

# The Implementation of Drug Abuse Rehabilitation to Prevent Relapse: A Systematic Literature Review

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**Abstract.** Rehabilitation is an integrated recovery program for individuals with drug abuse disorders. However, addiction is a chronic and relapsing condition. This study aims to explore how the implementation of rehabilitation programs can prevent relapse in individuals recovering from drug abuse. A systematic literature review methodology was employed in this study. Relevant literature was identified through electronic searches of valid databases using keywords related to drug rehabilitation and relapse prevention. The articles were retrieved and screened using the Watase UAKE website. Databases including MDPI, Frontiers Media, ScienceDirect, Elsevier, SAGE, OAMJMS, Mary Ann Liebert, BMC, Routledge, Springer, Emerald Insight, EASA, and Informa Healthcare were systematically searched using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), excluding meta-analysis, to obtain empirical studies published between 2014 and 2024. Out of the 489 articles collected, 27 were included in the analysis. The results showed that the successful implementation of drug rehabilitation programs is influenced by various factors, including intrinsic motivation, social support, and fulfillment of psychological needs during the rehabilitation process. Rehabilitation programs can shift clients' perspectives, enabling a better understanding of life's values and meaning. This is essential for relapse prevention after rehabilitation. Additionally, relapse prevention programs play a critical role in enhancing the effectiveness of rehabilitation efforts. While many factors contribute to relapse, therapeutic interventions are important for predicting retention in therapeutic communities for substance abuse treatment.

## 1 Introduction

According to the United Nations Office on Drugs and Crime (UNODC), approximately 39.5 million individuals globally between the ages of 15 and 65 suffered from drug abuse disorders in 2021 [1]. Drug use is more prevalent in developed countries than in developing countries, largely due to the greater availability of resources for education, health services, and social

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services, which can contribute to the high prevalence of drug abuse. The accessibility of drugs and socio-economic factors further drive drug use in these regions [2].

There has been a significant annual increase in the number of drug abuse cases. In 2018, 269 million people were reported to have abused drugs. This figure rose to 275 million in 2019, 284 million in 2020, and 296 million in 2021. This shows that drug abuse is a major concern worldwide [1,3,4,5].

Drug abuse has consequences for health, public safety, productivity, crime, and governance. Individuals who abuse drug can face severe physical and health risks, such as organ damage, cognitive impairments, and an increased risk of overdose or death. Additionally, drug abuse can negatively affect an individuals' social and economic life, leading to job loss, strained personal relationships, and social isolation. Moreover, society as a whole is also suffering from the negative impact of drug abuse, including rising crime rates, economic losses, and strain on public health and security systems [6]. The addictive nature of narcotics often leads individuals with severe substance use disorders to go to great lengths to obtain drugs, which can result in higher crime rates and societal disruption. Globally, drug abuse contributes to a decline in the quality human resources, reducing a country's overall competitiveness [7].

Effective treatment is necessary to address addiction. In this context, rehabilitation refers to programs and services designed to help individuals recover from substance dependence. These programs encompass a variety of therapeutic interventions, including inpatient and outpatient care, psychosocial support, and pharmacological treatments to prevent relapse. Rehabilitation programs can also involve multidisciplinary teams, personalized care plans, and performance monitoring to ensure the effectiveness of the treatment [8]. Some countries, such as Indonesia, Australia, and Portugal, have implemented drug courts as part of their rehabilitation policies. Rehabilitation is important because it provides a more humane, fair, and health-oriented approach to dealing with drug addiction [9].

Monitoring individuals for a specific period is necessary to ensure their recovery, given the chronic and relapsing nature of addiction [10]. Relapse occurs when an individual who has completed a rehabilitation or treatment program returns to drug use after a period of abstinence [9]. Even after overcoming drug dependence, former abusers may still experience strong cravings or psychological triggers that can lead to relapse, particularly during periods of emotional or situational instability [11]. Relapse rates remain high in several countries, with rates reported at 33% in Nepal, 55.8% in China, 60% in Switzerland, and between 60% and 90% in Bangladesh. Research suggests that drug users are most likely to relapse within a month and a year after discontinuing treatment [12].

This study aims to explore how the implementation of drug rehabilitation programs can prevent relapse. Specifically, it seeks to address the following questions: How are drug abuse rehabilitation programs implemented? What factors contribute to relapse in individuals recovering from drug abuse? And how can rehabilitation processes be optimized to prevent relapse?

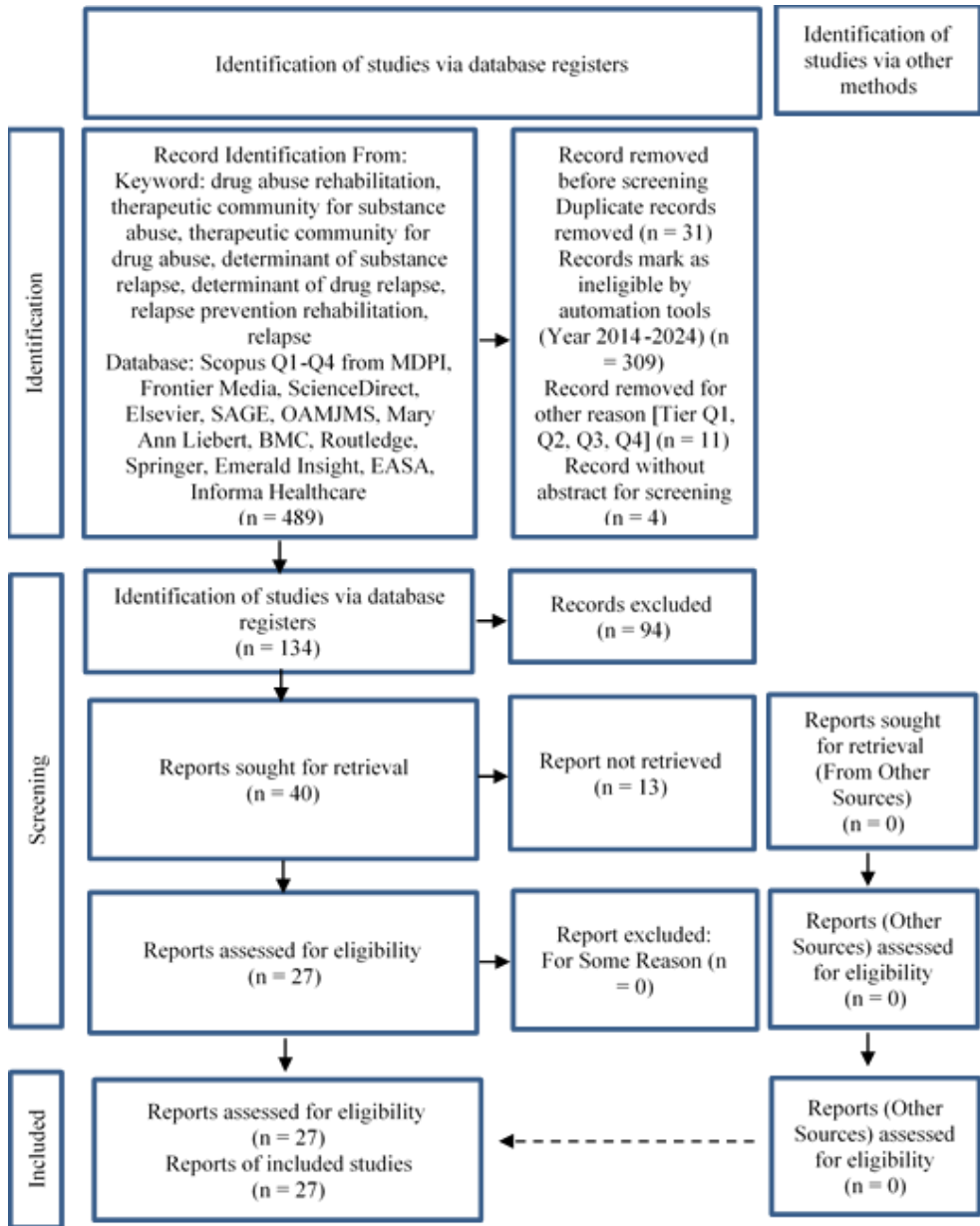
## **2 Methods**

To investigate the implementation of drug abuse rehabilitation in preventing relapse, this study employed the systematic literature review (SLR) technique, which is highly relevant to the research objectives. A systematic review of scientific literature is crucial for identifying research gaps and providing a solid foundation for future research in the field [13]. This approach allows researchers to identify, evaluate, and interpret the findings of relevant studies systematically and comprehensively [14]. Through a structured review of the literature, this study examines aspects of the rehabilitation process, including factors that play a role in the rehabilitation process, factors that cause addiction, factors that triggers relapse,

types of treatment in the rehabilitation process, and the interaction of the factors in preventing relapse among drug addicts. Data for this review were collected using Watase UAKE website and Scopus. A keyword-based search yielded 489 articles published between 2014 and 2024. After a thorough inspection, 27 articles relevant to the research topic were identified based on the selection criteria, namely Scopus-indexed articles ranging from Q1 to Q4. The selected articles were then tabulated, compared, and analyzed to draw conclusions.

## **2.1 Defining Search Keywords**

The keywords used for the search were "drug abuse rehabilitation", "therapeutic community for rehabilitation", "therapeutic community for substance abuse", "therapeutic community for drug abuse", "determinant of substance relapse", "determinant of drug relapse", "relapse prevention rehabilitation", and "relapse". The search was restricted to articles indexed in Scopus, ranging from Q1 to Q4, with publication dates between 2014 and 2024. The objective was to gather relevant articles on the topic of drug abuse rehabilitation and relapse prevention.

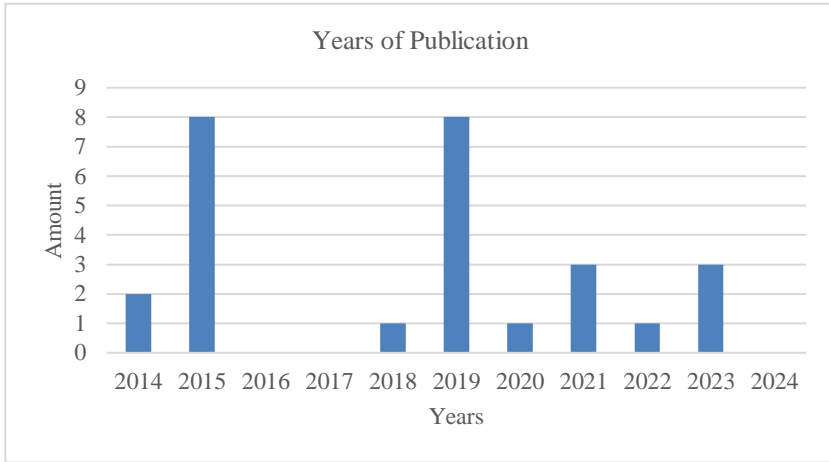


**Fig. 1.** Prisma Analysis Report.

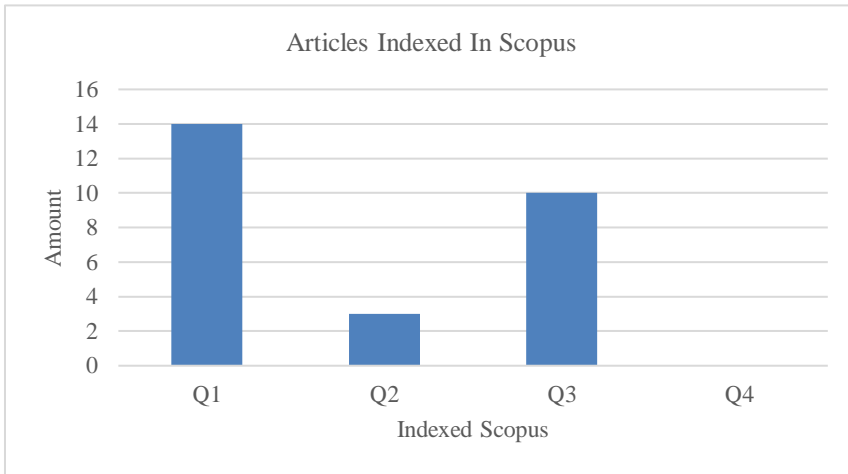
The keyword search yielded 489 articles, which were then selected based on the predetermined criteria, narrowing the selection to 134 articles. A further review revealed 40 articles that were relevant to the research topic, of which 13 articles failed to meet the criteria on the Watase UAKE website. Ultimately, 27 articles were included in the final analysis.

Once relevant articles were identified, a descriptive analysis was performed using Microsoft Excel to generate data visualizations. The analysis revealed trends in publications on the topic of "drug abuse rehabilitation and relapse prevention" from 2014 to 2024. The processed data showed that no relevant articles were found for the years 2016 and 2017. However, in 2015 and 2019, there was a notable increase in publications, followed by a stable

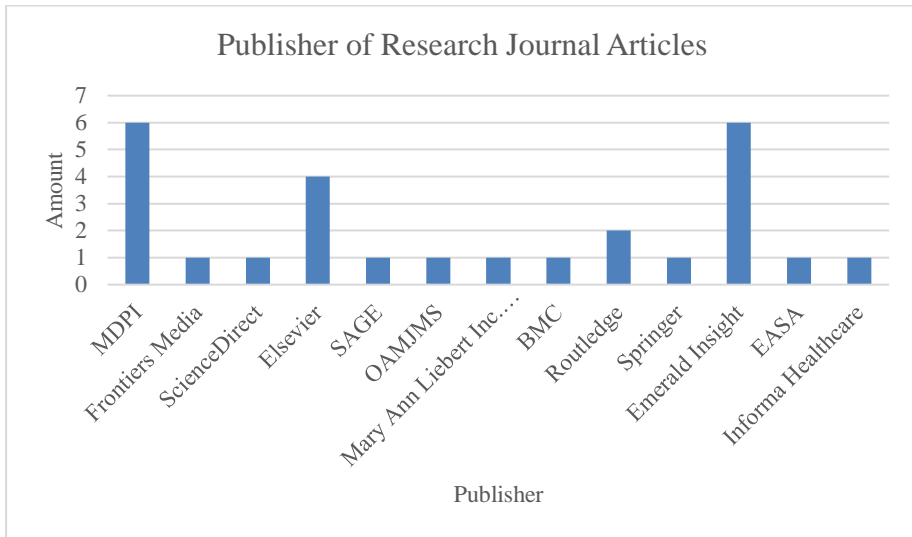
trend in 2020 to 2023, as shown in Figure 2 below.



**Fig. 2.** Number of Publications and Articles Based on Year.



**Fig. 3.** Number of Articles Based on Scopus Index.



**Fig. 4.** Number of Articles Based on Publisher.

Figure 3 shows data on the Scopus indexing of the selected articles, categorized from Q1 to Q4. Of the 27 articles, 14 articles were indexed as Q1, three articles as Q2, and 10 articles as Q3. In other words, the majority of articles in this study fell into the Q1 category. Figure 4 shows that three major publishers contributed to this research topic: MDPI and Emerald Insight each published six articles, while Elsevier published four articles. This shows a fairly diverse distribution of publishers, although MDPI and Emerald Insight contributed more publications on the topic of "implementation of drug abuse rehabilitation to prevent relapse".

### 3 Results and Discussion

Various factors, including intrinsic motivation, social support, and the fulfillment of psychological needs, influence the success of drug rehabilitation programs [15]. The implementation of drug abuse rehabilitation can lead to shifts in clients' perspectives, leading to a deeper understanding of life's values and meaning. This is crucial for preventing relapse after rehabilitation [16].

One common rehabilitation approach in community-based hospitals is known as therapeutic communities (TCs). Research suggests that patients who underwent therapeutic community treatment for a relatively longer time showed better results in psychiatric status, occupational status, social relationship, and well-being [17]. The supportive environment of TCs and the use of therapeutic tools such as the emotions board, encounter slips, talking to notes, and group discussions help clients enhance their emotional regulation and mentalization abilities, which ultimately contribute to successful recovery from addiction [18]. Table 1 presents the research findings from the 27 selected articles.

**Table 1.** Research findings.

No	Authors and Title	Results of the Study
1.	Chan et al., 2019, Intrinsic motivation and psychological connectedness to drug abuse and rehabilitation: The perspective of self-determination [15]	Intrinsic motivation, social support, and the fulfillment of psychological needs play a role in the drug rehabilitation process.
2.	Ting et al., 2015, Drug abuse, relapse, and prevention education in Malaysia: Perspective of university students through a mixed methods approach [19]	Gender differences indicate differences in perception, preference for student sources of information coming from the Internet, and the belief that private rehabilitation centers are more effective than government rehabilitation centers. Furthermore, students suggested that drug education would be more effective if started at a younger age and stressing the importance of an interactive, real-life experience-based approach.
3.	Abazid et al., 2023, A comprehensive overview of substance abuse amongst Syrian individuals in an addiction rehabilitation center [20]	Addiction is influenced by the pursuit of euphoria, the search for happiness and comfort, and easy access to drugs. It is crucial to consider the significance of addiction risk awareness programs, enforce stricter regulations, implement effective rehabilitation programs, foster collaboration among governments, community leaders, and religious institutions, and develop prevention strategies.
4.	Navarro et al., 2015, Structure and family type in patients with substance abuse or dependence psychoactive rehabilitation center of addiction in the municipality of Chia Cundinamarca [21]	Single-parent families, lack of social support, and poor communication lead to addiction problems. Factors that contribute to addiction are: (1) violence, negative feelings, weakness, loneliness, and lack of understanding in the family; (2) family authority with few demands and limitations; and (3) family dysfunction.
5.	Ulaş and Ekşi, 2019, Inclusion of Family Therapy in Rehabilitation Program of Substance Abuse and Its Efficacious Implementation [22]	The effectiveness of implementing family therapy in rehabilitation programs is that it can (1) improve problem-solving skills; (2) enhance coping strategies; (3) increase family resilience; (4) encourage abstinence (no relapse); (5) improve family attitudes; and (6) reduce abstinence-related issues.

No	Authors and Title	Results of the Study
6.	Camellia et al., 2019, Sociological and psychological factors on prohibited substances abuse in rehabilitation centre of Medan City, Indonesia [23]	<p>Factors that influence substance abuse include age, ethnicity, residence, marital status, educational level, and employment status.</p> <p>The study emphasizes the importance of comprehensive and integrated treatment for substance use.</p>
7.	Polley et al. 2015, The Feasibility and Acceptability of `arise`: An Online Substance Abuse Relapse Prevention Program [24]	<p>The "Arise" online drug abuse recurrence relapse prevention program is acceptable, informative, interesting, easy to use, and aids in learning the skills necessary to prevent drug recurrences.</p> <p>Participants' feedback suggests making modifications to the program, including shortening the relaxation game.</p>
8.	Sánchez-Iglesias et al, 2021, Use of causal language in studies on the relationship between spiritually-based treatments and substance abuse and relapse prevention [25]	<p>The purpose of using proper language in scientific writing is to accurately reflect the methodology and study results. Evidence-based treatment should incorporate the role of spirituality, religion, and cultural beliefs in recovery, addiction treatment, and relapse prevention for improved outcomes.</p>
9.	Sørensen and Lien, 2022, Significance of Self-Transcendence for Rehabilitation and Relapse Prevention among Patients with Substance Use Disorder: A Qualitative Study [16]	<p>Patients with a substance abuse disorder experience a change of perspective during rehabilitation, which leads to a deeper understanding of the values and meaning of life.</p> <p>Researchers found that factors like self-transcendence, generativity, spirituality, and religiousness play a significant role in preventing relapse occurrence after rehabilitation.</p>
10.	Harada et al., 2023, Sociodemographic profiles and determinants of relapse risks among people with substance use disorders in the Philippines: A survey in community and residential care settings [26]	<p>Factors such as low educational levels, employment, comorbidities with alcohol abuse disorders, and physical comorbidities are associated with a higher risk of relapse.</p> <p>The study highlights the importance of a comprehensive, evidence-based approach to dealing with substance use disorders in the Philippines, with an emphasis on adapting care and providing services to suit individual needs.</p>
11.	Kabisa et al., 2021, Determinants and prevalence of relapse among patients with substance use disorders: case of Icyizere Psychotherapeutic Centre [27]	<p>The study found that 59.9% of participants experienced relapses after treatment. Risk factors for relapse include family conflict, peer influence pressure, access to drug availability, lack of stability, parental status, duration of hospitalization time, quantity of substances used, family-related stress, and residence arrangements and housing</p>



No	Authors and Title	Results of the Study
		conditions. Social support is vital in preventing recurrence relapse and dealing with the global burden of substance abuse disruption.
12.	Beckwith et al., 2015, Predictors of flexibility in social identity among people entering a therapeutic community for substance abuse [28]	The prediction of retention in care is due to a number of factors, namely: changes in social identification in the first 4 weeks, pre-existing social factors, changes in social involvement, and early shifts in social identity towards community.
13.	Caputo et al., 2019, The Experience of Therapeutic Community: Emotional and Motivational Dynamics of People with Drug Addiction Following Rehabilitation [29]	Factors such as client expectations of change, the use of motivational interviews, the promotion of autonomy, and commitment to care can increase retention and treatment success.
14	Darsha et al, 2023, Perceived effectiveness of therapeutic community model as a rehabilitation approach for Sri Lankan individuals with substance use disorder [30]	Participants assessed that the Therapeutic Community (TC) model was very effective in helping recovery from substance use disorder (SUD). Factors that contribute to the positive experience of participants include program content, spiritual activities, friendly staff, and family-like relationships.
15	Moraleda et al., 2019, Specific aspects of cognitive impulsivity are longitudinally associated with lower treatment retention and greater relapse in therapeutic community treatment [31]	In therapeutic community medicine, decision-making skills and inhibition of emotional-driven responses are critical aspects of impulsiveness that affect retention and relapse. Treatment retention is associated with factors such as gender, age, educational level, employment status, and substance abuse disorders. The findings highlight the importance of assessing and possibly training specific cognitive processes during addiction treatment to improve treatment outcomes.
16	Davidson et al, 2019, Treatment engagement in a prison-based Therapeutic Community: A mixed- methods approach [32]	The study highlighted the importance of individual motivation and program structure in care engagement. There is a need for program modifications to improve post-TC outcomes by. We need to focusing on individual differences in involvement to improve the effectiveness of TC programs.
17	Salam and Gunter, 2014, Therapeutic Engagement as a Predictor of Retention in Adolescent Therapeutic Community Treatment	Therapeutic involvement plays a crucial role in forecasting adolescent drug abuse treatment community retention in therapeutic communities. These findings suggest that efforts to increase therapeutic involvement

No	Authors and Title	Results of the Study
	[33]	can reduce the risk of premature dropout.
18	Goethals et al., 2015, Core characteristics, treatment process and retention in therapeutic communities for addictions: A summary of four studies [34]	Client perception is crucial in the treatment process and can affect retention in treatment programs. It is critical to use multidimensional instruments to assess client perceptions and track their treatment progress. This article recommends improving client compliance with treatment, filtering risk factors associated with drop-outs, and adapting interventions to individual needs.
19	Aslan, 2015, Dropping out of therapeutic community treatment; when is \`unsuccessful`, successful? [35]	Dropping out of early treatment does not always mean failure, and an individualized treatment approach as well as advanced support are essential for long-term success in recovery from substance abuse.
20.	Defelippe et al., 2019, Treatment and outcomes at Takiwasi Center, a Peruvian therapeutic community: identifying patient-related indicators [36]	A higher level of education is associated with better treatment completion. Motivation is not always an indicator of treatment completion success. Students need additional support to improve treatment outcomes. A history of cocaine or polydrug use is associated with treatment failure.
21	Lyvers et al., 2018, Traits associated with treatment retention in a therapeutic community for substance dependence [37]	Impulsiveness, executive dysfunction, and sensitivity to punishment are factors associated with the participant's exit from treatment before 90 days. Alexetimia has no significant influence on treatment retention. Understanding these factors can assist in designing more effective treatment programs for substance abuse disorders.
22	Asuncion and Ramos, 2019, The recovery-oriented therapeutic community for addictions (ROTC): a response to contemporary substance use disorder treatments in the Philippines [38]	A therapeutic community is a shelter facility that drives personal change through social interaction and community responsibility. Although there are criticisms that TC is not evidence-based, research supports its effectiveness in treating substance use disorders. The ROTC could be the basis for a national care framework for addictions in the Philippines, in response to the current shortage of care systems and human rights violations associated with the drug war. ROTC stresses the importance of family and community involvement in the recovery

No	Authors and Title	Results of the Study
		process.
23	Solerio and Consigliere, 2015, Emotional ontologies: Paradigm shifts in drug addiction treatment in a therapeutic community in Italy [39]	There has been a paradigm shift in the therapeutic community in Italy over the last 30 years, from a ritual model to an individual- centered model. The ritual model focuses on group dynamics and emotional transformation. This new model emphasizes individual therapy and autonomy, as well as the introduction of methadone for detoxification.
24	Debaere et al., 2014, Beyond the `black box` of the Therapeutic Community for substance abusers: A participant observation study on the treatment process [18]	TC's environment and tools play a crucial role in assisting residents in enhancing their emotional regulation and mentalization skills, ultimately leading to a successful addiction recovery.
25	Galassi et al., 2015, Therapeutic community treatment of an inmate population with substance use disorders: Post-release trends in re-arrest, re- incarceration, and drug misuse relapse [40]	The TCI program shows potential for reducing criminal activity and drug abuse behavior among former prisoners. Participation in aftercare and participant motivation play an important role in the effectiveness of TCI programs.
26	González-Saiz and Vergara- Moragues, 2021, In- treatment changes in quality of life-related variables in therapeutic communities for cocaine abusers: Are these changes associated with clinical outcomes? [41]	Patients who completed the three-month evaluation showed lower anxiety and depression scores as well as higher HRQOL scores compared to those who left earlier. Long-term residential care programs are more effective than short-term programs for patients with double diagnoses. Better outcomes at the time of exit were associated with an increase in the quality of life variable after three months of treatment.
27	Staiger et al., 2020, Longitudinal substance use and biopsychosocial outcomes following therapeutic community treatment for substance Dependence [17]	The studies showed a significant decrease in drug and alcohol use as well as dependency rates at 3 and 9 months after leaving the therapeutic community (TC). There was also an improvement in psychiatric status, occupational status, social function, and overall well-being.

### 3.1 RQ1: How are drug abuse rehabilitation programs implemented?

**Table 2.** Studies on the implementation of drug abuse rehabilitation.

<b>Authors</b>	<b>Study Design, Period, Country</b>	<b>Sample</b>	<b>Findings</b>	<b>Founding Factors</b>
Enver Ulas and Halil Eksi [22]	Cohort, 2015-2017, Turkey	36	P = 0.00	Family-based psychological counseling: family nullity
Sixtus Dane Asuncion Ramos [38]	Cohort, 2016-2017, Philippines	Recovery-Oriented Therapeutic Community (ROTC) in the Philippines	The ROTC framework addresses addiction as a chronic, relapsing disease, emphasizing the need for a treatment approach that aligns with this understanding.	Evidence-based practices from international therapeutic communities, aftercare components
Ilse Goethals, Wouter Vanderplasschen, Stijn Vandeveldel and Eric Broekaert [34]	Review, 2009-2011, Belgium	4 studies	-	Client perceptions and retention, changes over time, impact of psychological factors, demographic limitations, clinical implications
Husam Abazid, Rana Abu-Farha, Ahmad R. Alsayed, Muna Barakat, Raja'a Al-Qudah [20]	Cross sectional, 2022, Syria	82	Gender (P = 0.9), Age (P = 0.16), Nationality (Pp = 0.4), Education level (Pp = 0.6), Monthly income (P = 0.3)	Friends, family, religious belief, regulation

The rehabilitation process for substance use disorder (SUD) begins with the decision to seek treatment, which involves abstinence and support for both inpatient and outpatient clients at rehabilitation facilities [22]. Therapeutic communities function as structured environments where personal change is driven by social interaction and community responsibility [38]. The rehabilitation process in TCs involves several key elements that influence clients’ perceptions and development such as cognitive understanding of how community methods work as well as changes in perceptions of personal development and psychological functioning. Cultural or environmental factors also influence the rehabilitation process, significantly contributing to the process of change. Overall, the rehabilitation process in TCs entails continuous monitoring of the client's psychological state and motivation, as well as treatment strategies tailored to the client's characteristics and progress [34]. A study suggested that modifications to C programs could improve post-treatment outcomes. Since no single treatment approach suits all individuals, effective responses to substance abuse require an integrated approach at all levels, including the community. Collaborative efforts among treatment agencies and related programs are essential for successful rehabilitation outcomes [8]. In addition, collaboration between governments, community leaders, and religious institutions is vital for the development of prevention strategies [20].

**3.2 RQ2: What factors contribute to relapse in individuals recovering from drug abuse?**

**Table 3.** Factors contributing to relapse.

Authors	Study Design, Period, Country	Sample	Findings	Founding Factors
Husam Abazid, Rana Abu-Farha, Ahmad R. Alsayed, Muna Barakat, Raja’a Al-Qudah [20]	Cross sectional, 2022, Syria	82	Help to forget the worries (65.9%); make live in a dream world (65.9%); activate and increase sexual capacity (54.9%); make strong and courageous (31.7%); make the person a nice one (50%); help to work long periods without fatigue (58.5%); help to be creative and to achieve targets (46.3%);	Perception: Help to forget the worries; make live in a dream world; activate and increase sexual capacity; make strong and courageous; make the person a nice one; help to work long periods without fatigue; help to be creative and to achieve targets; relieve physical trouble and pain; taboo; ruling on using drug; drug

<b>Authors</b>	<b>Study Design, Period, Country</b>	<b>Sample</b>	<b>Findings</b>	<b>Founding Factors</b>
			<p>relieve physical trouble and pain (54.9%); taboo (61%); ruling on using drug (34.1%); drug abuse does not lead to addiction (63.4%); lead to death (85.4%); evidence of manhood (18.3%); increases the student's ability to attain academic achievement (26.8%); the treatment of addiction is a waste of money (39%), effort and time (42.7%); give pleasure to life (36.6%); drugs harmful effects are overestimated (36.6%); the punishment should be on those who promote drugs (62.2%); drug abuse is a personal behavior that should be interfered with (35.4%); drug abuse can drive an individual to</p>	<p>abuse does not lead to addiction; lead to death; evidence of manhood; increases the student's ability to attain academic achievement; the treatment of addiction is a waste of money, effort and time; give pleasure to life; drugs harmful effects are overestimated; the punishment should be on those who promote drugs; drug abuse is a personal behavior that should be interfered with; drug abuse can drive an individual to steal; drugs help me to study and speed understanding.</p>

Authors	Study Design, Period, Country	Sample	Findings	Founding Factors
			steal (59.8%); drugs help me to study and speed understanding (35.4%).	
Eric Kabisa, Emmanuel Biracyaza, Jean d'Amour Habagusenga, and Aline Umubyeyi [27]	Cross sectional, 2019, Rwanda	391	Living only with their mother (OR = 1.9, 95 % CI (1.02–3.6), p = 0.04); Patients that were hospitalized between one to three months (OR = 9.2, 95 % CI (1.1–77.6), p = 0.02); lived with their peers (OR = 2.4, 95 % CI: (1.2–7.8), p = 0.01) or if they lived in a family with conflicts (OR = 2.1, 95 % CI (1.05–9.7), p = 0.02).	Living only with their mother, patients that were hospitalized between one to 3 months; lived with their peers or lived in a family with conflicts.
Pedro Vargas Navarro, Mario Danilo Parra Vera, Caterín Arévalo Zamora, Luisa Karen Cifuentes Gaitán, Jaime Valero Carvajal y Margarita Sierra de Jaramillo [21]	Cross sectional, 2009, Colombia	10 families	-	Single-parent families, inadequate communication, lack of authority rules and limits (family typology structure and personal factors in patients with addictions)

Factors that influence addiction include the pursuit of euphoria, the search for happiness and comfort, and easy access to drugs [20]. Other studies mention that risk factors for relapse include family conflicts, peer pressure, drug availability, lack of stability, parental status, duration of hospitalization, quantity of substances used, family-related stress, and housing conditions [27]. Family-related factors that contribute to addiction include: (1) single-parent households, lack of social support, and poor communication; (2) violence, negative feelings, weakness, loneliness, and lack of understanding within the family; (3) weak family authority with few demands and limitations; and (4) family dysfunction [21].

### 3.3 RQ3: How can rehabilitation processes be optimized to prevent relapse?

**Table 4.** Rehabilitation process to prevent relapse.

Authors	Study Design, Period, Country	Sample	Findings	Founding Factors
Enrique Moraleda Barreno, Sara Domínguez-Salas, Carmen Díaz-Batanero, Óscar M. Lozano, José Andrés Lorca Marín, Antonio Verdejo-García, Óscar M. Lozano [31]	Cohort, 2016-2017, Spain	68	The mean duration of treatment for dropouts associated for completers ( $t = 5.936, p < 0.0001$ )	Duration of treatment (dropout or complete)
Enver Ulas and Halil Eksi [22]	Cohort, 2015-2017, Turkey	36	$P = 0.00$	Family based psychological counseling; family nullity
Sixtus Dane Asuncion Ramos [38]	Cohort, 2016-2017, Philippines	Recovery-Oriented Therapeutic Community (ROTC) in Philippines	The ROTC framework addresses addiction as a chronic, relapsing disease, emphasizing the need for a treatment approach that aligns with this understanding.	Evidence-based practices from international therapeutic communities, Aftercare components



<b>Authors</b>	<b>Study Design, Period, Country</b>	<b>Sample</b>	<b>Findings</b>	<b>Founding Factors</b>
Torgeir Sørensen 1 and Lars Lien [16]	Cross sectional, 2022, Norway	4	Self-transcendence significant as part of the recovery process.	An unselfish prosocial commitment to family and the surroundings, self-efficacy, confidence, safety, and spirituality
Rebecca Polley Sanchez and Chelsea M. Bartel [24]	Cross sectional, 2015, North Carolina	17	Adolescents : Acceptability (SD = 0.63), Usability (SD = 0.65); Treatment Providers : Acceptability (SD = 0.72), Usability (SD = 0.51)	Easy to use, fun, have relaxation unit
Alexandra Galassi, Elias Mpofo, and James Athanasou [40]	Systematic literature review, 2007 - 2014	14 studies	-	Re-arrest, re-incarceration rates, and drug misuse
Cai Lian Tam, Qiu Ting Chie, Gregory Bonn, Chee Piau Wong, Hoang Minh Dang and Rozainee Khairudin [19]	Cross sectional, 2014 Malaysia	460	To rid of personal suffering (P = 0.07), unemployment (P < 0,05), building supportive social (P < 0.01), learning stress management (P < 0.01), constant communication with recovery doctors (P < 0.05), consult rehab centres (P < 0.05)	To rid of personal suffering, unemployment , building supportive social, learning stress management, constant communication with recovery doctors, consult rehab centres

Authors	Study Design, Period, Country	Sample	Findings	Founding Factors
<p>Vita Camellia, Fasihah Irfani Fitri, Muhammad Surya Husada, Dudy Aldiansyah, Muhammad Ichwan, Khairunnisa Khairunnisa, Farah Diba Harahap [23]</p>	<p>Cross sectional, 2019, Indonesia</p>	<p>126</p>	<p>Substance users group as 87 people (69%), Batak tribe as 73 people (57.9%), residence originating from outside the city as 70 people (55.6%), Unmarried as 87 people (70.2%), secondary education level is medium (junior high school) as 117 people (92.9%), and work as 77 people (61.1%). The study also found that the most dominant number of prohibited substances users were single users of methamphetamine and a combination of two substances, each of which was 49 people (38.9%)</p>	<p>Age, ethnicity, residence, marital status, educational level, employment status</p>
<p>Nishadi Darsha Dharmarathna, Akila Randika Jayamaha, Nadeeka Dimuthu</p>	<p>Cross sectional, 2022, Sri Lanka</p>	<p>75</p>	<p>The sessions of the program had considerable depth (86.7%, n = 65), the</p>	<p>The sessions of the program had considerable depth, the program</p>

Authors	Study Design, Period, Country	Sample	Findings	Founding Factors
Kumari Ranadeva, Harshini Rajapakse, Chinthika Gunasekara, Neluka Fernando and Lalitha Meegoda [30]			program was sufficient to recover from SUD (89.3%, n = 67), the satisfaction of psychological support was satisfactory (89.3%, n = 67), the freedom was adequacy (69.5%, n = 52) and the adequacy of facilities was adequate (76.0%, n = 57), the counselors and program guides were friendly (80.0%, n = 60), and participants were allowed to communicate with their family with restrictions (92.0%, n = 69).	was sufficient to recover from SUD, the satisfaction of psychological support was satisfactory, the freedom was adequacy, and the adequacy of facilities was adequate, the counselors and program guides were friendly, and participants were allowed to communicate with their family with restrictions

Rehabilitation programs teach decision-making skills and inhibit emotional responses, which are key aspects of impulsivity that affect retention and relapse in therapeutic communities [31]. Furthermore, family therapy in rehabilitation programs has proven effective for clients in improving problem-solving skills, coping strategies, family resilience, abstinence from drug use, and fostering positive changes in family attitudes [22]. Family and community involvement is important in the recovery process [38]. Other studies emphasize that self-transcendence, generativity, spirituality, and religiousness taught during rehabilitation are crucial for preventing relapse after treatment [16]. Technology can also be leveraged to develop online drug abuse relapse prevention programs [24]. Participation in aftercare and participant motivation play an important role in reducing drug misuse relapse [40].

Recovery success is influenced by several factors, including gender, age, ethnicity,

residence, marital status, educational level, and employment status [19, 23]. Furthermore, positive rehabilitation experiences are often shaped by factors such as program content, spiritual activities, friendly staff, and family-like relationships [30]. These factors influence clients' recovery journeys.

## 4 Conclusion

This study shows that the rehabilitation process plays a role in helping clients prevent relapse. Although many factors contribute to the likelihood of relapse, therapeutic involvement is a key predictor of treatment retention in therapeutic communities for drug abuse. Further studies are expected to explore more effective treatment programs for addressing drug use disorders.

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