KMAN PUBLISHING INSTITUTE
Journal Website

Article history:
Received 10 September 2025
Revised 01 December 2025
Accepted 07 December 2025
Initial Published 11 December 2025
Final Publication 10 January 2026

KMAN Counseling & Psychology Nexus

Volume 4, pp 1-11

E-ISSN: 3041-9026

Effectiveness of Mindfulness-Based Cognitive Therapy on Perceived Social Support and Resilience in Individuals with Morbid Obesity

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A r t i c l e I n f o

Article type:
Original Research
Section:
Health Psychology

How to cite this article:
Sharifi Nouri, S., & Abdivarmazan, M. (2026). Effectiveness of Mindfulness-Based Cognitive Therapy on Perceived Social Support and Resilience in Individuals with Morbid Obesity. *KMAN Conseling and Psychology Nexus*, *4*, 1-11.
http://doi.org/10.61838/kman.hp.psynexus.4851

A B S T R A C T

The objective of the present study was to examine the effectiveness of mindfulness-based cognitive therapy on perceived social support and resilience in individuals with morbid obesity. The research employed a quasi-experimental method with a pretest–posttest control group design. The statistical population consisted of individuals with morbid obesity (BMI above 40) residing in District 8 of Tehran in 2025, from which 30 individuals were selected through purposive sampling and randomly assigned to experimental and control groups (15 participants in each group). Mindfulness-based cognitive therapy was administered to the experimental group in eight sessions, each lasting 90 minutes, while the control group received no intervention. Data were collected using the Multidimensional Scale of Perceived Social Support (Zimet et al., 1988) and the Connor-Davidson Resilience Scale (Connor & Davidson, 2003). The mindfulness-based cognitive therapy protocol was delivered in eight weekly group sessions of 90 minutes each. Data analysis was performed using multivariate analysis of covariance. The findings indicated that, after controlling for the pretest effect, there was a statistically significant difference at the 0.05 level between the experimental and control groups in posttest scores of perceived social support and resilience. Therefore, mindfulness-based cognitive therapy can be considered an effective intervention for individuals with morbid obesity.

Keywords: *resilience, morbid obesity, perceived social support, mindfulness-based cognitive therapy*

1. Introduction

Obesity has become one of the most pervasive global health challenges of the twenty-first century, with psychological, physiological, and social consequences that extend far beyond weight-related complications. As epidemiological trends continue to rise across diverse age groups and geographical regions, a growing body of

interdisciplinary research has emphasized that obesity is not merely a metabolic condition but a biopsychosocial phenomenon influenced by environmental pressures, emotional vulnerability, and chronic stress responses. Contemporary epidemiological analyses describe obesity as a condition deeply embedded in socioeconomic transitions, dietary changes, and sedentary lifestyles, warranting a more integrative perspective on its determinants and consequences (Hruby & Hu, 2021). Within psychological science, an expanding line of inquiry has illuminated the relationship between obesity and emotional dysregulation, maladaptive coping strategies, and diminished resilience, suggesting that weight-related challenges often coincide with heightened susceptibility to stress, depression, and anxiety (Henriques et al., 2025). This perspective has led to the recognition that interventions aimed solely at physical outcomes may be insufficient, and that sustainable improvement requires targeting the cognitive, emotional, and interpersonal domains that shape individuals' experiences of their bodies and their social environments.

Among the psychological factors associated with obesity, perceived social support has emerged as a particularly significant construct due to its powerful buffering effect against psychological distress. Individuals with stronger perceived social support networks generally demonstrate greater emotional stability, adaptive coping, and willingness to engage in behavior change, whereas those with limited support are more prone to loneliness, negative self-appraisal, and maladaptive health behaviors (Wang et al., 2018). The foundational framework for assessing perceived social support, developed by Zimet and colleagues, conceptualizes support as a multidimensional construct encompassing family, friends, and significant others, each contributing uniquely to one's sense of belonging and emotional security (Zimet et al., 1988). Research in Iranian contexts has further validated the importance of perceived social support among populations facing health-related vulnerabilities, demonstrating strong associations with emotional intelligence, psychological resilience, and general well-being (Rostami et al., 2010). Moreover, empirical studies have shown that disruptions in social connectedness, whether due to obesity-related stigma or limitations in physical and social functioning, can exacerbate feelings of isolation and produce a cycle of psychological disengagement that undermines treatment outcomes (Salimi et al., 2009). These findings highlight the need for interventions that simultaneously enhance intrapersonal coping skills and strengthen social perceptions, particularly among individuals coping with morbid obesity.

Resilience, defined as the capacity to adapt positively in the face of adversity, represents another critical psychological construct that has gained prominence in obesity research. Seminal theoretical contributions from Southwick and colleagues describe resilience as a dynamic, multifaceted capability shaped by biological, cognitive, relational, and environmental systems (Southwick et al., 2014). Later refinements in the literature differentiate resilience from mere stress tolerance by emphasizing its active, transformative nature, aligning with contemporary ecological and psychological frameworks that view resilience as a process of continuous adaptation (Walker, 2020). The development of the Connor–Davidson Resilience Scale (CD-RISC) marked a turning point in resilience assessment, offering researchers a validated instrument capable of capturing individual differences in coping effectiveness, cognitive flexibility, and emotional regulation (Connor & Davidson, 2003). Studies using this scale across clinical and non-clinical populations have revealed that higher resilience correlates with improved mental health outcomes, better adjustment to chronic illness, and more adaptive emotional responses under stress (Jain & Singh, 2018). These patterns extend to obesity-related contexts, where psychological distress often interacts with emotional eating, body dissatisfaction, and internalized stigma, undermining individuals' ability to adopt and maintain health-promoting behaviors. Research documenting confirmatory factor structures of the CD-RISC in Iranian student populations further supports its cross-cultural relevance and psychometric robustness (Kheyani et al., 2014). As such, resilience represents a vital target for psychological intervention among individuals coping with the multifaceted burdens of obesity.

In recent years, mindfulness-based interventions have gained considerable empirical support as practical and effective tools for enhancing psychological well-being among individuals experiencing chronic stress, emotional dysregulation, and maladaptive coping behaviors. Grounded in cognitive and meditative traditions, mindfulness-based cognitive therapy (MBCT) integrates attentional training, emotion regulation strategies, and cognitive restructuring to reduce automatic thought patterns associated with negative affect and behavioral impulsivity (Segal et al., 2002). Neuroscientific evidence indicates that mindfulness practices enhance functional connectivity in prefrontal regions associated with executive control and emotion

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E-ISSN: 3041-9026

modulation, offering mechanistic explanations for their clinical efficacy (Rathore et al., 2022). Meta-analytic findings further demonstrate that mindfulness interventions reliably improve social connectedness, reduce psychological symptoms, and strengthen adaptive emotion regulation strategies (Keng et al., 2023). Within obesity research, mindfulness has received growing attention as a means of reducing emotional eating, increasing body awareness, and facilitating healthier behavioral choices. Systematic reviews have shown that mindfulness-based interventions can significantly improve physical health indicators, reduce binge-eating tendencies, and increase psychological resilience among adults with obesity (Rogers et al., 2017). Additional evidence suggests that mindfulness practices enhance subjective well-being and self-efficacy in individuals preparing for bariatric surgery, highlighting their potential as complementary approaches to medical treatment (Caynak et al., 2025). Recent clinical investigations specifically targeting obesity-related psychopathology further support the role of mindfulness in modifying emotional vulnerabilities that contribute to maladaptive eating patterns and body image disturbances (Aoun et al., 2025).

Studies within Iranian and regional populations corroborate these global findings, demonstrating that mindfulness-based interventions can significantly enhance resilience, perceived social support, and psychological flexibility among diverse groups. For example, mindfulness training has been shown to improve resilience and social support among female heads of households facing acute socioeconomic challenges (Hosseini Taqdehi, 2022). Research with students similarly indicates that mindfulness-based therapy strengthens interpersonal perceptions and adaptive coping (Mousavi Zadeh Gavarshaki & Fooladi, 2023). Comparative studies examining hope therapy and mindfulness interventions in clinical populations highlight the unique ability of mindfulness-based cognitive therapy to improve perceived social support across multiple relational domains, including friendships and family systems (Khaloui et al., 2021). Complementary evidence from acceptance and commitment therapy suggests that mindfulness-related processes improve body image flexibility and emotional regulation in individuals with obesity, reflecting the broader value of third-wave cognitive-behavioral interventions in weight-related contexts (Noroozi et al., 2021). These findings align with studies showing that mindfulness reduces emotional eating and enhances body image among overweight and obese Iranian women (Naseri Far et al., 2024). More recent investigations emphasize that mindfulness-based cognitive therapy and emotion-focused therapy can jointly reduce emotional vulnerabilities and improve body image among women with dysmorphic concerns, further reinforcing the adaptability and relevance of MBCT for culturally diverse populations (Nemativnashi et al., 2025).

Theoretical advances in resilience research provide additional support for the potential impact of mindfulness-based interventions in promoting adaptive functioning. Contemporary formulations of resilience, including resilience-to-change theory, conceptualize adaptability as a continuous process shaped by cognitive appraisal, emotional regulation, and behavioral flexibility (Rachmad, 2022). Studies examining resilience under crisis conditions across global industries suggest that resilience reflects not only personal coping capacity but also systemic and cognitive stability across multiple environmental pressures (Kojić et al., 2025). These conceptual expansions have direct implications for obesity research, where individuals must navigate fluctuating emotional states, environmental triggers, and long-term behavioral demands. Mindfulness-based interventions target precisely these domains by strengthening attention regulation, reducing cognitive reactivity, and enhancing emotional tolerance, thereby fostering conditions under which resilience can grow. Evidence from meta-analyses confirms that participation in mindfulness programs results in measurable increases in resilience, highlighting its potential as a robust psychological mechanism of change (O'Connor et al., 2023). Furthermore, culturally adapted mindfulness programs for clinical populations, including those with cancer and chronic illness, have demonstrated significant improvements in resilience and life expectancy, reinforcing the broad applicability of mindfulness practices across diverse health contexts (Garagoun et al., 2021).

Given the close interplay among resilience, perceived social support, and emotional well-being, the application of MBCT to individuals with morbid obesity represents a promising approach for addressing both psychological and behavioral challenges associated with the condition. Research analyzing social support among Iranian populations has found consistent associations between emotional intelligence, self-efficacy, and supportive interpersonal relationships, all of which represent critical factors for lifestyle change (Rostami et al., 2010). Additional work on the psychological consequences of loneliness and internet-based communication patterns suggests that deficits

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in perceived support can substantially diminish mental health outcomes, particularly in individuals already experiencing social stigmatization (Salimi et al., 2009). Within this broader psychological landscape, psychological distress associated with obesity may increase vulnerability to negative thought patterns, further reinforcing maladaptive behaviors that maintain the condition. Mindfulness-based programs, by teaching participants to become aware of internal experiences without judgment, may interrupt these cycles, enabling the cultivation of healthier self-perceptions and stronger adaptive capacities.

Taken together, these theoretical, empirical, and clinical findings underscore the importance of examining the role of mindfulness-based cognitive therapy in enhancing resilience and perceived social support among individuals with morbid obesity. Despite substantial evidence supporting the efficacy of mindfulness-based interventions in related populations, limited research has specifically evaluated their effects on these psychological constructs within Iranian adults suffering from severe obesity. Therefore, the aim of this study is to determine the effectiveness of mindfulness-based cognitive therapy on perceived social support and resilience in individuals with morbid obesity.

2. Methods and Materials

2.1. Study Design and Participants

The present study was applied in purpose and quasi-experimental in method, employing a pretest–posttest design with a control group. The statistical population consisted of individuals with morbid obesity (BMI above 40) residing in District 8 of Tehran, aged 20 to 40 years. To determine the sample size, purposive sampling was conducted in collaboration with specialized obesity treatment centers in District 8 of Tehran (such as Imam Hussein Hospital and affiliated clinics). After informing eligible patients, 30 individuals were selected and randomly assigned to experimental and control groups (15 participants in each group). The experimental group received mindfulness-based cognitive therapy in eight weekly sessions, each lasting 90 minutes, whereas the control group received no training.

The inclusion criteria consisted of completing the informed consent form and willingness to participate in the intervention program, not taking psychiatric medications, absence of psychological disorders, having morbid obesity above 40, and receiving diagnostic confirmation from a nutrition specialist. The exclusion criteria included lack of cooperation in any phase of the study and simultaneous participation in similar psychological–educational programs. These criteria were assessed through self-report during the initial interview before sample selection. Furthermore, to adhere to ethical principles, participants were informed that the training sessions were intended to support them as part of a research project, and all information would remain confidential and be used anonymously.

2.2. Measures

Multidimensional Scale of Perceived Social Support (MSPSS). This scale was developed by Zimet et al. (1988) and includes 12 items and three subscales: Family (items 3, 4, 8, 11), Friends (items 6, 7, 9, 12), and Significant Others (items 1, 2, 5, 10). Responses are rated on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Higher scores indicate greater perceived social support. Zimet et al. (1988) reported acceptable validity and reliability for the scale. Rostami et al. (2010) reported Cronbach's alpha coefficients between .76 and .89 for the subscales of perceived social support. Salimi et al. (2009) reported reliability coefficients using Cronbach's alpha of .86, .86, and .82 for the family, friends, and significant others dimensions, respectively, based on data from 30 families. In the present study, Cronbach's alpha coefficients for the subscales ranged from .76 to .88.

Connor–Davidson Resilience Scale (CD-RISC). This scale was developed by Connor and Davidson (2003) and contains 25 items. It is multidimensional and includes five subscales: Personal Competence (items 24, 25, 23, 17, 16, 12, 11, 10), Trust in One's Instincts/Tolerance of Negative Affect (items 6, 7, 14, 15, 18, 19, 20), Positive Acceptance of Change/Secure Relationships (items 2, 4, 5, 8), Control (items 13, 21, 23), and Spirituality (items 3, 9). Items are rated on a 5-point Likert scale ranging from 0 (never) to 4 (always). Total scores range from 0 to 100 (Connor & Davidson, 2003). Connor and Davidson (2003) reported a Cronbach's alpha of .89 for the scale and a test–retest reliability coefficient of .87 over a four-week interval. Convergent validity with the Multidimensional Scale of Perceived Social Support was reported as .44, and internal consistency reliability through Cronbach's alpha was .89. In Iran, the scale was translated and validated by Bakhshaiesh Eghbali et al. (2022). Construct validity was examined using confirmatory factor analysis, and 25 items across five subscales were confirmed, with all items having factor loadings above .30. Internal consistency reliability using

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Cronbach's alpha was reported as .94. Criterion validity was calculated by Keyhani et al. (2014) through correlation with the self-efficacy questionnaire, yielding .29, indicating convergent validity. In the present study, internal consistency reliability using Cronbach's alpha was calculated as .78.

2.3. Intervention

The mindfulness-based cognitive therapy intervention in this study followed the standardized eight-session, 90-minute weekly protocol developed by Segal et al. (2002) and was delivered in a structured, progressive format to the experimental group. The program began with orientation activities, rapport building, explanation of guidelines, and foundational mindfulness practices such as mindful raisin eating and the body-scan meditation to cultivate awareness of automatic pilot. Subsequent sessions introduced participants to confronting internal barriers, incorporating repeated body-scan exercises, mindful breathing, and guided practices designed to increase awareness of thoughts and emotions. As the sessions progressed, participants engaged in mindful movement, stretching, and breathing exercises, along with structured worksheets aimed at identifying pleasant events and distinguishing thoughts from facts. Mid-program sessions emphasized present-moment awareness through five-minute sensory observation practices, sitting meditation, mindful walking, and cognitive restructuring targeting distorted thinking patterns. Later sessions expanded to acceptance-based strategies, including sitting meditation with focused awareness of breath and bodily sensations, reflective exercises such as "the time machine," and evaluation of prior predictions and mental habits. Advanced sessions reinforced the principle that thoughts are not facts, integrating mood monitoring, cognitive differentiation exercises, and development of alternative perspectives. The program concluded with practices aimed at enhancing self-care, including meditations incorporating awareness of breath, body, sounds, thoughts, and emotions, and structured identification of connections between activities and mood to promote adaptive problem-solving. The final session focused on consolidating learning, conducting a full body-scan, reviewing the entire intervention, planning for continued application of mindfulness skills in daily life, and administering the posttest while acknowledging participants' efforts and progress.

2.4. Data analysis

Data were analyzed using multivariate analysis of covariance (MANCOVA) in SPSS version 27.

3. Findings and Results

In this study, 16 participants (53%) were between 20 and 30 years old, and 14 participants (47%) were between 31 and 40 years old. Regarding education level, 1 participant held a high-school diploma (3%), 10 participants held a bachelor's degree (33%), 17 participants held a master's degree (58%), and 2 participants held a doctoral degree (6%).

Table 1

Descriptive Statistics for Weight, Height, and Body Mass Index in Experimental and Control Groups

Variable	Group	Minimum	Maximum	Mean
Weight (kg)	Experimental	131	159	141.93
	Control	130	155	139.46
Height (cm)	Experimental	158	165	151.46
	Control	155	167	154.80
Body Mass Index (kg/m²)	Experimental	77.77	104.39	91.06
	Control	62.72	133.33	82.25

Table 1 presents descriptive statistics (minimum, maximum, and mean) for weight, height, and body mass index (BMI) in the experimental and control groups. The mean weight in the experimental group was 141.93 kg, compared to 139.46 kg in the control group. The mean height in the experimental group was 151.46 cm, and 154.80 cm in the control group. Mean BMI in the experimental group (91.06 kg/m²) was higher than that of the control group (82.25 kg/m²), indicating differences in physical status between groups.

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Table 2

Distribution of Participants by Weight Category

Weight Category	Frequency (Control)	Frequency (Experimental)	Percentage
130–140 kg	11	3	47%
140–150 kg	3	10	43%
Above 150 kg	1	2	10%
Total	15	15	100%

Table 2 displays the weight distribution of participants in both groups. The highest percentage belongs to the 130–140 kg category, representing 47% of participants in both groups combined. The next category, 140–150 kg, includes 43% of the sample. The above-150-kg category accounts for only 10%. This distribution demonstrates that most participants in both groups fall within the lower weight ranges.

Table 3

Means and Standard Deviations of Perceived Social Support and Resilience in Experimental and Control Groups at Pretest and Posttest

Variable	Group	Stage	Mean	Standard Deviation
Perceived Social Support	Experimental	Pretest	36.99	0.97
		Posttest	51.20	0.67
	Control	Pretest	45.06	1.16
		Posttest	46.06	0.88
Resilience	Experimental	Pretest	67.33	0.97
		Posttest	92.06	0.88
	Control	Pretest	80.60	0.50
		Posttest	82.40	1.05

In the experimental group, the mean perceived social support score increased from 36.99 at pretest to 51.20 at posttest, indicating positive change following the intervention. In the control group, perceived social support increased only slightly from 45.06 at pretest to 46.06 at posttest, showing no meaningful change.

Similarly, the mean resilience score in the experimental group increased from 67.33 at pretest to 92.06 at posttest, indicating substantial improvement. In contrast, the control group's resilience scores showed no meaningful difference between pretest (80.60) and posttest (82.40).

To determine the significance of these changes and evaluate the effectiveness of the intervention, multivariate analysis of covariance (MANCOVA) was employed. Assumptions for MANCOVA—normality, homogeneity of variances, and homogeneity of regression slopes—were examined for both dependent variables.

Normality was tested using the Kolmogorov–Smirnov test for perceived social support ($Z = 0.16$, $p = 0.20$) and resilience ($Z = 0.20$, $p = 0.12$). Because these values were not significant, normality was confirmed.

Levene's test for equality of variances indicated homogeneity of variances for perceived social support ($F = 2.35$, $p = 0.09$) and resilience ($F = 1.88$, $p = 0.08$).

The homogeneity of regression slopes assumption was examined by testing the interaction effect of group × pretest for perceived social support ($F = 0.77$, $p = 0.77$) and resilience ($F = 2.32$, $p = 0.11$), confirming that the assumption was met.

Given that all assumptions were satisfied, performing MANCOVA to assess the significance of changes was appropriate. Results of MANCOVA are presented in Table 4.

Table 4

Multivariate Analysis of Covariance for Study Variables

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Source	Variable	Sum of Squares	df	Mean Square	F	p	Effect Size
Group	Posttest Perceived Social Support	3.57	1	3.57	5.40	0.02	0.17
	Posttest Resilience	4.67	1	4.67	4.63	0.03	0.15
Pretest Perceived Social Support	Posttest Perceived Social Support	0.01	1	0.01	0.02	0.86	0.001
Pretest Resilience	Posttest Resilience	0.13	1	0.13	0.13	0.71	0.005
Error	Posttest Perceived Social Support	17.19	26	0.66	—	—	—
	Posttest Resilience	26.26	26	1.01	—	—	—
Total	Posttest Perceived Social Support	71171.000	30	—	—	—	—
	Posttest Resilience	231504.000	30	—	—	—	—

Findings presented in Table 4 indicate that after controlling for the covariate (pretest scores), the experimental and control groups differed significantly in posttest scores of perceived social support ($F = 5.40$, $p \leq .001$) and resilience ($F = 4.63$, $p \leq .001$). The experimental group showed significant increases from pretest to posttest, whereas the control group did not. These findings demonstrate the effectiveness of the intervention for the experimental group.

The effect size values indicate that 17% of the variance in perceived social support scores and 15% of the variance in resilience scores can be attributed to the intervention.

4. Discussion

The purpose of this study was to examine the effectiveness of mindfulness-based cognitive therapy on perceived social support and resilience in individuals with morbid obesity. The results demonstrated that participants who received the eight-session MBCT intervention showed significant improvements in both perceived social support and resilience, whereas the control group exhibited no meaningful changes across the same period. These findings suggest that mindfulness-based cognitive interventions can play a meaningful role in strengthening adaptive psychological resources among individuals who commonly experience high levels of stress, emotional vulnerability, and social stigma associated with severe obesity. The observed improvements reflect the broader psychological mechanisms proposed in the literature, particularly the influence of attentional regulation, cognitive flexibility, and acceptance-based coping styles that MBCT cultivates (Segal et al., 2002). The significant gains in resilience are consistent with contemporary resilience frameworks, which emphasize that adaptive functioning can be enhanced through targeted psychological training that strengthens emotional regulation capacities (Southwick et al., 2014).

The improvement in perceived social support observed in the experimental group aligns with previous findings that highlight the strong association between mindfulness practices and enhanced social connectedness. Meta-analytic evidence confirms that mindfulness promotes relational awareness, empathy, and interpersonal attunement, ultimately increasing individuals' perceptions of being supported by others (Keng et al., 2023). In populations coping with chronic illness or significant psychological stress, such as female heads of household, mindfulness training has been shown to significantly improve both perceived social support and resilience, suggesting that mindfulness interventions enhance interpersonal functioning as well as internal coping resources (Hosseini Taqdehi, 2022). Furthermore, earlier Iranian studies confirm that perceived social support is strongly associated with adaptive psychological processes, including emotional intelligence and self-efficacy, reinforcing the importance of social perceptions in mental well-being (Rostami et al., 2010). The current study extends these findings to individuals with morbid obesity, a group often characterized by social withdrawal, stigmatization, and diminished interpersonal confidence. By cultivating non-judgmental awareness and self-acceptance, MBCT may reduce internalized stigma and increase openness to positive social engagement, thus contributing to higher levels of perceived support.

The observed enhancement in resilience is consistent with a robust body of literature illustrating the effectiveness of mindfulness-based interventions in strengthening adaptive coping skills. Meta-analytic research demonstrates that mindfulness training significantly increases resilience by reducing cognitive reactivity and enhancing the capacity to tolerate distress (O'Connor et al., 2023). The theoretical foundation for these findings is supported by resilience-to-change theory, which conceptualizes resilience as a continuous dynamic process influenced by cognitive appraisal and emotional regulation (Rachmad, 2022). From this perspective, mindfulness functions as a mechanism that fosters the cognitive flexibility and emotional stability necessary to adapt to adversity. Additionally, mindfulness-based interventions have demonstrated neural effects on prefrontal cortical regions responsible for executive control and emotion regulation (Rathore et al., 2022). These

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E-ISSN: 3041-9026

neuropsychological changes likely contribute to the increased resilience observed in the present study, as participants become better equipped to navigate the emotional and behavioral challenges associated with obesity.

Furthermore, the present findings align with previous clinical work demonstrating that mindfulness-based interventions reduce emotional eating, improve self-regulation, and enhance body image in individuals with obesity (Naseri Far et al., 2024). Emotional eating is often linked to difficulties in emotion regulation and low distress tolerance, components that mindfulness training directly targets through present-moment attention and acceptance-based strategies. Studies examining the interplay between obesity and psychological distress further support this interpretation, showing strong associations between obesity and symptoms of anxiety, depression, and emotional dysregulation (Henriques et al., 2025). When individuals experience chronic stress and negative emotional states, resilience may decline, making them more susceptible to unhealthy coping patterns. By disrupting automatic behavioral patterns and increasing awareness of internal cues, MBCT offers a structured method for modifying these maladaptive tendencies, thereby contributing to improved psychological resilience.

The current study also contributes to the growing evidence supporting the use of mindfulness-based interventions in populations with obesity-related difficulties. Research examining MBCT and mindfulness-based stress reduction programs has shown significant improvements in psychological functioning among individuals coping with chronic conditions, including gastrointestinal cancers, where resilience and life expectancy increased following mindfulness training (Garagoun et al., 2021). Likewise, systematic reviews of mindfulness-based interventions for adults with overweight and obesity reveal consistent improvements in both psychological and physical health outcomes (Rogers et al., 2017). The present study extends these findings by demonstrating the dual benefits of MBCT on resilience and perceived social support, emphasizing the multifaceted nature of mindfulness-based improvements.

Several studies suggest that mindfulness may also influence social perceptions by reducing loneliness and increasing awareness of supportive relationships. Evidence indicates that loneliness and perceived social support play critical roles in shaping mental health outcomes, with lower levels of perceived support being associated with increased psychological distress (Wang et al., 2018). Mindfulness practices can counteract these tendencies by cultivating emotional openness and reducing negative self-referential thinking, which often distorts social interpretations. Additional findings from the literature on acceptance- and mindfulness-based therapies indicate that such interventions may enhance body image flexibility, reduce self-criticism, and foster more positive interactions with peers and family members (Noroozi et al., 2021). These relational improvements are consistent with the increased perceived social support observed in the present study, suggesting that MBCT may influence interpersonal functioning both directly through emotional regulation and indirectly through increased self-acceptance.

The present findings also align with investigations demonstrating that mindfulness-based interventions successfully enhance psychological functioning in student populations, as shown by significant improvements in both resilience and perceived social support following mindfulness-based therapy (Mousavi Zadeh Gavarshaki & Fooladi, 2023). These results parallel findings from studies examining hope-based and mindfulness-based interventions in clinical populations, which revealed that mindfulness training produced significant gains in perceived social support across multiple relational domains (Khaloui et al., 2021). The consistency of these outcomes across diverse settings supports the generalizability of mindfulness-based cognitive therapy as a culturally adaptable psychological intervention.

Notably, the present findings also align with recent work illustrating the efficacy of mindfulness- and emotion-focused therapies in improving body image and reducing emotional vulnerabilities in overweight women with dysmorphic concerns (Nemativnashi et al., 2025). These findings underscore the importance of mindfulness-based interventions not only for modifying emotional and cognitive processes but also for addressing the relational and perceptual challenges that individuals with obesity frequently encounter. Research exploring mindfulness-based self-efficacy among individuals preparing for bariatric surgery likewise demonstrates that mindfulness training enhances happiness and psychological resilience, further supporting the relevance of mindfulness in the context of obesity treatment (Caynak et al., 2025).

The broader implications of these findings can also be interpreted through the lens of ecological resilience theory, which emphasizes the adaptive interplay between individuals and their environments (Walker, 2020). Just as ecological systems require flexibility and dynamic stability

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E-ISSN: 3041-9026

to withstand external pressures, individuals confronting the challenges of obesity require psychological resilience and supportive social environments to navigate complex emotional and behavioral demands. This conceptual parallel supports the idea that resilience is not a fixed trait but a malleable capacity shaped by cognitive, emotional, and relational processes that can be strengthened through structured psychological training.

The observed improvements in perceived social support may also be informed by research emphasizing the interpersonal benefits of mindfulness. For example, mindfulness enhances attention to social cues, reduces interpersonal reactivity, and increases empathy, all of which contribute to more positive relational experiences (Keng et al., 2023). The Multidimensional Scale of Perceived Social Support, which was used in this study, has long been recognized as a reliable tool for capturing individuals' perceptions of relational support, and its strong psychometric properties in multiple cultural contexts further strengthen the validity of the current findings (Zimet et al., 1988).

Similarly, the use of a validated resilience scale developed by Connor and Davidson provides a reliable foundation for interpreting the increases in resilience observed following MBCT (Connor & Davidson, 2003). The strong psychometric properties of the CD-RISC across different populations—including Iranian nursing students (Kheyani et al., 2014)—suggest that the instrument effectively captures resilience-related changes resulting from psychological interventions.

5. Conclusion

Overall, the findings from the present study align consistently with previous research supporting the effectiveness of mindfulness-based cognitive therapy for enhancing psychological well-being, resilience, and social perceptions in populations facing chronic psychological and physical challenges. The integration of present-moment awareness, emotional acceptance, cognitive flexibility, and interpersonal sensitivity cultivated by MBCT offers a theoretically coherent explanation for the observed changes. Moreover, the psychological challenges experienced by individuals with morbid obesity—including stigma, emotional distress, and reduced social engagement—underscore the need for comprehensive interventions that address both intrapersonal and interpersonal dimensions of well-being.

This study, like all psychological research, is subject to several limitations. The sample size was relatively small, which may limit the generalizability of the findings to broader populations. Participants were selected through purposive sampling from a specific geographic region, which may have influenced the demographic composition and psychological characteristics of the sample. The absence of a long-term follow-up assessment also limits the ability to determine whether the observed improvements were sustained over time. Additionally, the study relied on self-report instruments, which may be susceptible to response biases such as social desirability or inaccurate self-perceptions.

Future studies should incorporate larger and more diverse samples to enhance the generalizability of findings across different demographic and cultural groups. Longitudinal designs with multiple follow-up assessments would help determine the stability and long-term impact of mindfulness-based cognitive therapy on resilience and perceived social support. Experimental comparisons between MBCT and other third-wave cognitive-behavioral interventions could offer greater insight into differential mechanisms of change. Moreover, incorporating qualitative methods may provide deeper understanding of participants' subjective experiences during mindfulness training.

Based on the findings of this study, psychological practitioners working with individuals who have morbid obesity may consider integrating mindfulness-based cognitive therapy into treatment plans to improve emotional regulation, enhance resilience, and strengthen perceived social support. Clinicians may benefit from tailoring mindfulness exercises to address the specific emotional challenges and social barriers faced by this population. Additionally, incorporating group-based mindfulness sessions may foster a sense of community among participants, further reinforcing social support and engagement.

Authors' Contributions

This article is derived from the first author's master's thesis, which was approved by the Research Deputy of the Islamic Azad University, Tehran South Branch, and conducted with personal funding. All authors contributed equally to the design, conceptualization, data collection, methodology, statistical analysis, and finalization of the manuscript.

Declaration

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In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

References

Aoun, A., Ghoussoub, C., Farsoun, C., Al Mallah, A., Ayoub, F., Trezia, N., & Abi Karam, S. (2025). Examining the efficacy of mindfulness-based interventions in treating obesity, obesity-related eating disorders, and diabetes mellitus. *Journal of the American Nutrition Association*, *44*(4), 292-305. https://doi.org/10.1080/27697061.2024.2428290

Caynak, S., Göktaş, A., & Şimşek Arslan, B. (2025). The Relationship Between Mindfulness-Based Self-Efficacy and Happiness Level in Individuals Planned for Bariatric Surgery: A Cross-Sectional Study. *Bariatric Surgical Practice and Patient Care*. https://doi.org/10.1089/bari.2024.0014

Connor, K. M., & Davidson, J. R. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and Anxiety*, *18*(2), 76-82. https://doi.org/10.1002/da.10113

Garagoun, S. N., Mousavi, S. M., Shabahang, R., & Bagheri, F. (2021). The effectiveness of mindfulness-based stress reduction intervention on resilience and life expectancy of gastrointestinal cancers patients. *Iranian Journal of Psychiatric Nursing (IJPN) Original Article*, *9*(2). http://ijpn.ir/article-1-1759-fa.pdf

Henriques, J., Afreixo, V., Unterrainer, H., & Senra, H. (2025). Psychological mediators of the association between obesity and symptoms of depression, anxiety, and stress. *Neuropsychobiology*, *84*(1), 26-37. https://doi.org/10.1159/000542767

Hosseini Taqdehi, L. (2022). The Effectiveness of Mindfulness Training on Resilience and Perceived Social Support in Female Head of Households. *Women and Family Studies*, *15*(57), 153-168. https://journals.iau.ir/article_689382.html

Hruby, A., & Hu, F. B. (2021). The epidemiology of obesity: A big picture. *Pharmacoeconomics*, *33*(7), 673-689. https://doi.org/10.1007/s40273-014-0243-x

Jain, M. A., & Singh, D. C. (2018). Resilience and quality of life in caregivers of schizophrenia and bipolar disorder patients. *Global Journal of Human Social Science Research*, *14*(5), 24-28. https://www.researchgate.net/profile/Dweep-Singh/publication/321061095_Resilience_and_Quality_of_Life_in_Caregivers_of_Schizophrenia_and_Bipolar_Disorder_Patients_Resilience_and_Quality_of_Life_in_Caregivers_of_Schizophrenia_and_Bipolar_Disorder_Patients/links/5a0b238ca6fdccc69eda0431/Resilience-and-Quality-of-Life-in-Caregivers-of-Schizophrenia-and-Bipolar-Disorder-Patients-Resilience-and-Quality-of-Life-in-Caregivers-of-Schizophrenia-and-Bipolar-Disorder-Patients.pdf

Keng, S. L., Tan, Y. Z., & Eisenlohr-Moul, T. (2023). Mindfulness and social connectedness: A meta-analytic review. *Clinical psychology review*, *99*, 102-135. https://www.researchgate.net/publication/324313324_Mindfulness_and_connectedness_to_nature_A_meta-analytic_investigation

Khaloui, Q., Al Yasin, S. A., Heydari, H., & Davoodi, H. (2021). Comparing the Effectiveness of Hope Therapy-Based Educational Intervention and Mindfulness-Based Cognitive Therapy on Perceived Social Support in Women with Multiple Sclerosis. *Journal of the Faculty of Medicine, Mashhad University of Medical Sciences*, *64*(2), 2847-2864. https://doi.org/10.61186/jea.10.19.93

Kheyani, M., Taghavi, D., Rajabi, A., & Amirpour, B. (2014). Internal Consistency and Confirmatory Factor Analysis of the Connor-Davidson Resilience Scale in Nursing Female Students. *Iranian Journal of Medical Education*, *14*(10), 851-859. https://ijme.mui.ac.ir/browse.php?a_code=A-10-2685-1&slc_lang=fa&sid=1

Kojić, M., Rakić, S., Silva, J. W. L. D., & Araujo, F. H. A. D. (2025). Sectoral Efficiency and Resilience: A Multifaceted Analysis of S&P Global BMI Indices Under Global Crises. *Mathematics*, *13*(4), 641. https://doi.org/10.3390/math13040641

Mousavi Zadeh Gavarshaki, S. Z., & Fooladi, A. (2023). The Effectiveness of Mindfulness-Based Therapy on Resilience and Perceived Social Support in Students.

Naseri Far, M., Saraj Khorrami, N., Soferzadeh, S., & Heydari, A. R. (2024). Comparing the Effectiveness of Cognitive-Behavioral Therapy and Mindfulness-Based Cognitive Therapy on Body Image Satisfaction in Women with Obesity. *Psychological Growth*, *13*(7), 111-120. https://frooyesh.ir/article-1-5214-fa.html

Nemativnashi, R., Rahmanian, M., Kordmirza Nikoozadeh, A. E., Rafei Pour, A., & Abdollahzadeh, H. (2025). The Effectiveness of Emotion-Focused Therapy and Mindfulness-Based Cognitive Therapy on Improving Emotional Eating and Body Image in Overweight Women with Body Dysmorphic Symptoms. *Quarterly Journal of Experimental and Cognitive Psychology*, 1-16. https://quarterlyecp.com/index.php/ecp/article/view/280

Noroozi, F., Ghorbanshiroudi, S., & Khalaji, A. R. (2021). Examining the Effectiveness of Acceptance and Commitment Therapy on Self-Regulation and Body Image Flexibility in Patients with Obesity. *Psychological Growth*, *10*(7), 77-86. https://frooyesh.ir/browse.php?a_id=2415&sid=1&slc_lang=fa

O'Connor, M., Stapleton, A., O'Reilly, G., Murphy, E., Connaughton, L., Hoctor, E., & McHugh, L. (2023). The

KMAN-CPN KMAN-Counseling & Psychology Nexus E-ISSN: 3041-9026

efficacy of mindfulness-based interventions in promoting resilience: A systematic review and meta-analysis of randomised controlled trials. *Journal of Contextual Behavioral Science*, *28*, 215-225. https://doi.org/10.1016/j.jcbs.2023.03.005

Rachmad, Y. E. (2022). *Resilience to Change Theory*. Valladolid Castillos Publicaciones Internacionales Edición Especial. https://www.academia.edu/download/119371993/BOOK_2022_085_NEW.pdf

Rathore, M., Verma, M., Nirwan, M., Trivedi, S., & Pai, V. (2022). Functional connectivity of prefrontal cortex in various meditation techniques-a mini-review. *International Journal of Yoga*, *15*(3), 187-194. https://doi.org/10.4103/ijoy.ijoy_88_22

Rogers, J. M., Ferrari, M., Mosely, K., Lang, C. P., & Brennan, L. (2017). Mindfulness-based interventions for adults who are overweight or obese: a meta-analysis of physical and psychological health outcomes. *Obesity Reviews*, *18*(1), 51-67. https://doi.org/10.1111/obr.12461

Rostami, R., Shah Mohammadi, K., Qaeidi, G. H., Basharat, M. A., Akbari Zardkhaneh, S., & Nasrat Abadi, M. (2010). The Relationship Between Self-Efficacy, Emotional Intelligence, and Perceived Social Support Among Students of the University of Tehran. *Daily Internal Medicine*, *16*(3), 46-54. https://imtj.gmu.ac.ir/article-1-964-fa.html

Salimi, A., Jokar, B., Jokar, B., & Nikpour, R. (2009). Internet Communications in Life: Examining the Role of Perceived Social Support and Feelings of Loneliness in Internet Use. *Psychological studies*, *5*(3), 81-102. https://psychstudies.alzahra.ac.ir/?_action=articleInfo&article=1607

Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2002). *Mindfulness based cognitive therapy for depression: A new approach to preventing relapse*. New-York: Guilford Press. https://psycnet.apa.org/record/2001-05895-000

Southwick, S. M., Bonanno, G. A., Masten, A. S., Panter-Brick, C., & Yehuda, R. (2014). Resilience definitions, theory, and challenges: interdisciplinary perspectives. *European Journal of Psychotraumatology*, *5*(1), 25338. https://doi.org/10.3402/ejpt.v5.25338

Walker, B. (2020). Resilience: what it is and is not. *Ecology and Society*, *25*(2), 11. https://doi.org/10.5751/ES-11647-250211

Wang, J., Mann, F., Lloyd-Evans, B., Ma, R., & Johnson, S. (2018). Associations between loneliness and perceived social support and outcomes of mental health problems: a systematic review. *BMC psychiatry*, *18*(1), 156. https://doi.org/10.1186/s12888-018-1736-5

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, *52*(1), 30-41. https://doi.org/10.1207/s15327752jpa5201_2

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