Combined Use of Cognitive Behavioral Therapy (CBT) and Its Healing Impact on Drug Abusers Who Are Addicted to Drugs: A Scoping Review

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Abstract

Aims: The aim of this study is to assist individuals in healing from addiction; it is essential to implement a combination of interventions, such as CBT, that are proven to be effective in treating drug abuse with a holistic approach that integrates psychological and social aspects for optimal results, according to empirical evidence.

Methods: The search databases for this study were PubMed, ScienceDirect, and Google Scholar. Identify articles published in the last 10 years (2014-2024), Randomized Control Trials (RCTs), English and Indonesian, Full-Text, and Teenagers to the Elderly. Using the PRISMA flowchart, data extraction and scoping with keywords (English): "Drug Addict OR Substance Abuse AND Cognitive Behaviour Therapy AND Dependence OR Substance-Related Disorder" and keywords in the Indonesian language "Pecandu Narkoba OR Penyalahguna Zat AND Cognitive Behaviour Therapy AND Ketergantungan OR Gangguan Terkait Zat".

Results: The study found eight articles that met the criteria, the main findings showed the use of Modified Cognitive Behavioral Therapy (M-CBT) in enhancing recovery motivation among cocaine-dependent individuals. Interventions such as galantamine, C-CBT, and computer-based CBT also show promise in reducing cocaine use. Additionally, combining CBT with contingency management (CM) facilitates changes in neural activity related to cognitive control. CBT paired with MET+ABI+ATTI and Female-Specific CBT (FS-CBT) effectively addresses alcohol use in adolescents and women.

Conclusion: Current study highlights various CBT approaches that can be combined, such as M-CBT for cocaine independence and computer-based CBT, as well as the combination of CBT with contingent management that influences neural activity related to cognitive control.

Keywords: cognitive behaviour therapy, drug abuser, healing impact.

Introduction

Drug addiction is a severe problem in both public health and clinical contexts that requires serious attention. According to the latest report from the United Nations Office on Drugs and Crime (UNDOC), approximately 284 million people worldwide engage in substance abuse. Furthermore, more than 35 million people have been diagnosed and are undergoing treatment for drug addiction, with the majority of them in the age range of 15 to 64 years (UNODC, 2022). This addictive condition can cause significant physical, psychological, and social problems (Xue et al., 2023). Neurologically, drug addiction alters the neuronal transmission of signals via neurotransmitters, thereby heightening susceptibility to mortality from other illnesses and injuries (He, 2022).

Drug abuse, which involves medical, psychiatric, mental health, and socio-psychological aspects, has been shown to have severe clinical and functional impacts and often causes significant impairment (Mclellan, 2017). Substance use disorders and the availability of certain over-the-counter medications are significant (Douaihy et al., 2013). The impact of drug abuse also affects many individuals worldwide, both mentally and physically (First et al., 2022). As a result, frequent use of this substance can cause substance abuse and has severe clinical and functional impacts, often leading to serious disorders (Alhammad et al., 2022).

CBT is an approach that can help individuals overcome drug addiction by focusing on increasing motivation for recovery and changing behavior. According to Magill et al. (2016), CBT is a collaborative, structured, time-limited skills development program in treatment involving several stages and special techniques to change thoughts and behavior (Magill et al., 2023). Several studies have evaluated various forms of CBT and their effectiveness in treating a variety of substance abuse disorders (Nakao et al., 2021). Research by He (2022) showed that CBT was applied to inpatients with infectious and substance disorders, with most patients using marijuana, cocaine, alcohol, and other opioids. In many cases, CBT techniques used for addiction include cognitive reconstruction, relapse prevention, and contingency (He, 2022). CBT can help in the recovery process by understanding and managing a person's thought patterns and behaviors that contribute to drug abuse or addiction problems. The effectiveness of providing CBT to drug abusers is supported by empirical evidence from well-designed trials (Carroll et al., 2018).

In addition, the combination of CBT has shown great potential in supporting the healing process of individuals experiencing addiction to drugs, alcohol, and other substances (Magill et al., 2019). The addition of these interventions can help address the complex challenges often associated with addiction, such as resistance to change, emotional stress, and behavioral patterns that are difficult to address (Magill et al., 2020). In this context, it is recommended to add additional interventions to increase the effectiveness of CBT, especially in populations experiencing drug dependence (Kurniawati et al., 2021). Implementing CBT requires a combination of other interventions to assist in the healing process for drug abusers. However, from several reviews that have been conducted, no review has been found that summarizes the combination of CBT methods for drug abuse patients. Therefore, conducting a scoping review of combination CBT in drug abuse is important because it can increase the effectiveness of intervention and recovery. In this context, this scoping review will guide further developments in CBT practice and research and ensure that implemented interventions are supported by robust evidence and are relevant in addressing growing challenges in drug abuse treatment. The urgency of this research lies in the need to understand in depth the impact of the combination or addition of CBT to existing interventions in treating drug addiction. The combination of CBT with other strategies may provide a more comprehensive and practical therapeutic approach to addressing the complex challenges often associated with addiction, such as resistance to change, emotional stress, and behavioral patterns that are difficult to

change. With the increasing number of cases of drug addiction and the need for a more integrated approach, it is hoped that this research can provide information for practitioners in designing intervention strategies that can improve therapeutic outcomes for individuals experiencing addiction problems. Based on this, we conducted a scoping review of the combination of providing CBT interventions and their impact on victims of drug abuse. Therefore, the aim of this research is to map the CBT combination as well as identify the impact of the CBT combination intervention on drug abusers who experience addiction problems.

Method

This scoping review was conducted following the six-step framework developed by UNODC (2022). These steps include: 1) identifying research questions; 2) identifying relevant research; 3) selecting studies; 4) Charting the data; 5) compiling, summarizing, and reporting results; and 6) consultation. The initial two steps involve determining research questions and identifying relevant literature, utilizing the PCC acronym (population, concept, and context) with keywords in both English and Indonesian. The subsequent four phases adhere to the standard flowchart outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) to complete the third step. In this scoping review method, an evaluation is carried out using tools from the JBI (Joanna Briggs Institute) to develop a comprehensive understanding of the scope of available literature.

Identifying the research questions

This scoping review focuses on finding questions about the combination of CBT for victims of drug abuse and the impact of CBT intervention in helping the healing process. In the literature search process, researchers use relevant keywords according to the PPC Framework.

Identifying relevant research

This study searched the database using PubMed, ScienceDirect, and Google Scholar. Keywords in English include "Drug Addict OR Substance Abuse AND Cognitive Behavior Therapy AND Dependence OR Substance Related Disorder", and keywords in Indonesian include "Pecandu Narkoba OR Penyalahguna Zat AND Cognitive Behaviour Therapy AND Ketergantungan OR Gangguan Terkait Zat".

Selecting studies

The scoping review also carried out a review framework to map the results of study selection. Study selection in this scoping review was carried out systematically using predetermined inclusion criteria. 1) The study in this scoping review refers to drug abusers and the combination of CBT and its impact on drug abusers or those experiencing addiction; 2) The selected articles are original articles using randomized control trials (RCTs) research methods; and 3) It was published for ten years (2014–2024) and written in English and Indonesian. Articles are written to meet the needs of the health and nursing fields.

Charting the data

In the fifth process of scope observation, three reviewers were involved based on strict competency criteria, including relevant educational background, experience in research or similar observations, in-depth analytical skills, and extensive knowledge of research methodology. We implemented a series of stringent verification steps to ensure the accuracy of the results presented in this review. First, we ensure the extracted results are consistent with the previously established research objectives. We further verified that the extracted data came from the appropriate inclusion articles by carefully examining each mapped element in the observations. We also checked references and

data sources to ensure the accuracy of the resulting interpretations and compared the results presented with the conclusions of each inclusion article to ensure the consistency and correctness of the conclusions drawn from those observations. With this approach, we ensured that this review accurately represented the findings and results of the relevant articles included. After data extraction was carried out based on the research objectives and results explored, the data were then mapped into this scoping review, including author and year, country of origin, subject, method, intervention details, impact, and research results. Data collection in this study was reviewed based on target subjects, research design, country, methods, interventions, and results of combined research on the use of CBT on victims of drug abuse and then carried out by extracting and tabulating data. Reviewers assessed full-text articles and assessed duplicates. Studies that met the inclusion criteria were selected for analysis.

Table 1. PCC's Search Strategy

Database	**Population**	**Concept**	**Context**	**Keywords and Boolean Operators**	**Search Date**
PubMed	Drug Addiction, Substance Abuse	Cognitive Behaviour Therapy	Dependence, Substance-Related Disorder	Drug Addict OR Substance Abuse AND Cognitive Behavior Therapy AND Dependence OR Substance-Related Disorder	2014-2024
Science Direct	Drug Addiction, Substance Abuse	Cognitive Behaviour Therapy	Dependence, Substance-Related Disorder	Drug Addict OR Substance Abuse AND Cognitive Behavior Therapy AND Dependence OR Substance-Related Disorder	2014-2024
Google Scholar	Pecandu Narkoba, Penyalahguna Narkoba	Cognitive Behaviour Therapy	Ketergantungan, Gangguan terkait Zat	Pecandu Narkoba OR Penyalahgun a Zat AND Cognitive Behaviour Therapy AND Ketergantung an OR Gangguan Terkait Zat	2014-2024

Compiling, summarizing, and reporting results
This step is the final step of the scoping review, which describes the results of the review that has been carried out by compiling, summarizing, and reporting the results of data extraction that has been reviewed.

Consultation
Consultation is the final stage in preparing the scoping review. At this stage, the researcher consulted with experts in the field to provide suggestions and input, starting with literature selection, the search process, and preparation for completing this scoping review. There were three reviewers involved based on strict competency criteria, including relevant educational background, experience in similar research or observation, excellent analytical skills, and extensive knowledge of research methodology. To ensure the accuracy of the results presented in this review, we implemented a series of stringent verification steps. First, we ensure the extracted results are consistent with the previously established research objectives. We also verified that the extracted data came from the correct inclusion articles by carefully examining each mapped element in the observations. In addition, we checked references and data sources to ensure the accuracy of the interpretation of the results produced and compared the results presented with the conclusions of each inclusion article to ensure the consistency and correctness of the conclusions drawn from these observations. With this approach, we ensured that this review accurately reflected the findings and results of the relevant articles. After the data extraction process was carried out based on the research objectives and results extracted, the data were then mapped into this scoping review, including the author's name and year, country of origin, subject, method, intervention details, impact, and research results.

Results
Initially, the search had taken 46,120 scientific articles. After the duplicates were removed, 7,028 articles were selected. After the title and abstract were read, 7,011 articles were excluded. Out of the 17 selected articles, nine were excluded for failing to meet the eligibility criteria. After carefully analyzing the complete manuscripts, eight studies were included in this scoping review (Figure 1).

Preliminary findings from this scoping review indicate that the use of M-CBT for cocaine dependence is effective in increasing recovery motivation in the cocaine-dependent population (Aharonovich et al., 2018). In addition, the combination of CBT with Contingency Management (CM) can facilitate changes in neural activity related to cognitive control in populations receiving this therapy (Devito et al., 2017). For alcohol use in adolescents and women, interventions such as CBT combined with Motivational Enhancement Therapy (MET), Abstinence Incentives (ABI), and Attendance Incentives (ATTI) have also been shown to be effective (Stanger, 2017). Intervention results suggest that the Female-Specific CBT (FS-CBT) protocol can increase social support for abstention among women post-treatment, compared with conventional CBT (Epstein et al., 2018). Interventions such as galantamine and computer-based CBT (C-CBT) have been shown to reduce cocaine use (Carroll et al., 2018). Cognitive Behavioral Therapy for Cocaine Dependence (CBT4CBT) participants who achieved cocaine abstinence for more than three weeks during treatment showed significant reductions in the Drug Stroop Effect, underscoring the efficacy of computer-based CBT in reducing attentional bias towards drug-related stimuli (DeVito et al., 2018). Motivational Enhancement Therapy (MET) and Cognitive Behavioral Therapy (CBT) have been shown to be effective in reducing cannabis use by focusing on increasing motivation to change and altering thought and behavior patterns associated with substance use. This method supports individuals in developing healthier strategies for dealing with challenges related to cannabis use (Stephens et al., 2020). Overall, the results of this review highlight various

combinations of CBT that have the potential to reduce the use of various types of illicit substances as well as influence neural activity related to cognitive control in individuals experiencing cocaine dependence.

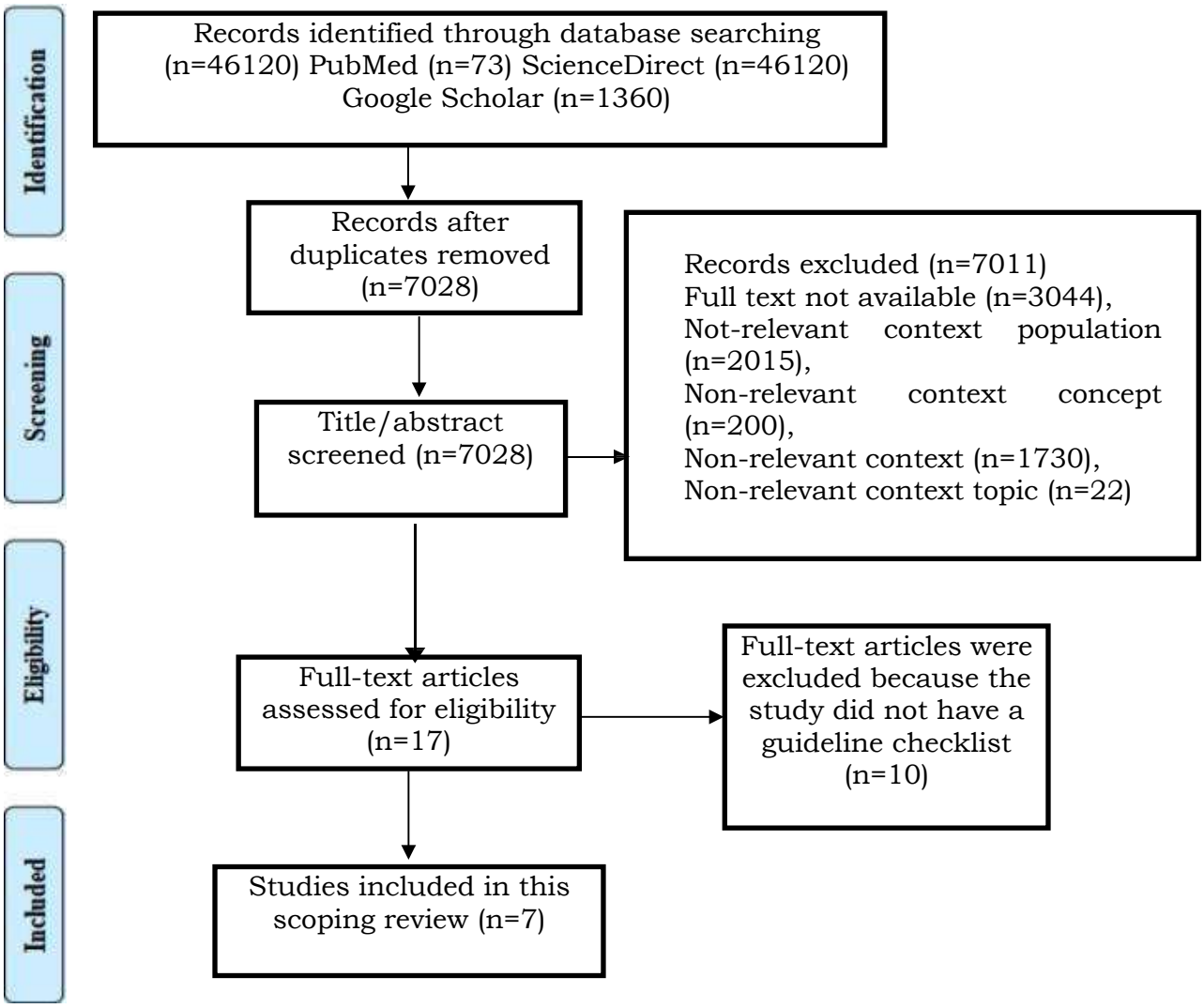

Figure 1. Flowchart of the selection process of articles according to the PRISMA statement

Modified Cognitive Behavioral Therapy (M-CBT): Impacts Motivational Recovery in Cocaine Dependence

M-CBT enhances motivational recovery for individuals with cocaine dependence. Previous research suggests that compared with minimal treatment, CBT shows consistent, moderate, and significant effect sizes across a wide range of outcomes and follow-up periods. Compared with nonspecific therapy or treatment as usual, CBT showed significant treatment effects on the frequency and amount of consumption in the early follow-up stages, although these effects decreased over time. In contrast, the effects of CBT compared with specific therapies consistently show a lack of responsiveness in various outcomes and durations of follow-up. Two of the ten pooled effect sizes analyzed showed moderate heterogeneity, but multivariate analysis revealed few systematic predictors of between-study variation (Magill et al., 2019).

Based on these findings, a combination of CBT may be necessary to increase the effectiveness of the intervention. This research highlights that cognitive impairment presents a significant challenge in the treatment of cocaine dependence. Nevertheless, the development of M-CBT that integrates compensatory strategies is emerging as a promising approach to address this problem. Although preliminary results from an early-stage randomized clinical trial did not demonstrate significant superiority of M-CBT compared with standard CBT in reducing drug use or improving treatment retention, there was a trend toward more significant reductions in cocaine use among participants who completed at least nine weeks of M-CBT. This demonstrates the potential effectiveness of M-CBT for both cognitively impaired and non-cognitively impaired individuals and provides a basis for further investigation and refinement of interventions tailored for this population (Aharonovich et al., 2018).

Cognitive Behaviour Therapy (CBT) and Contingency Management (CM): Impact on Changes in Control-Related Neural Activity in Cocaine Dependence

This study explored the correlation between cognitive control-related neural activity and treatment outcomes in participants with cocaine use disorder. In the randomized clinical trial, participants received cognitive behavioral therapy (CBT), contingency management (CM) or no CM, and disulfiram or placebo. Analyses showed decreased Stroop-related neural activity after treatment, which was associated with higher engagement in CBT sessions and receipt of CM rewards but was not associated with the day of disulfiram administration. Within the sample overall, compared to beginning-of-treatment, post-treatment Stroop-related neural activity was diminished in the hippocampus, thalamus, cingulate, precentral, post/precentral gyrus, and precuneus and culmen regions ($pFWE<.05$). These findings indicate that crucial process indicators from CBT and CM may be associated with functional changes in cognitive control-related neural circuits (Devito et al., 2017).

CBT with Motivational Enhancement Therapy (MET): Its Impact on Reducing Alcohol and Drug Consumption in Addicted Adolescents

A study showed that a combination of motivational enhancement therapy (MET) and cognitive behavioral therapy (CBT), along with weekly urine testing, abstinence incentives (ABI), parent training, and attendance incentives (ATTI), can significantly reduce alcohol and substance use in adolescents during and after treatment. This research confirms that these interventions not only focus on reducing substance use but also address the critical role of parents in supporting adolescents' recovery from substance use disorders. This intervention encourages changes in behavior and thought patterns that support adolescents' long-term recovery from addiction problems by using a structured therapeutic approach and positive incentives (Stanger, 2017).

Galantamine with Computer-Based CBT (C-CBT): Impact on Reducing Cocaine Dependence

This study was a 12-week 2×2 factorial trial evaluating the effects of galantamine on cocaine use and cognitive function in individuals with cocaine use disorder. Results of the analysis showed significant reductions in the frequency of cocaine use over time, with significant interaction effects between galantamine versus placebo ($F=5.3$, $p=0.02$) and computer-based cognitive behavioral therapy versus standard methadone treatment ($F=4.2$, $p=0.04$). However, there is no significant evidence that the combination of both therapies provides additional benefits compared to each treatment separately (Carroll et al., 2018).

Female-Specific Cognitive Behavioral Therapy (FS- CBT): Impact on Reducing Alcohol Use in Women

The results showed that the Female-Specific Cognitive Behavior Therapy (FS-CBT)

protocol explicitly developed for alcohol-dependent women shows high levels of engagement and satisfaction with the treatment. They also reported significant reductions in alcohol consumption as well as expected changes in almost all aspects, except social support for abstinence (Epstein et al., 2018).

Cognitive Behaviour Therapy for Cocaine Dependence: Impact on Reducing Cocaine Dependence

This study demonstrated that participants who achieved a more extended period of cocaine abstinence (3+ weeks) during treatment showed a significant reduction in the Drug Stroop Effect compared to those who had a shorter period of abstinence. These findings suggest that prolonged abstinence may reduce attentional bias toward drug-related cues and potentially reduce drug cravings. Additionally, the degree of reduction in the Drug Stroop Effect during treatment correlated with increased engagement in treatment components specific to Computer based Cognitive Behavioral Therapy for Cocaine Dependence (CBT4CBT) rather than Treatment as Usual (TAU) components. These results imply that mechanisms such as increased executive cognitive control and response inhibition, facilitated by CBT4CBT, may underlie its effectiveness in reducing drug-related cognitive biases and cravings among cocaine-dependent individuals (DeVito et al., 2018).

CBT with Motivational Enhancement Therapy (MET): Its Impact Reducing Cannabis

The research was also conducted by Stephens et al. (2020); the results from the study showed that both fixed-dose and "as-needed" treatment models using motivational enhancement therapy (MET) and CBT were effective in reducing marijuana use and related problems in the short term. Although there were no significant differences between the two conditions, these are long-term results. This study suggests that MET and CBT can be effective treatment options for treating marijuana use disorder in clinical settings, but further research is needed to understand better the long-term effects of these two treatment models (Stephens et al., 2020).

Table 1. JBI Critical Appraisal Tool

Author, Published Year	JBI Critical Appraisal Tool	Study Design
(Aharonovich et al., 2018).	61.54%(8/13)	RCT
(Devito et al., 2017).	69.23%(9/13)	RCT
(Stanger, 2017).	61.54%(8/3)	RCT
(Carroll et al., 2018).	69.23%(9/13)	RCT
(Epstein et al., 2018).	76.92%(10/13)	RCT
(DeVito et al., 2018).	69.23%(9/13)	RCT
(Stephens et al., 2020).	69.23%(9/13)	RCT

Table 2. Characteristics of the included studies

Articles No.	Authors, year	Purpose	Country	Method	Sample	Intervention	Impact	Result
1.	(Aharonovich et al., 2018).	Modified Cognitive Behavioral Therapy (M-CBT) for Cocaine Dependence: Development of Treatment for Cognitively Impaired Users and Results from a Stage 1 Trial	New York	A Pilot Randomized Trial.	Stage 1 (N=15) Stage 2 (N=102)	M-CBT	Increasing recovery motivation in cocaine-dependent populations.	Among participants who completed at least nine weeks of therapy, the mean CSQ score was 46.5 (SD=5.2) for the MCBT group and 37.9 (SD=10.0) for the CBT group, with a significant difference (F=1.29)=9.5, p=0.004).
2.	(Devito et al., 2017).	Functional neural changes following behavioral therapies and disulfiram for cocaine dependence	United States of America	Randomized Control Trial (RCT)	26	Cognitive Behavior therapy (CBT) plus contingency management (CM) or no CM, as well as disulfiram or placebo.	We are facilitating changes in neural activity related to cognitive control in populations receiving such therapy.	The results showed that Stroop-related neural activity was significantly reduced after treatment, especially in several brain regions such as the hippocampus, thalamus, cingulate, and precentral gyrus (pFWE<0.05).
3.	(Stanger, 2017).	Abstinence Based Incentives plus Parent Training for Adolescent Alcohol and Other Substance	USA	Randomized Control Trial (RCT)	75	Motivational Enhancement Therapy/Cognitive Behavior Therapy (MET/CBT), Weekly Urine Testing, Abstinence Incentive (ABI),	We are reducing alcohol and substance consumption in adolescents with the help of parent training and	Results showed that the experimental treatment (EXP) resulted in a significant reduction in the percentage of days of alcohol and marijuana use compared to the control group (CONTROL) during the post-treatment period up

Articles No.	Authors, year	Purpose	Country	Method	Sample	Intervention	Impact	Result
						Parent Training, Attendance Incentive (ATTI)	incentives.	to 36 weeks with (p=0.80)
4.	(Carroll et al., 2018).	Galantamine and Computerized Cognitive Behavioral Therapy for Cocaine Dependence: A Randomized Clinical Trial.	USA	RCT	120	Galantamine and Computerized Cognitive Behaviour Therapy	The impact of CBT in this study was to reduce the drug use of cocaine.	The result of random effects regression analysis showed that galantamine vs. placebo (F=5.3, p=0.02) and computer-based cognitive behavioral therapy vs. standard methadone treatment (F=4.2, p=0.04) resulted in a significant reduction in the frequency of cocaine use over time.
5.	(Epstein et al., 2018).	A Randomized Trial of Female-Specific Cognitive Behavior Therapy for Alcohol Dependent Women.	USA	RCT	99 women with Alcohol Use Disorder (AUD)	Female-Specific Cognitive Behavioral Therapy (FS-CBT)	The impact of CBT in this research is to reduce alcohol use in women.	The results showed that after FS-CBT treatment, there was a significant increase in the percentage of abstainers in the social network (p=0.002).
6.	(DeVito et al., 2018).	Drug Stroop: Mechanisms of response to computer-based cognitive behavioral therapy for cocaine dependence in a randomized clinical trial.	USA	RCT	79	Computer-Based CBT (CBT4CBT)	The impact of CBT in this study was to produce positive effects by reducing cocaine use.	The study results showed that in the total sample, changes in Drug Stroop Effect scores at post-treatment compared to pre-treatment were significantly related to indicators of engagement in CBT4CBT sessions

Articles No.	Authors, year	Purpose	Country	Method	Sample	Intervention	Impact	Result
								(p<0.05).
7.	(Stephens et al., 2020).	Treating Cannabis Use Disorder: Exploring a Treatment As Needed Model with 34-Month Follow-up.	USA	RCT	89	Motivational Enhancement Therapy (MET) and Cognitive Behavioral Therapy (CBT).	The impact of CBT in this research is that combining CBT and MET is effective in reducing marijuana use.	The result of the study showed the 4-month assessment, where the percentage of participants reporting complete abstinence was higher in the dose condition—fixed (37%) compared with the PRN condition (15%), X2=4.96, p<0.05.

Discussion

In this scoping review, researchers gathered evidence regarding the combined use of CBT in the treatment of individuals experiencing drug dependence. The results of this scoping review also underline the importance of adapting CBT models for various populations, such as adolescents and young adults, as well as individuals with comorbid disorders (Ding & Li, 2023). Studies show that CBT is able to change thought patterns and behaviors related to drug use, while the MET approach increases motivation to change (Filges & Jorgensen, 2018).

Studies on factors predictive of success in CBT use highlight that individual characteristics and the type of drug used influence response to therapy (Johnson, 2021). This therapy not only increases awareness of the thought patterns and behaviors that include embracing drugs but also provides concrete strategies for overcoming challenges that arise in the recovery process (Stanger, 2017). Nonetheless, the literature also reveals challenges in implementing CBT, including low rates of patient compliance and inadequate systemic support (Chapoutot et al., 2021).

The results of the exploration of various aspects of the use of CBT in the treatment of individuals experiencing drug dependence show that the use of CBT in combination with other approaches, such as motivational enhancement therapy (MET) and contingency management (CM), is effective in reducing drug use behavior and improving recovery outcomes in populations struggling with drug addiction (Carroll et al., 2018). Cost-benefit analysis suggests that the use of CBT in the treatment of drug addiction can be an economically efficient solution, although it requires significant initial investment (Fardone et al., 2023). Although the literature shows success in the use of combined CBT, there are still gaps in knowledge about how variables such as population characteristics or type of drug may influence long-term treatment outcomes (Aharonovich et al., 2018).

The evaluation methodology studies included in this scoping review demonstrate variation in study design and outcome measurement, underscoring the need for more consistent and standardized approaches in future research. The practical implications of the findings of this scoping review highlight the importance of integrating CBT in the clinical management of drug dependence. Recommendations for further research include further exploration of CBT adaptations for different populations as well as exploration of more innovative and effective incorporation methods in the treatment of drug addiction (Carroll et al., 2018). Overall, the integration of CBT into drug addiction treatment approaches promises to be a step forward that can improve recovery outcomes and minimize relapse. This scoping review provides essential insights for mental health practitioners and researchers considering the most effective and relevant therapeutic approaches to treating the complex problems associated with drug addiction.

Limitation

Although CBT shows excellent potential for treating substance use disorders, several limitations need to be acknowledged. Existing studies highlight challenges such as variation in individual response to therapy, the complexity of cognitive impairment in some patients, and constraints in resources and training for healthcare providers. The need for developing more focused techniques and continued research to understand the long-term effects of various modifications of CBT will also be critical in maximizing the benefits of this therapy in clinical practice.

Contribution to global nursing practice

CBT integration into substance use disorder treatment contributes significantly to global nursing practice by offering evidence-based therapeutic approaches. Nurses

trained in CBT can play pivotal roles in implementing structured interventions that address both the psychological and behavioral aspects of addiction. This approach not only enhances patient outcomes but also empowers nurses to effectively manage and support individuals with substance use disorders across diverse healthcare settings. CBT is not limited to one particular category of health professionals, such as clinical nurses or doctors. Special skills are required to carry out CBT effectively, including understanding the basic principles of CBT, intervention techniques, and the ability to adapt therapy according to the client's individual needs. All articles that were included demonstrated that nurses, physicians, and therapists who had received training and certification in CBT provided CBT therapy to the sample studied. This confirms that the implementation of CBT therapy is more comprehensive than that of one professional group. The quality of the therapeutic intervention corresponds to professional standards established in the field of mental health.

Conclusion

CBT stands out as a vital therapeutic modality in the treatment of substance use disorders, offering practical strategies to modify maladaptive behaviors and thought patterns. The integration of CBT with other interventions shows promise in enhancing treatment outcomes and addressing complex clinical challenges associated with addiction. Continued research and adaptation of CBT techniques are essential to further optimizing their efficacy and applicability in clinical practice.

Author Contribution

The authors contributed equally to the conception, design, and drafting of the manuscript. Each author reviewed and approved the final version for submission. The study included three reviewers, who played an essential role in refining the research methodology and results. Author 1 made significant contributions in the conceptualization and methodology stages of the study, assessing the JBI tools used and reviewing the article. In addition, they play a role in the process of writing, reviewing, and editing the manuscript to ensure the clarity and consistency of the text. Author 2 was also active in conceptualizing this study and reviewing the article. Meanwhile, Author 3 made a unique contribution to managing resources and was involved in writing reviews and editing the manuscript. Through their different roles, the three reviewers have enriched the quality of this study by ensuring solid methodology and a comprehensive presentation of results.

Conflict of interest

The authors declare no conflict of interest related to this manuscript.

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