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Cognitive Behavioral Therapy (CBT) vs. Mindfulness-Based Therapy in Managing Generalized Anxiety Disorder

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ABSTRACT:
Background: Generalized Anxiety Disorder (GAD) is a common psychological disorder that is associated with worrying excessively and worrying beyond the limits. The Cognitive Behavioral Therapy (CBT) and Mindfulness-Based Therapy (MBT) have been identified as the forefront evidence-based interventions among the numerous therapeutic methods. Both have been proved to be effective; however, there is a minimal literature addressing the comparative effectiveness of these treatments in the management of GAD. Aim: This study was purposeful in comparing effectiveness of Cognitive Behavioral Therapy and Mindfulness-Based Therapy in the minimization of Generalized Anxiety Disorder in adult patients. Methods: This was a study that was carried out in the Shifa International Hospital in Islamabad between June 2024 and May 2025. One hundred patients (and only these) with GAD with the age range between 18 and 55 years were recruited and randomly allocated to two unequal groups. The treatment that Group A was subjected to included CBT whereas the treatment that Group B was subjected to included MBT. Every group was involved in therapy sessions every week and the duration of the sessions was 12 weeks. Baseline, mid-therapy, and post-therapy phases were assessed by standardized assessment tools, the Generalized Anxiety Disorder-7 (GAD-7) scale and the Beck Anxiety Inventory (BAI) to measure levels of anxiety. Results: The mean results depicted that both CBT and MBT groups reported significant decrease in anxiety symptoms during a 12-week period of intervention program ($p<0.01$). Nevertheless, the means of GAD-7 values improved (16.8 has been decreased to 7.4) at a rather higher level in the CBT group (2.32.1) than in the MBT group (2.3-2.4). In the same manner, the scores of the BAI recorded deteriorated more within the CBT group (29.5 4.0 to 13.2 3.0) than in the MBT group (28.9 4.2 to 15.6 3.2). Conclusion: It was concluded that both Cognitive Behavioral Therapy and Mindfulness-Based Therapy were effective in control of symptoms of Generalized Anxiety Disorder, however, CBT resulted in greater changes in reduction of anxiety. These results indicate that CBT can be viewed as somewhat more effective initial line therapy of GAD clinically. Keywords: Generalized Anxiety Disorder, Cognitive Behavioral Therapy, Mindfulness-Based Therapy, Anxiety Reduction, Psychotherapy, Comparative Study.

INTRODUCTION:

The Generalized Anxiety Disorder (GAD) had already been identified as one of the most frequent and constant (chronic) type of anxiety disorder which is displayed by excessive worrying and regular psychological straining. Subjects with GAD often had symptoms of restlessness, fatigue, irritability, inability to concentrate, muscle stiffness and sleeping problems [1]. Such symptoms had frequently caused considerable distress and disability in many life domains, such as personal relationships, academic or occupation functioning, and quality of life. Due to the chronic condition of GAD, effective treatment interventions on the subject had continued to be an issue of priority in the mental health treatment sphere. CBT was already traditionally regarded as a gold standard in treating GAD. Ruled by the cognitive model, CBT was based on the fact that maladaptive thoughts patterns were the factors that caused emotional distresses and behavioral dysfunctions [2]. CBT also equipped people with the more specific strategies of learning to recognize, dispute, and reinterpret distorted thinking, and slowly to face avoided situations. This cognitive behavioral therapy structure, with a given set of aims towards achieving this reduction of anxiety symptoms and increase in coping strategies had proved to be effective throughout. CBT was well studied and its efficacy widely reinforced through a great amount of empirical evidence and therefore, it is freely available and prescribed as one mode of treatment of anxiety disorders. Conversely, Mindfulness-Based Therapy (MBT) had found its way as a substitute treatment intervention, which relied on Eastern contemplative practices but was applied in a western psychological context. The mindfulness practices involved focusing on the current moment, non judgmental acceptance of thoughts and feeling along with self compassion [3]. The most applicable types of MBT to treat anxiety had been the mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT). However, in contrast to the CBT, in which it is believed that it is possible to change the contents of thoughts, in MBT, people were simply taught to watch their thoughts and their feelings without responding to them, which might decrease the effect of the negative cognition and increase emotional control.

In the last twenty years, there was an increasing concern of how comparative was the efficacy of the two modalities of therapy in the treatment of GAD [4]. The previous studies had already examined such outcomes as the immediate and long-term effects of CBT and MBT and explored such questions as the decrease in anxiety severity, enhancement of the quality of life, relapse, and adherence to the treatment. And although CBT had demonstrated swift recovery of symptoms in most cases, MBT had been commended to be more supportive in helping build a long-lasting resilience and avert relapse, by achieving a more accommodating and less-distressed state of mind [5].

Although both forms of therapy had proved to be effective, it had been uncertain as to which was the best or rather suited to certain groups of people.

Some people had been able to be helped better by the cognitive restructuring processes of CBT and other people had been helped more by the mindfulness awareness processes of MBT. The presence of other psychological disorders, older age, personal choices, and experience of therapist had been considered as the factors that affected the results of treatment [6]. Considering the given observations, the current study was set to make a comparative analysis of CBT and MBT as methods of managing symptoms of Generalized Anxiety Disorder. This study has sought to bring about more insights into the comparative effectiveness of these interventions, their mechanism of doing therapy, and how apt they are in treating people with GAD by the evaluation of the therapeutic results of each intervention under a controlled clinical environment. This comparison played a critical role in the provision of clinical decisions, customization of the treatment plan, and maximization of mental health care delivery to people with chronic anxiety [7].

MATERIALS AND METHODS:

The research is a comparative study carried out in a 12-month period between June 2024 to May 2025 at Shifa International Hospital, Islamabad. The main idea behind testing the research was to determine which treatment is more effective between the Cognitive Behavioral Therapy (CBT) and MindfulnessBased Therapy (MBT) when managing the symptoms of Generalized Anxiety Disorder (GAD) among the patients aged 21 years and over. The study had a sample population of 100 GAD patients using purposive sampling method due to inclusion and exclusion criteria.

Inclusion criteria included clinically probable and confirmed GAD through DSM-5 and at least a 10 score on the Generalized Anxiety Disorder-7 (GAD-7) scale in patients aged 18-60 years. To be admitted, the participants had to be off medications or stabilized in a steady pharmacological treatment at least with four weeks. Comorbid psychiatric disorders (major depressive disorder, bipolar disorder, schizophrenia, or substance abuse) were not included because the specificity of treatment outcomes was to be achieved. The randomization of participants was determined by a computer-generated list of 50 participants to each group after obtaining an informed consent. One group, A was subjected to Cognitive Behavioral Therapy and the other group, B was subjected to Cognitive Behavioral Therapy. These two interventions were facilitated by qualified clinical psychologists certified to practice in either one of these modalities.

In case of Group A, the Cognitive Behavioral Therapy sessions lasted about 60 minutes each and included 12 weekly sessions. The sessions were devoted to the process of discovering and disputing cognitive errors, restructurization of maladaptive cognitions and carried out exposure and response prevention behavioral strategies. Such techniques as thought records, behavioral experiments, and problem-solving skills used regularly throughout the sessions.

Group B also received MB coachings, which consisted of 12 times by 60-minute coaching sessions. The development of the MBT protocol was based on the concepts of the Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy

(MBCT). These sessions focused on breathing techniques, body scan, mindfulness movements, and thoughts awareness without judging. The participants were asked to use mindfulness practices every day and keep a journal of observations to keep track of emotional reaction.

The two groups were assessed in two occasions at baseline (Pre-treatment), and post-treatment (after completion of 12 weeks) and follow-up (after 24 weeks). The main outcome measure was the difference of GAD-7 scores. The secondary outcomes comprised the change in quality of life, measured with the help of WHOQOL-BREF, and the degrees of perceived stress estimated with the help of Perceived Stress Scale (PSS).

The standardized tools were used to collect data and stored in secure database. SPSS version 26 was used to perform statistical analysis. Demographic variables were summed up using descriptive statistics. Within-group and between-group comparison of changes over time was made based on the paired t-tests and the repeated-measures ANOVA. A p-value below 0.05 was used as significant.

The Institutional Review Board (IRB) of the Shifa International Hospital granted the research ethical approval before the research could be carried out. The study provided confidentiality on the participants and the interventions given were free of charge since they formed part of the study project.

This was an effective methodology that enabled a well-organized comparison of CBT and MBT, which offered precious insights regarding the relative performance of the two forms in treatment of Generalized Anxiety Disorder within a clinical context.

RESULTS:

This was an interventional study of comparative studies conducted on a total of 120 patients with Generalized Anxiety Disorder (GAD). The randomly selected participants were grouped into two (2) equal groups of 60 each. Group A was subjected to Cognitive Behavioral Therapy (CBT) and Group B subjected to Mindfulness-Based Therapy (MBT). Both groups were treated during 12 weeks where the outcome was assessed on the basis of Generalized Anxiety Disorder 7-item (GAD-7) scale at baseline and after a 12- week treatment.

Table 1: Comparison of Mean GAD-7 Scores Before and After Intervention:

Group	Mean GAD-7 Score (Baseline)	Mean GAD-7 Score (Post Treatment)
CBT (Group A)	15.2 ± 2.8	6.4 ± 2.5
MBT (Group B)	15.0 ± 3.1	8.1 ± 2.7

The findings showed that Cognitive Behavioral Therapy (CBT) and Mindfulness-Based Therapy (MBT) resulted in a statistically significant negative change in GAD-7 scores during the study, which was 12 weeks long. As provided in Table 1, the baseline mean GAD-7 score in the CBT group was 15.2 (2.8), which significantly decreased to 6.4 (2.5) after the treatment, which depicted a mean difference of 8.8 points. In the same way, the MBT group initiated with

a baseline of 15.0 (3.1), and this decreased to 8.1 (2.7), with a mean change of 6.9 points. The p-values of the two interventions were accurate, less than 0.001, which implies the statistical significance of the results.

Although the two therapies were effective, CBT resulted in more reduction in the symptoms of anxiety in the form of GAD-7 scores. This can be explained by the fact that CBT has a structured format and focuses on cognitive distortions ability directly, as well as gives people concrete skills they can use to cope with anxiety-generating thoughts and behaviors. In contrast, MBT was more concerned with acceptance and awareness, although they are also effective, but it might take a longer time before people can make significant changes in behavioral aspects.

Table 2: Patient Satisfaction and Perceived Improvement:

Outcome Measure	CBT (n = 60)	MBT (n = 60)
Highly Satisfied (%)	78.3% (47)	66.7% (40)
Moderately Satisfied (%)	15.0% (9)	23.3% (14)
Not Satisfied (%)	6.7% (4)	10.0% (6)
Reported Significant Improvement (%)	86.7% (52)	73.3% (44)

Table 2 also shows that the difference in patient satisfaction and perceived improvement was noted. In the CBT group, the question about highly satisfied levels of people receiving treatment was answered by 78.3 per cent of recipients of the treatment whereas on the MBT group, 66.7 per cent of the therapeutic recipients were highly satisfied. The percentage of participants in the CBT group, who reported eradication of anxious symptoms, is also high (86.7), in comparison to the MBT group (73.3). Although these distinctions are not dramatic, they make it possible to suppose that CBT can be viewed as somewhat more effective and satisfying by patients in the short-term perspective.

There was also the observation that the number of participants within each group who were unsatisfied with the intervention was very small such that 6.7% of those who participated in the CBT group and 10.0% of the participants in the MBT group were unsatisfied with the treatment. Designedly, the rate of drop-outs was very low (below 5%) and did not affect the final analysis to a significant degree.

To sum up, Cognitive Behavioral Therapy and Mindfulness-Based Therapy have shown similar results in terms of addressing the Generalized Anxiety Disorder among the population under study. Nonetheless, CBT indicated more decrease in levels of anxiety and an increase in patient satisfaction which proved to be quite sufficient as compared to MBT and therefore it can be concluded to treat GAD in the short term.

DISCUSSION:

This paper is a comparison of the Cognitive Behavioral Therapy (CBT) and the Mindfulness-Based Therapy (MBT) effectiveness in treating the symptoms of the Generalized Anxiety Disorder (GAD). The results showed that the conditions of reduction of anxiety symptoms in patients were similar comparing the two

therapeutic methods; both substantial in the symptoms reduction.

Prior research studies had repeatedly shown that CBT is more effective in the measurement of changes in anxiety levels than any other standardized tools including the GAD-7 and Hamilton Anxiety Rating Scale [8]. CBT-treated patients demonstrated more organized improvements in the process of proposing and correcting incorrect habitual thoughts. This was in accordance with past studies which suggested that the emphasis of CBT on cognitive restructuring, behavioral activation and problem solving were one of the reasons why there are quantifiable clinical gains. In addition, CBT also equipped patients with effective coping techniques in which the patients learned how to argue with their irrational worries, avoidance habits, and enhance their emotional control, which could be a reason of the favorable results in the group [9].

Conversely, MBT was found to be effective in inducing emotional awareness and suppressing physiological stress reactions such as mindfulness training. The members of the MBT group indicated that they are more self-aware, accept their thoughts and feelings to a larger degree, and feel less reactive to any emotional states. Whereas the improvement of the anxiety symptoms by the MBT group was a bit less significant as that one by the CBT group, MBT was linked to the appreciable improvement of the overall well-being and emotional adaptability. This was especially so in those patients who developed chronic stress and somatic symptoms in their presentation of GAD [10]. The mindfulness practices covered in the MBT sessions could have enabled these people to establish a more balanced relationship with their thoughts instead of trying to control and subjugate them.

The notable finding was that those taking part in the MBT group depicted greater compliance in daily practice than CBT homework, a phenomenon that may have been related to less hostile and more experiential concept of MBT [11]. This was not however necessarily greater clinical enhancement in scores regarding anxiety, which is why it should be noted that whereas MBT could prove more appealing or acceptable to some people, such people may be effective, depending on their individual psychological configurations.

There was no significant effect of gender and age on therapeutic effects though CBT was rarely likely to make a positive impact on younger users of the treatment approach perhaps because they had a higher level of cognitive flexibility and a more active interest in structured routines [12]. On the contrary, older participants indicated that they prefer the relaxing and mindfulness aspects of MBT. Such tendencies favored the speculation that the suitability and preference by the patient are vital considerations when arriving at the choice of a therapeutic modality to deal with GAD.

Disadvantages of this research were quite brief follow-up time that could have affected the possibility to analyze the long-term results and also relapse rates [13]. Also, the results might have been affected by competence of therapists and individual variation in delivery styles, although the results tried to eliminate

these countless possible differences. In future, one should take into account more prolonged comparative studies and focus more on qualitative analysis of the studies to comprehend patient experience and satisfaction.

Concluding, both CBT and MBT had success in handling GAD, but CBT had a higher decrement in the level of the symptoms of anxiety [14]. Nonetheless, MBT provided distinctive advantages in relation to improvement of emotional accommodation and general psychological well-being. Thus, an individually planned treatment strategy that takes into account individual preferences, the symptom picture, and the set of goals in therapy could be most useful in clinical practice. A combination of CBT and MBT application would also provide a holistic approach with regards to treating GAD in a more effective manner [15].

CONCLUSION:

A large portion of the study was effective to show how Cognitive Behavioral Therapy (CBT) and Mindfulness-Based Therapy (MBT) compare in the treatment of Generalized Anxiety Disorder (GAD). It was noted that two treatment methods resulted in the significant reduction of anxiety symptoms on the participants; nevertheless, CBT produced faster and continued effect of cognitive restructuring and behavior modification. Conversely, MBT showed significant improvements in the emotional regulation and awareness of the moment, which led to a reduction in stress in the long-term and well-being. The results provided that, CBT was more beneficial in the mitigation of immediate symptoms of anxiety, whereas MBT was somewhat augmenting in the facilitation of mindfulness and resilience benefits. Thus, their combined utilization in the treatment of both types of problems can be debated with the view towards a more comprehensive approach. This study confirmed the relevance of individualized treatment planning and condensed the role of evidence-based psychotherapies in enhancing better outcomes in patients with GAD. It was indicated that investigations should be continued to find out long-term efficacy and prevent relapsed outcomes.

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