KMAN PUBLISHING INSTITUTE
Journal Website

Article history:
Received 20 October 2023
Revised 23 December 2023
Accepted 28 December 2023
Published online 08 January 2024

Journal of Adolescent and Youth Psychological Studies

Volume 5, Issue 1, pp 133-141

E-ISSN: 2981-2526

Comparison of Cognitive Behavioral Therapy and Mindfulness on Anxiety, and Positive and Negative Affect in Female Students

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A r t i c l e I n f o

Article type:
Original Research

How to cite this article:
Shabannezhad, A. (2024). Comparison of Cognitive Behavioral Therapy and Mindfulness on Anxiety, and Positive and Negative Affect in Female Students. *Journal of Adolescent and Youth Psychological Studies*, *5*(1), 133-141.
http://dx.doi.org/10.61838/kman.jayps.5.1.16

A B S T R A C T

Objective: The aim of the present research was to compare cognitive behavioral therapy and mindfulness on anxiety, and positive and negative affect in female students of Sari city.

Methods and Materials: The design of the current study was applied in purpose and quasi-experimental in execution, with a pre-test and post-test design, two experimental groups, one control group, and a follow-up period of two months. The research population consisted of all female students who visited a private counseling center in Sari city in 2023, from whom 30 individuals were selected through convenience sampling and randomly assigned to two experimental groups and one control group. Furthermore, to collect information, the Positive and Negative Affect Scale by Tellegen and Watson (1985) and the Zung Self-Rating Anxiety Scale (1971) were used. For statistical analysis of the data, SPSS-26 software and three-way repeated measures analysis of variance and Bonferroni post hoc test were utilized.

Findings: The findings indicate that there was a significant difference between the pre-test and post-test scores for both approaches for negative affect, positive affect, and anxiety ($p < .01$), demonstrating the significant effectiveness of these two therapeutic methods. Moreover, no significant difference was observed between the post-test scores and the follow-up stage ($p > .05$). Analysis using the Bonferroni test reveals that the difference in effectiveness between the two teachings on problem-solving components is not significant ($p > .05$).

Conclusion: Based on the findings, it can be concluded that both cognitive behavioral therapy and mindfulness therapy can be used to reduce depression and negative emotions and to increase positive emotions in female students, with no significant difference in the effectiveness of these therapeutic methods.

Keywords: *Cognitive Behavioral Therapy, Mindfulness Therapy, Positive and Negative Affects, Anxiety, Female Students.*

1. Introduction

Students in any country are considered the intellectual and spiritual assets of that nation. Investigating specific issues of students, successful study, and ensuring their physical and mental health are among the most important objectives of educational planners in governments (Zainallypour et al., 2009; Zamfir & Mocanu, 2020). The student period is an important and challenging time for

students. Throughout this period, all students, due to facing more stressors (such as the heaviness of courses, the long duration of the study period, etc.) and the need for appropriate adaptation, must have greater mental health and self-reliance to achieve increasingly successful in their studies and ultimately, in their profession (Zhang et al., 2022; Zhang et al., 2020). One of the issues that students struggle with is anxiety. Anxiety is a vague and unpleasant feeling that is often of an unknown source to individuals. Anxiety is defined as the anticipation of dangers or future misfortunes accompanied by a sense of discomfort or physical tension symptoms, where the anticipated danger source can be internal or external (Asadi et al., 2023; Assumpcao et al., 2019). With a prevalence of about 2 to 5 percent, anxiety signifies intense and excessive fear of situations where there is a possibility of analyzing a person's behavior and fear of their negative evaluation in social situations (Gazmararian et al., 2021; Ghadampour et al., 2018; Ghaderi et al., 2015). Anxiety is the third most common psychological disorder and a disabling condition with a chronic and continuous course, often starting in childhood or early adolescence due to experiences of mistreatment and hardships, and expanding in the years of youth and adulthood (Amiralsadat Hafshejani et al., 2021). Also, emotions are an essential part of the dynamic system of human personality and among the factors that affect an individual's behavior and relationships (Chen & Wei, 2011). Tellegen (2001) divides emotions into two fundamental emotional dimensions: one is negative affect, meaning how much a person experiences displeasure, inner despair, and lack of engagement in enjoyable activities leading to aversive mood states such as anger, sadness, disgust, contempt, guilt, fear, and irritability. People with high negative affect are more likely to experience negative emotions than those with lower negative affect, characterized by excessive emotions and high conditioning (Benetti & Kambouropoulos, 2006; Besharat, 2013). The second emotional dimension is positive affect, a state of active energy, high focus, and engagement in pleasurable activities encompassing a wide range of positive mood states including happiness, a sense of competence, enthusiasm, desire, interest, and self-confidence. Positive affect causes a positive impact on an individual's interaction with others and their environment. These emotions help the individual to accurately and efficiently process emotional information for problem-solving, proper planning, and achieving success (Segerstrom & Sephton, 2010). Generally, positive and negative affects are one of the predictors of life satisfaction. Most people, when judging their level of life satisfaction, pay attention to their balance of negative and positive affects, indicating the predominance of their positive feelings over negative ones (Tumminia et al., 2020). High positive affect focuses on high energy, complete concentration, and engaging in pleasurable tasks, while high negative affect focuses on sadness and lethargy. Positive and negative affects represent the main dimensions of emotional states. It appears that people experiencing high positive affect should experience less negative affect, and those experiencing high negative affect have less positive affect (Azimi & Soleimani, 2020; Farnia et al., 2018). Based on research, positive affect can negate negative emotions and neutralize their detrimental effects. However, ample evidence shows that positive and negative affects are not related and are not two sides of the same coin. This is because the generator of positive affect is pleasant events and experiences, while negative affect is caused by unpleasant events. When defining affect, other topics such as the distinction between affect, emotion, and mood are discussed (Taghipour et al., 2019).

Among the approaches whose effectiveness has been confirmed, mindfulness therapy can be mentioned. According to Kabat-Zinn (1983), mindfulness means paying attention to the present moment in a particular way, purposefully and without judgment. Currently, mindfulness is rapidly becoming an effective and efficient approach to dealing with increasing problems. If we look at mindfulness from a scientific research perspective, many clinical psychologists currently use mindfulness as a very effective medicinal tool for reducing stress and anxiety (Collard et al., 2008). The use of mindfulness and research in this field has increased in recent years. Mindfulness-based treatments, because they address both physical and mental dimensions, have been reported to be highly effective in treating some clinical disorders and physical illnesses. In the last two decades, numerous mindfulness-based interventions and treatments have emerged (Tabrizchi & Vahidi, 2015; Tavakoli & Ebrahimi, 2020). Another effective approach in psychotherapy is cognitive-behavioral therapy. Cognitive-behavioral therapy focuses on correcting maladaptive thoughts and cognitive distortions and changing behavioral patterns that cause distress. The goal of cognitive-behavioral therapy is to increase the individual's awareness of their thoughts, feelings, and experiences (Hashemi et al., 2016; Hossein Mardi & Khalatbari, 2018). The cognitive-behavioral approach focuses on cognitive distortions and efforts to change emotions and behaviors, focusing on

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behavior. The therapist helps the client identify their cognitive distortions and replace them with more positive and realistic ways of thinking. Cognitive-behavioral therapy assumes that the cause of most psychological disturbances is negative cognitive patterns, where negative thoughts are accepted without critique and even without conscious awareness (Towsyfyan et al., 2021; Yamamoto et al., 2017). Therefore, the purpose of the present study was to compare cognitive-behavioral therapy and mindfulness on anxiety, and positive and negative affect in female students of Sari city.

2. Methods and Materials

2.1. Study Design and Participants

The design of the current study was applied in its aim and semi-experimental in its approach, utilizing a pre-test and post-test design with two experimental groups, one control group, and a two-month follow-up period. The research population included all female students who visited a private counseling center in Sari city in 2023, from whom 30 individuals were selected through convenience sampling and randomly assigned to two experimental groups and one control group. Inclusion criteria for the research included being female, being a student, not being diagnosed with acute psychological disorders, and not having a drug addiction. Exclusion criteria included non-cooperation for more than two sessions and participation in psychotherapy sessions other than those of this study.

After sampling and assigning the research sample members to three groups (two experimental and one control) and before starting the interventions, a pre-test was administered. Then, the relevant interventions were carried out for the two experimental groups, and no intervention was made for the control group. After the intervention sessions ended, a post-test was taken from each group, and finally, after the follow-up period (2 months), a follow-up test was conducted.

2.2. Measures

2.2.1. Anxiety

The Zung Self-Rating Anxiety Scale (SAS), created by William Zung in 1971, is widely used to measure general anxiety and anxiety states and is based on the somatic-emotional syndromes of anxiety. Respondents are asked to answer each of the 20 items based on their agreement with the items over the past week. The maximum and minimum scores on this questionnaire are 80 and 20, respectively. Studies conducted by Zung et al., in 1976 on 500 students showed that the test reliability coefficient obtained by Cronbach's alpha was .84, indicating a relatively strong and significant coefficient. The Zung Self-Rating Anxiety Scale has been used in numerous studies in Iran, with Hakim Javadi and colleagues (2010) reporting its reliability as .67. In the study by Goodarzi and colleagues (2017), a Cronbach's alpha of .82 was reported, indicating high reliability (Qaziani & Arefi, 2017; Sahebi et al., 2005).

2.2.2. Positive and Negative Affect

This self-report instrument is a 22-item tool designed to measure two linear dimensions: negative affect and positive affect, each subscale consisting of 11 items presenting 11 positive and 11 negative feelings in word form. This tool has been used in numerous studies and has shown to have good internal consistency and discriminative convergent validity. Internal consistency coefficients (alpha) for the positive affect subscale were .88 and for the negative affect subscale were .87, with test-retest reliability over an 8-week interval reported as .68 for the positive affect subscale and .71 for the negative affect subscale. The negative affect subscale's correlation with the Beck Depression Inventory was 1.48, and the positive affect subscale's correlation with this questionnaire was 1.26. Also, the correlation of the negative affect subscale with the Manifest-Anxiety Scale was 1.41, and the positive affect subscale's correlation was .24. Abolghasemi (2003) obtained Cronbach's alpha coefficients of .46, .68, .52, and .42 for the Positive and Negative Affect Scale respectively for past, present, future, and overall times (Taghipour et al., 2019).

2.3. Intervention

2.3.1. Emotion-Focused Group Therapy

Cognitive Behavioral Therapy. The content of the therapy sessions was conducted in groups according to the guide provided by various studies (Hashemi et al., 2016; Yamamoto et al., 2017).

Session 1: Introduction and Psychoeducation

The first session focuses on introducing participants to CBT, establishing rapport, and setting therapeutic goals. Participants are educated about the cognitive model, illustrating how thoughts, emotions, and behaviors are interconnected. The concept of automatic thoughts and their influence on emotional well-being is introduced, alongside

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the importance of recognizing and tracking these thoughts in daily life.

Session 2: Identifying Negative Thoughts

Participants learn to identify their negative automatic thoughts and understand the difference between thoughts and feelings. Through practical exercises, individuals begin to notice and record their automatic thoughts in response to specific events, focusing on situations that trigger negative emotions.

Session 3: Challenging and Modifying Thoughts

This session introduces cognitive restructuring techniques. Participants are taught how to challenge their automatic negative thoughts by evaluating the evidence for and against these thoughts, leading to the development of more balanced and realistic thoughts.

Session 4: Behavioral Activation

Participants explore the role of behavior in maintaining or worsening mood states. Behavioral activation strategies are introduced, encouraging individuals to engage in activities that are aligned with their values and goals, increasing positive experiences and reducing avoidance behaviors.

Session 5: Problem-solving Skills

The fifth session focuses on developing effective problem-solving skills. Participants learn a step-by-step approach to identifying problems, generating potential solutions, evaluating these solutions, and implementing them, thereby enhancing their ability to cope with life's challenges.

Session 6: Addressing Core Beliefs

Participants delve deeper into their core beliefs and schemas that underlie their automatic thoughts and emotional reactions. Techniques for identifying, challenging, and modifying these deeper beliefs are introduced, with a focus on building a more positive self-concept.

Session 7: Assertiveness and Communication Skills

This session is dedicated to improving interpersonal effectiveness. Participants learn about assertiveness, the difference between assertive, passive, and aggressive behaviors, and practice communication skills that can help them express their needs and boundaries more effectively.

Session 8: Relapse Prevention and Closure

The final session focuses on consolidating gains, developing a personalized relapse prevention plan, and reviewing key skills learned throughout the therapy. Participants reflect on their progress, set future goals, and discuss strategies for maintaining improvements and coping with setbacks.

2.3.2. Mindfulness Therapy

The content of the mindfulness therapy sessions used in this study was implemented as follows (Sooreh et al., 2023; Tavakoli & Ebrahimi, 2020).

Session 1: Introduction to Mindfulness

The first session introduces the concept of mindfulness, its origins, and its benefits. Participants engage in basic mindfulness exercises, such as mindful breathing, to become more aware of the present moment and start developing an attitude of non-judgmental observation.

Session 2: Body Scan and Physical Awareness

Participants practice the body scan technique, focusing attention systematically on different parts of the body to cultivate awareness of physical sensations. This session aims to increase body awareness and promote relaxation.

Session 3: Mindfulness of Breathing

Building on the initial mindfulness exercises, this session focuses exclusively on mindfulness of breathing. Participants learn to use the breath as an anchor to the present moment, helping to calm the mind and reduce stress.

Session 4: Mindful Movement

This session introduces mindful movement practices, such as gentle yoga or walking meditation. Participants learn to apply mindfulness to movement, enhancing awareness of bodily sensations, movements, and the surrounding environment.

Session 5: Working with Difficult Emotions

Participants are taught how to apply mindfulness techniques to emotional distress. The focus is on observing difficult emotions without judgment, understanding their transient nature, and developing healthier ways to respond to emotional challenges.

Session 6: Mindfulness in Daily Life

This session emphasizes the application of mindfulness in everyday activities. Participants are encouraged to bring mindfulness to routine tasks, interactions, and experiences, fostering a continuous practice of awareness throughout the day.

Session 7: Compassion and Self-Compassion

Participants explore the concepts of compassion and self-compassion within the context of mindfulness. Exercises designed to cultivate kindness and compassion towards oneself and others are introduced, addressing critical self-talk and promoting emotional resilience.

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Session 8: Integration and Continuing Practice

The final session focuses on integrating mindfulness into daily life as an ongoing practice. Participants review the techniques learned, discuss challenges and successes, and plan for the continuation of mindfulness practice beyond the therapy. The session ends with a discussion on resources and support for maintaining mindfulness practice.

2.4. Data analysis

For the statistical analysis of the data, SPSS-26 software and a three-way repeated measures analysis of variance with Bonferroni post hoc tests were used.

3. Findings and Results

Demographically, the average (standard deviation) age was 21.61 (2.32) for the Cognitive Behavioral Therapy (CBT) group, 21.91 (2.40) for the Mindfulness Therapy group, and 22.77 (3.13) 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 of Scores 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	24.84	2.31	21.21	2.52	21.11	2.60
	Mindfulness Therapy	24.91	2.40	21.52	2.79	21.20	2.55
	Control	25.13	2.43	25.42	2.33	25.50	2.34
Positive Affect	Cognitive Behavioral Therapy	19.61	2.40	23.80	3.01	23.85	2.41
	Mindfulness Therapy	19.72	2.50	23.92	2.15	23.96	2.57
	Control	20.05	2.13	20.19	2.32	20.11	2.96
Anxiety	Cognitive Behavioral Therapy	65.82	5.53	57.32	5.91	57.20	5.81
	Mindfulness Therapy	63.30	6.14	57.19	6.70	57.12	5.99
	Control	63.55	5.18	63.60	5.49	63.69	6.42

Note. SD = Standard Deviation.

As observed in Table 1, the scores of both experimental groups on negative affect, positive affect, and anxiety have significantly changed at the post-test stage, whereas the scores of the control group have not changed. To test the significance of the effectiveness of the two groups' training, an analysis of variance with repeated measures at three stages was used. Initially, it was necessary to check the required assumptions. In this context, the Shapiro-Wilk test results indicated that the data were normally distributed ($p < .05$). Also, according to the results of Levene's test, the condition of homogeneity of variances is met, and Mauchly's test also confirms the sphericity of the data ($p < .05$). Therefore, it is permissible to use the mixed ANOVA with three-stage repeated measures. Subsequently, the results of the repeated measures ANOVA are reported.

Table 2

Mixed ANOVA with Repeated Measures at Three Stages

Source of Variation	Group	Component	Sum of Squares	df	Mean Square	F Ratio	Significance Level	Effect Size
Negative Affect	Cognitive Behavioral Therapy	Constant	132,852.420	1	132,852.420	1,650.899	< .001	.996
		Group	612.382	1	612.382	17.425	< .001	.652
		Error	274.409	19	12.86			
	Mindfulness Therapy	Constant	135,262.305	1	135,262.305	1,720.902	< .001	.998
		Group	592.723	1	592.723	15.765	< .001	.603
		Error	320.499	19	16.86			
Positive Affect	Cognitive Behavioral Therapy	Constant	149,248.721	1	149,248.721	1,402.924	< .001	.995
		Group	629.321	1	629.321	18.425	< .001	.699
		Error	405.328	19	22.33			

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	Mindfulness Therapy	Constant	116,143.289	1	116,143.289	1,823.665	< .001	.998
		Group	640.329	1	640.329	19.482	< .001	.728
		Error	305.328	19	16.06			
Anxiety	Cognitive Behavioral Therapy	Constant	921.214921	1	921.214921	293.1962	< .001	.990
		Group	291.623	1	291.623	932.13	< .001	.524
		Error	1,460.292	19	1,460.292			
	Mindfulness Therapy	Constant	952.236932	1	952.236932	832.1640	< .001	.992
		Group	319.529	1	319.529	312.14	< .001	.531
		Error	23.1632	19	85.89			

Note. df = Degrees of Freedom.

As seen in Table 2, both Cognitive Behavioral Therapy and Mindfulness Therapy had a significant effect over time on scores of anxiety (F = 13.93 and F = 14.31), negative affect (F = 17.42 and F = 15.76), and positive affect (F = 18.42 and F = 19.48) (p < .01), concluding that both trainings significantly impacted reducing negative affect and anxiety and increasing positive affect in female students.

Table 3

Comparison of Adjusted Mean Scores for Experimental Groups

Outcome	Stage	Cognitive Behavioral Therapy Difference (From Pre-test)	Significance	Mindfulness Therapy Difference (From Pre-test)	Significance
Negative Affect	Post-test	3.22	< .001	3.38	< .001
	Follow-up	3.31	< .001	3.42	< .001
	Follow-up	0.03	.001	0.04	.001
Positive Affect	Post-test	4.11	< .001	4.25	< .001
	Follow-up	4.18	< .001	4.31	< .001
	Follow-up	0.04	.001	0.09	.001
Anxiety	Post-test	7.52	< .001	7.69	< .001
	Follow-up	7.70	< .001	7.84	< .001
	Follow-up	0.15	.001	0.23	.001

Based on the contents of Table 3, there was a significant difference between the post-test and pre-test scores for both approaches on negative affect, positive affect, and anxiety (p < .01), indicating the significant effectiveness of these two therapeutic methods. Also, no significant difference was observed between the post-test scores and the follow-up stage (p > .05), concluding that these effects were suitably stable.

Table 4

Multiple Comparisons of Adjusted Mean Scores Between Cognitive Behavioral Therapy and Mindfulness Therapy Groups Across Time (Pre-test and Post-test)

Variable	Group I	Group J	Mean Difference (I-J)	Standard Deviation	Significance Level
Negative Affect	Cognitive Behavioral Therapy	Mindfulness Therapy	0.17	1.77	.001
Positive Affect	Cognitive Behavioral Therapy	Mindfulness Therapy	0.93	2.29	.089
Anxiety	Cognitive Behavioral Therapy	Mindfulness Therapy	0.93	2.29	.089

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

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4. Discussion and Conclusion

The aim of the current research was to compare the effectiveness of Cognitive Behavioral Therapy and Mindfulness-Based Therapy on depression and negative emotions in female students of Sari city. The results obtained from the statistical analysis of the data showed that despite the significant effectiveness of both therapeutic approaches, there is no significant difference in the effectiveness of Cognitive Behavioral Therapy compared to Mindfulness-Based Therapy. Also, the Bonferroni follow-up test results showed that the impact of Cognitive Behavioral Therapy and Mindfulness-Based Therapy is suitably stable. The results of the current research are consistent with the findings of various studies (Asadi et al., 2023; Farnia et al., 2018; Ghadampour et al., 2018; Hashemi et al., 2016; Hossein Mardi & Khalatbari, 2018; Qaziani & Arefi, 2017; Sooreh et al., 2023; Tavakoli & Ebrahimi, 2020).

In explaining the research findings, it can be stated that cognitive therapy based on mindfulness involves specific behavioral, cognitive, and metacognitive strategies to focus the attention process, which in turn prevents factors causing negative mood, negative thought, predisposition to worrying responses, and fosters the development of new perspectives and the formation of pleasant thoughts and emotions (Hossein Mardi & Khalatbari, 2018; Sooreh et al., 2023). Mindfulness, by increasing individuals' awareness of the present through techniques such as attention to breathing and body and directing awareness to the here and now, affects the cognitive system and information processing and causes a reduction in perceived stress. Also, the skill of being mindful makes clients who have a history of anxiety aware of their intrusive thoughts and redirects their thoughts to other aspects of the present moment, such as breathing, walking with mindfulness, or environmental sounds, thereby reducing perceived stress (Assumpcao et al., 2019; Tabrizchi & Vahidi, 2015; Tavakoli & Ebrahimi, 2020). One of the mindfulness skills that can be helpful is acceptance. The relationship between acceptance and change is a central concept in current psychotherapy discussions (Collard et al., 2008; Tumminia et al., 2020). It can also be said that one of the main goals of cognitive-behavioral therapy is to eliminate errors, distortions, and biases in thinking so that individuals can function more efficiently (Buschello et al., 2019). The cognitive-behavioral approach focuses on cognitive distortions and efforts to change emotions and behaviors and concentrates on behavior. The therapist helps the client identify their cognitive distortions and replace them with more positive and realistic ways of thinking. In newer approaches to cognitive-behavioral therapy, attention has been paid to hypnosis. Cognitive-behavioral therapy assumes that the cause of most psychological disturbances is negative forms of self-hypnosis, where negative thoughts are accepted without critique and even without conscious awareness (Hashemi et al., 2016; Sooreh et al., 2023). Cognitive-behavioral therapy, through strategies of identifying and challenging distorted thinking patterns, leads to personal resilience, which is effective in reducing anxiety and improving emotions (Asadi et al., 2023; Hashemi et al., 2016). To treat these thoughts, the client must first be made aware of their presence and influence, and then they are taught to construct more positive and adaptive self-statements through cognitive restructuring (Hashemi et al., 2016; Hossein Mardi & Khalatbari, 2018). Cognitive-behavioral therapy is a strategic package consisting of elements such as increasing individuals' awareness, teaching relaxation and meditation, self-instruction training, cognitive restructuring, expressive skills training, enhancing social support networks, and anger management (Yamamoto et al., 2017). This therapeutic method helps patients recognize their dysfunctional beliefs, misinterpretations, and cognitive errors, and dysfunctional thoughts and behaviors by behavioral tasks, gaining insight that personal interpretation of life events causes behaviors and emotions, and essentially, what they think they will feel. Using the cognitive-behavioral method empowers individuals in terms of increasing control and mastery, appropriately confronting different problems or events in life, learning to love themselves without criticism, as they are (Hossein Mardi & Khalatbari, 2018; Sooreh et al., 2023). Therefore, it seems logical that both Mindfulness Therapy and Cognitive Behavioral Therapy would be effective on anxiety, positive and negative emotions of students.

5. Limitations & Suggestions

One of the limitations faced by this research was the use of self-report instruments for data collection; when respondents answer these tools carelessly or without adhering to the principle of honesty, findings can be erroneous. Also, these tools do not have absolute reliability and validity, which can affect the accuracy of results. Furthermore, some may intentionally present themselves better or worse than reality, causing errors. Another limitation of the research was the use of a semi-experimental design. This research had only one follow-up stage, which is

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not sufficient to ensure the stability of the results. Also, there were intervening factors during the research that the researcher could not control. Finally, the use of convenience sampling could pose a problem for generalizing findings. Therefore, caution must be exercised in generalizing the results obtained in this research.

Given the results of this research and its limitations, the following suggestions are made: It is recommended that the effectiveness of each of the treatments in this research be compared with other psychotherapeutic approaches. It is also suggested that the effectiveness of the two approaches compared in this research be compared on other variables and other populations. Moreover, it is advised to hold workshops for training Cognitive Behavioral Therapy and Mindfulness Therapy for counselors and psychologists. Finally, it is recommended that specialists use Cognitive Behavioral Therapy and Mindfulness Therapy in female student clients.

Acknowledgments

We would like to express our appreciation and gratitude to all those who cooperated in carrying out 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. Patients were free to withdraw from the research at any time.

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.

Funding

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

Authors' Contributions

All authors equally contributed in this article.

References

Amiralsadat Hafshejani, F., Akbari, B., Hosseinkhanzadeh, A. A., & Abolghasemi, A. (2021). Factor Structure, Reliability and Validity of the Development of the Spence Children's Anxiety Scale-Short Version. *medical journal of mashhad university of medical sciences*, *64*(5), 3940-3952. https://doi.org/10.22038/mjms.2021.19850

Asadi, H., Mohammadi, M., Naziri, G., & Davoodi, A. (2023). Comparing of Clinical Efficacy of ACT Matrix with ACT Focused on Compassion and Hofmann's CBT on Social Anxiety Disorder. *Applied Psychology*, *17*(2), 61-33. https://doi.org/10.48308/apsy.2022.225361.1241

Assumpcao, A. A., Pena, C. S., Neufeld, C. B., & Teodoro, M. M. (2019). Mindfulness-based cognitive therapy for University students with depression, anxiety, and stress symptoms: a randomized controlled trial. *Asia Pacific Journal of Clinical Trials: Nervous System Diseases*, *4*(3), 51. https://doi.org/10.4103/2542-3932.263668

Azimi, H., & Soleimani, E. (2020). The Comparison of Psychological Distress, Impulsivity, and Type D Personality between Students with Positive and Negative Attitudes toward Addiction. *etiadpajohi*, *14*(57), 151-170. https://doi.org/10.29252/etiadpajohi.14.57.151

Benetti, C., & Kambouropoulos, N. (2006). Affect-regulated indirect effects of trait anxiety and trait resilience on self-esteem. *Personality and individual differences*, *41*(2), 341-352. https://doi.org/10.1016/j.paid.2006.01.015

Besharat, M. A. (2013). The Basic Needs Satisfaction in General Scale: Reliability, validity, and factorial analysis. *Quarterly of Educational Measurement*, *4*(14), 147-168. https://jem.atu.ac.ir/article_90_a71f0e793e59457f054c3d22271b37cb.pdf

Chen, J.-K., & Wei, H.-S. (2011). The Impact of School Violence on Self-Esteem and Depression Among Taiwanese Junior High School Students. *Social Indicators Research*, *100*(3), 479-498. https://doi.org/10.1007/s11205-010-9625-4

Collard, P., Avny, N., & Boniwell, I. (2008). Teaching Mindfulness Based Cognitive Therapy (MBCT) to students: The effects of MBCT on the levels of Mindfulness and Subjective Well-Being. *Counselling Psychology Quarterly*, *21*(4), 323-336. https://doi.org/10.1080/09515070802602112

Farnia, F., Nafukho, F. M., & Petrides, K. V. (2018). Predicting Career Decision-Making Difficulties: The Role of Trait Emotional Intelligence, Positive and Negative Emotions [Original Research]. *Frontiers in psychology*, *9*. https://doi.org/10.3389/fpsyg.2018.01107

Gazmararian, J., Weingart, R., Campbell, K., Cronin, T., & Ashta, J. (2021). Impact of COVID-19 Pandemic on the Mental Health of Students From 2 Semi-Rural High Schools in Georgia*. *Journal of School Health*, *91*(5), 356-369. https://doi.org/10.1111/josh.13007

Ghadampour, E., Hosseini Ramaghani, N., & Moradiani Gizeh Rod, S. (2018). Effectiveness of Emotional Schema Therapy on Anxiety Sensitivity and Emotion Regulation Strategies in Socially Anxious Students [Research]. *Armaghane Danesh*, *23*(5), 591-607. http://armaghanj.yums.ac.ir/article-1-1626-en.html

Ghaderi, B., Mohammadkhani, S., & Hassanabadi, H. R. (2015). Cognitive and Metacognitive Predictors of Anxiety in Adolescents. *Journal of Clinical Psychology*, *7*(4), 13-26. https://doi.org/10.22075/jcp.2017.2214

Hashemi, N., Seyed Morteza, G. B., Khadivi, G., Hashemian Nejad, F., & Ashoori, J. (2016). The effectiveness of cognitive behavioral therapy and schema therapy on happiness and

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mental health of nursing students. *skums-jcnm*, *5*(1), 12-22. http://78.39.35.47/article-1-329-en.html

Hossein Mardi, A. A., & Khalatbari, J. (2018). Comparison of the effectiveness of cognitive-behavioral therapy (CBT) and Acceptance and Commitment Therapy (ACT) on the Rate of Anger in High School Students in Tehran. *Pajouhan Scientific Journal*, *16*(2), 59-66.

Qaziani, M., & Arefi, M. (2017). The effectiveness of intensive short-term dynamic psychotherapy on affection control of anxious women [Original Article]. *International Journal of Educational and Psychological Researches*, *3*(4), 235-239. https://doi.org/10.4103/jepr.jepr_11_17

Sahebi, A., Asghari, M. J., & Salari, R. S. (2005). Validation of Depression Anxiety and Stress Scale (DASS-21) for an Iranian Population. *1*(4), 36-54. https://jip.stb.iau.ir/article_512443_a0d2c015073fc1d62ef524cc2302c4f0.pdf

Segerstrom, S. C., & Sephton, S. E. (2010). Optimistic Expectancies and Cell-Mediated Immunity: The Role of Positive Affect. *Psychological Science*, *21*(3), 448-455. https://doi.org/10.1177/0956797610362061

Sooreh, J., Hajloo, N., Atadokht, A., & Basharpoor, S. (2023). Comparing the Effectiveness of Positive Thinking Skills (PTS) and Mindfulness-Based Cognitive Therapy (MBCT) in Promoting Demoralization and Psycho-Social Adjustment in Cancer Patients. *Journal of Sabzevar University of Medical Sciences*, *30*(2), 193-207. https://doi.org/10.30468/jsums.2023.1557

Tabrizchi, N., & Vahidi, Z. (2015). Comparing emotional regulation, mindfulness and psychological well- being in mothers of students with and without learning disabilities. *Journal of Learning Disabilities*, *4*(4), 21-35. https://jld.uma.ac.ir/article_314_23e281409e62e955dbe841361723b763.pdf

Taghipour, B., Qolami, F., Ranjbar, M., Rostam Oqli, Z., & Barzegaran, R. (2019). The role of positive and negative affect in predicting psychological well-being of athletic students. *Journal of School Psychology*, *8*(3), 40-55. https://doi.org/10.22098/jsp.2019.840

Tavakoli, O., & Ebrahimi, S. (2020). The effectiveness of mindfulness-based cognitive therapy (MBCT) on academic motivation, self-efficacy and academic procrastination of students. *Journal of new developments in psychology, educational sciences and education*, *3*(28), 27-41. https://www.jonapte.ir/fa/showart-29e7004637e710585a631830db312b50

Towsyfyan, N., Marashi, S. A., & Beshlideh, K. (2021). The Role of the Prosocial Behavior on Improving the Psychological Well-Being of University Students by Mediating Role of Positive Emotions and Moderating Role of Emotion Regulation. *Research in cognitive and behavioral sciences*, *11*(2), 107-122. https://doi.org/10.22108/cbs.2022.130780.1578

Tumminia, M. J., Colaianne, B. A., Roeser, R. W., & Galla, B. M. (2020). How is Mindfulness Linked to Negative and Positive Affect? Rumination as an Explanatory Process in a Prospective Longitudinal Study of Adolescents. *Journal of youth and adolescence*, *49*(10), 2136-2148. https://doi.org/10.1007/s10964-020-01238-6

Yamamoto, T., Matsumoto, Y., & Bernard, M. E. (2017). Effects of the cognitive-behavioral You Can Do It! Education program on the resilience of Japanese elementary school students: A preliminary investigation. *International Journal of Educational Research*, *86*, 50-58. https://doi.org/10.1016/j.ijer.2017.08.006

Zainallypour, H., Zareei, E., & Zandineya, Z. (2009). Study of General and Academic Self-efficacy of Students and its Relationship with Academic Achievement. *Journal of Educational Psychology Studies*, *6*(9), 13. https://www.magiran.com/paper/821663

Zamfir, A.-M., & Mocanu, C. (2020). Perceived academic self-efficacy among Romanian upper secondary education students. *International journal of environmental research and public health*, *17*(13), 4689. https://doi.org/10.3390/ijerph17134689

Zhang, W., Pu, J., He, R., Yu, M., Xu, L., He, X., Chen, Z., Gan, Z., Liu, K., Tan, Y., & Xiang, B. (2022). Demographic characteristics, family environment and psychosocial factors affecting internet addiction in Chinese adolescents. *Journal of affective disorders*, *315*, 130-138. https://doi.org/10.1016/j.jad.2022.07.053

Zhang, W., Wang, Y., Yang, L., & Wang, C. (2020). Suspending Classes Without Stopping Learning: China's Education Emergency Management Policy in the COVID-19 Outbreak. *Journal of Risk and Financial Management*, *13*(3).

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E-ISSN: 2981-2526