

# A Comprehensive Assessment of Generalized Anxiety Disorder Treatments

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## Abstract:

Generalized Anxiety Disorder (GAD), which is commonly known as a mental health disorder. GAD has the characteristic of sustained and excessive anxieties, which seriously affects the daily lives of patients. The present study comprehensively evaluated the clinical characteristics, treatment methods, and efficacy of GAD. The research involves Pharmacotherapy (such as benzodiazepines and antidepressants), psychotherapy (such as cognitive-behavioral therapy (CBT) and mindfulness based cognitive therapy (MBCT), and innovative therapies such as sandplay therapy (SPT). The results indicate that psychotherapy and drug therapy are still the first choices, and innovative therapies can be used to assist and improve treatment. Choosing a treatment method requires comprehensive consideration of multiple factors, including the individual condition of the patient and possible side effects. In this study, a systematic review of the typical features of GAD and its etiology was performed. In addition, the advantages of different therapies as well as typical representatives are discussed and analysed. The results of this study provide implications for related research and suggest future research directions.

**Keywords:** Generalized anxiety disorder; Psychological therapy; Cognitive behavioral therapy; etiology, Benzodiazepines; Pharmacotherapy.

## 1. Introduction

Psychopathology is a field that investigates mental health, with a focus on understanding the complexities of different psychological disorders and how they affect people's lives. One such disorder that is widely prevalent and can have a significant impact on individuals' well-being is Generalized Anxiety Disorder (GAD), whose characteristic is persistent and excessive anxiety across different areas of life. The purpose of this introduction is to provide a thorough overview of GAD, drawing on current literature, and covering the main topics outlined in the syllabus.

### 1.1 Defining and Describing GAD

GAD is a type of psychological disorder that falls under the category of anxiety disorders. The DSM-5 defines GAD as a condition in which individuals experience excessive and uncontrollable worry surrounding day-to-day events and activities. The appearance of GAD is accompanied by a series of symptoms, such as restlessness, difficulty concentrating, muscle tension, and sleep disturbances [1]. This will affect a person's entire life, social interaction, and work. The issues related to influencing factors will be explained later in this article.

GAD is a condition that is identified by a range of behavioral, emotional, and cognitive features. These features can lead to various clinical symptoms. According to recent research, people with GAD often experience heightened physiological arousal, exaggerated startle response, and chronic feelings of tension and apprehension. In addition, cognitive processes in GAD are characterized by persistent negative thoughts, excessive worry about potential future events, and difficulty in controlling intrusive thoughts.

### 1.2 Significance of Understanding GAD

Clinicians, researchers, and society must understand GAD due to its high prevalence and significant impact on individuals' quality of life. According to epidemiological studies, GAD poses a considerable burden, with lifetime prevalence rates ranging from 5% to 10% in the general population [2]. Additionally, GAD is associated with comorbidities such as depression, substance abuse, and other anxiety disorders, which further complicates its clinical presentation and management.

### 1.3 Current Understanding and Controvers-

## sies

Recent studies have concentrated on clarifying the neurological, psychological, and environmental factors that underlie GAD, also evaluating the effectiveness of various therapeutic methods. There are debates surrounding the comparative effectiveness of pharmacological interventions versus psychotherapy in managing GAD symptoms [3]. Furthermore, emerging research suggests that integrative approaches, such as mindfulness-based interventions, are crucial in addressing the multifaceted nature of GAD [4].

In summary, this introduction establishes the foundation for a comprehensive examination of GAD, highlighting its defining characteristics, prevalence, impact, and current research landscape. By addressing important objectives and integrating findings from contemporary literature, this paper aims to enhance comprehension regarding GAD and provide insights for forthcoming research and clinical application.

## 2. Methodology

The study adopts a literature review method, which systematically analyzes published research literature to construct a comprehensive understanding of GAD. The main sources of data include the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5), which serves as the standard basis for diagnosing GAD; And other key literature.

The research methods include searching and screening relevant literature, using Google Scholar Search and other academic databases such as PubMed and Scopus. Literature analysis will use content analysis to identify and summarize different methods and their effectiveness in treating GAD, especially the comparative effects of drug therapy and psychotherapy. The data analysis will use qualitative methods to conduct thematic analysis on the research results, in order to identify key factors and challenges in the treatment of GAD..

The research results are expected to provide clinical doctors with a more comprehensive perspective, helping them diagnose and treat GAD more effectively, while providing theoretical basis and practical guidance for future research directions.

## 3. Results and Discussion

### 3.1 Diagnostic Features

The main characteristic of GAD is excessive anxiety that is disproportionate to the actual likelihood or potential impact of the event, resulting in excessive anxiety. This anxiety is difficult to control and affects daily life.

### 3.2 The Main Differences between GAD and Non Pathological Anxiety

#### 3.2.1 Excessive Worry

Compared to non pathological daily worries, GAD related concerns are excessive, often uncontrollable, and can interfere with the patient's normal social interactions [5].

#### 3.2.2 The Breadth of Concerns

GAD concerns are usually very broad, deeper, and last longer, and these concerns often occur suddenly without reason.

#### 3.2.3 Accompanying Physical Symptoms

Anxiety accompanied by obvious physical symptoms, such as restlessness, nervousness or irritability, and muscle tension.

Patients often feel the pain caused by their social, work, or other daily life functions being affected.

## 4. Treatment

### 4.1 Pharmacotherapy

The medication treatment for GAD mainly involves two types of medications: benzodiazepines and antidepressants. Benzodiazepine medications, such as lorazepam, can quickly and effectively alleviate symptoms of GAD. They work by enhancing the transmission of the neurotransmitter GABA. However, these types of medications have certain side effects [6], including potential risks of abuse, dependence, and potential risks of causing psychomotor disorders and injuries.

On the other hand, antidepressants, including tricyclic antidepressants (TCAs) and selective serotonin reuptake inhibitors (SSRIs) such as paroxetine and fluoxetine, mainly affect monoamine neurotransmission. These medications take effect slowly and usually take 2-4 weeks to take effect [7].

Some studies have shown that benzodiazepines are superior in improving the physical symptoms, such as twitching, stiffness, tinnitus, of GAD patients. For the treatment of mental symptoms, antidepressants are more suitable. However, there are also studies supporting the fact that both have the same effect [3].

International treatment guidelines, such as the World Federation of Societies of Biological Psychiatry (WFSBP), recommend the use of SSRIs and SNRIs as the first choice for GAD, while retaining benzodiazepine medications primarily for special patients due to the risk of adverse reactions, such as resistance and dependence, associated with benzodiazepine medications.

Considering the superior therapeutic effect of benzodiazepines on physical symptoms and the potential benefits of

antidepressants in managing certain complications, selecting the most suitable treatment method requires comprehensive consideration of multiple factors, including the overall condition of the patient and possible side effects. This balance is particularly important in clinical practice to ensure that the most effective treatment plan is provided for GAD patients. Future research should explore the most effective combination of drugs and psychotherapy.

## 4.2 Cognitive Behavioral Therapy (CBT)

CBT is the main recommended treatment for GAD and is considered a standard treatment method. Numerous studies with Meta-analysis have demonstrated that is an effective treatment for GAD [8].

In a meta-analysis of practical clinical practices covering 56 studies, researchers evaluated the effectiveness of CBT and compared it with the results of randomized controlled trials. The findings indicated that patients undergoing CBT demonstrated notably greater enhancements in anxiety symptoms compared to those in the control group. Specific data shows that the effectiveness of CBT achieved an improvement rate of 78%, while the improvement rate of the control group was only 22%. This result further confirms the significant effectiveness of CBT in treating anxiety symptoms in practical clinical settings [9].

In addition, a study in routine clinical care further evaluated the effectiveness of CBT in treating GAD. Research has found that CBT has significant effects in reducing worries, negative metacognition, tolerance for uncertainty (IU), depressive symptoms, and general psychopathology. These results collectively support the significant efficacy of CBT as an effective clinical intervention in treating anxiety and related symptoms [10].

However, these studies were mainly conducted in specialized and complex clinical environments. Compared to this, there is relatively less study on the effect of CBT in community environments. CBT in the community can prevent the development of generalized anxiety disorder through early identification and intervention. This is particularly important for those who are unable to access professional mental health services due to economic, geographical, or time constraints. A study filled the research gap in this field by evaluating the actual effectiveness of CBT treatment for GAD in an outpatient setting. This study focused on GAD patients at an outpatient hospital in Ontario, Canada, with a total of 386 participants, most of whom participated in 12 group CBT courses. The researchers used a series of paired sample t-tests and used tests such as GAD syndromes (GAD-7) and depression syndromes (DASS-21 Compression subscale) to evaluate treatment efficacy. The results showed that CBT can significantly reduce the severity of GAD symptoms and the

severity of chronic anxiety [11].

The study also emphasizes the importance of CBT treatment in a wider and diverse community environment and patient population to further validate its universal applicability and effectiveness. The study also suggests continuing to investigate other factors that may affect treatment effectiveness, such as gender identity, life stress, and family status [11].

## 4.3 Other Research Methods

### 4.3.1 Mindfulness Based Cognitive Therapy (MBCT)

MBCT has been recognized as an effective treatment approach, particularly in the context of preventing the recurrence of depression. Recent studies have further validated the effectiveness of MBCT in adjuvant medication therapy for patients with panic disorder (PD) and GAD. The study analyzed the effects of 46 patients with PD or GAD after receiving an 8-week MBCT and an anxiety disorder education (ADE) program. Patient evaluations were conducted using various assessment tools such as The Hamilton Anxiety Rating Scale (HAM-A), Hamilton Depression Rating Scale (HAM-D), and other related scales. The findings indicated that the MBCT group experienced substantial improvements in all anxiety and depression scale scores when compared to the ADE group [12].

The study also showed that MBCT can help alleviate anxiety and depression symptoms in GAD patients by reducing the psychological patterns of worry and repetitive thinking. This indicates that MBCT is more effective in improving the emotional state of PD and GAD patients than simply using educational methods. These findings highlight the potential of MBCT in treating various emotional disorders, particularly as a complementary option to traditional medication therapy [12].

### 4.3.2 Sandplay Therapy (SPT)

SPT is an increasingly important psychotherapy method, especially with significant growth in popularity and application worldwide in the past few years. This therapy can be applied to improve the condition of children or adult GAD patients through nonverbal communication [13].

Jungian sandbox therapy has been proven to be highly effective in alleviating symptoms of GAD, improving the function of key areas of the brain associated with GAD, including the limbic system and prefrontal cortex. The study used a pre - and post control design within the participants, targeting adult women diagnosed with GAD between the ages of 21 and 40. These participants received a total of 30 weeks of SPT treatment, with each treatment lasting one week. Through this design, researchers aim to measure and compare the clinical anxiety scores (assessed using the Hamilton Anxiety Scale HAM-A and GAD-7)

and brain metabolic changes of participants before and after treatment. Participants who received Sandplay Therapy (SPT) showed a significant decrease in clinical anxiety scores after treatment. Neuron vitality has improved. And sandplay therapy has shown excellent performance in reducing anxiety symptoms. This indicates that sandplay therapy not only helps to express and process emotions, but may also have a positive regulatory effect on brain function [14].

## 5. Conclusion

This study explores the diagnostic characteristics, treatment methods, and efficacy of different treatment methods for GAD. This study emphasized the difference between GAD and non-pathological anxiety. In terms of treatment options, the present study focused on discussing pharmacotherapy and psychotherapy. In terms of pharmacotherapy, it is mentioned that the use of benzodiazepines and antidepressants. In terms of psychotherapy, CBT has become a standard intervention supported by reliable evidence. Innovative therapies such as MBCT and SPT have also been discussed as promising adjunctive therapies for GAD. Choosing the most suitable GAD treatment method requires comprehensive consideration of multiple factors, including the individual condition of the patient and the possible side effects of the medication.

Future research should focus on exploring the most effective combination of pharmacotherapy and psychotherapy, as well as identifying factors that affect treatment outcomes. Overall, this study contributes to a deeper understanding of GAD and provides valuable insights for clinicians, researchers, and policy makers, as well as determining better treatment plans for patients.

## References

[1] Szuhany, K. L., & Simon, N. M. (2022). Anxiety Disorders: A Review. *JAMA : The Journal of the American Medical Association*, 328(24), 2431–2445.

[2] Preti, A., Demontis, R., Cossu, G., Kalcev, G., Cabras, F., Moro, M. F., Romano, F., Balestrieri, M., Caraci, F., Dell’Osso, L., Di Sciascio, G., Drago, F., Hardoy, M. C., Roncone, R., Faravelli, C., Gonzalez, C. I. A., Angermayer, M., & Carta, M. G. (2021). The lifetime prevalence and impact of generalized anxiety disorders in an epidemiologic Italian National Survey carried out by clinicians by means of semi-structured interviews. *BMC Psychiatry*, 21(1), 48–48.

[3] Beyer, C., Currin, C. B., Williams, T., & Stein, D. J. (2024). Meta-analysis of the comparative efficacy of benzodiazepines and antidepressants for psychic versus somatic symptoms of

generalized anxiety disorder. *Comprehensive Psychiatry*, 132, 152479–152479.

[4] Moskow Diamond, D., Rosenfield, D., Kaiser, N., Baker, A. W., Hoge, E. A., Khalsa, S. B. S., Hofmann, S. G., & Simon, N. M. (2024). Changes in mindfulness facets across yoga, CBT and stress education in individuals with generalized anxiety disorder. *Journal of Mood and Anxiety Disorders*, 6.

[5] Diagnostic and statistical manual of mental disorders : DSM-5. (5th ed.). (2013). American Psychiatric Association.

[6] Andrews, G., Bell, C., Boyce, P., Gale, C., Lampe, L., Marwat, O., Rapee, R., & Wilkins, G. (2018). Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for the treatment of panic disorder, social anxiety disorder and generalised anxiety disorder. *Australian and New Zealand Journal of Psychiatry*, 52(12), 1109–1172.

[7] Feltner, D.E., Harness, J., Brock, J., Sambunaris, A., Cappelleri, J.C. and Morlock, R. (2009), Clinical Evaluation of the Daily Assessment of Symptoms-Anxiety (DAS-A): A New Instrument to Assess the Onset of Symptomatic Improvement in Generalized Anxiety Disorder. *CNS Neuroscience & Therapeutics*, 15: 12-18.

[8] Covin, R., Ouimet, A. J., Seeds, P. M., & Dozois, D. J. A. (2008). A meta-analysis of CBT for pathological worry among clients with GAD. *Journal of Anxiety Disorders*, 22(1), 108–116.

[9] Stewart, R. E., & Chambless, D. L. (2009). Cognitive-Behavioral Therapy for Adult Anxiety Disorders in Clinical Practice: A Meta-Analysis of Effectiveness Studies. *Journal of Consulting and Clinical Psychology*, 77(4), 595–606.

[10] Krzikalla, C., Morina, N., Andor, T., Nohr, L., & Buhlmann, U. (2023). Psychological interventions for generalized anxiety disorder: Effects and predictors in a naturalistic outpatient setting. *PloS One*, 18(3), e0282902–e0282902.

[11] Malivoire, B. L., Stewart, K. E., Cameron, D., Rowa, K., & McCabe, R. E. (2024). Effectiveness and predictors of group cognitive behaviour therapy outcome for generalised anxiety disorder in an out-patient hospital setting. *Behavioural and Cognitive Psychotherapy*, 1–16.

[12] Kim, Y.W., Lee, S.-H., Choi, T.K., Suh, S.Y., Kim, B., Kim, C.M., Cho, S.J., Kim, M.J., Yook, K., Ryu, M., Song, S.K. and Yook, K.-H. (2009), Effectiveness of mindfulness-based cognitive therapy as an adjuvant to pharmacotherapy in patients with panic disorder or generalized anxiety disorder. *Depress. Anxiety*, 26: 601-606.

[13] Roesler, C. (2019). Sandplay therapy: An overview of theory, applications and evidence base. *The Arts in Psychotherapy*, 64, 84–94.

[14] Foo, M., & Freedle, L. R. (2024). The effects of sandplay therapy on the limbic system and prefrontal cortex in women with generalized anxiety disorder. *The Arts in Psychotherapy*, 88.