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APPLICATIONS OF COGNITIVE-BEHAVIORAL THERAPY IN GENERALIZED ANXIETY DISORDER

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Abstract: Generalized Anxiety Disorder (GAD) is one of the most prevalent disorders in the population today, significantly interfering with quality of life. Cognitive Behavioral Therapy is recognized for its effectiveness in treating GAD, as it allows for the identification and modification of dysfunctional thought and behavior patterns that perpetuate anxiety. The objective of this study is to analyze the effectiveness of CBT in the treatment of GAD, the most commonly used techniques, and the results, through a narrative review of the literature. In this review, scientific articles published between 2023 and 2025 in the Scielo, PePsic, and Google Scholar databases were analyzed. Among the most commonly used techniques are psychoeducation, cognitive restructuring, gradual exposure, problem solving, and relaxation. Finally, it is concluded that CBT is a first-line psychotherapeutic intervention for GAD, as the results corroborate a significant remission of anxiety symptoms, promoting an improvement in the patient's quality of life.

Keywords: Treatment efficacy. Cognitive-Behavioral Therapy. Generalized Anxiety Disorder.

INTRODUCTION

Generalized Anxiety Disorder (GAD) is one of the most common conditions among anxiety disorders, with an estimated global prevalence of about 5% of the population, being more frequent in women than in men (Cavalcante et al., 2024). The disorder is characterized by excessive concern about the future, that is, it involves constant worries associated with the anticipation of events that have not yet occurred, which are not under control, but in the mind of the

anxious person, the imagined scenarios are real, leading to concerns that do not represent a reason consistent with reality (Dantas, 2024). In addition to the dysfunctional cognitive pattern of GAD, individuals experience associated physical symptoms such as muscle tension, restlessness, fatigue, difficulty concentrating, irritability, and insomnia (Freitas et al., 2024). The disorder is also often associated with comorbidities, such as depression and other anxiety disorders, which aggravates the clinical picture and hinders effective treatment. This highlights the need for effective and specific therapeutic interventions for the treatment of GAD (Dantas, 2024).

Cognitive-behavioral therapy (CBT) is a scientific approach that aims to control or even eliminate the problem in a small number of sessions by focusing directly on the central issues of the cause. Furthermore, CBT addresses the fact that the interpretation of an event is shaped by beliefs, thus determining the triad (thought, emotion, and behavior). It is applied in different ways, such as in individual and/or group sessions, in person or online, varying according to the needs of each case (Dantas, 2024).

The approach to treating GAD with Cognitive Behavioral Therapy has stood out for its proven effectiveness, focusing on identifying and modifying dysfunctional thought and behavior patterns that maintain and intensify anxiety symptoms. Thus, it concentrates on modifying the cycle of unrealistic concerns, which induces the patient to engage in avoidance and procrastination behaviors, contributing to the worsening of anxiety symptoms (Mendonça et al., 2024).

The topic addressed is relevant because it deals with a health problem that significantly affects part of the population. This study aims to address the management of generalized anxiety disorder through Cognitive Behavioral Therapy, highlighting the techniques most used in the treatment of GAD, the effectiveness of these techniques, and the results obtained with the use of CBT.

METHODOLOGY

This is a narrative review of the literature. This method consists of obtaining specific knowledge of a topic through previous independent research, which, through the analysis and synthesis of results, allows evaluative conclusions to be drawn. Thus, the objective is to critically analyze the selected studies to develop a comprehensive explanation of a specific phenomenon (Lima et al., 2025).

Data collection was carried out through research databases such as Scielo (Scientific Electronic Library Online), PePSIC (Electronic Journals in Psychology), and Google Scholar. The keywords used were: Cognitive-Behavioral Therapy; Generalized Anxiety Disorder; Treatment.

The inclusion criteria were: articles published between 2023 and 2025 that addressed the treatment of generalized anxiety disorder through the Cognitive-Behavioral Therapy approach. The exclusion criteria were: publications that did not fit the established time frame, studies that did not meet the research objective, and those found in more than one database, which were considered only once.

RESULTS AND DISCUSSION

The management of GAD treatment with Cognitive Behavioral Therapy has stood out due to its focus on identifying and modifying dysfunctional thought and behavior patterns that maintain and intensify anxiety symptoms. Thus, it works to modify cycles of concerns that are inconsistent with reality (Mendonça et al., 2024). In addition, to ensure the effectiveness of CBT in the treatment of GAD, it is first essential to develop a treatment plan that takes into account the patient's needs and the individual presentation of each case, which will guide the therapist in selecting the appropriate techniques and interventions.

Considering the functioning of GAD, CBT provides strategies that help relieve anxiety symptoms through techniques that aim to interrupt avoidance patterns and develop coping skills for managing GAD (Lorentz, 2024). According to Freitas et al. (2024), the studies analyzed demonstrate the predominance of psychoeducation, cognitive restructuring, exposure, and relaxation techniques. The combination of cognitive and behavioral interventions to modify dysfunctional thoughts and behaviors has been shown to be effective (Lorentz, 2024).

Psychoeducation is considered an efficient tool for increasing treatment adherence, promoting a greater sense of control and modifying dysfunctional beliefs. In addition, the patient should be educated about the disorder and its diagnosis, as well as the cognitive-behavioral model of GAD and CBT (Lorentz et al., 2024). Psychoeducation is the first stage of treatment, which includes recognizing symptoms, justifying treatment, and understanding the dysfunctional beliefs and behaviors that are respon-

sible for maintaining pathological concern (Freitas et al., 2024).

The Dysfunctional Thoughts Record (DTR) aims to enable the individual to identify distorted automatic thoughts, emotions, and dysfunctional behaviors attributed to a particular situation interpreted as disturbing. Thus, this process assists in tracking automatic thoughts by understanding the meaning attributed to them, enabling more rational responses (Lima et al., 2024). In relation to GAD, RPD contributes to the identification of thoughts, emotions, and behaviors triggered by a potentially anxious situation, enabling patients to have a more rational perception and to develop strategies to better deal with anxious mental triggers by clarifying and altering the dysfunctional meanings attributed to these situations (Santos, 2024).

Cognitive restructuring is a central component of CBT, being essential in identifying and modifying dysfunctional automatic thoughts and schemas, whose records are necessary for identifying maladaptive patterns. Thus, the aim is to recognize cognitive distortions, promoting awareness and, consequently, the empirical evaluation of dysfunctional thoughts in order to replace them with alternative and functional thoughts (Lorentz et al., 2024). Furthermore, in cognitive restructuring, several techniques are applied simultaneously, such as recording dysfunctional thoughts (RDT), guided discovery, Socratic questioning, and de-catastrophizing (Lima et al., 2025). Thus, CBT's effectiveness is based mainly on cognitive restructuring, which results in significant improvement or changes in how the patient perceives and reacts to their environment, i.e., what triggers anxiety. The aim is to develop emotional regulation skills,

reducing the discomfort caused by negative emotions that impact behavior (Ferreira et al., 2023).

Problem solving aims to teach the patient to define the problem clearly, evaluate the pros and cons, generate alternative solutions, make decisions, and evaluate the results. Thus, the training proposes focusing on specific problems, since anxious individuals have many unproductive concerns, causing suffering (Lorentz et al., 2024). Socratic questioning helps patients recognize and modify maladaptive thoughts through questions directed by the therapist, which encourage them to question their own beliefs. Ultimately, the goal is to break dysfunctional and rigid thinking patterns, enabling the development of new perceptions, which results in positive cognitive and emotional changes (Lorentz et al., 2024).

According to the study by Mendonça et al. (2024), among the various CBT interventions is the exposure technique, which consists of repeated and gradual exposure to situations that trigger fear and suffering for the patient. In this situation, a mental trigger of predictability of a catastrophic outcome and exacerbated concern occurs, which does not correspond to reality. Additionally, the exposure technique will help to challenge maladaptive beliefs associated with danger, promoting the remission of anxiety symptoms (Freitas et al., 2024). Furthermore, gradual exposure to anxiety-provoking situations is commonly used to reduce the vulnerability of the disorder, allowing the patient to adapt to stressful contexts. The review by Silva et al. (2025) demonstrates the effectiveness of this strategy in different patient groups, with positive impacts on symptom remission.

Sleep hygiene seeks to follow practices that promote restful sleep, since various behaviors and factors can impair sleep. In cases of GAD, there is overstimulation of the nervous system, mainly due to bad habits, exacerbated concerns, a fast-paced routine, and a stressful . In view of this, practices such as maintaining regular sleep and wake times, moderating caffeine consumption, exercising regularly at appropriate times, and restricting heavy meals before bedtime are important behaviors for maintaining sleep quality (Lorentz et al. 2024). In addition, CBT helps with time management so that individuals can develop their priorities and gain control over their activities and tasks (Santos, 2024).

Anxiety can cause excessive and negative thoughts about future events, resulting in a series of disturbing thoughts. Thus, the thought-stopping technique consists of presenting visual images focused on well-being and adequacy, promoting the interruption of the flow of negative anxious thoughts, replacing them with more functional and adaptive cognitions. The distraction technique is similar to “thought stopping,” also aiming to direct focus to mental images of relaxation or details of the external environment, such as observing and describing the environment around you (Santos, 2024).

Progressive Muscle Relaxation seeks to promote complete relaxation of the skeletal muscles, eliminating the residual tension commonly present in anxious individuals. Therefore, it is observed that people with GAD tend to carry more tension than necessary to function, causing damage to their daily lives (Lorentz et al., 2024). Mindfulness integrated with CBT has proven effective in treating GAD, as it consists of intentionally directing attention to the present,

with full awareness and without judgment. This method helps to interrupt cycles of negative thoughts and reduce rumination, which are key characteristics of this disorder (Lorentz et al., 2024). Controlled and uncontrolled studies have shown that the combination of mindfulness and CBT has led to improvements in anxiety and excessive worry, resulting in a 42% reduction in CBT therapy sessions for patients with GAD (Souza, 2023).

In addition, diaphragmatic breathing is a breathing technique used primarily during anxiety attacks, when the individual experiences a feeling of shortness of breath. This technique helps activate the diaphragm muscle, directing airflow to the lower regions of the lungs. , a randomized clinical trial analyzed the effectiveness of this technique in reducing anxiety. The results indicated a significant reduction in anxiety levels after 8 weeks of training, as measured by the Beck Anxiety Inventory (Lorentz et al., 2024).

Relapse prevention is a strategy for maintaining therapeutic gains and preventing symptom remission (Mendonça et al., 2024). Studies indicate a GAD recovery rate of 51% after six months of treatment with CBT. The effectiveness of this method can be long-lasting, as the techniques used allow for emotional regulation and relapse prevention (Lima et al., 2024).

Currently, the cognitive-behavioral model is an approach widely recognized for its efficiency in GAD. The good results are related to cognitive and behavioral restructuring through rationalization about the environment, especially in relation to factors that generate anxiety (cognitive therapy), which consequently provides changes in the behavior of the anxious individual (beha-

vioral therapy) (Souza, 2023). Furthermore, it points out that patients achieved greater emotional control by identifying core beliefs and automatic thoughts that perpetuate anxiety (Mendonça et al., 2024).

According to Mendonça et al. (2024), CBT emerges as one of the most effective approaches to GAD, as its structure is permeated by a cognitive focus, enabling the monitoring and modification of cognitive activity and promoting changes in cognitive and behavioral assessments. In addition, studies show that cognitive and behavioral techniques, such as psychoeducation, muscle relaxation, and diaphragmatic breathing, are effective in reducing anxiety symptoms, providing relief (Espíndula et al., 2023).

Studies indicate that when patients are cooperative and strictly follow the proposed techniques, the greater the possibility of successfully modifying their cognitive model, and consequently, the better the results (Espíndula et al., 2023). Furthermore, the benefits are evident both for in-person treatment and the online approach, showing good adaptation (Dantas, 2024). Online CBT has been shown in several studies to be equally effective in patients with more chronic GAD symptoms, such as the elderly. Thus, it corroborates its efficiency, flexibility, and adaptability to different populations, age groups, and cultural contexts (Lima et al., 2025).

The research by Lima et al. (2024) investigated the efficiency of CBT with a focus on intolerance of uncertainty and negative beliefs through a clinical trial with 14 individuals with GAD and 12 controls. The results showed a success rate of 6 months to 1 year. In addition, Lima et al. (2024) obtained similar results, with the results remaining stable 6, 12, and 24 months after the

intervention. Other clinical trials corroborate these findings, demonstrating that regardless of whether the treatment was individual or group-based, there was a significant improvement in intolerance of uncertainty and dysfunctional beliefs linked to worry, with results maintained even after the end of the sessions (Espíndula et al., 2023). According to Espíndula et al. (2023), CBT contributes significantly to the treatment of GAD, mainly in reducing the rate of medicalization, since it promotes the modification of dysfunctional beliefs through specific and structured techniques. E Silva et al. (2025) also observed similar results, in addition to improvement in occupational functioning.

Finally, CBT stands out for its significant effect on symptom remission and improvement in the quality of life of individuals affected by GAD, when compared to usual treatments, consolidating itself as the main therapeutic strategy for this disorder (Silva et al., 2025). CBT has high rates of progress in the treatment of GAD in various age groups, from children to the elderly. Thus, it has become the most recommended psychotherapeutic approach and is used as a treatment for 20 anxiety disorders, achieving long-term gains even after the end of treatment (Dantas, 2024).

FINAL CONSIDERATIONS

It can be concluded that Cognitive Behavioral Therapy (CBT) has effective techniques that help educate patients about their symptoms, challenge and reframe dysfunctional beliefs, adapt to stressful situations, develop problem-solving skills, improve sleep quality, develop relaxation habits, focus on the present, and help main-

tain symptom remission. Thus, CBT significantly reduces anxiety symptoms and improves the patient's quality of life.

However, studies show the effectiveness of Cognitive Behavioral Therapy in the treatment of anxiety disorders. There is a lack of treatment protocols considering the diversity of contexts, such as cultural and sociodemographic variations. Thus, there is a need for long-term studies to accurately assess the effectiveness of CBT in different contexts.

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