

The Importance of Therapeutic Environment for Drug Recovery in Malaysia

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DOI: <https://dx.doi.org/10.47772/IJRISS.2025.930000001>

Received: 10 December 2025; Accepted: 16 December 2025; Published: 24 December 2025

ABSTRACT

This conceptual paper examines the vital role of the therapeutic environment in supporting drug recovery by highlighting how physical, emotional, and social factors directly influence motivation, engagement, and longterm rehabilitation. Persistent challenges such as relapse, low treatment retention, stigma, and emotional instability demonstrate the importance of understanding how treatment environments can either strengthen or undermine recovery. Individuals receiving treatment often struggle with disrupted routines, psychological distress, and limited support networks, making them highly sensitive to the surrounding environment. Drawing from psychological theories of behavior change, environmental design principles, and clinical rehabilitation literature, this paper proposes a multidimensional framework to explain how therapeutic spaces promote or inhibit recovery. The physical dimension includes comfort, safety, spatial arrangement, sensory stimulation, lighting, and privacy—elements known to influence stress regulation, readiness to engage in therapy, and overall psychological stability. The emotional climate encompasses feelings of empathy, trust, non-judgment, acceptance, and psychological safety, which are crucial for individuals who may carry experiences of trauma, shame, or social marginalization; a warm emotional environment encourages openness and fosters internal motivation for change. The social dimension emphasizes peer relationships, counsellor support, and community integration as essential foundations of sustained recovery; positive peer interactions create shared encouragement, professional guidance provides structure and therapeutic consistency, and community reintegration activities strengthen resilience beyond the treatment setting. By integrating these interconnected components, the proposed model suggests that an effective therapeutic environment is not merely a physical space but a holistic ecosystem that nurtures well-being, strengthens coping strategies, and supports meaningful behavioral transformation. This framework provides theoretical direction for future empirical studies and offers practical implications for designing recovery programs that prioritize person-centered, supportive, and transformative environments. These insights underscore the urgency of improving recovery settings nationwide for better outcomes.

Keywords: Therapeutic environment, Drug recovery, Addiction treatment, Rehabilitation, Recovery settings

INTRODUCTION

Background and Relapse Statistics

Substance use disorder (SUD) represents a significant global health challenge characterized by uncontrolled use of substances despite harmful consequences (McLellan et al., 2022). According to the American Psychiatric Association (2024), SUD is a complex condition where individuals develop an intense focus on using certain substances to the point where their ability to function in daily life becomes impaired. The disorder affects brain structure and function, causing intense cravings, personality changes, and impaired decision-making (Mao et al., 2024). This neurobiological basis makes recovery particularly challenging.

Relapse remains one of the most significant obstacles in addiction recovery. According to Guenzel and McChargue (2023), relapse rates following treatment typically reach 40-75% within 3-6 months after completing treatment programs. The National Institute on Drug Abuse reports similar findings, noting that relapse rates for substance use disorders mirror those of other chronic conditions like asthma and diabetes, with approximately 40-60% of individuals with SUDs experiencing relapse (National Institute on Drug Abuse, 2020). A study conducted at Icyizere Psychotherapeutic Centre found a 59.9% prevalence of relapse among patients with SUDs (Kabisa et al., 2021).

The normalization of relapse as an almost inevitable part of recovery can reduce the urgency for providing effective interventions to prevent it (Guenzel & McChargue, 2023). However, the consequences of relapse are severe, with many individuals losing employment, families, freedom, and even their lives. In 2020, the United States reported that drug overdose deaths increased by approximately 30% between 2019 and 2020, highlighting the potentially fatal consequences of continued substance use (Kabisa et al., 2021).

Traditional Treatment Approaches

Traditionally, management of SUD has relied on medical and behavioral approaches in the form of medication and counseling (Theodorakis et al., 2024). Pharmacological means center on how to alter brain chemistry to address specific SUDs, reduce urges, and control withdrawal signs (Volkow & Blanco, 2023). Specifically, methadone, buprenorphine, and naltrexone are FDA-approved for opioid use disorders (Edinoff et al., 2022). In contrast, naltrexone, acamprosate, and disulfiram are approved for alcohol use disorders and nicotine replacement therapies for tobacco use disorders (Cleveland Clinic, 2024).

Cognitive-behavioral therapies (CBT) have been used extensively to enable patients to change their perception and behavior concerning substance consumption (Franklin & Hai, 2021). These therapies include CBT, which assists in identifying, avoiding, and managing situations that lead to drug abuse; contingency management, where positive behaviors are reinforced; and motivational interviewing, which enhances the willingness to change (National Institute on Drug Abuse, 2020). These interventions deal with the thoughts and actions of a single person and not with the environment.

The traditional policies in Malaysia, as well as in other Southeast Asian nations regarding drug treatment and its enforcement, have been rigorous and rather punitive (Hassan & Zin, 2025). Such approaches included compulsory treatment in Narcotic Addiction Rehabilitation Centers (PUSPEN) or community parole (Mustapha et al., 2023). However, there were arguments on their effectiveness as the relapse rates were high (ranging from 70-90%), no medical attention was provided, and children were reported to be physically assaulted through corporal punishment in some programs, which prompted a change from the health-enhancing approaches towards the current health-oriented methods.

Emerging Role of Environment in Recovery

A growing literature has started to acknowledge the important role of environmental factors in the substance use recovery process. This means that environments are not just purely physical characteristics of the treatment context but can also be social, emotional, and cultural. Bank and Roessler (2022) have shown that users' experiences and evaluations of therapeutic spaces in drug treatment institutions do not necessarily facilitate recovery while also identifying how such spaces may stigmatize users.

Moreover, West Coast Recovery Centers (2024) states that any environment can influence recovery in physical spaces and interpersonal relationships. These therapeutic landscapes, particularly those involving natural environments, especially marine environments, have been engaged in managing clients' stress and making them comfortable engaging in therapy (Horn, 2021). According to Mao et al. (2024), the above natural environments foster attachment to treatment providers, enabling clients to accept the challenging changes needed in therapy.

Research Gap and Objective

Despite growing recognition of environmental factors in recovery, there remains a significant research gap regarding integrated conceptual understanding of therapeutic environments in addiction treatment. Most studies have focused narrowly on clinical protocols and specific interventions rather than taking a holistic view of the

treatment setting. Additionally, as noted by Galaj et al. (2020), behavioral interventions are often ineffective or short-lasting because they focus on specific contingency conditions and appear to work only as long as these conditions are in effect.

This paper aims to address this gap by developing a comprehensive conceptual framework that highlights the importance of therapeutic environments in drug recovery. The objective is to conceptualize how physical spaces, emotional climates, and social structures within treatment settings influence recovery outcomes and reduce relapse risk. By providing this integrated understanding, the paper seeks to guide future empirical research and inform the design of more effective recovery programs.

Paper Structure

This paper is organized into five main sections. Following this introduction, a literature review examines existing knowledge on addiction recovery models, environmental psychology principles, and key elements of therapeutic environments. The third section presents the proposed conceptual framework, detailing its core components and underlying propositions. The fourth section discusses theoretical and practical implications, potential integration with existing approaches, and acknowledged limitations. Finally, the conclusion summarizes key insights and outlines directions for future research.

LITERATURE REVIEW

Addiction Recovery Models

The understanding of addiction and recovery has evolved significantly over time, with current approaches recognizing the complex, multifaceted nature of substance use disorders (Bahji, 2024). The biopsychosocial model represents one of the most comprehensive frameworks, acknowledging biological, psychological, and social factors that contribute to addiction and influence recovery (Roberts, 2023). This model recognizes that effective treatment must address neurobiological changes caused by substances, psychological factors such as coping skills and mental health, and social factors including family relationships and peer influences (Cleveland Clinic, 2024).

Another approach is the person-centered model, which focuses on that person's specific needs and issues (Onaolapo et al., 2022). This accedes to the fact that no cure can suit everybody, or what may work for one patient may not necessarily work for the other (Ayo et al., 2023). This model emphasizes the belief in the individual's right to self-governance, preserving the individual's worth and encouraging the patient's involvement in rehabilitation. For instance, in Malaysia, this has changed from compulsory drug detention centers to more voluntary centers where patients are treated based on their differences (Nawawi et al., 2024).

Recovery is increasingly viewed as a process rather than an event, with distinct stages that individuals progress through over time (Branje et al., 2021). Guenzel and McChargue (2023) describe three stages of recovery: the abstinence stage (first 1-2 years), the repair stage (years 2-3), and the growth stage (years 3-5 and beyond). Each stage involves different challenges and requires different forms of support, highlighting the need for treatment approaches that evolve as individuals progress through their recovery journey.

Environmental Psychology and Healing Spaces

Environmental psychology offers valuable insights into how physical spaces impact psychological well-being and behavior (Jeong et al., 2022). Research by Li et al. (2021), demonstrated that the design and characteristics of environments can significantly influence mood, stress levels, cognitive functioning, and social interactions. In healthcare settings, evidence shows that well-designed spaces can promote healing, reduce stress, and improve overall outcomes (Bank & Roessler, 2022).

Research reviews relating exclusively to addiction treatment have highlighted that physical surroundings are essential for rehabilitation. This was supported by Youssef (2022), who stated that the environment can either worsen the condition by encouraging addiction or can support recovery. According to current data, "there is rather compelling evidence regarding the reserve capacity of physical settings, particularly the contact with natural landscapes to assist in the recovery from physiological stress and mental exhaustion" (Youssef, 2022).

Cintamani environments that facilitate personal resource replenishment needed for various tasks are far more restorative and relaxing than English urban settings.

The 'enabling places' concept has been developed to define how contexts support recovery. These places embrace drug-free lifestyles and encourage people to participate in productive behavior models (Bank & Roessler, 2022). Post-structuralist frameworks radically differ from the geometric view of space as they believe space is "constructed through the assembled synthesis of a composition of processes, matter, and discourse which generates affordances or constraints for recovery" (Bank & Roessler, 2022).

Key Elements of Therapeutic Environments

Studies have outlined several factors that have been known to enhance therapeutic conditions for individuals undergoing substance rehabilitation. Stability, protection, assistance, and involvement are necessary for healing and sustainable development (Hariram et al., 2023). The structure also has characteristics of predictability and routinization, a pattern that may improve an individual's stability after the randomness that people who have substance use disorders experience (Mats Ekendahl et al., 2024).

Safety encompasses physical and psychological dimensions and is a foundation for therapeutic work (Podolan & Gelo, 2023). According to Nawawi et al. (2024), therapeutic spaces must be safe and secluded rather than hospital-like. According to Youssef (2022), researchers have noted that patients welcomed into environments characterized by 'bright paintings, soft furnishing and areas where guests can relax and be comfortable' are more receptive to change as this makes them feel protected and, hence, can begin the healing process.

Support and engagement look at the physical features of space and the interactions of the people within the space. According to Macià et al. (2021) illustrated that social connectedness, positive social activities, and felt connectedness are linked to better mental health. In this case, places that afford 'persons to leave drugs and practice other relevant leisure pursuits,' recovery-affirming environments that offer accessible alternatives to drug use, promote recovery (Bank & Roessler, 2022).

Gaps in Current Research

However, research analyzing the contribution of environmental factors in recovery experiences some gaps in the current studies. This is one of the potential drawbacks of most environmental studies because they are usually partial, and little attention is paid to environmental management holistically. Secondly, there is a lack of understanding among researchers about the moderating effects of various elements of the therapeutic milieu, as well as the personality characteristics of clients that affect clinical improvement. As Bank and Roessler (2022) have pointed out, "the involvement of the environmental context and therapeutic spaces in stigmatization processes in outpatient drug treatment practices remains underexplored." This paper aims to address these gaps by proposing an integrated conceptual framework for understanding therapeutic environments in addiction recovery.

CONCEPTUAL FRAMEWORK

Physical Environment

The physical environment constitutes a foundational component of therapeutic settings for addiction recovery (Podolan & Gelo, 2023). Research by Faraj et al. (2024) indicates that elements such as lighting, noise levels, cleanliness, spatial layout, and access to nature significantly impact treatment experiences and outcomes. Studies on inpatient mental health settings have shown that "the design of space has an effect on patient-staff interaction" and can contribute to "faster improvement" (Bank & Roessler, 2022). For addiction treatment specifically, creating physical spaces that feel safe, comfortable, and non-institutional helps reduce the stigma often associated with seeking help.

Exposure to nature identifies one of the most influential aspects of the physical environment. Youssef (2022) has pointed out that natural environments that provide conditions for the renewal of personal resources to meet life's challenges are restorative and have a calming effect compared to an urban environment. This is supported by West Coast Recovery Centers (2024), stating that 'nature can help clients to open up when it is difficult for them

to' and it makes treatment effective. Treatment centers near nature, such as forests or beaches, exploit these benefits.

The symbolic aspects of design also play a crucial role in creating therapeutic environments. Bank and Roessler (2022) highlight how "symbolic aspects of design can contribute to a feeling of homeliness and promote wellbeing." Moving away from institutional aesthetics toward more home-like environments with "vibrant paintings, soft furnishings and comfortable break out zones" helps individuals feel welcomed and valued rather than processed through a system (Youssef, 2022). This sense of being in a healing space rather than a clinical facility supports psychological engagement with the recovery process.

Emotional Climate

Therapeutic atmosphere refers to the emotions, expectations, relationships, and worldview predominant within the therapeutic context (Caro & Palazzolo, 2024). These values include staff and peer empathy, trust, respect, and openness. The literature revealed that emotional climate plays a huge role in recovery by impacting a person's willingness to seek treatment, the feeling of safety held by the individual, and the motivation to alter prior patterns (Bank & Roessler, 2022).

Out of all indexes, the perception of empathy from treatment providers is the most relevant measure of the overall emotional climate. This motivates the staff and offers the individuals dignity and acceptance through a lens of empathy, which is rare for those with substance use disorders as they are enveloped in shame and stigma. According to Bank and Roessler (2022), spaces that minimize stigmatization processes are essential for effective treatment. This requires staff who are trained to create atmospheres of acceptance and support rather than judgment or condemnation.

Top management, non-hierarchical openness, and trusting relationships allow staff and peers to share challenging incidents and feelings and engage in applied behavior (Byrne et al., 2021). To draw attention, Ackermann (2019) says that 'talking to someone about relapse can help to decrease that urge and bring the back rational mind into play.' By building a spirit of openness and encouraging people to support each other, these treatments take advantage of this interconnectivity to reduce cravings and the risk of relapse (Stanojlović & Davidson, 2021). For this reason, we must cultivate environments in which people feel safe enough to expose their raw emotions without fear of receiving negativity in return.

Social Structure

The nature of the social organization of settings where the therapeutic process occurs refers to the combination of relationships, interactions, and communications in treatment (Wampold & Flückiger, 2023). These sources comprise peer support services, staff-client interactions, communal cultures, and linkages to other support structures. Research Yamashita et al. (2021) indicates that social factors significantly influence recovery outcomes, with supportive relationships serving as protective factors against relapse.

Peer support is one of the most significant aspects of the social system (Ghenaati et al., 2024). Having other people who have undergone the same process can offer support, advice, and encouragement to those new to the journey. According to Guenzel and McChargue (2023), individuals in early recovery can benefit from a peer recovery coach who has struggled with the substance and has not used it for some time. Peer support assists in preventing the sense of loneliness that these individuals may feel due to substance use disorder and offers positive role models for long-term sobriety.

Another important structural factor related to therapeutic systems is staff-client connections (Hardan et al., 2023). A study conducted by Marzban and colleagues in 2022 shows that the proper quality of these relationships directly impacts treatment compliance and effectiveness. According to Bank and Roessler (2022), the spatial setting influences the patient-staff relationship. Through design, environments should be fostered that are conducive to a proactive and effective patient-and-staff relationship. In these treatment programs, clients view the staff as supportive, non-judgmental, and genuinely caring, and clients are more likely to seek services and remain sober.

Key Propositions

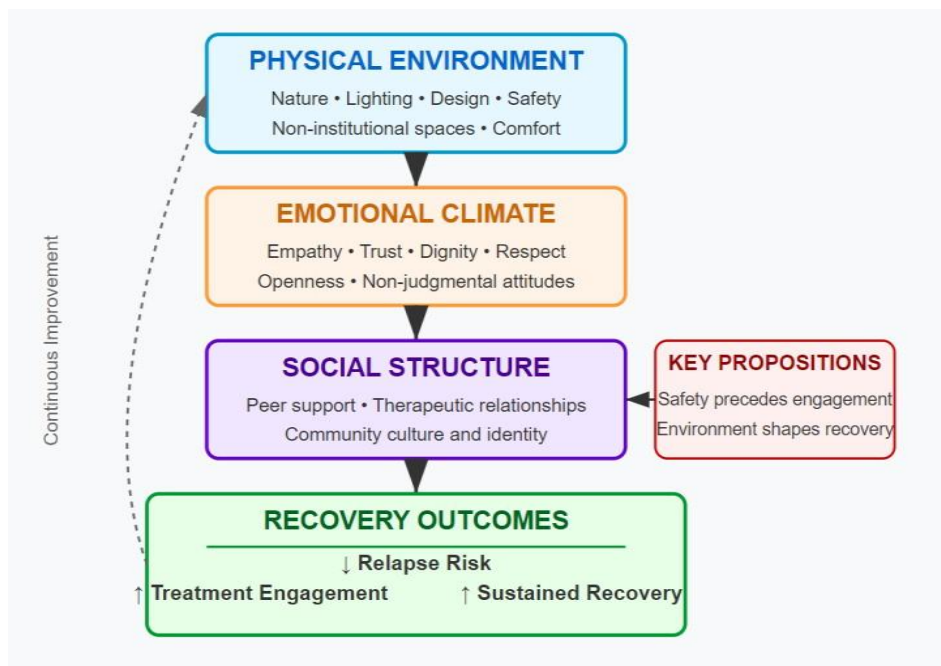
Based on the literature and the conceptual framework presented above, this paper proposes two key relationships between therapeutic environments and recovery outcomes. First, supportive therapeutic environments enhance client motivation and reduce relapse risk. Through physical comfort, emotional safety, and a supportive social environment within the treatment setting, one will likely remain sober and active in completing recovery processes. This proposition is in agreement with the following research by stating that being in a place that reminds them of their trigger can compel them to use it again, and being in a place that is unsafe or uncertain can increase anxiety (West Coast Recovery Centers, 2024).

Second, physical and emotional safety are prerequisites for psychological engagement in the recovery process (Selander et al., 2023). Ideally, for people to delve into such productive therapeutic work, they should feel safe and at ease in their surroundings. According to Youssef (2022), "Where to live to be safe, feel comfortable, and practice healthy lifestyles are essential to attain permanency in sobriety." This illustrates that safety is a core concept in the therapeutic process, as treatment centers should provide physical and psychological safety before clients undertake rigorous psychological processes.

Framework Model Diagram

The conceptual framework can be visualized as a nested model with three interconnected levels: physical environment, emotional climate, and social structure. Each level influences and is influenced by the others, creating a dynamic system that collectively shapes recovery experiences and outcomes. Figure 1 illustrates this conceptual framework.

Figure 1 illustrates the conceptual framework for the therapeutic environment for drug recovery



DISCUSSION

Theoretical Implications

The conceptual system discussed within the paper indicates a shift from the typical model of substance dependence treatment to adopting environment centered principles. Information based models derived from the medical model have mainly focused on specific personal factors and targeted interventions with low consideration of the environment (Paparini et al., 2021). However, the framework challenges the traditional separation between person and place by arguing that recovery does not occur within individuals but rather emerges through their continuous engagement with their surroundings. This represents a fundamental shift from viewing environments as passive backgrounds to understanding them as active participants in the recovery process. The framework rejects the notion that therapeutic interventions can be meaningfully isolated from the contexts in which they occur.

This change is consistent with the changing dynamics of their approach to health and well-being from an ecological and systemic perspective that acknowledges the multiple determinants. According to Bank and Roessler (2022), post structuralist approaches define space as an arrangement of existing processes, materials, and discourses that regulate actions and health outcomes. Rather than treating space as a neutral container, the framework posits that environments actively shape what becomes possible or impossible for individuals in recovery. Regarding addiction treatment, this idea identifies the importance of the environment and the fact that getting better happens in context, even when individual therapeutic techniques seem logical and scientific. The framework thus dissolves the artificial boundary between treatment content and treatment setting.

It also collapses the separation between treatment and setting, claiming that the setting is a treatment entity. This aligns with Galaj et al. (2020) on environmental enrichment (EE), with the researchers finding that when "exposure to EE (running wheel) is offered simultaneously with the option to self administer the drug, great alteration occurs in drug related behaviors." This evidence suggests that environmental modifications can produce therapeutic effects that work through physical and neurological pathways rather than requiring explicit cognitive awareness. The implications challenge the assumption that recovery necessarily requires conscious deliberation or intentional behavior change. Environments may directly influence substance use patterns through embodied mechanisms.

The framework also questions whether standardized treatment protocols can adequately address recovery needs. If recovery emerges from person environment interactions, then what works in one setting for one person may fail in another setting for another person. This demands context sensitive application of treatment principles rather than rigid adherence to universal procedures. Practitioners require practical wisdom to adapt general knowledge to specific situations.

Practical Implications

The conceptual framework has profound implications for the recovery centers' layout and functionality. The framework demands that treatment facilities be designed as flexible spaces that can accommodate diverse and changing recovery needs. The environment of care settings should be optimized and purposefully built concerning several factors like lighting, noise, cleanness, and nature. According to Youssef (2022), the transition from "bleak, bare walls and minimalist furniture" to "colorful murals, plush blankets, and adequate segregated seating areas" can be effectively used to make the environment "inclusive for all people." However, aesthetic improvements alone prove insufficient. The framework requires that individuals in recovery have genuine agency in shaping their environments rather than merely occupying prefabricated therapeutic spaces. Without such participation, even well-designed environments risk reproducing the disempowerment that characterizes addiction.

In particular, treatment centers near nature, especially the sea, have proven that nature's effects help improve patient outcomes. Yet the therapeutic value of nature cannot be reduced to simple exposure. Natural environments may facilitate recovery through multiple pathways including sensory restoration, symbolic associations with renewal, and opportunities for meaningful activity. Understanding which mechanisms operate for which individuals requires careful empirical investigation.

Another important practical implication is staff training. Kyambade et al. (2024) also note that staff must be trained in specific treatment methods and develop an environment that encompasses empathy, trust, and respect. Beyond technical skills, staff must cultivate environmental awareness. This means developing the capacity to perceive how physical arrangements, social dynamics, and institutional practices either support or undermine recovery. This encompasses creating competencies in trauma informed care, culture, and relationship building. The authors, Bank and Roessler (2022), have noted that clients' and practitioners' interactions shape clients' experiences and therapeutic outcomes; thus, staff should be taught the creation of "therapeutic environments that foster human development and meaningful ways of existing." Staff must learn to recognize when environments produce therapeutic effects and when they generate harmful consequences such as stigmatization, infantilization, or coercion. This requires judgment rather than rule following.

Such work also entails consideration of the social organization of care environments in which treatments are provided. It should enable positive interactions with peers and provide possibilities for building friendly relations

and definite norms of behavior and interactions. However, peer support networks must be structured carefully to avoid reproducing hierarchies and exclusions. The framework recognizes that social environments can be therapeutic or harmful. Recovery communities that privilege certain pathways while devaluing others may create new forms of marginalization. Kabisa et al. (2021) further determined that the likelihood of relapse was high if the individual lived with peers or if the referred family had conflicts, pointing to the need for nurturing healthy social environments during and post treatment. This finding reveals that therapeutic environments must extend beyond treatment facilities into homes, neighborhoods, and communities. Recovery cannot be sustained if individuals return to environments that actively undermine their efforts. Therefore, recovery centers should include family, peer, and community factors (Stanojlović & Davidson, 2021). This demands expanding the scope of addiction treatment to encompass the broader social contexts in which individuals live.

Integration with Existing Models

The provisioned framework is not intended to replace other models of addiction treatment, such as a trauma informed or person-centered approach, but builds upon these frameworks. Rather than simply adding environmental considerations to existing models, the framework reinterprets them through an environmental lens. There is evidence of post traumatic stress disorder in people with SUD, which is why trauma sensitive approaches are aimed at promoting an atmosphere of safety, credibility, non-forced choice, and partnership (Yadav & Gunturu, 2024). The framework extends trauma informed care by recognizing that environments themselves can traumatize or heal. Consistent with these principles, the current framework is environmental, positing that interventions should not re-traumatize the clients but should promote their healing from historical trauma. Institutional spaces that emphasize surveillance, restrict freedom, or convey oppressive aesthetics may inadvertently replicate traumatic conditions. Trauma informed environmental design therefore requires eliminating architectural and organizational features that trigger fear, shame, or helplessness (Owen & Crane, 2022).

Person centered theories advocate for protecting the rights and their dignity and recognizing individual differences (Cárdenas et al., 2022). However, person centered care risks becoming empty rhetoric if it ignores the material and social conditions that enable or constrain personhood. This is consistent with the framework suggesting that the therapeutic environment should not be standardized but should feel normal and incorporate each person's interests. In their study, Mustapha et al. (2023) explained that "the types of therapeutic programs provided in the centers of a drug addict are associated with the characteristics of the addicts such as frequency of the use of the drugs, the kind of drugs taken as well as their history of the use of drugs", this clearly shows that the primary focus of such centers is based on the needs of the people with a substance use disorder. The framework advances this by arguing that persons develop through their environmental engagements rather than existing as fixed entities with predetermined preferences. Therefore, person centered care must attend to the environments that shape personhood itself.

It also easily connects with the stages of the change model, which proposes that recovery is a linear process comprising pre contemplation, contemplation, preparation, action, and maintenance stages. However, the framework questions the strict linearity implied by stage models. Recovery trajectories often involve recursive movements with individuals cycling between stages rather than progressing steadily forward. During different stages of change, from pre contemplation to action and into maintenance, other environmental contexts may be more conducive to change. This further shows how therapeutic environments develop and are unfixed as people continue recuperation. The framework therefore calls for developmentally responsive environments that provide appropriate supports and challenges as individuals' needs evolve. What constitutes a therapeutic environment during early abstinence may differ substantially from what supports long term recovery. Environments must remain dynamic rather than static.

Limitations and Challenges

However, several limitations are also associated with the framework provided in this research. The framework's comprehensiveness creates significant methodological challenges. First, the key components of the environmental framework remain theoretical propositions requiring empirical validation. Previous research has investigated relationships between individual environmental factors and treatment outcomes, but comprehensive studies examining how multiple environmental dimensions interact remain scarce. Operationalizing constructs

like emotional climate or social structure in ways that capture their full complexity presents substantial difficulties (Hernaes et al., 2024). Quantitative measures inevitably reduce rich experiences to numerical indicators while qualitative approaches struggle with generalizability. Therapeutic settings are diverse and dynamic, complicating such studies since identifying and measuring interactions between different variables is not always easy. The framework may also face challenges regarding falsifiability. Because it encompasses many factors and allows for context specific variations, specifying what evidence would count against it becomes difficult.

However, when applied in real life contexts, it can experience particular difficulties associated with resources, framework, and organizational culture. Implementation faces obstacles beyond resource scarcity. Creating good therapeutic milieus may involve spending money, changing the physical space, and challenging people's beliefs and working methods. Treatment facilities operate within regulatory regimes, funding structures, and professional hierarchies that resist the flexibility the framework demands (Poljašević et al., 2025). Organizations may endorse the framework verbally while maintaining institutional practices that contradict its principles. However, as with many student and collegiate affairs best practices, scarce resources often prevent the implementation of the entire framework, which inevitably leads to deliberative choices about what can and should be accomplished. The framework also raises difficult questions about equity and access. If therapeutic environments must be personalized and responsive, ensuring equitable access becomes challenging. Without attention to issues of power and privilege, therapeutic environments risk becoming exclusive spaces available only to those with adequate resources. This would reproduce rather than address the social inequalities that contribute to addiction.

CONCLUSION AND RECOMMENDATIONS

Summary of Insights

This paper has proposed a conceptual framework highlighting the critical role of therapeutic environments in supporting drug recovery. The framework identifies three core components such as physical environment, emotional climate, and social structure, that collectively shape recovery experiences and outcomes. Beyond cataloging environmental factors, the framework advances a relational understanding of recovery. It argues that recovery emerges neither from individuals alone nor from environments alone but from their ongoing interaction. By emphasizing the importance of creating environments that promote physical comfort, emotional safety, and supportive social interactions, the framework offers a holistic perspective on addiction treatment that extends beyond specific clinical interventions to consider the contexts in which recovery occurs. The framework reconceptualizes treatment by refusing to separate intervention from context. This represents a transformation in understanding the recovery process rather than merely an expansion of existing approaches.

Contributions to Literature

The framework thus serves as a valuable addition to the literature on addiction recovery and environmental psychology by demonstrating such connections. It fills a void in the current state of knowledge about the concept of therapeutic milieu in substance use disorders treatment by providing a foundation from which future research and implementations can begin. The framework's main contribution is challenging three addiction research assumptions. First, it challenges the idea that environments are passive treatment containers. Second, it challenges the idea that individual treatments cause therapeutic benefits rather than systemic configurations. Third, it undermines the idea that recovery is context-independent. While recognizing that recovery is shaped by relationships, contexts, and moods that can be enacted in physical space, the framework offers a better way of conceptualizing what makes recovery happen than approaches that focus on individual or clinical factors alone. By foregrounding environment, the framework shifts fundamental research questions. Rather than asking only what works, researchers must ask what works for whom, in which contexts, through which mechanisms, and with which meanings. This represents a move from seeking universal laws to understanding situated practices.

Future Research Directions

Future research should focus on empirically validating the relationships proposed in the framework through longitudinal studies examining how specific environmental factors influence recovery trajectories over time.

However, validation should not be understood narrowly as hypothesis testing. Given the framework's complexity, research must explore its explanatory power across diverse contexts rather than seeking simple causal confirmation. Such studies should employ mixed methods approaches that combine quantitative measures of recovery outcomes with qualitative explorations of individual experiences of therapeutic environments. Phenomenological methods appear particularly valuable because they can illuminate how individuals experience, interpret, and respond to environmental possibilities. Such methods can reveal mechanisms that behavioral measures alone would miss.

Additionally, cross cultural comparisons would be valuable for understanding how different cultural contexts influence the relationship between environment and recovery, potentially identifying universal principles and culture specific considerations for creating effective therapeutic environments. However, cross cultural research must avoid treating cultures as uniform entities. Research should examine how therapeutic environments are negotiated within culturally diverse settings and how individuals navigate between different healing frameworks. This requires attending to power relations and historical contexts that shape which healing practices are legitimized or marginalized.

Finally, intervention studies testing environment focused approaches to relapse prevention would provide practical evidence for implementing the framework in various treatment settings. Such studies face the challenge of isolating environmental interventions from the broader therapeutic systems in which they operate. Rather than demonstrating environmental effects in controlled conditions, research should examine how environmental modifications interact with clinical practices, organizational cultures, and community resources. Specific systems science methods such as agent-based modeling could simulate how individual recovery trajectories emerge from interactions between persons and environments, while social network analysis could map how peer support structures develop within and across treatment settings. Realist evaluation approaches, which seek to understand what works for whom under what circumstances, appear particularly well-suited to investigating environment-based interventions because they acknowledge context dependency rather than seeking universal effects. Recent applications of realist evaluation in addiction research have demonstrated how environmental factors moderate treatment effectiveness, providing models for future studies (Paparini et al., 2021). Systems science methods and realist evaluation approaches may prove more appropriate than conventional randomized controlled trials for investigating environment-based interventions.

ACKNOWLEDGEMENT

The project was supported by Universiti Sultan Zainal Abidin (UniSZA) for the financial support provided under the Scientific Research Grant of the National Anti-Drugs Agency (NADA) (UNISZA/2024/PPI/AADK (027)). This support has been instrumental in enabling the successful completion of this project.

REFERENCES

1. Ackermann, K. (2019). Warning Signs of Relapse: Depression, Stress, and Other Triggers. AmericanAddictionCenters.<https://americanaddictioncenters.org/adult-addiction-treatmentprograms/signs-of-relapse>
2. American Psychiatric Association. (2024). What is a substance use disorder? Psychiatry.org. <https://www.psychiatry.org/patients-families/addiction-substance-use-disorders/what-is-a-substance-usedisorder>
3. Bahji, A. (2024). Navigating the Complex Intersection of Substance Use and Psychiatric Disorders: A Comprehensive Review. *Journal of Clinical Medicine*, 13(4), 999–999. <https://doi.org/10.3390/jcm13040999>
4. Bank, M., & Roessler, K. K. (2022). Therapeutic Environments in Drug Treatment: From Stigmatising Spaces to Enabling Places. A Theory-Based Qualitative Analysis. *International Journal of Environmental Research and Public Health*, 19(9), 5005. <https://doi.org/10.3390/ijerph19095005>
5. Branje, S., de Moor, E. L., Spitzer, J., & Becht, A. I. (2021). Dynamics of Identity Development in Adolescence: A Decade in Review. *Journal of Research on Adolescence*, 31(4), 908–927. <https://doi.org/10.1111/jora.12678>

6. Byrne, L., Roennfeldt, H., Davidson, L., Miller, R., & Bellamy, C. (2021). To disclose or not to disclose? Peer workers impact a culture of safe disclosure for mental health professionals with lived experience. *Psychological Services*, 19(1). <https://doi.org/10.1037/ser0000555>
7. Cárdenas, D., Davisson Correia, M. I. T., Hardy, G., Ochoa, J. B., Barrocas, A., Hankard, R., Hannequart, I., Schneider, S., Bermúdez, C., Papapietro, K., Pounds, T., Cuerda, C., Ungpinitpong, W., du Toit, A., & Barazzoni, R. (2022). Nutritional care is a human right: Translating principles to clinical practice. *Nutrition in Clinical Practice*, 37(4), 743–751. <https://doi.org/10.1002/ncp.10864>
8. Caro, M. D., & Palazzolo, C. (2024). The ethical model of orchestra conducting: a psychological and philosophical perspective. *Philosophical Psychology*, 1–25. <https://doi.org/10.1080/09515089.2024.2417980>
9. Cleveland Clinic. (2024). Substance use disorder (SUD): Symptoms & treatment. Cleveland Clinic. <https://my.clevelandclinic.org/health/diseases/16652-drug-addiction-substance-use-disorder-sud>
10. Edinoff, A. N., Nix, C. A., Orellana, C. V., StPierre, S. M., Crane, E. A., Bulloch, B. T., Cornett, E. M., Kozinn, R. L., Kaye, A. M., Murnane, K. S., & Kaye, A. D. (2022). Naltrexone Implant for Opioid Use Disorder. *Neurology International*, 14(1), 49–61. <https://doi.org/10.3390/neurolint14010004>
11. Faraj, M., May Ling Siow, & Sreetheran Maruthaveeran. (2024). Therapeutic Environment Design Elements in Malaysia's Medical Tourism Accommodations: An Observation Study. *International Journal of Sustainable Development and Planning*, 19(3), 917–930. <https://doi.org/10.18280/ijstdp.190310>
12. Franklin, C., & Hai, A. H. (2021). Solution-Focused brief therapy for substance use: A review of the literature. *Health & Social Work*, 46(2), 103–114. <https://doi.org/10.1093/hsw/hlab002>
13. Galaj, E., Barrera, E. D., & Ranaldi, R. (2020). Therapeutic efficacy of environmental enrichment for substance use disorders. *Pharmacology Biochemistry and Behavior*, 188, 172829. <https://doi.org/10.1016/j.pbb.2019.172829>
14. Ghenaati, N., Zendehtalab, H. R., Namazinia, M., & Zare, M. (2024). Peer support groups and care burden in hemodialysis caregivers: a RCT in an Iranian healthcare setting. *BMC Nephrology*, 25(1), 371. <https://doi.org/10.1186/s12882-024-03811-8>
15. Guenzel, N., & McChargue, D. (2023). Addiction Relapse Prevention. Nih.gov; StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK551500/>
16. Hardan, T., Emily Adlin Bosk, Mendez, A., Williams-Butler, A., Julien, F., & MacKenzie, M. J. (2023). A Relational Workforce Capacity Approach to Trauma-Informed Care Implementation: Staff Rejection Sensitivity as a Potential Barrier to Organizational Attachment. *Behavioral Sciences*, 13(8), 652–652. <https://doi.org/10.3390/bs13080652>
17. Hariram, N. P., Mekha, K. B., Suganthan, V., & Sudhakar, K. (2023). Sustainalism: An Integrated Socio-Economic-Environmental Model to Address Sustainable Development and Sustainability. *Sustainability*, 15(13), 10682. <https://www.mdpi.com/2071-1050/15/13/10682>
18. Hassan, F., & Zin, R. M. (2025). Medical Cannabis Regulation in East and Southeast Asia: A Scoping Review and Policy Insights for Malaysia. *Journal of Pharmacy*, 5(2), 316–329.
19. Hernaus, T., Potočník, K., Lira, E. M., & LeBreton, J. M. (2024). Multilevel empirical research: A call for more mixed-methods approaches. *European Management Journal*, 42(4), 452–461. <https://doi.org/10.1016/j.emj.2024.06.001>
20. Horn, A. (2021). The role of nature in nature-based therapy: A qualitative study of therapists' perspectives. A thesis submitted in partial fulfillment of the requirements for the Degree of Master of Counselling at the School of Health Sciences. https://ir.canterbury.ac.nz/bitstream/10092/102488/1/Horn%20C%20Amy_final%20Master%27s%20Thesis%20-%20Amy%20Horn.pdf
21. Jeong, S., Aymerich-Franch, L., Arias, K., Alghowinem, S., Lapedriza, A., Picard, R., Park, H. W., & Breazeal, C. (2022). Deploying a robotic positive psychology coach to improve college students' psychological well-being. *User Modeling and User-Adapted Interaction*. <https://doi.org/10.1007/s11257022-09337-8>
22. Kabisa, E., Biracyaza, E., Habagusenga, J. d'Amour, & Umubyeyi, A. (2021). Determinants and prevalence of relapse among patients with substance use disorders: case of icyizere Psychotherapeutic Centre. *Substance Abuse Treatment, Prevention, and Policy*, 16(1), 1–12. <https://doi.org/10.1186/s13011021-00347-0>
23. Kyambade, M., Nkurunziza, G., Sewante, L., Namatovu, A., & Tushabe, M. (2024). Servant leadership and healthy work relationships in university context: a moderated mediation analysis of psychological

- safety and socially responsible leadership. *Cogent Education*, 11(1).
<https://doi.org/10.1080/2331186x.2024.2418802>
24. Li, H., Dong, W., Wang, Z., Chen, N., Wu, J., Wang, G., & Jiang, T. (2021). Effect of a Virtual RealityBased Restorative Environment on the Emotional and Cognitive Recovery of Individuals with Mild-toModerate Anxiety and Depression. *International Journal of Environmental Research and Public Health*, 18(17), 9053. <https://doi.org/10.3390/ijerph18179053>
25. Macià, D., Cattaneo, G., Solana, J., Tormos, J. M., Pascual-Leone, A., & Bartrés-Faz, D. (2021). Meaning in Life: A Major Predictive Factor for Loneliness Comparable to Health Status and Social Connectedness. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.627547>
26. Mao, S., Chou, T., & D'Orsogna, M. R. (2024). A probabilistic model of relapse in drug addiction. *Mathematical Biosciences*, 372, 109184. <https://doi.org/10.1016/j.mbs.2024.109184>
27. Marzban, S., Najafi, M., Agolli, A., & Ashrafi, E. (2022). Impact of patient engagement on healthcare quality: A scoping review. *Journal of Patient Experience*, 9(1), 1–12. <https://doi.org/10.1177/23743735221125439>
28. Mats Ekendahl, Kvarmans, P., & Karlsson, P. (2024). Urine Samples and Drug-Body-Treatment Assemblages: Youth Enactments of Drug Testing in Sweden. *Contemporary Drug Problems*, 51(3), 163–177. <https://doi.org/10.1177/00914509241262528>
29. McLellan, A. T., Koob, G. F., & Volkow, N. D. (2022). Preadiction—A Missing Concept for Treating Substance Use Disorders. *JAMA Psychiatry*, 79(8), 749. <https://doi.org/10.1001/jamapsychiatry.2022.1652>
30. Mustapha, R., Mahmud, M., Paris, T. N. S. T., Musa, M. S., Awang, H., & Burhan, N. M. (2023). The Factors of the Drug Addict Relapse in Malaysia: The Experts Views and Consensus. *Open Journal of Social Sciences*, 11(04), 160–173. <https://doi.org/10.4236/jss.2023.114013>
31. Mustapha, S. Z., Ahmad, Y., Aziz, N. A., & Hamid, S. N. F. A. (2023). Cure & Care 1Malaysia Clinics: Measuring the Effectiveness via Dyads Lens Involving Receivers and Providers. *Journal of Patient Experience*, 10. <https://doi.org/10.1177/23743735231179070>
32. National Institute on Drug Abuse. (2020). Treatment and recovery. National Institute on Drug Abuse. <https://nida.nih.gov/publications/drugs-brains-behavior-science-addiction/treatment-recovery>
33. Nawawi, N. a. a. M., Othman, E. A., Nasir, F. M., Abdullah, K. A., & Baharudin, M. N. (2024). Drug addictions in Malaysia: a mini-review on drug types, rehabilitation centers and therapeutic programs. *Journal of Ethnicity in Substance Abuse*, 1–13. <https://doi.org/10.1080/15332640.2024.2336495>
34. Onaolapo, O. J., Olofinnade, A. T., Ojo, F. O., Adeleye, O., Falade, J., & Onaolapo, A. Y. (2022). Substance use and substance use disorders in Africa: An epidemiological approach to the review of existing literature. *World Journal of Psychiatry*, 12(10), 1268–1286. <https://doi.org/10.5498/wjp.v12.i10.1268>
35. Owen, C., & Crane, J. (2022). Trauma-Informed Design of Supported Housing: A Scoping Review through the Lens of Neuroscience. *International Journal of Environmental Research and Public Health*, 19(21), 14279. <https://doi.org/10.3390/ijerph192114279>
36. Paparini, S., Papoutsis, C., Murdoch, J., Green, J., Petticrew, M., Greenhalgh, T., & Shaw, S. E. (2021). Evaluating Complex Interventions in context: systematic, meta-narrative Review of Case Study Approaches. *BMC Medical Research Methodology*, 21(1), 1–22. <https://doi.org/10.1186/s12874-02101418-3>
37. Podolan, M., & Gelo, O. (2023). The Functions of Safety in Psychotherapy: An Integrative Theoretical Perspective across Therapeutic Schools. *Clinical Neuropsychiatry*, 20(3), 193–204. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10405669/pdf/cn-20-193.pdf>
38. Poljašević, B. Z., Gričnik, A. M., & Žižek, S. Š. (2025). Human Resource Management in Public Administration: The Ongoing Tension Between Reform Requirements and Resistance to Change. *Administrative Sciences*, 15(3), 94–94. <https://doi.org/10.3390/admsci15030094>
39. Roberts, A. (2023). The Biopsychosocial model: Its Use and Abuse. *Medicine, Health Care, and Philosophy*, 26(3), 1–18. <https://doi.org/10.1007/s11019-023-10150-2>
40. Selander, K., Korkiakangas, E., Toivanen, M., Yli-Kaitala, K., Kangas, H., Nevanperä, N., & Laitinen, J. (2023). Engaging Leadership and Psychological Safety as Moderators of the Relationship between Strain and Work Recovery: A Cross-Sectional Study of HSS Employees. *Healthcare*, 11(7), 1045. <https://doi.org/10.3390/healthcare11071045>

41. Stanojlović, M., & Davidson, L. (2021). Targeting the Barriers in the Substance Use Disorder Continuum of Care With Peer Recovery Support. *Substance Abuse: Research and Treatment*, 15, 1–10. <https://doi.org/10.1177/1178221820976988>
42. Theodorakis, Y., Hassandra, M., & Panagiotounis, F. (2024). Enhancing Substance Use Disorder Recovery through Integrated Physical Activity and Behavioral Interventions: A Comprehensive Approach to Treatment and Prevention. *Brain Sciences*, 14(6), 534. <https://doi.org/10.3390/brainsci14060534>
43. 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>
44. Wampold, B. E., & Flückiger, C. (2023). The alliance in mental health care: Conceptualization, evidence and clinical applications. *World Psychiatry*, 22(1), 25–41. <https://doi.org/10.1002/wps.21035>
45. West Coast Recovery Centers. (2024). The importance of environment on addiction recovery. West Coast Recovery Centers. <https://westcoastrecoverycenters.com/blog/the-importance-of-environment-onaddiction-recovery/>
46. Yadav, G., & Gunturu, S. (2024). Trauma-Informed therapy. PubMed; StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK604200/>
47. Yamashita, A., Yoshioka, S., & Yajima, Y. (2021). Resilience and related factors as predictors of relapse risk in patients with substance use disorder: a cross-sectional study. *Substance Abuse Treatment, Prevention, and Policy*, 16(1), 1–9. <https://doi.org/10.1186/s13011-021-00377-8>
48. Youssef. (2022). The importance of your environment in recovery. Delamere. <https://delamere.com/blog/the-importance-of-your-environment-in-recovery>