

Cognitive Behavioral Art Therapy in Treating Adolescent Generalized Anxiety Disorder: A Narrative Review

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Author Biography

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Abstract

As Generalized Anxiety Disorder (GAD) continues to become a prevalent psychological disorder that creates profound impacts on adolescents, concerns regarding substantial variances in cognitive development between adults and adolescents have been raised. Due to such differences, current research suggests that the effectiveness of current GAD treatments has been less effective for adolescents. Thus, new therapeutic methods are emerging. This narrative review addresses and synthesizes existing theoretical frameworks and research for one newly developed therapeutic method - Cognitive Behavioral Art Therapy (CBAT). This narrative review is conducted through search engines and databases of Google Scholar, JSTOR, and ProQuest. Results indicated that CBAT holds high theoretical potential and although active researchers in this field have only conducted 3 clinical trials, all trials demonstrated positive results in addressing adolescent GAD. This paper further discusses the theoretical analysis, implementation, and limitations of CBAT. Overall, although CBAT is potentially highly beneficial to adolescent GAD, research done on this therapeutic method is still very limited, and future studies and clinical trials should be done to further explore its effectiveness on adolescent GAD.

Keywords: Cognitive Science, Psychology, Art Therapy, Cognitive Behavioral Art Therapy, Cognitive Behavioral Therapy, Therapy, Generalized Anxiety Disorder, Anxiety

Introduction

Within the rapid pace of modern life, anxiety has become an increasingly prevalent problem. While anxiety is a normal stress reaction and is something that everyone experiences, anxiety that involves excessive fear or anxiety to an extent that affects one's daily activities and differs far from normal feelings of nervousness or anxiousness then becomes a disorder. Globally, in 2019, over 301 million people were living with some form of anxiety disorder, including 58 million children and adolescents (Klaudia et al., 2023). Recent global events have only contributed to the rise of anxiety (Mental Disorders, n.d.). The COVID-19 pandemic doubled the prevalence of anxiety and depression, with rates being the highest in older and female-identifying adolescents (Racine et al., 2021). Emphasis on adolescent anxiety becomes a necessity.

Anxiety disorders can be classified into four types, Generalized Anxiety Disorder, Panic Disorder, Social Anxiety Disorder, and Phobia-related Disorders (Anxiety Disorders - National Institute of Mental Health (NIMH), 2023). Each type differs from one another and influences individuals afflicted with an anxiety disorder differently. For the purpose of this paper, only Generalized Anxiety Disorder (GAD) is discussed as it is the most common of the four types (Anxiety Disorders, 2023).

Generalized anxiety disorder is a mental health disorder that produces excessive fear, worry, and a constant feeling of being overwhelmed (Griffin, 1990). Major symptoms and criteria for the diagnosis of Generalized Anxiety Disorder are characterized by DSM IV and DSM V:

Table 1. *DSM-IV to DSM-5 Generalized Anxiety Disorder Comparison*

(*Substance Abuse and Mental Health Services Administration, 2016*)

DSM-IV	DSM-V
Disorder Class: Anxiety Disorders	SAME
A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).	SAME
B. The person finds it difficult to control the worry.	SAME
C. The anxiety and worry are associated with three or more of the following six symptoms (with at least some symptoms present for more days than not for the past 6 months): Restlessness or feeling keyed up or on edge, Being easily fatigued, Difficulty concentrating or mind going blank, Irritability, Muscle tension, Sleep disturbance (difficulty falling or staying asleep, or restless unsatisfying sleep).	SAME
D. The focus of the anxiety and worry is not confined to features of an Axis I disorder (e.g., the anxiety or worry is not about having a panic attack [as in panic disorder], being embarrassed in public [as in social phobia], being contaminated [as in obsessive-compulsive disorder] being away from home or close relatives [as in separation anxiety disorder], gaining weight [as in anorexia Nervosa], or having a serious illness [as in hypochondriasis]), and the anxiety and worry do not occur exclusively during posttraumatic stress disorder.	F. The disturbance is not better explained by another mental disorder (e.g., anxiety or worry about having panic attacks in panic disorder, negative evaluation in social anxiety disorder [social phobia], contamination or other obsessions in obsessive-compulsive disorder, separation from attachment figures in separation anxiety disorder, reminders of traumatic events in posttraumatic stress disorder, gaining weight in anorexia nervosa, physical complaints in somatic symptom disorder, perceived appearance flaws in body dysmorphic disorder, having a serious illness in illness anxiety disorder, or the content of delusional beliefs in schizophrenia or delusional disorder).
E. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.	SAME (Part D)
F. The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism) and does not occur exclusively during a mood disorder, a psychotic disorder, or a pervasive developmental disorder.	E. The disturbance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition (e.g., hyperthyroidism).

Although GAD is clearly defined and characterized by the DSM-IV and DSM-V, many studies have shown there are substantial differences between the way adolescents and adults experience GAD. During adolescence, emotional control is subdued, fear conditioning is underdeveloped, and reward and stress response systems are heightened thus exacerbating the symptoms of GAD. (Xie et al., 2021). Moreover, there are shifts in the functional connections between brain regions, particularly involving the striatum, amygdala, and prefrontal cortex for adolescents (Xie et al., 2021). As these are all key regions involved in the processing of emotional stimuli and the regulation of emotional responses, the lack of connectivity between these regions may contribute to excessive anxiety and development of GAD (Qi et al., 2023). As adolescent brains are actively developing, both cognitively and physically, current treatment plans must consider the level of neurological development and the life stage for which the treatment has been designed (Girolamo et al., 2011).

Previously completed psychological and clinical trials have indicated that other than psychopharmacologic treatments like Selective Serotonin Reuptake Inhibitors (SSRIs) or Selective Serotonin-Norepinephrine Reuptake Inhibitors (SSNRIs), Cognitive Behavioral Therapy (CBT) as the most effective psychotherapy method used to treat both adult and adolescent GAD (Wehry et al., 2015).

However, due to the differences in adult and adolescent brains, the effectiveness of therapeutic methods is significantly different. The overall relapse rate for psychiatric treatments and psychological interventions for adults with GAD fluctuates between 14% and 58% (Bruin et al., 2022), while the adolescent relapse rate ranges from 39% to 72% (Robberegt et al., 2023). When specifically considering CBT for the treatment of adult GAD, remission rates are 48% (Levy et al., 2021). For adolescents, CBT only allowed about 22% of youth to achieve stable remission, even when combined with pharmaceutical treatments (Ginsburg et al., 2018).

Possible reasons for Cognitive Behavioural Therapy (CBT) not being as effective for adolescents lie within its fundamental principles. CBT is a psychotherapy approach that has been widely used to treat GAD and is based on the concept that one's thoughts, feelings, physical sensations, and actions

are interconnected (Kaczurkin & Foa, 2015). CBT underscores the notion that negative thoughts and feelings can trap you in a negative cycle (Halder & Mahato, 2019). Thus, it could easily be influenced by factors within one's living and social environment. Specifically, CBT is less applicable to adolescents due to limitations that include but are not limited to familial and cultural factors, acceptance and stigma, and assessment and dysfunctional cognitions. Familial, and cultural influences significantly affect how therapy is tailored for children and adolescents (Karver et al., 2006). Parents' attitudes and beliefs could affect their recognition of the need for psychotherapeutic treatment, often relying on teacher referrals (Baker-Ericzen et al., 2013). Despite an increase in mental health awareness, parents often deny their child's mental health condition, impacting therapy outcomes (Villatoro et al., 2018). Similarly, therapeutic goals might diverge between parents and children, especially with adolescents when children are beginning to seek more independence. Adolescents may hold conflicting emotions with parents and perceive situations differently (Moretti & Peled, 2004). Additionally, identifying and addressing dysfunctional cognitions, a core element of CBT, can be significantly more challenging for adolescents than adults due to communication barriers as the brain is underdeveloped. Furthermore, distinguishing thoughts, emotions, and behaviors can be difficult, and thus the guided discovery process might not always yield lasting insights (Halder & Mahato, 2019).

The discrepancy between adults and adolescents undergoing CBT for the treatment of GAD has created the need for new therapies to be developed. One such therapy is Cognitive Behavioral Art Therapy (CBAT) - a newly developed therapeutic technique that is gaining more attention from researchers and practitioners due to its potential to treat GAD (M. L. Rosal, 2015). The merge of cognitive-behavioral principles with artistic expression in CBAT introduces a transformative intersectionality of treatments that goes beyond traditional therapeutic boundaries (Rubin, n.d.). This integrative approach becomes especially relevant in the context of adolescent cognitive development, where the exploration of emotions can be intricate and demanding.

The ultimate objective of this narrative review is to synthesize existing research regarding Cognitive Behavioral Art Therapy (CBAT) as a treatment option

for treating youth GAD to understand current opinions and to quantify and determine the possibility of future implementation.

Methodology

This narrative review was conducted using Google Scholar, JSTOR, and ProQuest search engines. English sources found on the above platforms were considered. The narrative review also reviewed three sources in Mandarin that were found through CNKI. Other search engines were not considered in this narrative review due to a lack of access. Search strings that were used include keywords like Cognitive Behavioral Art Therapy, Art Therapy, Cognitive Behavioral Therapy, Generalized Anxiety Disorder, and Adolescent and combinations between the words. Acronyms for the listed words were also used during the research process, including CBAT, CBT, and GAD.

The selection process of this narrative review is focused primarily on Cognitive Behavioral Art Therapy in treating Generalized Anxiety Disorder, thus sources that discuss only Cognitive Behavioral Therapy or Art Therapy were excluded from the review process. Any article that explicitly discussed CBAT was included in this review. Understandings of both Art Therapy and Cognitive Behavioral Therapy are used when explaining the fundamentals and concepts of Cognitive Behavioral Art Therapy. As such, sources that simultaneously address the possibility and theoretical framework of both therapeutic methods combined were kept despite not using the term “Cognitive Behavioral Art Therapy”. For the purpose of this review, CBT and art therapy used in tandem is equivalent to CBAT. Furthermore, this review focuses only on youth Generalized Anxiety Disorder and no other form of mental illness. Thus, only results that are related to the effectiveness of treatments in treating adolescent GAD were kept.

Conceptualization and Literary Review sections specifically regarding CBAT were taken from the papers reviewed. Most sections discussed the theoretical possibility for adoption or the differences between CBAT and CBT. For studies that included clinical trials, information regarding patient information, sample size, remission rate, and other relevant information useful in evaluating the effectiveness of CBAT was taken.

Results

When conducting searches in Google Scholar, “Cognitive Behavioral Art Therapy” yielded 1,380,000 results, “Generalized Anxiety Disorder” yielded 2,610,000 results, “Cognitive Behavioral Therapy” yielded 3,780,000 results, “Cognitive Behavioral Therapy+Art” yielded 1,280,000 results, “Cognitive Behavioral Therapy+Art+Adolescents” yielded 375,000 results, “Cognitive Behavioral Therapy+Art+Adolescents+Anxiety” yielded 220,000 results, and “Cognitive Behavioral Therapy+Art+Adolescents+Generalized Anxiety Disorder” yielded 20,900 results. Corresponding searches using acronyms did not yield more relevant results. Relevant sources were reviewed and 25 results were kept and used from all the results yielded in Google Scholar. Using the same search string, 1 source was taken from JSTOR, 4 sources were taken from ProQuest, and 2 sources were taken from CNKI (search conducted in Mandarin). The above concludes all sources used to discuss CBAT and the search process.

Most studies found during the search process were theoretical analyses or discussions of the potential synthesis of CBT and Art Therapy. Only three sources in this study were found to have clinically applied CBAT to adolescents and have experimented with GAD.

The three clinical trials were performed by Rosal (Rosal, 2001), Wang and Zhang (Wang & Zhang, 2023), and Morris (Morris, 2014). All three studies are conducted in English and Western countries under the influence of Western culture. Morris and Rosal’s studies are highly interconnected as Rosal provided support and advice throughout Morris’ research process. Both conducted research that was case study specific – where they only performed CBAT on adolescents with GAD that they considered suitable for this treatment option. Although Wang’s research investigated a group of 66 adolescent patients, his study was conducted with the patients having anorexia and with some that have GAD. However, his study measured the Beck Anxiety Inventory (BAI), which is commonly used to measure the overall conditions of GAD patients, for all patients within the study so this study was included. All three clinical trials showed success to a certain extent in alleviating anxiety disorder and in lowering remission rates.

Discussion

Theoretical analysis

Art therapy was first integrated into CBT through the Marchand et al (2007) brief CBT model in an attempt to address its critique that CBT is too verbal and abstract (Morris, 2014). Throughout time, there has been a progressive development for CBAT. The foundation of CBT and CBAT begins with the onset of behaviorism or what is now regarded as the first wave of CBT. The second wave of CBT and CBAT started when there was an emergence of cognitive science and the subsequent integration of it into behaviorism. The third wave of CBT and CBAT approaches has tried to fully integrate art therapy within more so than the first two evolutions of CBT and CBAT and is the current stage of exploration (Rosal, 2018).

CBAT is a problem-focused and practical approach to art therapy (Rosal, 2001). Art-making involves numerous cognitive skills that are targeted and expanded through CBAT. CBAT therapists use the intrinsic cognitive properties of artmaking and imagery in treatment and apply CBT principles to uncover problematic cognitive processes that interfere with positive adaptation and develop art-making strategies to challenge these cognitions and form new perspectives and behaviors. Specifically, CBT and CBAT share common elements as being flexible in strategies to enhance treatment; being understanding of differences in cognition, including inner speech and mental imagery; and promoting pragmatic solutions to aid individuals under stress and offer an efficient means to relieve and cope with it (Rosal, 2018).

Based on these characteristics, CBAT offers several characteristics that prove highly beneficial to adolescents, including but not limited to, points such as acceptance and externalization that allow the mental problem to be visualized on paper and liberate the client from the belief that the issue is fixed and inherent. This visual externalization makes it easier and safer for patients to explore, as well as to expand and reframe problems to help break patients' fixed perspectives on issues (Wang, 2023). While the method is similar to CBT, this alteration is more effectively achieved through art therapy. The intervention helps teenagers uncover the positive aspects of their art skills and be able to reimagine their applications (Morris, 2014). Furthermore, studies demonstrate that CBAT offers a solution superior

to verbal communication in helping adolescents gain clarity about their concerns amidst mental chaos (Griffin, 2014). The role of art in children's development and problem-solving suggests that image-making assists children in comprehending the world and is reflected through the complexity of their art (Yu & Nagai, 2020).

Implementation

In implementing CBAT, psychologists should have experience with both CBT and art therapy in order to be able to provide comprehensive CBAT treatments. The current standard CBAT treatment plan involves over 10 sessions, each lasting 60-70 minutes, with painting and collage as the predominant art forms (Liao, 2023). Since it is a fairly flexible approach, full treatment details always vary by patient (Kendall et al., 2008).

CBAT may help patients with skills such as: understanding and reconstructing thoughts and ideas, understanding feelings and emotions, altering self-schema, using mental imaging, and applying problem-solving skills (Blackwell, 2021). CBAT employs CBT as a theoretical framework and utilizes art as an intervention tool. Usually, therapists engage patients in discussions about the physical, cognitive, and behavioral components of their GAD. Patients were often instructed to use collage materials to create mind maps triggering anxiety attacks. The therapist then explored anxiety elements within these collages, prompting patients to recognize their panic, perceive themselves in space or surrounded by related imageries, and express abstract anxiety perceptions through art forms (Rosal, 2016).

Therapists also help patients with cognitive reconstruction. Cognitive restructuring involves identifying, challenging, and modifying irrational automatic thinking to shift rigid patterns and reduce negative emotions and problematic behaviors stemming from distorted perceptions. Therapists discuss negative thoughts related to social anxiety with patients and instruct them to create an "unlikely cognition" diagram. The therapist then assigns homework to create an artwork depicting a "likely perception." The resulting artworks were analyzed by psychiatrists and often are used to help gain a better self-perception and escape their habitual mindset (Rosal, 2018).

Therapists also try to use systematic desensitization and exposure to imagery to allow patients to face fears and allow gradual anxiety reduction through repeated exposure and relaxation. Therapists guide patients through desensitization exercises using art to simulate and visualize the anxiety they experience. Patients engaged in activities such as mandala coloring and abdominal breathing relaxation exercises. The resulting artwork served as a reminder of the process and understanding of the positive physiological changes that these exercises bring to them. Image exposure, another desensitization technique using artwork to bring imagined aversive images to life, is also employed in CBAT. After trials of systematic desensitization with both methods, patients are categorized by fear level and complete artwork depicting their fears allowing therapists to determine the appropriate future treatments (Rosal, 2015).

One case study has proven the effectiveness of CBAT intervention over GAD. In the initial sessions, the subject engaged in psychoeducation about GAD, using art to visually represent her anxiety cycle. Through the sessions, she participated in all three methods, where she created images of her support systems and coping skills, breathing retraining exercises, and cognitive restructuring tasks. Imaginal exposure was introduced to address her feared activities and situations, allowing her to confront and re-evaluate her anxieties through art. Her progress was visually documented in desensitization drawings, providing records of her achievements and challenges faced throughout the therapy session (Morris, 2014). The impacts of intervention have then culminated in a relapse prevention session, where she reviewed her artwork, acknowledging a positive shift in her mindset and coping strategies. Overall, Aurelia found that the integration of art into the therapeutic process helped her symbolize and cope with her anxieties, bringing a positive outlook on challenging situations (Morris, 2014).

Similarly, a study was conducted with 66 adolescent patients in a statistical analysis, with 31 patients in the control group and 35 patients in the treatment group. Although patients did not all have GAD, they were diagnosed with anorexia, and most all had symptoms of GAD. After the intervention through CBAT and CBMT (cognitive behavior music therapy), their cognitive and behavioral ability,

emotional reaction, and treatment satisfaction changes were compared and analyzed in the two groups. After the intervention, Beck Anxiety Inventory (BAI scores were significantly lower than they were before the intervention, and the scores in the treatment group were significantly lower than they were in the control group ($P < 0.05$) (Wang C; Xiao R, 2021). CBAT has the possibility of guiding patients through image and problem analysis, answering questions through art, with key processes encompassing creating images of stressors, preparing for stressors, step-by-step problem management, and imagery for stress reduction.

Further Experimental Studies

This review found only 3 sources reporting clinical trial results. With a small sample size, it is important to acknowledge the potential restrictions in generalizations to adolescents across the board. Factors of culture, individual conditions, and art abilities might have played a role in the outcome of the 3 clinical studies (Aleml et al., 2009). All three studies are conducted in Western countries and through the English Language. Although CBAT is highly reliant on art as an expressive form, the involvement of CBT includes cultural and linguistic concerns regarding the final outcome. Previous studies have pointed out that the conceptualization and measurement of culturally responsive interventions, client-therapist language, and ethnicity match are important variables affecting the utilization of all kinds of therapy (Sue et al., 2009). Thus, with all studies being conducted within the same culture and language background, the generalization of these results might have been limited.

Furthermore, all three clinical trials failed to provide participant demographics. No specification was done in the study conducted by Rosal and Wang (YEAR). All participants were generalized as adolescents with GAD and adolescents with anorexia and GAD. Only Morris specifically addressed her subject being a 19-year-old white female diagnosed with GAD and also meeting partial criteria for Attention Deficit Hyperactivity Disorder (ADHD).

As two out of the three studies were conducted based on single-participant case studies, it is important to acknowledge the differences that individuals exhibit and how they might have affected the outcome of CBAT. As all individuals have different

levels of comfort with art, outcomes of CBAT may vary significantly. The individualized nature of the art-making process introduces variability in the impact of specific components on participants. The preferences and responses to different art modalities may contribute to variations in outcomes (Van Lith, 2016). Specifically, in single-subject cases, understanding whether improvements are solely attributable to the art-based elements or a combination of factors is another methodological challenge.

Conclusion

This narrative review offered a synthesis of existing theoretical frameworks and research on Cognitive Behavioral Art Therapy (CBAT) to suggest its potential to address the rising Generalized Anxiety Disorder (GAD) in adolescents using databases including Google Scholar, JSTOR, and ProQuest. Results indicated that CBAT holds high theoretical potential and although active researchers in this field have only conducted 3 clinical trials, all trials demonstrated positive results in addressing adolescent GAD. CBAT capitalizes on the inherent cognitive benefits of artmaking, offering a tangible and creative outlet for adolescents to explore and challenge negative thoughts and emotions.

Based on positive outcomes, current research suggests implementation to have at least 10 sessions, each lasting 60-70 minutes, with painting and collage as the predominant art forms. Overall content should also involve a combination of CBT techniques and art therapy modalities, which better suit one's individual needs and preferences. Specifically, techniques such as cognitive reconstruction, image exposure, and systematic desensitization.

Despite the promising findings, this narrative review acknowledges several limitations, including the lack of clinical trials and the lack of diversity in data sources. Future research should aim to address these limitations by conducting rigorous trials with larger and more diverse samples and exploring optimal treatment protocols and session formats.

In all, as CBAT continues to gain prominence, it represents an improvement and adaptation in mental health interventions (Rosal, 2018). Although necessary research is needed to push it forward, the nature of artistic expression within CBAT allows

adolescents to communicate and explore their emotions and is extremely insightful in providing therapists with what may remain obscured through traditional verbal communication. This dynamic fusion of cognitive-behavioral and artistic modalities not only acknowledges the developmental nuances of adolescence but also positions CBAT as a transformative and integrative therapeutic tool.

Limitations

The results of the narrative review were limited by search engine access and restrictions to academic and medical journals. As such, this review may not include all available clinical trials and experimental studies. Future recommendations are to repeat this review after access to such resources becomes available to gain a more holistic understanding of CBAT in treating adolescent GAD.

Future narratives or literature reviews should focus not just on understanding the possibility of synthesizing the two therapeutic methods but also on performing trials to test for the effectiveness of CBAT on adolescent GAD. Furthermore, those experiments could have examined the most suitable number of sessions and topics within each session to aid overall implementation in the future.

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