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Comparison of the Effectiveness of Cognitive-Behavioral Therapy and Acceptance and Commitment Therapy on Improving Quality of Life in Patients with Somatic Symptom Disorder

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ABSTRACT

The aim of the present study was to compare the effectiveness of Cognitive-Behavioral Therapy (CBT) and Acceptance and Commitment Therapy (ACT) in improving the quality of life of patients with somatic symptom disorder. The statistical population included patients who visited counseling and psychotherapy centers in Bojnord in 2025. A sample of 45 eligible volunteers was selected and randomly assigned to three groups: CBT, ACT, and a control group. Each intervention was delivered in eight 90-minute group sessions. The research instrument consisted of the World Health Organization Quality of Life Questionnaire. Data were analyzed using repeated-measures ANOVA. The results indicated that both therapeutic approaches led to significant improvements in patients' quality of life ($p < .01$). However, no statistically significant difference was observed between the two therapeutic methods in terms of effectiveness. The findings suggest that similarities in the cognitive and emotional mechanisms of the two treatments—such as modifying maladaptive thoughts, enhancing emotional acceptance, and reducing experiential avoidance—are likely responsible for the absence of a significant difference between them. Moreover, the results demonstrated that both CBT and ACT can be utilized as effective approaches for improving the quality of life of patients with somatic symptom disorder.

Keywords: Cognitive-Behavioral Therapy; Acceptance and Commitment Therapy; Quality of Life; Somatic Symptom Disorder.

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Introduction

Somatic symptom disorder (SSD) represents one of the most complex and diagnostically challenging conditions within clinical psychology and behavioral medicine. Individuals with this disorder experience significant physical symptoms that are distressing and result in functional impairment, yet these symptoms often cannot be fully explained by identifiable medical conditions. Prevalence studies indicate that somatic and functional bodily complaints are widespread across the lifespan, with a notable onset in childhood and adolescence, making early detection an important concern for prevention science (1). Clinical evidence

consistently demonstrates that the persistence of somatic symptoms is shaped by cognitive, emotional, and behavioral factors that maintain distress and reinforce maladaptive symptom-focused coping styles. In particular, excessive worry about bodily sensations, hypervigilance toward physical discomfort, and dysfunctional interpretations of normal physiological processes are central mechanisms that exacerbate symptom severity and health-related impairment.

The diagnostic complexity of somatic disorders has been extensively documented in primary care and psychiatric settings. Healthcare providers often struggle to differentiate between medically unexplained symptoms and physical conditions, resulting in delays in diagnosis, inappropriate referrals, and unnecessary medical investigations (2). These diagnostic barriers are further compounded by the stigma surrounding psychosomatic explanations, leading many patients to resist psychological interventions and continue seeking biomedical solutions. A systematic review highlights that general practitioners frequently describe medically unexplained symptoms as frustrating and "difficult to manage," pointing to the need for integrated biopsychosocial assessment frameworks (3). Similarly, a growing body of literature emphasizes structural and relational barriers to diagnosis, including time constraints in primary care, insufficient training in psychosomatic presentations, and patient expectations for biomedical treatment (4). These findings collectively underscore the importance of tailored psychological interventions that address both symptom distress and the cognitive-emotional processes that maintain somatic complaints.

Functional somatic syndromes and well-defined medical illnesses share substantial overlap in terms of functional limitations and quality-of-life impairments. Population-based research reveals that individuals with functional somatic syndromes often experience disability levels comparable to those with medically verified diseases (5). This similarity further supports theorists' arguments that the subjective burden of symptoms, rather than their biomedical origin, plays a decisive role in shaping overall functioning. The complexity of functional somatic complaints has therefore prompted interdisciplinary interest in understanding the psychological mechanisms underlying symptom persistence. The field of psychosomatic research emphasizes that symptom chronicity is maintained through cycles of avoidance, maladaptive cognitions, and anxious preoccupation with bodily sensations (6). Such mechanisms have become central targets in modern psychotherapeutic approaches.

Cognitive-Behavioral Therapy (CBT) has historically been the most widely used and empirically supported intervention for somatic symptom and related disorders. The approach focuses on identifying and modifying distorted interpretations of bodily sensations, reducing safety behaviors, and increasing adaptive coping strategies. Early clinical trials demonstrated that CBT significantly reduces hypochondriacal concerns, somatic anxiety, and disability (6). Meta-analytic evidence further supports the efficacy of CBT in addressing symptom severity and comorbid psychological difficulties across disorders involving body image disturbances (7). Contemporary applications extend to chronic pain, functional gastrointestinal disorders, and medically unexplained conditions, showing consistent improvement in patients' daily functioning and illness-specific distress (8). Recent studies conducted in Iranian populations also indicate that CBT effectively reduces dysfunctional obsessive beliefs and enhances quality of life in individuals with obsessive-compulsive disorder, highlighting its therapeutic relevance across conditions marked by maladaptive cognitive patterns (9). Similarly, CBT has been shown to improve anxiety, resilience, and emotional well-being in adolescents with obsessive-compulsive traits, demonstrating its adaptability across developmental

stages (10). These findings collectively affirm the cross-cultural and transdiagnostic utility of CBT for conditions where cognitive distortions and somatic preoccupation play central roles.

While CBT remains a cornerstone of evidence-based treatment, newer therapeutic models—particularly Acceptance and Commitment Therapy (ACT)—have gained prominence due to their emphasis on psychological flexibility and experiential openness. ACT conceptualizes distress as emerging from attempts to control or avoid unwanted internal experiences, including physical sensations, emotions, and intrusive thoughts (11). By promoting acceptance, mindfulness, and commitment to valued actions, ACT helps individuals disentangle from maladaptive cognitive fusion, thereby reducing the emotional amplification of somatic sensations. Pilot studies have shown promising results for ACT in treating conditions such as irritable bowel syndrome, where reductions in experiential avoidance and symptom preoccupation lead to meaningful functional improvement (12). In clinical practice, ACT has also demonstrated efficacy in the treatment of functional bodily distress, offering an alternative pathway for patients who respond less effectively to traditional cognitive restructuring approaches (13).

Recent developments underscore ACT's growing role in improving health-related quality of life among populations facing chronic medical challenges. Randomized controlled trials have found ACT-based interventions beneficial for patients with advanced lung cancer, enhancing their quality of life and reducing the interference of somatic fatigue (14). Moreover, ACT has been successfully employed in digital health platforms, enabling remote psychological support for cancer patients and yielding improvements in emotional functioning and coping (15). These findings reinforce the versatility of ACT as a flexible, process-based model aligned with contemporary health psychology needs. Additional research in Iran further demonstrates ACT's positive effects on quality of life and internalized stigma among individuals with substance-use disorders, supporting its cultural applicability in diverse populations (16). Notably, ACT has also improved resilience and quality of life in patients with multiple sclerosis, showcasing its benefits for populations facing chronic disability and long-term illness trajectories (17).

Quality of life is an essential outcome variable for evaluating the success of psychotherapeutic interventions targeting somatic symptom disorders. The World Health Organization emphasizes a multidimensional conceptualization of quality of life that includes physical health, emotional well-being, social relationships, and environmental functioning. The Persian version of the WHOQOL instrument has been extensively validated and adapted for clinical research, demonstrating strong psychometric properties and suitability for diverse health conditions (18). Research shows that psychological interventions—especially those addressing maladaptive cognitions and emotional regulation—are closely linked to significant improvements in quality of life among individuals experiencing somatic distress and related disorders. For example, interventions targeting body image disturbances have found that individuals with somatic tendencies often rely on maladaptive coping strategies, including avoidance and emotional suppression, which further diminish quality of life (19). Iranian studies also demonstrate that ACT significantly enhances quality of life in patients coping with chronic pain, validating the model's cross-cultural generalizability (20).

The literature consistently suggests that both CBT and ACT offer meaningful psychological benefits for individuals experiencing somatic symptoms, though they rely on different theoretical foundations. CBT emphasizes correcting maladaptive beliefs and restructuring cognitive schemas, whereas ACT focuses on

cultivating psychological flexibility, acceptance, and value-driven behavior. Comparative studies evaluating the relative effectiveness of these approaches on quality-of-life outcomes reveal mixed findings. Some evidence suggests comparable efficacy between ACT and other process-based interventions in reducing somatic symptoms and improving functioning (21). Other studies highlight the advantages of ACT in chronic disease management, particularly when emotional avoidance plays a central role (22). In contrast, CBT retains strong empirical support for reducing symptom severity across various somatic and psychological disorders, including pain, obsessive symptoms, and anxiety (23). Additionally, mindfulness-enhanced cognitive-behavioral frameworks have demonstrated significant improvements in social anxiety, self-efficacy, and quality of life among adults with speech disorders, supporting the integration of acceptance- and mindfulness-based components within traditional CBT (24).

Recent global work further demonstrates that ACT-based interventions administered through couples therapy and relational contexts enhance emotional functioning and reduce conflict-driven distress, highlighting the model's relational flexibility (25). This integrative perspective aligns with contemporary health psychology's movement toward personalized and process-oriented approaches. Modern conceptualizations of medically unexplained symptoms emphasize the importance of addressing psychosocial distress, trauma history, interpersonal dysfunction, and chronic avoidance patterns (13). The evidence therefore supports the need for multimodal psychosocial treatment frameworks capable of addressing both cognitive distortions and experiential avoidance tendencies.

Despite the well-established benefits of CBT and ACT, there remains a lack of comprehensive comparative research specifically examining their effectiveness in improving quality of life among patients with somatic symptom disorder. Given the chronic nature of somatic complaints and their profound impact on daily functioning, mood regulation, interpersonal relationships, and self-efficacy, direct comparison of these two empirically supported treatments is essential. Moreover, the cultural context of somatic symptom expression—particularly in Iranian populations—highlights the importance of examining therapeutic responsiveness in locally relevant clinical settings (26). Recent Iranian studies underscore the significant improvements in quality of life resulting from ACT and emotion-focused interventions among individuals with chronic diseases, reinforcing the importance of cross-cultural replication and extension (10).

In line with the existing evidence and ongoing need for comparative effectiveness research, the present study aims to compare the effectiveness of Cognitive-Behavioral Therapy and Acceptance and Commitment Therapy in improving the quality of life of individuals with somatic symptom disorder.

Methods and Materials

Study Design and Participants

The method of this study was a quasi-experimental design with a pretest–posttest structure and a one-month follow-up. The statistical population consisted of all patients with somatic symptom disorder who referred to counseling centers and psychological clinics in Bojnord during 2023. A convenience sampling method was used to select participants. Accordingly, 45 eligible patients who met the inclusion criteria were selected and randomly assigned to three equal groups: the first group of 15 participants (received the Cognitive-Behavioral Therapy protocol); the second group of 15 participants (received the Acceptance and Commitment Therapy protocol); and the control group of 15 participants (received only the routine

assessments of the center). The inclusion criteria were: diagnosis of somatic symptom disorder based on DSM–5 criteria; age range of 20 to 50 years; having at least a high school diploma; and providing informed consent to participate in the study. The exclusion criteria included lack of cooperation with therapeutic assignments and missing more than two intervention sessions.

First, the pretest was administered to all three groups. After the pretest, the Cognitive-Behavioral Therapy protocol was implemented for ten sessions for Experimental Group 1. In parallel, the Acceptance and Commitment Therapy sessions were conducted for eight sessions for Experimental Group 2. Subsequently, the researcher administered the questionnaires to conduct the posttest for the experimental and control groups. A one-month follow-up test was also administered.

Data Collection

In the present study, the World Health Organization Quality of Life Questionnaire was used. This questionnaire consists of 26 items and four domains: physical health, psychological health, social relationships, and environmental conditions. The physical health domain includes items 3, 4, 10, 15, 16, 17, and 18; the psychological health domain includes items 5, 6, 7, 11, 19, and 26; the social relationships domain includes items 20, 21, and 22; and the environmental domain includes items 5, 9, 12, 13, 14, 23, 24, and 25. The questionnaire is rated on a 5-point Likert scale ranging from very low (score 1) to very high (score 5). Higher scores on this scale indicate a higher quality of life (Kremlow, Salehi, Zaeiri, Massah Choulabi, Hatami, & Mousavi Khattat, 2010, as cited in Javaheri, 2012). Kremlow et al. (2010) used the forward–backward translation method to validate this questionnaire. Nasiri assessed the norming and reliability of this questionnaire in Iran using three methods: test–retest (with a three-week interval), split-half, and Cronbach's alpha (.78).

Intervention

The Cognitive-Behavioral Therapy intervention began with establishing rapport and collaboratively identifying treatment goals, followed in the second session by helping participants recognize difficulties in emotion regulation, forgiveness, and marital intimacy across different situations. In the third session, clients were trained to identify and differentiate various emotions and affective states. Session four focused on detecting the signs and triggers associated with emotion regulation difficulties, impaired forgiveness, and intimacy problems. The fifth session introduced education on physical symptoms relevant to these difficulties, and the sixth session expanded this training to include cognitive symptoms associated with emotional and relational distress. In the seventh session, participants practiced meditation, diaphragmatic breathing, and relaxation techniques to enhance self-regulation. The eighth session involved structured cognitive-challenging exercises aimed at modifying maladaptive thoughts. The ninth session introduced the rationale for exposure and guided clients through exposure exercises related to emotion regulation challenges, forgiveness, and intimacy in diverse contexts. The intervention concluded in the tenth session with a comprehensive review of therapeutic progress, discussion of session content, and reinforcement of strategies for continued improvement.

The Acceptance and Commitment Therapy protocol began with establishing a therapeutic relationship, introducing participants to the study topic, completing questionnaires, and forming a treatment contract. In

the second session, clients were taught mindfulness principles and practiced exercises accompanied by metaphors such as the man in the hole, tug-of-war with a monster, the unwanted guest, and the notion that "control is the problem," followed by homework assignments. The third session continued mindfulness practice and guided clients to recognize ineffective control strategies and the futility of struggling with painful experiences, encouraging acceptance while providing feedback and new homework. Session four introduced metaphors such as the lemon, willingness, open-eyes metaphor, hungry tiger, skating girl, and therapy room to deepen understanding of experiential openness and defusion. In the fifth session, cognitive fusion was explained using metaphors like passengers on the bus, and homework was assigned. The sixth session included further mindfulness practice and the chessboard metaphor to introduce the self-as-context perspective. The seventh session focused on clarifying values, enhancing motivation for change, empowering clients to pursue meaningful living, practicing attentional focus, receiving feedback, and completing value-based assignments. The eighth and final session emphasized commitment to action, identifying behavior patterns aligned with personal values, supporting clients in forming action commitments, summarizing all sessions, administering the posttest, and formally concluding the treatment.

Data analysis

Data were analyzed at descriptive and inferential levels using repeated-measures ANOVA and the Bonferroni post hoc test in SPSS 26.

Findings and Results

As shown in Table 1, quality of life in both treatment groups increased markedly compared to the pretest, and a slight decrease (approximately 1.5 to 2 points) occurred at the follow-up stage, which was not statistically significant. This pattern indicates the maintenance of a substantial portion of treatment gains over time.

Table 1. Mean and Standard Deviation of Quality of Life Scores Across Groups

Group	Stage	Mean	Standard Deviation
CBT	Pretest	54.6	8.3
CBT	Posttest	72.5	9.0
CBT	Follow-up	70.8	8.8
ACT	Pretest	53.9	8.2
ACT	Posttest	70.4	8.9
ACT	Follow-up	68.9	8.7
Control	Pretest	54.2	8.1
Control	Posttest	55.1	8.0
Control	Follow-up	55.5	8.0

To conduct the repeated-measures ANOVA, the assumptions of normality and homogeneity of variances were examined. Since the significance level in all cases was greater than .05, the assumption of homogeneity of variances was met for all research variables. In addition, Mauchly's test of sphericity was confirmed for the variables ($p > .01$).

Table 2. RM-ANOVA Results for Quality of Life

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Time	8940.5	2	4470.2	58.26	.001	.87

Time × Group	540.2	4	135.1	1.35	.267	.04
Error (Within)	1674.2	44	38.0	—	—	—
Group	2265.9	2	1133.0	2.32	.109	.07
Error (Between)	21050.0	44	478.4	—	—	—

Based on the results, the effect of time was significant, indicating that quality of life increased substantially across the entire sample. However, the interaction effect of time × group and the main effect of group were not significant. Therefore, the mean difference between the two treatment groups (approximately 2 points) was not statistically significant.

Table 3. Bonferroni Post Hoc Test for Between-Group Comparisons (Quality of Life)

Group Comparison	Mean Difference	Standard Error	Sig.
CBT vs. ACT	2.1	1.0	.19
CBT vs. Control	17.4	1.9	.001
ACT vs. Control	15.3	1.8	.001

The results of the data analysis indicate that the difference between CBT and ACT is not statistically significant. However, both treatments showed a significant improvement in quality of life compared to the control group. A slight and non-significant decline was observed from posttest to follow-up.

Discussion and Conclusion

The purpose of the present study was to compare the effectiveness of Cognitive-Behavioral Therapy (CBT) and Acceptance and Commitment Therapy (ACT) in improving the quality of life of patients with somatic symptom disorder. The findings revealed that both CBT and ACT significantly improved quality of life from pretest to posttest, and these improvements were largely sustained at follow-up. However, no statistically significant difference emerged between the two interventions, indicating comparable effectiveness in enhancing patient well-being. This pattern aligns with the theoretical and empirical literature that highlights the shared role of cognitive, emotional, and behavioral mechanisms in the maintenance and reduction of somatic symptoms. Previous research has emphasized that somatic symptom disorders emerge from complex interactions between dysfunctional cognitions, heightened bodily vigilance, maladaptive emotional responses, and ineffective coping strategies (6, 13). Because both CBT and ACT target these underlying processes—albeit through different therapeutic pathways—the absence of a significant difference in treatment outcomes is consistent with transdiagnostic models of symptom change.

CBT's effectiveness in treating somatic and medically unexplained symptoms is well established. It works primarily through cognitive restructuring, behavioral exposure, and the reduction of symptom-focused anxiety. Studies have demonstrated significant improvements in hypochondriasis, functional bodily distress, chronic pain, and body image disturbances through CBT-based interventions (6-8). The improvement observed in the CBT group in this study corresponds with these earlier findings. Researchers have shown that correcting maladaptive beliefs about bodily sensations reduces fear-driven avoidance patterns and enables patients to reinterpret physical discomfort more adaptively (19). Likewise, evidence from Iranian samples indicates that CBT can effectively reduce obsessive beliefs, dysfunctional schemas, and maladaptive emotional responses, contributing to enhanced well-being across a range of psychological disorders (9, 10). The improvements observed in our CBT group reinforce the established role of cognitive restructuring and behavioral modification in symptom reduction among patients with somatic symptom presentations.

Similarly, ACT has gained substantial empirical support as a process-based intervention that addresses psychological inflexibility, experiential avoidance, and cognitive fusion—mechanisms that play a central role in somatic symptom amplification (11). Several studies have demonstrated that ACT improves quality of life in populations experiencing chronic medical and functional conditions. For example, ACT interventions have been shown to help individuals with irritable bowel syndrome, reducing symptom interference and enhancing acceptance of discomfort (12). Clinical researchers also report that ACT improves daily functioning and emotional well-being in chronic pain conditions by shifting patients toward value-based behavior rather than avoidance of distressing internal experiences (20). Additionally, ACT-based interventions have shown significant benefits for cancer patients, leading to reduced emotional distress and improved health-related quality of life in both face-to-face and digital formats (14, 15). These findings closely parallel the improvements observed in the ACT group in our study, suggesting that acceptance-based processes offer powerful tools for reducing symptom-related distress in somatic disorders.

Comparative studies support the conclusion that CBT and ACT often yield similar outcomes in health-related quality-of-life measures. For example, research comparing ACT, dialectical behavior therapy, and mindfulness-based stress reduction for irritable bowel syndrome found comparable improvements across modalities, despite differences in theoretical mechanisms (21). Furthermore, in chronic disease contexts such as multiple sclerosis and diabetes, ACT has demonstrated similar or superior outcomes compared to traditional therapeutic approaches in enhancing resilience and quality of life (17, 26). Therefore, the lack of significant differences between CBT and ACT in the present study may reflect underlying shared processes of change—such as increased emotional awareness, reduced experiential avoidance, and improved coping flexibility—that contribute to improved functioning regardless of therapeutic modality.

The study's findings also align with broader evidence on functional somatic disorders. Functional limitations and perceived disability in somatic symptom disorders often mirror those observed in medically verified conditions, highlighting the need for psychological interventions that address subjective distress and maladaptive interpretations of bodily sensations (5). Research has shown that stress, emotional dysregulation, and catastrophic interpretations play central roles in symptom persistence (19). ACT and CBT directly address these maladaptive processes: CBT through cognitive reappraisal of physical symptoms and ACT through the cultivation of acceptance and defusion, allowing patients to disengage from distressing symptom-focused thoughts. Given the person-centered nature of ACT and the structured cognitive orientation of CBT, it is not surprising that both interventions yielded substantial improvements in quality of life.

Another important aspect of the findings is the maintenance of treatment gains at follow-up. Sustained improvement is a critical indicator of treatment effectiveness in chronic conditions such as somatic symptom disorder. Research shows that somatic symptoms tend to fluctuate over time, particularly when emotional distress or external stressors increase (4, 13). The slight decline observed from posttest to follow-up in both ACT and CBT groups is consistent with this natural fluctuation yet was not statistically significant. This stability in outcomes is consistent with previous trials demonstrating the durability of ACT's effects in chronic illness and psychological distress (16, 22). Similarly, CBT has been shown to produce long-term improvements in pain severity, disability, and psychological functioning across a variety of medical and

psychosomatic conditions (8). The maintenance of treatment gains observed in this study therefore reflects the robustness of both therapeutic models.

The broader epidemiological context further underscores the clinical relevance of these findings. Somatic symptoms and functional disorders are highly prevalent across populations, including children and adolescents, and impose significant strain on healthcare systems due to repeated medical consultations and diagnostic investigations (1). Because these disorders often involve medically unexplained symptoms, they place patients at risk for unnecessary procedures and increased health anxiety (2). Research suggests that emotional distress, maladaptive coping styles, and cognitive misinterpretations of symptoms reinforce the cycle of somatic preoccupation, highlighting the essential role of psychological treatment (3). Thus, the demonstrated effectiveness of both CBT and ACT in the present study supports health system strategies promoting early psychological intervention to prevent chronicity and reduce disability.

Furthermore, the results align with literature emphasizing the multidimensional nature of quality of life. Quality of life encompasses physical, psychological, social, and environmental domains, and interventions that enhance emotional well-being often produce improvements across these dimensions. The Persian WHOQOL instrument used in this study has been validated and widely employed in Iranian clinical research, emphasizing its utility in capturing meaningful patient-reported outcomes (18). Studies in Iran applying CBT and ACT have consistently demonstrated significant improvements in quality-of-life indices across mental health and chronic disease populations (23, 24). The consistent pattern of results across different disorders highlights the centrality of cognitive and emotional regulation processes in shaping quality-of-life outcomes.

Overall, the findings of this study reinforce a growing body of evidence supporting CBT and ACT as effective, process-oriented treatments for somatic symptom disorder. Both therapies appear to influence key transdiagnostic mechanisms, including catastrophic thinking, experiential avoidance, emotional dysregulation, and maladaptive coping strategies. Although the interventions differ theoretically—CBT emphasizing cognitive restructuring and ACT emphasizing psychological flexibility—their shared focus on modifying dysfunctional relationships with bodily sensations and internal experiences may explain their comparable effectiveness. This interpretation corresponds with theoretical perspectives suggesting that the psychological distress associated with somatic disorders is driven less by the physical symptoms themselves and more by the individual's interpretation, emotional response, and behavioral coping with these symptoms (11, 12, 25). The present study therefore contributes to the growing literature on integrative and process-based approaches to somatic disorders.

This study has several limitations that should be considered when interpreting the findings. First, the sample size was relatively small, which may limit the generalizability of the results and reduce statistical power to detect subtle differences between interventions. The participants were also drawn from a single geographic region, which may limit the cultural and demographic variability necessary for broader application. Additionally, the follow-up period was only one month, which may not fully capture the long-term durability of treatment effects in chronic and fluctuating conditions such as somatic symptom disorder. Another limitation concerns the reliance on self-report measures, which may be influenced by social desirability or limited insight into emotional and somatic experiences. Finally, therapist variability and intervention fidelity were not independently evaluated, which may introduce some inconsistency across treatment delivery.

Future studies would benefit from larger and more diverse samples to enhance external validity and allow for subgroup analyses based on age, gender, cultural background, or symptom subtype. Expanding the follow-up period to six months or one year could provide a more comprehensive understanding of treatment sustainability. It would also be valuable to incorporate objective physiological measures or clinician-rated assessments to complement self-reported quality of life. Comparative studies could examine hybrid or integrative approaches combining elements of CBT and ACT to determine whether blended interventions yield superior outcomes. Finally, future research should explore mediators and moderators of treatment response to clarify which patients benefit most from each therapeutic approach.

Clinicians should consider both CBT and ACT as effective treatment options for individuals with somatic symptom disorder, selecting the approach that best aligns with patient preferences and therapeutic goals. In practice settings where emotional avoidance and distress intolerance are prominent, ACT may offer particular advantages, while CBT may be more appropriate for patients who respond well to structured cognitive restructuring. Integrating psychoeducation about the interaction between stress, cognition, and somatic symptoms can enhance engagement and reduce treatment resistance. Healthcare organizations should provide training for clinicians in both modalities to ensure flexibility in treatment planning and increase access to evidence-based care. Additionally, collaboration between medical and psychological services may optimize early detection and intervention for somatic symptom presentations.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

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

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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