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Research Article

Effectiveness of Cognitive-behavioral Therapy on the Weight of People Suffering from Obesity and Concerned about Body Image

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Abstract

Background: Obesity is a significant health concern associated with psychological difficulties, including body dissatisfaction. Cognitive Behavioral Therapy (CBT) may contribute to weight management and improved body image by modifying maladaptive cognitive and behavioral patterns.

Objectives: This study aimed to investigate the effectiveness of an eight-session CBT intervention in reducing body mass index (BMI) and improving body image satisfaction among individuals with obesity.

Methods: This experimental study included 30 individuals with obesity who were randomly assigned to either a CBT intervention group or a control group using a random number table and sealed envelopes. The intervention consisted of eight CBT sessions focusing on psychoeducation, emotional eating management, modification of negative body-related thoughts, development of coping strategies, and goal setting for weight management. Data were collected using BMI measurements and the Multidimensional Body-Self Relations Questionnaire (MBSRQ) and analyzed using SPSS version 23.

Results: The findings indicated statistically significant differences between the intervention and control groups in weight reduction and body image satisfaction. The mean BMI was 32.47 in the intervention group compared with 34.81 in the control group ($p < .001$). Participants receiving CBT also demonstrated significantly greater improvements in body image satisfaction than those in the control group.

Conclusion: The findings suggest that an eight-session CBT intervention may be effective in reducing BMI and improving body image satisfaction among individuals with obesity. These results highlight the potential value of incorporating psychological interventions into comprehensive obesity management programs.

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Extended Abstract

Introduction

Obesity, defined by the excessive accumulation of body fat, stands as a formidable global health crisis, intricately linked to a wide spectrum of detrimental physical ailments and psychological distress. The Body Mass Index (BMI), commonly employed as a principal metric, designates a BMI of 30 or greater as indicative of obesity. The widespread prevalence of obesity, coupled with its attendant chronic diseases and associated morbidities, highlights the critical and pressing necessity for the development and implementation of treatment strategies that are not only efficacious but also readily accessible and economically viable for diverse populations.

While conventional medical approaches, including pharmacological interventions and surgical procedures, continue to play an indispensable role in the management of obesity, the significance of psychological therapies has steadily ascended. Among these, Cognitive-Behavioral Therapy (CBT) has garnered particular attention and acclaim. This is largely attributable to its inherent potential for minimizing the incidence of adverse effects and its demonstrated capacity for fostering enduring positive outcomes. CBT offers a structured framework that empowers individuals to identify and modify maladaptive thought patterns and behaviors that contribute to unhealthy eating habits and sedentary lifestyles, thereby facilitating sustainable weight loss and enhancing overall psychological well-being. This research endeavor was specifically designed to undertake a comprehensive and rigorous evaluation of the effectiveness of a structured 8-session CBT intervention program. The primary objectives were to ascertain its impact on critical aspects of weight management, including measurable reductions in body weight and associated indicators, and to assess its efficacy in ameliorating concerns related to body image. The target population for this study comprised individuals formally diagnosed with obesity, who often grapple with profound dissatisfaction and negative perceptions of their physical selves. By examining these dual outcomes, the study sought to provide robust empirical evidence regarding the utility of CBT as a valuable therapeutic tool in the multifaceted battle against obesity.

Method

This experimental study employed a robust methodology involving 30 participants diagnosed with obesity and exhibiting concerns about their body image. A cornerstone of this research was the implementation of simple randomization to allocate participants into two distinct groups: an intervention group receiving the 8-session CBT, and a control group. The randomization process was meticulously executed using a table of random numbers, with assignments determined by the last digit of the selected number. To ensure procedural integrity and mitigate bias, numbers ending in zero or digits from 7 to 9 were excluded, necessitating re-selection until all 30 participants were assigned. Allocation concealment was maintained through the use of sealed envelopes. Data collection encompassed two phases: a pre-test and a post-test, ensuring a comprehensive assessment of changes. The primary outcome measures included the Body Mass Index (BMI), a widely accepted quantitative

measure of body fat, and the Multidimensional Body-Self Relationship Questionnaire (MBSRQ), a validated instrument designed to assess various facets of body image. Statistical analysis was performed using SPSS software, version 23, with a significance level set at $\alpha=0.05$. Descriptive statistics, including frequency, mean, and standard deviation, were utilized to characterize the sample and the data. To ascertain the impact of the intervention and account for potential baseline differences, an analysis of covariance (ANCOVA) was employed to compare the post-test scores between the two groups, controlling for pre-test values.

Results

Results The findings of this study provide compelling evidence for the effectiveness of the 8-session Cognitive-Behavioral Therapy (CBT) intervention. Analysis revealed a statistically significant difference between the CBT group and the control group in both weight reduction and the amelioration of body image concerns. Participants in the CBT intervention group demonstrated a mean BMI of 32.47 ± 3.26 post-intervention, a notable decrease compared to the control group's mean BMI of 34.81±4.82. This difference highlights a greater efficacy of CBT in facilitating weight loss among individuals struggling with obesity. Furthermore, the impact of CBT extended to significant improvements in body image satisfaction. The mean score for body image in the CBT group was 138.88±11.92 following the intervention, indicating a substantial positive shift. In contrast, the control group's mean body image score was 90.99±13.34. This substantial disparity underscores the profound positive effect of CBT on participants' perception and satisfaction with their physical appearance. The differences observed between the two groups were statistically significant, with a p-value less than 0.001 ($p<0.001$), strongly supporting the conclusion that the CBT intervention was a powerful catalyst for both weight reduction and enhanced body image satisfaction.

Discussion

This research aligns with and expands upon existing literature in the psychological management of obesity. Obesity, a multifaceted disorder, impacts not only physical health but also significantly affects an individual's psychological well-being, often accompanied by considerable body image distress. The observed outcomes reinforce the hypothesis that targeted psychological interventions, such as CBT, can be instrumental in addressing these intertwined issues. The notable weight reduction and decreased body image concerns experienced by participants in the CBT group after just eight sessions highlight its clinical applicability and potential for delivering significant and rapid improvements.CBT's ability to equip individuals with strategies for cognitive restructuring and behavioral modification appears to be the primary driver of these positive changes. By furnishing participants with tools to challenge negative thought patterns related to food, weight, and body shape, and by encouraging the adoption of healthier behaviors, CBT fosters a more positive and adaptive self-perception. The sustained nature of these effects, as indicated by post-intervention improvements, suggests that CBT provides participants with skills that can be integrated into their long-term self-management strategies. These findings carry important implications for clinical practice, advocating for the integration of CBT as a primary or adjunctive therapy

within comprehensive obesity management programs, thereby enhancing both physical health outcomes and psychological resilience.

Furthermore, the present study contributes to a deeper understanding of the underlying mechanisms through which CBT influences weight loss and body image. The therapy doesn't solely focus on behavioral aspects but also addresses the cognitive roots of weight-related issues. Alterations in negative self-talk, dysfunctional beliefs about the body and one's ability to control weight, as well as improved coping skills, all contribute to positive outcomes. This comprehensive approach distinguishes CBT from more traditional interventions that might focus exclusively on diet and exercise.

Another significant point is CBT's impact on the emotional distress associated with obesity. Many individuals struggling with obesity also contend with anxiety, depression, and low self-esteem. By providing a framework for managing these emotions and developing a healthier attitude towards oneself, CBT can substantially improve the quality of life for these individuals. The improvement in body image observed in this study signifies not just greater satisfaction with physical appearance, but also greater self-acceptance and reduced shame or negative self-judgment about one's body. These psychological shifts can, in turn, enhance motivation for maintaining a healthy weight and engaging in social activitie.Ultimately, the significant success of CBT within a relatively short timeframe (eight sessions) underscores its efficiency and cost-effectiveness. This allows for broader accessibility to treatment and could be considered a key component in public health strategies to combat the obesity epidemic. Integrating CBT into existing treatment paradigms, whether in clinical settings or community support programs, could represent a crucial step towards improving the overall health of the population.

Author Contributions: In the present study, Dr. Yadoleh Zargar and Dr. Jalal Moludi were responsible for supervising the entire research process and finalizing the research revisions as supervisors. Ayoub Asadi was responsible for developing the research plan, the process of collecting, compiling, and interpreting the findings, and writing the text of the article. It should be noted that the discussion and conclusion sections were conducted with the participation of all colleagues.

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