KMAN PUBLISHING INSTITUTE
Journal Website

Article history:
Received 21 January 2024
Revised 23 February 2024
Accepted 09 March 2024
Published online 01 April 2024

Applied Family Therapy Journal

Volume 5, Issue 2, pp 208-217

E-ISSN: 3041-8798

Comparison of Cognitive Behavioral Therapy and Acceptance and Commitment Therapy on Negative Automatic Thoughts and Negative Affect in Depressed Women

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Article Info

Article type:
Original Research

How to cite this article:
Barzegari Khanagha, H. (2024). Comparison of Cognitive Behavioral Therapy and Acceptance and Commitment Therapy on Negative Automatic Thoughts and Negative Affect in Depressed Women. *Applied Family Therapy Journal, 5*(2), 208-217.
http://dx.doi.org/10.61838/kman.aftj.5.2.23

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ABSTRACT

Objective: The purpose of this study was to compare the effects of Cognitive Behavioral Therapy (CBT) and Acceptance and Commitment Therapy (ACT) on negative automatic thoughts and negative affect in depressed women.
Methods: The design of this study was applied and quasi-experimental, featuring pre-test and post-test stages with two experimental groups and one control group, followed by a two-month follow-up period. The study population included all women diagnosed with depression who visited a private counseling center in Tehran in 2023. A convenience sample of 30 participants was randomly assigned equally to the two experimental groups and one control group. The Watson and Tellegen (1985) Positive and Negative Affect Schedule (PANAS) and the Hollon and Kendall (1980) Automatic Thoughts Questionnaire (ATQ) were used for data collection. Data were analyzed using SPSS-26 software, applying three-way repeated measures analysis of variance (ANOVA) and Bonferroni post hoc tests.
Findings: Results indicate significant differences between pre-test and post-test scores for both therapies in terms of negative affect and negative automatic thoughts ($p < .01$), demonstrating the significant efficacy of both treatment modalities. No significant differences were found between post-test and follow-up scores ($p > .05$). Analysis using the Bonferroni test shows no significant difference in the efficacy of the two approaches on problem-solving components ($p > .05$).
Conclusion: Based on the findings, it can be concluded that both Cognitive Behavioral Therapy and Acceptance and Commitment Therapy are effective in reducing negative affect and negative automatic thoughts in depressed women, with no significant difference in the effectiveness of these therapeutic approaches.
Keywords: *Cognitive Behavioral Therapy, Acceptance and Commitment Therapy, Negative Affect, Negative Automatic Thoughts, Depressed Women.*

The term depression refers to a set of behaviors primarily characterized by a slowness in movement and speech, and other symptoms including crying, sadness, lack of active responses, disinterest, feelings of worthlessness, insomnia, and lack of appetite. Depression is a disorder affecting the psychobiological system, encompassing emotions, thoughts, behavior, and physical functioning (Shensa et al., 2020). Emotional components of depression include feelings of sadness and sorrow, an inability to enjoy, boredom, guilt, irritability, and hopelessness. Physical symptoms consist of hypochondriasis, variations in sleep patterns such as insomnia and hypersomnia, weight loss or gain, diarrhea or constipation, fatigue, exhaustion, and decreased libido. Behavioral changes in depression include social withdrawal, occupational disengagement, and reduced participation in pleasurable activities (Maydych, 2019). Depression is a disorder marked by decreased energy and interest, feelings of guilt, changes in appetite and thoughts of death and suicide, and accompanies changes in cognitive abilities, speech, sleep patterns, and appetite, leading to impairments in job performance, social, and interpersonal relationships (Vanderlind et al., 2022).

One variable proven to correlate with depression is negative automatic thoughts. These involuntary, unconscious, entirely illogical, and distressing thoughts occur in response to everyday harmful events, leading to emotional problems (Naseri & AliMehdi, 2023). Negative automatic thoughts are fleeting and involuntary, occurring within the stream of consciousness and act as a significant factor in stressful situations, determining human behaviors (Della Libera et al., 2023). These thoughts result from failing to respond adequately to life's stresses. Inefficient cognitive processes throughout life are influenced by cultural and environmental factors, transforming cognitions into a source of concern and conflict (Onofrei, 2020). These thoughts, because they tend to spontaneously appear in the mind, are referred to as automatic. They are often altered and distorted, not presenting an accurate view of events. A crucial point about these thoughts is that they are a natural part of the subconscious mind, typically unnoticed, making their recognition quite challenging. Therefore, it is essential for individuals to be aware of the most common negative automatic thoughts, as many of them control reactions and responses (Marzeh HajiAghayi et al., 2023). Negative automatic thoughts occur quickly and in the short term but can have long-lasting effects on an individual's emotions (Budak et al., 2021).

Emotions are a universal aspect of human life (Chen et al., 2021). Tellegen (2001) categorizes emotions into two basic dimensions: negative affect, indicating the extent to which a person feels displeasure and unhappiness, resulting in avoidant mood states such as anger, sadness, disgust, humiliation, guilt, fear, and irritation. People with high negative affect are more prone to experiencing negative emotions, characterized by excessive emotions and high conditioning (Overall et al., 2020). The second emotional dimension, positive affect, represents a state of active energy, high concentration, and engagement in pleasurable activities, encompassing a broad range of positive mood states, including happiness, a sense of capability, excitement, desire, interest, and confidence. Positive affect significantly impacts an individual's interactions with others and their environment, assisting in efficiently processing emotional information to solve problems, plan accurately, and achieve success (Asadi et al., 2020). It appears that individuals experiencing high positive affect tend to experience less negative affect, whereas those experiencing high negative affect tend to have less positive affect (Chen et al., 2021). Research indicates that positive affect can counteract and neutralize the detrimental effects of negative emotions. However, substantial evidence shows that positive and negative affects are unrelated and are not two sides of the same coin. This is because the source of positive affect is pleasant events and experiences, whereas negative affect arises from unpleasant events. The definition of affect also involves distinguishing between affect, emotion, and mood (Horn et al., 2019).

Acceptance and Commitment Therapy (ACT) is a therapeutic approach gaining increasing attention from therapists and has proven effective in various situations. The treatment plan for ACT involves six core processes including acceptance, cognitive defusion, self as context, being present, values, and committed action, leading to psychological flexibility (Hayes & Hofmann, 2021). Each of these processes represents psychological skills that can be enhanced in any life domain, based on internal experiences or unwanted symptoms. Thus, ACT interventions are considered transdiagnostic psychological treatments potentially affecting various psychological symptoms and life issues (Saadati et al., 2021). ACT is based on the principle that attempts to avoid or control distressing mental experiences are futile or counterproductive, often exacerbating them, and one must strive to fully accept them (Gloster et al., 2020). This approach assumes that psychological distress arises from efforts to change

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distressing internal experiences (i.e., thoughts and feelings), leading to maladaptive behavior (Bai et al., 2020). Another approach that appears to be effective in this context is Cognitive Behavioral Therapy (CBT). A fundamental principle of CBT is the close relationship between thoughts, emotions, and behaviors. In this approach, it is believed that negative and illogical thoughts can lead to the creation and persistence of negative emotions and destructive behaviors. As a result, this treatment helps individuals to identify and challenge these negative cognitive patterns, replacing them with more realistic and constructive thoughts. This change in thoughts often leads to improved emotions and healthier behaviors (Leahy et al., 2022). The primary goals of CBT include eliminating errors, distortions, and biases in thinking, enabling individuals to function more effectively (Boschloo et al., 2019). The CBT approach focuses on cognitive distortions and efforts to change emotions and behaviors, concentrating on behavior. The therapist helps the client to identify cognitive distortions and replace them with more positive and realistic ways of thinking (Gautam et al., 2020). CBT is also recognized as one of the most effective treatment methods for coping with mental disorders such as anxiety and depression, focusing on correcting maladaptive thoughts, cognitive distortions, and changing behavioral patterns that cause distress. The goal of CBT is to increase an individual's awareness of their thoughts, feelings, and experiences (Surmai & Duff, 2022). The assumptions of CBT focus on the basis of changing cognition, emotion, and behavior; this means that CBT interventions in the current research have caused participants to correct their incorrect perceptions in terms of thinking and emotion and to use them in their interactions with others to have a positive view of their situation. Additionally, by correcting beliefs and perceptions of their emotions, they create conditions for reducing negative emotions during the intervention. This has made CBT effective in emotion regulation (Reid et al., 2021). CBT is based on the idea that by changing how we think, we can create positive changes in our emotions and behaviors. This approach emphasizes self-efficacy and empowering patients to manage their psychological issues (Nesset et al., 2021). Therefore, considering the said content and the importance of research in finding the best treatment, especially for depressed women, and the lack of research in this area, the current research was conducted with the aim of comparing Cognitive Behavioral Therapy and Acceptance and Commitment Therapy on negative automatic thoughts and negative affect in depressed women.

1. Methods

1.1. *Study design and Participant*

The present study was applied in aim and quasi-experimental in method, using a pre-test and post-test design with two experimental groups and one control group, including a two-month follow-up period. The study population consisted of all women diagnosed with depression who visited a private counseling center in Tehran in 2023. Thirty individuals were selected through convenience sampling and randomly assigned equally across the two experimental groups and one control group. Inclusion criteria were being female, diagnosed with depression, not diagnosed with other acute psychological disorders, and not addicted to drugs. Exclusion criteria included non-cooperation in more than two sessions and participation in psychotherapy sessions outside of this study. Data were collected using the Watson and Tellegen (1985) Positive and Negative Affect Schedule (PANAS) and the Hollon and Kendall (1980) Automatic Thoughts Questionnaire.

After sampling and assigning the study participants to three groups (two experimental and one control) and before initiating the interventions, a pre-test was administered. Subsequently, the respective interventions were performed for the two experimental groups, while no intervention was conducted for the control group. Post-tests were administered at the end of the intervention sessions for each group, and finally, after the two-month follow-up period, follow-up tests were conducted.

1.2. *Measures*

1.2.1. *Negative Affect*

This self-report tool consists of 22 items designed to measure two dimensions, positive affect and negative affect, with each subscale containing 11 items reflecting positive and negative feelings, respectively. The instrument is widely used in various studies and has demonstrated good internal consistency and discriminant validity. Internal consistency (Cronbach's alpha) for the positive affect subscale was .88 and for the negative affect subscale was .87. Test-retest reliability over an 8-week interval was reported as .68 for positive affect and .71 for negative affect (Watson & Tellegen, 1985). Negative affect correlated with Beck's Depression Inventory at 1.48 and positive affect at 1.26. Negative affect also correlated with the State-Trait Anxiety

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Inventory at 1.41 for positive affect and 1.24 for state anxiety (Watson et al., 1988; Watson & Tellegen, 1985). Abuolghasemi (2003) obtained Cronbach's alpha coefficients of .46, .68, .52, and .42 for the positive and negative affect scale across different times: past, present, and future, respectively (Vafaeinezhad et al., 2023).

1.2.2. Automatic Thoughts

This questionnaire consists of 30 items to assess automatic negative self-statements. Scoring is based on a Likert scale from "never" to "always" with scores ranging from 1 to 5. Total scores range from 30 to 150, with higher scores indicating more frequent negative automatic thoughts. The questionnaire assesses four subscales: personal maladjustment and desire for change, negative self-concept and expectations, low self-esteem, and helplessness. It has demonstrated excellent internal consistency with a Cronbach's alpha of .97 (Hollon & Kendall, 1980). In research by Kaviani et al. (2005), correlations of .67 and .74 were obtained for belief in automatic thoughts and their frequency, respectively, suggesting good convergent validity. Interclass correlations for control group scores between the first and second stages showed coefficients of .76 and .88 for belief in and frequency of automatic thoughts, respectively, indicating good reliability (Kaviani et al., 2005). In studies by Kord and Mohammadi (2019) Cronbach's alpha was reported as .91 and the convergent validity of this questionnaire was found to be satisfactory, with a reported Cronbach's alpha of .94 (Kord & Mohammadi, 2019). In the current study, the reliability of the instrument was established with a Cronbach's alpha of .83.

1.3. Interventions

1.3.1. Cognitive Behavioral Therapy

The content of therapy sessions was conducted in a group format according to the guidelines provided by Beck (2020) (Beck et al., 2020).

Session 1: Introduction and Orientation

In the first session, participants are introduced to each other, and the therapist explains the goals and expectations of the therapy. The group rules and the nature of anxiety are discussed to establish a foundation for the sessions. As homework, participants are tasked with reading a self-help book on overcoming anxiety to prepare them for the upcoming sessions.

Session 2: Cognitive Model Education

The second session involves a review of the previous session and the homework assigned. The cognitive model of thought and behavior is introduced, with an emphasis on identifying cognitive distortions and the degree of belief in these distortions. Participants are given a worksheet to record their thoughts and review cognitive distortions as homework.

Session 3: Strategies Against Cognitive Distortions

This session reviews the previous homework and discusses any obstacles encountered. The therapist introduces strategies to combat cognitive distortions, and participants practice these strategies during the session. For homework, participants are asked to practice evidence examination using their thought record worksheet.

Session 4: Psychological Education on Cognitive Distortions

The fourth session continues with a review of cognitive distortion strategies, introducing the cost-benefit analysis technique and practicing it during the session. The session is summarized, and participants are assigned to perform a cost-benefit analysis using their thought record worksheet as homework.

Session 5: Identifying Trigger Situations

Participants review the previous session and discuss homework. The session focuses on identifying trigger situations, distress tolerance, and social skills training, including role-playing. Homework involves preparing a hierarchy of anxiety-provoking situations along with the percentage of distress they cause.

Session 6: Mental Imagery and Exposure

This session includes a review of the mental rehearsal of social skills and the homework from the previous session. The therapist teaches mental imagery, simulated and real exposure, and assertiveness, followed by role-playing. Participants are assigned to mentally rehearse social skills and complete thought record worksheets as homework.

Session 7: Role-Playing and Real Exposure

Participants review and discuss the previous session's homework. The session focuses on role-playing and real exposure activities, such as participating in groups and public speaking. The session concludes with a summary and participants are assigned to practice real exposure and complete thought record worksheets as homework.

Session 8: Review and Relapse Prevention

The final session reviews all previous sessions and homework. Discussion centers on the factors that contribute to relapse and strategies for preventing relapse. Participants

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are tasked with practicing and applying these prevention strategies as homework.

1.3.2. Acceptance and Commitment Therapy

The content of therapy sessions based on the Acceptance and Commitment Therapy protocol by Hayes et al. (2005) was conducted in eight 60-minute group sessions (Hayes & Hofmann, 2021).

Session 1: Introduction and Therapeutic Relationship

The first session involves introducing the participants and establishing a therapeutic relationship. The therapist introduces the core concepts of ACT and sets a collaborative treatment contract with the participants.

Session 2: Discovery and Evaluation of Treatment Methods

This session explores and evaluates the patient's previous treatment methods and discusses the temporary and ineffective nature of these methods. The focus is on psychological acceptance, clarification of values, and action, with discussion and feedback incorporated into the session.

Session 3: Ineffective Strategies and Acceptance

The therapist helps the participant identify ineffective control strategies and the futility of these efforts. The session includes using metaphors to facilitate the acceptance of painful personal events without struggle. Feedback is provided, and homework is assigned.

Session 4: Emotional Regulation Training

The fourth session teaches emotional regulation, including the avoidance of painful experiences and awareness of their consequences. Steps towards acceptance and changing language concepts using metaphors are taught, along with relaxation techniques. Feedback is collected, and homework is assigned.

Session 5: Behavior, Emotions, and Psychological Functions

This session discusses the interconnection between behavior, emotions, psychological functions, and observable behavior. Efforts to change behavior based on these connections are explored, with feedback and homework assignments given.

Session 6: Self-as-Context

The therapist explains the concepts of role and context, helping participants see themselves as a backdrop and establishing contact with the self using metaphors. Awareness of different sensory perceptions and detachment from mental content are practiced, with feedback and homework provided.

Session 7: Values and Motivation for Change

The concept of values is explained, motivating the participant to make changes for a better life. Concentration exercises are practiced, and feedback and homework are provided to reinforce the session's teachings.

Session 8: Commitment to Action

The final session focuses on committing to actions aligned with personal values, summarizing the sessions, and preparing for the post-test. Relaxation techniques are taught using tension-reduction strategies for the follow-up phase.

1.4. Data Analysis

Statistical data analysis was carried out using SPSS-26 software, employing three-way repeated measures analysis of variance (ANOVA) and Bonferroni post hoc tests.

2. Findings and Results

Regarding demographic characteristics, the mean (standard deviation) age was 26.41 (5.61) for the Cognitive Behavioral Therapy (CBT) group, 24.29 (5.40) for the Acceptance and Commitment Therapy (ACT) group, and 27.13 (4.91) for the control group. Descriptive data for all three groups at three stages—pre-test, post-test, and follow-up—are presented in Table 1.

Table 1

Descriptive Data for Experimental and Control Groups at Pre-test, Post-test, and Follow-up Stages

Variable	Group	Pre-test Mean	Pre-test SD	Post-test Mean	Post-test SD	Follow-up Mean	Follow-up SD
Negative Affect	Cognitive Behavioral Therapy	31.44	4.29	24.76	4.37	24.51	4.55
	Acceptance and Commitment	32.03	4.14	24.80	3.96	24.30	5.23
	Control	30.97	4.76	31.17	4.66	31.10	5.07
Automatic Thoughts	Cognitive Behavioral Therapy	105.42	10.26	92.30	10.30	91.76	10.91

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Acceptance and Commitment	106.12	11.03	92.11	11.67	91.95	11.22
Control	105.77	10.85	106.46	11.20	106.59	11.65

As observed in Table 1, the scores of both experimental groups in negative affect and automatic thoughts showed significant changes at the post-test stage, whereas the scores of the control group did not change. A repeated measures analysis of variance was used to test the significance of the training effectiveness of the two groups. Initially, necessary assumptions were examined. The results of the Shapiro-Wilk test indicated that the data were normally distributed ($p < .05$). The Levene's test confirmed the homogeneity of variances, and the Mauchly's test confirmed the sphericity of the data ($p < .05$). Thus, the use of mixed-design ANOVA with three repeated measures was permitted. The results of the repeated measures ANOVA are reported in Table 2.

Table 2

Mixed ANOVA with Repeated Measures Across Three Stages

Source of Variation	Group	Component	SS	Df	MS	F	p	Effect Size
Negative Affect	Cognitive Behavioral Therapy	Constant	48293.242	1	48293.242	254.29	0.000	0.94
		Group	283.295	2	141.647	9.20	0.001	0.29
		Error	325.991	28	11.642			
	Acceptance and Commitment	Constant	49873.878	1	49873.878	260.32	0.000	0.95
		Group	304.942	2	152.471	9.67	0.000	0.32
		Error	355.371	28	12.691			
Automatic Thoughts	Cognitive Behavioral Therapy	Constant	80958.353	1	80958.353	362.377	0.000	0.98
		Group	497.223	2	248.611	13.38	0.001	0.38
		Error	706.249	28	25.223			
	Acceptance and Commitment	Constant	83130.490	1	83130.490	392.352	0.000	0.99
		Group	525.838	2	262.919	13.55	0.001	0.41
		Error	768.677	28	27.425			

As indicated in Table 2, Cognitive Behavioral Therapy and Acceptance and Commitment Therapy had a significant impact on the scores of negative affect and automatic thoughts over time ($F = 13.38$ and $F = 13.55$ for automatic thoughts, and $F = 9.20$ and $F = 9.67$ for negative affect; $p < .01$). It can be concluded that both treatments significantly affected the reduction of negative affect and automatic thoughts and increased positive affect in female students.

Table 3

Comparison of Adjusted Means for Experimental Groups

Variable	Stage	Cognitive Behavioral Therapy		Acceptance and Commitment Therapy	
		Mean Difference	Significance	Mean Difference	Significance
Negative Affect	Post-test vs. Pre-test	6.74	0.00	7.25	0.00
	Follow-up vs. Pre-test	6.87	0.00	7.44	0.00
	Follow-up vs. Post-test	0.13	1.00	0.19	1.00
Automatic Thoughts	Post-test vs. Pre-test	13.61	0.00	14.07	0.00
	Follow-up vs. Pre-test	13.79	0.00	14.28	0.00
	Follow-up vs. Post-test	0.18	1.00	0.21	1.00

Based on the contents of Table 3, there was a significant difference between the post-test and pre-test scores for both negative affect and automatic thoughts ($p < .01$), indicating the significant efficacy of these two therapeutic approaches. Additionally, no significant difference was observed between the post-test and follow-up scores ($p > .05$), suggesting that these effects were adequately stable.

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Table 4

Multiple Comparisons of Adjusted Mean Scores of Cognitive Behavioral Therapy and Acceptance and Commitment Therapy across Group and Time (Pre-test and Post-test)

Variable	Group I	Group J	Mean Differences (I-J)	Standard Deviation	Significance Level
Negative Affect	CBT	ACT	0.21	1.41	1.00
Automatic Thoughts	CBT	ACT	0.82	2.88	1.00

According to Table 4, the analysis using the Bonferroni test shows that the difference in the efficacy of the two trainings on the research variables is not significant ($p > .05$).

3. Discussion and Conclusion

The present study aimed to compare Cognitive Behavioral Therapy (CBT) and Acceptance and Commitment Therapy (ACT) in terms of their effects on negative automatic thoughts and negative affect in depressed women. The results from the statistical analysis indicated that although both therapeutic approaches were significantly effective, there was no significant difference between the effectiveness of CBT and ACT. Additionally, the results of the Bonferroni post hoc test showed that the effects of both CBT and ACT were suitably stable. The findings of this study are consistent with the findings from various studies (Apolinário-Hagen et al., 2020; Asadi et al., 2020; Asli azad et al., 2020; Bai et al., 2020; Leahy et al., 2022; Naseri & AliMehdi, 2023; Nesset et al., 2021; Saadati et al., 2021; Sheykhangafshe et al., 2023; Tabrizi et al., 2019; Zahedi et al., 2021).

In explaining the research findings, it can be said that a fundamental principle of Acceptance and Commitment Therapy (ACT) is the mindful and non-judgmental acceptance of internal experiences such as thoughts, feelings, and memories. In this approach, individuals are encouraged to accept these experiences as a natural part of their being, rather than fighting or avoiding them. This acceptance helps individuals deal with stress and pain from negative experiences in a more constructive way (Hayes & Hofmann, 2021). Moreover, this therapy aids individuals in increasing their cognitive defusion from their thoughts and emotions. This means learning that thoughts and feelings are merely mental experiences and not necessarily absolute realities. This distancing helps individuals gain control over their thoughts and emotions, preventing negative automatic responses. Furthermore, ACT emphasizes moving towards actions consistent with one's personal values, even if these actions involve difficult internal experiences. This means accepting the existence of problems and choosing to live an active and meaningful life based on personal values (Sander et al., 2021). ACT strives to enhance an individual's psychological acceptance of mental experiences (thoughts and emotions), reduce ineffective control actions, and increase present-moment psychological awareness (Saadati et al., 2021). This approach also emphasizes an individual's present psychological state, helping them become aware of their mental, physical, thoughts, feelings, and behaviors at the moment. It then teaches the individual to detach from these mental experiences in a way that allows them to act independently of these experiences (Coto-Lesmes et al., 2020). The next phase emphasizes efforts to reduce excessive self-focus on the life story narrative that the individual has created in their mind. It then helps the individual identify their personal values and translate them into specific behavioral goals, ultimately motivating them to engage in committed actions aligned with these defined goals and values while accepting mental experiences (Bai et al., 2020). Overall, Acceptance and Commitment Therapy is a flexible, dynamic approach that helps individuals face the realities of their lives in a more constructive and meaningful way. This approach not only aids in reducing suffering and pain but also enables individuals to build a fulfilling life aligned with their true values (Stockton et al., 2019).

On the other hand, Cognitive Behavioral Therapy sessions are typically conducted with structured planning. In each session, the therapist and patient focus on specific topics and work towards previously defined goals. This structured approach helps keep the therapeutic process focused and effective, ensuring that each session contributes towards progress in achieving common therapeutic goals (Leahy et al., 2022). Cognitive-behavioral therapy, through strategies of identifying and challenging distorted thinking patterns, also leads to personal resilience, which is effective in reducing anxiety and improving emotions (Apolinário-Hagen et al., 2020). In treating these thoughts, it is first necessary to make the patient aware of their presence and influence, and then teach them to construct more positive

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E-ISSN: 3041-8798

and adaptive self-talk through cognitive restructuring (Dobkin et al., 2020). In Cognitive Behavioral Therapy, by employing a combination of cognitive and behavioral strategies, the individual is able to make serious efforts towards behavioral changes and evaluate the consequences of these changes. Then, through changing thoughts and understanding, the therapeutic goal is achieved, transferring the learned skills into the individual's daily life; thus, the patient becomes their own therapist and is able to better manage their emotions (Leeuwerik et al., 2019). Furthermore, it can be stated that Cognitive Behavioral Therapy is a problem-solving approach that helps individuals practically and directly examine their problems and challenges. This method, with the therapist's assistance, allows the individual to break down their problems into smaller, more manageable pieces and develop specific strategies to address each of these issues. This practical approach helps individuals gain a better understanding of their problems and find constructive solutions for resolving them (Leahy et al., 2022). This therapeutic method, through behavioral homework, helps the patient recognize their ineffective beliefs, misinterpretations, cognitive errors, and inefficient thoughts and behaviors, gaining insight that personal interpretations of life events cause behaviors and emotions, and generally what they think they will feel. The use of cognitive-behavioral method empowers individuals in increasing control and mastery, facing different life events appropriately, learning to love themselves without criticism, just as they are (Gautam et al., 2020; González-Valero et al., 2019). On the other hand, the cognitive-behavioral approach focuses on cognitive distortions and efforts to change emotions and behaviors, focusing on behavior. The therapist helps the client to identify cognitive distortions and replace them with more positive and realistic ways of thinking. Cognitive-behavioral therapy assumes that most psychological disturbances are caused by negative cognitive distortions where negative thoughts are accepted uncritically, even unconsciously (Maydych, 2019; Nesset et al., 2021).

4. Suggestions and Limitations

This research, like others, faced limitations. The most significant limitation faced by the researcher was the population, restricted to depressed women, which reduces the generalizability of the findings. Moreover, the use of non-random, convenience sampling could also pose problems for generalization. Another major limitation of this study was the use of self-report measurement tools for collecting quantitative data, which could be problematic due to the potential lack of adherence to the principle of honesty, carelessness, and the occurrence of errors in responding. Additionally, during the research, there were variables that were beyond the control of the researcher. Therefore, caution must be exercised in generalizing the results obtained in this study.

Given the limitations of the research and the results obtained, it is recommended that the effectiveness of each of the treatments in this study also be compared with other psychotherapeutic approaches. Additionally, it is suggested that the effectiveness of these two approaches on other variables and other statistical populations also be compared. Also, it is recommended that workshops be held to train the techniques and protocols of Cognitive Behavioral Therapy and Acceptance and Commitment Therapy for counselors and psychotherapists. Finally, it is recommended that specialists use Cognitive Behavioral Therapy and Acceptance and Commitment Therapy in their clients, especially depressed women. Researchers are also advised to integrate these two approaches during fundamental and qualitative research.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Declaration

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

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E-ISSN: 3041-8798

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

Ethical Considerations

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

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E-ISSN: 3041-8798

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