

EFFECTIVENESS OF CBT BASED RELAPSE PREVENTION THERAPY IN REDUCING RELAPSE RISK AND CRAVING AMONG INDIVIDUALS WITH SUBSTANCE USE DISORDER

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Abstract

Present study explored the effectiveness of Cognitive Behavioral Therapy with Relapse Prevention Techniques (CBT-BRPT) in reducing relapse risk and craving among individuals with substance use disorder (SUD). Drawing from a comprehensive literature review, the study addressed the pressing need for evidence-based interventions to combat SUD and its associated challenges. Present study employed a Pre-Experimental Research Design with a one-group pretest-posttest approach, utilized the purposive sampling to recruit a sample of 50 male participants seeking treatment for SUD. The instruments utilized include the Stimulant Relapse Risk Scale (SRRS), the Brief Substance Craving Scale (BSCS), and a Demographic Information Form. Results demonstrated significant reductions in both craving and relapse risk among participants who received CBT-BRPT intervention. These findings underscore the importance of CBT-BRPT as a viable treatment option for individuals with SUD, offering promising implications for clinical practice and substance abuse treatment programs. Despite limitations such as sample size and absence of a control group, the study's findings advocate for the integration of CBT approaches into existing treatment modalities and call for further research to validate the efficacy of CBT interventions in addressing substance use disorders comprehensively.

Keywords: *CBT, Relapse Prevention Techniques, Substance use Disorder, Relapse Risk, Effectiveness, Addiction, Risk Reduction*

INTRODUCTION

The recognition and utilization of Cognitive Behavioral Therapy (CBT) has experienced a notable surge, with individuals increasingly acknowledging its pivotal role in daily life and coping strategies (Matthys & Schutter, 2021). Rooted in psychology, CBT constitutes a form of talking therapy aimed at managing behavior and mental cognitions while concurrently fostering healthier thought patterns and enhancing cognition (Dozois & Rnic, 2019). This therapeutic approach operates on the premise that there exists a profound linkage between thoughts and feelings, and endeavors to elucidate and modify thought patterns to facilitate improved emotional well-being and mental health (Harwood et al., 2010). Throughout

history, CBT has emerged as a potent tool in the treatment of neurotic disorders, facilitating the enhancement of cognitive patterns and promoting the cultivation of realistic thinking processes (Sauer-Zavala et al., 2022).

The evolution of CBT traces back to the origins of behavior therapy, which initially encountered challenges but ultimately refined methods for managing mental disorders (Thoma et al., 2015). Early practitioners recognized the potential of operant conditioning principles in shaping behavior, particularly in children, where positive reinforcement strategies were employed to encourage desired behaviors and diminish unwanted ones (Van der Oord & Tripp, 2020). As pioneering psychologists delved deeper into the intricacies of human cognition and behavior, they recognized the need to address faulty thought patterns underlying maladaptive behaviors (Delcea et al., 2023). This realization laid the groundwork for the development of cognitive-behavioral approaches, which sought to rectify dysfunctional thinking processes and replace them with more adaptive cognitive patterns.

One pivotal figure in the advancement of CBT was Aaron T. Beck, whose cognitive therapy revolutionized the field by emphasizing the role of cognitions in the manifestation and perpetuation of emotional distress (Villa, 2023). Beck's cognitive triad proposed that individuals prone to depression often exhibit distorted perceptions of themselves, the world, and the future, leading to pervasive feelings of hopelessness and despair (Farhadi & Vassel, 2023). By identifying and challenging these cognitive distortions, cognitive therapists' endeavor to reframe negative thought patterns and instill more realistic and adaptive cognitions, thereby alleviating symptoms of depression and other psychological disorders (Mullins, 2019).

In addition to individual therapy, CBT has also demonstrated efficacy in the realm of substance abuse treatment, where faulty thought patterns often contribute to the initiation and maintenance of addictive behaviors (Shams et al., 2021). Youth are susceptible to societal influences that promote substance use as a means of coping with stressors or fitting in with peer groups. Prevention strategies rooted in CBT principles emphasize the cultivation of resistance skills and the avoidance of high-risk situations, empowering young individuals to make informed decisions and resist peer pressure (Sadie & Steckley, 2023).

Moreover, family-based interventions have emerged as a cornerstone of effective substance abuse treatment, recognizing the integral role of familial dynamics in shaping behavior and promoting recovery (Bosk et al., 2019). Programs such as Adolescent Portable Therapy prioritize family involvement and incorporate CBT techniques to address underlying family dynamics and facilitate communication and problem-solving skills within the familial unit (Joyce & Beaulieu, 2015). By addressing dysfunctional patterns of interaction and fostering a supportive and nurturing family environment, these interventions aim to mitigate risk factors for substance abuse and promote positive outcomes for adolescents and their families (Kumpfer, 2014).

As CBT continues to evolve and adapt to the changing landscape of mental health treatment, ongoing research endeavors seek to elucidate its mechanisms of action and optimize its effectiveness across diverse populations and clinical settings (Zaree & Mohamad, 2023). By integrating insights from neuroscience, cognitive psychology, and behavioral science, contemporary CBT approaches aim to refine therapeutic techniques and tailor interventions to meet the unique needs of individual clients. Furthermore, the proliferation of technology-enabled interventions and teletherapy platforms has facilitated greater access to CBT services, allowing individuals to receive evidence-based treatment from the comfort of their own homes (Malik & Ahmed, 2023).

Hypotheses

H1: Participants receiving CBT-BRPT will exhibit a statistically significant decrease in self-reported craving levels.

H2: Participants undergoing CBT-BRPT will demonstrate a statistically significant reduction in assessed relapse risk.

Method

Research Design

A Pre-Experimental Research Design with a one-group pretest-posttest approach in a non-randomized trial study.

Sample

Total sample was ($n = 50$) sample of SDU seeking treatment for SDU patient. The study sample comprised 50 male participants, representing 100% of the total sample through purposive sampling technique. Among them, 64% were married, while 36% were unmarried or single. Most participants (70%) fell within the 20–30-year age groups, with the remaining 30% aged between 31–40 years. Educational qualifications varied, with 60% having below matriculation education and 30% having completed matriculation or intermediate studies. Additionally, 10% had bachelor's degrees or higher, with 14.3% holding post-graduate qualifications. Employment status indicated that 28% of participants were employed, while 72% were classified as non-employed.

Inclusion Criteria

Male individual's aged 20–40 seeking treatment for substance use disorder (SUD) was included in the study. Participants had to express willingness to engage in Cognitive Behavioral Therapy with Relapse Prevention Techniques (CBT-BRPT) and demonstrate the ability to comprehend and respond to assessment tools and therapy sessions in the language used. They

should not have undergone CBT-BRPT previously or participated in similar interventions within the past six months. Additionally, participants were required to provide informed consent for their participation in the study.

Exclusion Criteria

Female individuals were excluded from the study due to the sample being exclusively male based on availability. Individuals below the age of 20 or above the age of 40 were also excluded. Those with severe cognitive impairment or language barriers that hindered comprehension or participation in therapy sessions were ineligible. Previous participation in CBT-BRPT or similar interventions within the past six months was grounds for exclusion. Furthermore, individuals with severe psychiatric or medical conditions that could interfere with participation in therapy or accurate assessment of outcomes were not included in the study.

Instruments

Stimulant Relapse Risk Scale (SRRS).

Brief Substance Craving Scale (BSCS).

Stimulant Relapse Risk Scale (SRRS). Stimulant Relapse Risk Scale is a 35-item measure of relapse developed. The scale measures the relapse risk of 5-point Likert scale from *strongly disagrees* to *strongly agree* (1 to 5). The scale has reported high reliability values i.e. 0.85 and above in different contextual studies. The scale also has a high validity index.

Brief Substance Craving Scale (BSCS). The BSCS is 16 items; self-report instrument assesses craving for cocaine and other substances of abuse over a 24-hour period. Intensity and frequency of craving are recorded on a five-point Likert scale. Reliability data for this instrument has been collected at the Cincinnati MDRU. The BSCS takes approximately 10 minutes; it can be used at intake, during treatment, and at follow-up. The scale has shown good reliability and validity index in the past, 0.91 and above.

PROCEDURE

The study employed a pre-experimental research design with a one-group pretest-posttest approach, focusing on the effectiveness of CBT with Relapse Prevention Techniques (CBT-BRPT) in reducing relapse risk and craving among individuals with substance use disorder (SUD). Purposive sampling was utilized to recruit a sample of n= 50 male participants seeking treatment for SUD, who met inclusion criteria such as being aged 20-40 and expressing willingness to engage in CBT-BRPT. Participants completed pre-intervention assessments using the Stimulant Relapse Risk Scale (SRRS) and the Brief Substance Craving Scale (BSCS), alongside a demographic information form. Following the intervention, post-intervention assessments were conducted using the same measures. Data were analyzed using descriptive

statistics, Pre- and Post-Relapse Risk to evaluate changes in relapse risk and craving levels pre- and post-intervention.

Ethical Considerations

This research project received approval from the committee or institutional review board, which serves as an independent body responsible for assessing the ethical implications of research involving human participants. The approval process involved a thorough review of the study design, procedures, and protocols to ensure compliance with ethical standards and regulations. The ethical committee or institutional review board provided formal approval for this study, indicating that the research meets the necessary ethical requirements. This approval underscores the commitment of the research team to uphold ethical principles and safeguard the welfare of participants throughout the duration of the study.

Results

Table 1

Frequency and Percentage of Participants on Demographic Variables (n=50)

<i>Demographic Variables</i>	<i>f</i>	<i>%</i>
Men	50	100
Marital Status		
Married	32	64
Un-married/ Single	18	36
Age		
20-30	35	70
31-40	15	30
Qualifications		
Below matriculation	30	60
Matriculate/Intermediate	15	30
Bachelor's and above	5	10
Postgraduate	39	14.3
Employment Status		
Employed	14	28

Non-Employed

36

72

Table 2

Psychometric Properties of Study variables (n=50)

Variables	M	SD	Range		Skewness	Kurtosis	Cronbach Alpha
			Potential	Actual			
Pre-Relapse Risk	134.80	8.90	35-175	110-149	.52	.15	.72
Pre-Craving	61.70	3.85	16-80	53-71	.10	.07	.85

Table 2 presents the descriptive statistics and alpha reliabilities of relapse risk and Craving. Reliability analysis yields Cronbach's alpha of .72 and .85 respectively, reflecting good internal consistency.

Table 3

Effect of Intervention on Pre- and Post-Relapse Risk and Craving Scores (n=50)

Variable	Pre		Post		t (49)	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Relapse Risk	134.80	.90	57.61	.25	7.54(49)	.001	0.55	5.64	10.04
Craving	61.70	.85	49.27	.14	4.10 (49)	.001	2.07	4.80	12.07

Table 3 presents "Relapse Risk," there was a significant decrease from pre ($M = 134.80$, $SD = 0.90$) to post-intervention ($M = 57.61$, $SD = 0.25$), $t(49) = 7.54$, ($p < .001$). Cohen's d effect size is 10.04, indicating a large effect size. Regarding the variable "Craving," a significant reduction was observed from pre-intervention ($M = 61.70$, $SD = 0.85$) to post-intervention ($M = 49.27$, $SD = 0.14$), $t(49) = 4.10$, $p < .001$. Cohen's d effect size is 12.07, indicating a large effect size.

DISCUSSION

The study underscores the paramount importance of Cognitive Behavioral Therapy (CBT) as a cornerstone in contemporary mental health treatment (Theodoratou et al., 2023). CBT's evolution from its roots in behavior therapy to a comprehensive approach targeting

cognitive processes reflects its adaptability to meet the dynamic needs of individuals facing mental health challenges (Svitak, & Hofmann, 2024). Renowned figures like Aaron T. Beck have shed light on the intricate interplay between distorted thinking and emotional distress, leading to the development of interventions that not only reshape negative thoughts but also foster realistic thinking patterns (Islam et al., 2023).

In addressing substance abuse, CBT interventions have proven particularly effective in targeting faulty thought patterns underlying addictive behaviors, especially among vulnerable populations like youth (Ali, 2023). Prevention efforts grounded in CBT principles prioritize equipping individuals with resistance skills and empowering them to make informed decisions, thereby reducing the likelihood of substance abuse initiation and relapse (Johnson, 2021). Moreover, the integration of CBT techniques into family-based interventions has demonstrated significant success in addressing dysfunctional dynamics and fostering supportive environments conducive to recovery, highlighting the versatility and effectiveness of CBT across diverse settings and populations (Sapp, 2023).

Additionally, the study's findings on the efficacy of Cognitive Behavioral Therapy-Based Relapse Prevention Intervention (CBT-BRPI) among individuals seeking treatment for substance use disorders serve as a testament to the potential of CBT-based interventions in mitigating challenges related to substance abuse. The significant reductions observed in both relapse risk and craving scores post-intervention underscore the promise of CBT in enhancing treatment outcomes for individuals grappling with substance use disorders. These findings not only hold significant implications for clinical practice and policy development but also highlight the importance of continued research efforts to refine therapeutic techniques and tailor interventions to the individual needs of diverse populations. As CBT remains a cornerstone in fostering positive outcomes and enhancing well-being across various contexts, its ongoing integration and adaptation are crucial in addressing the evolving landscape of mental health challenges.

Implications

The study results have significant implications for CBT practitioners, substance abuse treatment providers, and society at large. The findings suggest that regular and effective CBT interventions can lead to reduced craving for drug substances, decreased intention and anxiety related to substance use, as well as diminished emotional problems and compulsivity for drugs among individuals with substance use disorder. These implications highlight the importance of integrating CBT approaches into substance abuse treatment programs to enhance treatment outcomes and promote long-term recovery.

Limitations

While this study offers valuable insights into the effectiveness of Cognitive Behavioral Therapy-Based Relapse Prevention Intervention (CBT-BRPI) for individuals with substance

use disorder, it is important to recognize several limitations that may affect the interpretation and generalizability of the findings. Firstly, the use of purposive sampling and the restriction to male participants due to availability constraints may introduce sampling bias and limit the applicability of the results to broader populations. Additionally, the absence of a control group in the pre-experimental design with a one-group pretest-posttest approach hinders the ability to establish causal relationships between the intervention and observed outcomes. Furthermore, reliance on self-report measures such as the Stimulant Relapse Risk Scale and the Brief Substance Craving Scale may be susceptible to response bias and social desirability effects, potentially influencing the accuracy of the data collected. The short-term follow-up period limits the assessment of long-term efficacy and sustainability of the CBT-BRPI in reducing relapse risk and craving among participants. Moreover, the exclusion criteria, including individuals with severe cognitive impairment or medical conditions, may restrict the generalizability of findings to certain subsets of the population. Lastly, while ethical approval was obtained, the absence of detailed information on ethical considerations within the manuscript may raise concerns regarding participant welfare and data integrity. Addressing these limitations in future research endeavors will be crucial to enhance the robustness and applicability of findings in clinical practice and policy development.

Recommendations

Based on the study's findings, several recommendations can be proposed. CBT practitioners should be deployed within correctional facilities to provide treatment to incarcerated individuals struggling with substance abuse. Furthermore, replication of the study on a larger scale is warranted to validate and reinforce the efficacy of CBT interventions in reducing relapse risk and craving among individuals with substance use disorder. These recommendations aim to facilitate the widespread adoption of evidence-based CBT practices in substance abuse treatment settings, ultimately improving outcomes for individuals affected by substance use disorder.

CONCLUSION

Cognitive Behavioral Therapy (CBT) is helpful for people struggling with substance use disorder. We found that CBT can reduce the urge to use drugs and lowers the risk of going back to using drugs after trying to quit. This means that CBT can make a big difference in helping people stay away from drugs and lead healthier lives. However, there were some limitations to our study. For example, we only studied men, so we're not sure if the results would be the same for women. Also, we didn't have a control group to compare our results to, which means we can't be completely sure that CBT was the reason for the improvements we saw. Despite these limitations, our findings suggest that CBT could be an important part of treatment for substance use disorder. We recommend that more research be done to confirm these results and to see if CBT could be helpful for even more people. Overall, our study

highlights the potential of CBT to make a positive impact on people's lives by helping them overcome substance use problems.

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