

EFFICACY OF COGNITIVE BEHAVIORAL THERAPY (CBT) FOR ANXIETY AMONG CHILDREN AND ADOLESCENTS: A SYSTEMATIC REVIEW

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Abstract

Objective: Current study focuses on analyzing the effectiveness of cognitive behavioral therapies for anxiety disorders in children and adolescents.

Methods: This systematic review is taken through screening last ten years (2013- 2023) of clinical trials conducted on children and adolescents having anxiety applying CBT intervention. All data were taken from Scopus, Elsevier, PubMed, PsycARTICLES, and science direct.

Results: The compilation of n=8 inclusive clinical trials of the last ten years show the positive effects of CBT application in reducing anxiety symptoms.

Conclusion: It is concluded that there should be more research conducted on different regions of the world to maximize the significance of psychological interventions.

Keywords: CBT intervention, adolescents, anxiety, meta-analysis, systematic, children

INTRODUCTION

One of the most prevalent disorders in the globe is anxiety disorders. Anxiety is linked with fear but as defined by (Barlow D.H, 2020) anxiety is a future-focused mood state associated with making plans for probable, impending unfavorable circumstances (actual or perceived), and fear is an alert reaction to a danger that is immediately present or urgent. Anxiety disorders currently have a 7.3% worldwide prevalence, making them the most prevalent mental illnesses. [4.8%-10.9%].

The period between adolescence and adulthood is by no means a seamless shift. As opposed to this, adolescence is characterized by a number of not synchronized but interconnected changes in cognitive, social, emotional, biological and identity related computation. (Kendall & Williams, 1986). Nevertheless, a lot of the shifts that occur during adolescence help someone mature. Others, such as anxiety illnesses, make people more vulnerable to psychopathology (Lerner & Steinberg, 2004)

Adolescence is supposed to be a time where anxiety occurs frequently, but strangely, it is also a period when embracing risks and pursuing independence becomes more intense. (Mayes, et al, 2010) Biological and psychological aspects of typical adolescent development could include factors that increase the chance of developing anxiety disorders (Steinberg L, 2014).

Anxiety is now more widely acknowledged to be a significant issue when it affects children or adolescents. We are now aware how anxiety can harm a child's social and academic development in along with having serious lasting effects. (Pine, 1997). Many kids who have an anxiety disorder will experience it sporadically for the remainder of their lives. Additionally, there are other severe diseases like MDD (Richards, et al 1989).

CBT is helpful in identifying the negative patterns of thoughts and uses cognitive restructuring in changing the patterns of irrational thoughts. The practical implementation of learning theory ideas, such as classical and operant conditioning, is where CBT got its start. So-called "first-wave" behavioral therapy was developed in the 1950s. In U.S Albert Ellis developed (REBT) rational



emotive behavioral therapy to help patients change the irrational beliefs when faced with stretches of life. When developing his cognitive therapy for patients with depression, Aaron Beck used Ellison's idea. In the 1960s, "second-wave" CBT was created when both the cognitive as well as behavioral therapies were merged in theory and practice (Thoma, 2015).

In an effort to create well-defined and rigorous techniques founded on fundamental principles that have received empirical validation, first and second wave forms of CBT emerged. Second-wave CBT techniques have been the most popular psychotherapies since the 1960s. Functional analytic psychotherapy, thought-based cognitive therapy, dialectical behavior therapy, acceptance and commitment therapy, and extended behavioral activation are a few of the newer treatment modalities that have emerged as a result of a third wave form of CBT that has recently attracted more focus. Other forms might also exist, but this is speculative (Ruggiero et al., 2018)

Cognitive behavioral treatments (CBTs) are proved effective in the reduction of anxiety related problems in children as well as teenagers. The most well-documented treatment for teen anxiety problems is cognitive behavior therapy (CBT) (James A.C, et al, 2013). Programs aimed at various anxiety disorders as well as therapy for individual illnesses are used to address children's anxiety. With children similar anxiety therapy methods are used who are having variety of disorders such as separation anxiety, social anxiety, specific phobias, OCD, and GAD, and who typically present with a number of co-morbid anxiety problems. CBT for adults with anxiety disorders, where there has been an expansion of particular therapy models for multiple anxiety disorders, for instance, a structured CBT programme called "Coping Cat," employs these approaches. Randomized clinical investigations have demonstrated that around two-thirds of children who got CBT were clear of their primary diagnosis at the conclusion of treatment. (Kendall, 1990, Kendall and Hedtke, 2006). Despite the fact that several CBT therapy plans have been examined in young people with various anxiety disorders, fundamental similarities are found. To address anxiety disorders and related issues in children and adolescents, key components can be detailed and thorough assessment, establishing solid therapeutic relationship, cognitive restructuring, repeated exposure with a decrease in avoidance behavior, learning skills, and exposure therapies (Seligman & Ollendick, 2011).

One of the studies conducted in US in 2020 aimed to evaluate results of treatment on and disruptive and unhelpful anxiety in kids with autism spectrum disorder, and to examine the respective effectiveness of two CBT programs with standard care (TAU). Treatment's impact on positive reaction, the severity of ASD symptoms, and adaptive performance related to anxiety were evaluated as secondary goals. Results indicated CBT being effective for kids with disrupted anxiety and ASD, and an adapted CBT technique proved to be beneficial. They also recommended that if healthcare professionals are actively treating school-aged children with ASD, they might consider learning CBT. (Wood et al., 2020).

MATERIAL AND METHOD

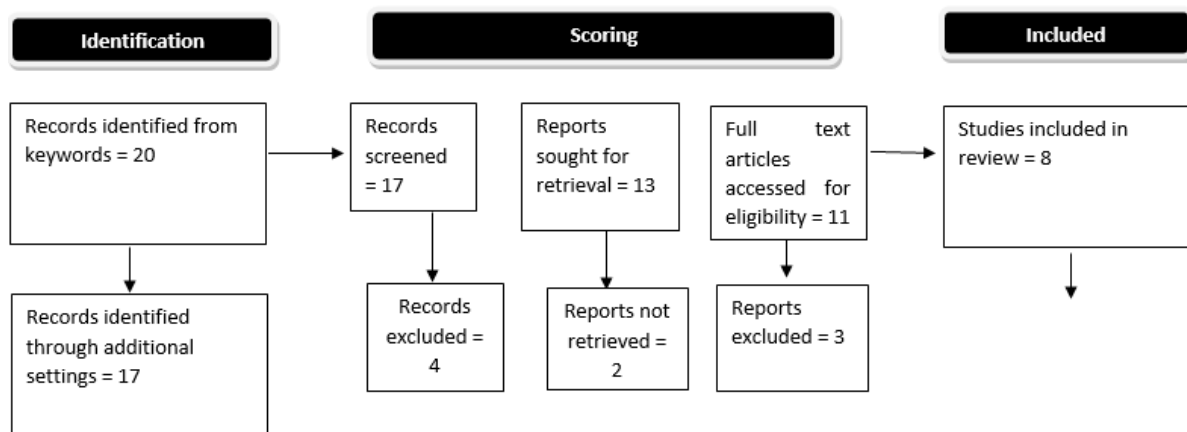
Randomized clinical studies were conducted with a specific goal of determining the "cognitive behavior therapy's effectiveness on anxiety among children and teenagers." This meta-analysis systematic study has chosen to focus on collective anxiety. The review covers every form of anxiety, including social anxiety, generalized anxiety, anxiety in autistic children, etc. The approach used to evaluate the clinical trials was founded on accepted standards for performing systematic review research (Chalmers and Haynes, 1994; Wright et al., 2007; Pae, 2015).

Search strategy

The information was obtained from a variety of websites, including science direct, pubmed, cochrane, and zendy. Search terms: CBT treating anxiety within children and adolescents were used to find clinical trials on anxiety problems in these age groups. A similar database contained additional supporting literature that was also discovered to bolster the assertion.



Figure 1: PRISMA illustration of review data



Inclusion Criteria

The criteria for inclusion were primarily concerned with planning and executing CBT on any type of anxiety disorder condition in children as well as adolescents as part of clinical studies. Only previous 10 years were the center of the random clinical trials (2013-2023). Only publicly available randomized clinical studies were used as proof to back up the assertion. This systematic review research only included articles written in English. As proof, only books and articles were used. No unpublished works of writing were cited to back up the assertion.

Results

The systematic meta-included analysis's studies were primarily concerned with "the impact of CBT upon anxiety in target population(children and adolescents) through randomized clinical studies or trials." N = 20 papers were initially downloaded and reviewed. Based on the keyword search that was used to filter the data, the n=20 was downloaded. Out of n=20, n=14 was further reduced with the goal of excluding clinical trials done on kids and teenagers who had any kind of anxiety condition. The n = 14 was further evaluated to only include randomized clinical trials that concentrated on CBT. It is clear from the comprehensive clinical studies (n = 8) that CBT is an effective strategy for reducing and modifying symptoms of fear and anxiety in kids as well as teenagers.

Efficacy of CBT in treating anxiety disorders in children and adolescents

It's been figured out that cognitive behavior therapy is very effective and reasonably priced for reducing or eliminating the anxiety feelings that many kids and teenagers experience. The clinical studies that were used as examples to support this claim demonstrate successful outcomes and a decrease in symptoms over time. Through the studies n=8, it was also made clear that families who collaborated and participated in the intervention had superior outcomes than CBT used alone or without family focus therapy.

Study	Design	Setting	Sample size Sample and demographic	Intervention and Modification	Results	Limitation	Conclusion
Ollendick T.H, et al, 2012	Quasi experimental design	Clinical setting	N= 33 adolescent and children	Thirteen children and teenagers received individual treatment, while 20 were given	After eight sessions of therapy, regardless of the research format they were in, more than	A randomized control design was not used in	During the follow-up, anxiety and depression considerably diminished.



				group therapy.	half of the young people who underwent CBT were no longer diagnosed with their primary anxiety disorder	this research. There was no blinding of interviewers	
Wisman M.A. et al, 2023	two-arm pilot randomized controlled trial	Clinical setting	N=39	ERT + CBR 18 individuals were randomly allocated to the CBT-only control condition. Randomly, the experimental group with CBT+ERT treatments received 21 patients.	Results showed that ERT and CBT seemed to be adequately practicable and acceptable to be delivered in a broader clinical context. Nonetheless, despite adequate treatment adherence and patient satisfaction, both could be further enhanced. Generally speaking, program and therapist direction are elements that are connected to teen compliance and satisfaction with virtual healthcare systems.	It is impossible to entirely rule out a prospective placebo effect of the online ERT because there wasn't an active control group added to CBT in the control condition. This study was conducted during the COVID-19 epidemic, which could have influenced the findings	Both patients and therapists agreed that adding ERT to CBT was doable and acceptable. Furthermore, according to our preliminary findings, it may help youth patients with anxiety or depression disorders improve their depressed symptoms, anxiety symptoms, and their use of ER techniques. Also, it was determined that the study's design was workable, albeit future studies should try to increase recruitment rates.
Creswell C et al, 2021	training case series of CT-SAD-A delivered in routine CAMHS, qualitative interviews	Five CAMHS teams within Berkshire Health care and Oxford Health NHS Foundation Trusts.	N= 12	Teenage social anxiety disorder may benefit from cognitive therapy (CT-SAD-A). In CT-SAD-A therapy, eight therapists were trained. Six therapists administered CT-SAD-A to twelve young people. Participating in the qualitative interviews were three managers, seven therapists, six parents, and six young people.	Nine out of 12 individuals had positive results on all measures (r for social anxiety measures was less than 0.60). CT-SAD-A was calculated to have cost £1861 (standard deviation £358) per person. Qualitative interviews revealed that while therapists and managers encountered difficulties implementing the training and therapy	The results were drawn from a tiny, homogeneous sample, and there was no control group.	The current CAMHS environment makes it difficult to implement CT-SAD-A, a promising treatment for young individuals with SAD. To guarantee that CAMHS can use and test CT-SAD-A, more work is required. As an alternative, CT-SAD-A should be tested and administered in other settings that are better suited to care for young people whose lives are restricted by SAD. Such a chance might be offered by the new



					within the present CAMHS context, young people, parents, and therapists found the treatment to be acceptable.		school Mental Health Support Teams that are envisioned in the 2017 Children's Mental Health Green Paper.
Maric M et al, 2018	Randomized clinical trails	Clinical setting	N=123	Children were assigned to four categories based on (a) whether they had gotten child CBT (CCBT) or family CBT (FCBT), and (b) whether their scores on the CBCL subscale for attention problems were normal versus (sub)clinical.	Children with severe anxiety disorders benefit more over the long run from FCBT than CCBT, according to the severity of the children's anxiety disorders. There were no variations between CCBT and FCBT for kids with mild symptoms of ADHD, anxiety, or attention issues.	In the present research, the only tool accessible to define the presence of youths' attention and hyperactive problems was their CBCL scores.	Family participation appears to be a beneficial addition to CBT for kids who also exhibit symptoms of ADHD and anxiety.
Chavira D.A et al, 2017	Qualitative methods	Latino community	N=43	There were 28 mental health specialists present for the focus group talk. Latino parents were the subjects of qualitative conversations.	Results argued that parents had a very positive view of psychotherapist and all the significant components of CBT. Both parents and carers emphasized the importance of making adjustments to address real and observed hurdles to treatment, such as time, convenience, homework, and literacy. While providers were given more negative feedback, Many parents praised a phoning-based approach as being able to overcome a number of their perceived obstacles.	Latino parents and Latino mental health workers are the study's primary target populations. Consequently, conclusions cannot be extended.	In areas with a shortage of clinicians and little access to CBT training, Examining the effectiveness of methods which rely on infrequent clinician interaction, such as phoning-based, therapist-supported bibliotherapy, is critical. Results from this along with additional qualitative studies that consider community opinions could prove relevant for modifying evidence-based treatments for rural Latino adolescents in the years to come.



<p>Hirshfeld et al 2010</p>	<p>Wait-list controlled study with randomization. Parent surveys, structured diagnostic interviews with parents, and tests in the lab to measure behavioral inhibition.</p>	<p>Laboratory setting + clinical setting</p>	<p>N= child parent CBT technique (n = 34) or a 6-month wait-list condition (n = 30) were randomly assigned to 64 anxious children (53% female, mean age 5.4 years, 80% European American).</p>	<p>Wait-list controlled study with randomization. Conduct: 64 anxious kids were randomly allocated to receive either a parent-child CBT treatment (n = 34) or a 6-month wait-list condition (n = 30). (53% female, mean age 5.4 years, 80% European American). Children were evaluated by interviewers who were oblivious to the children's treatment plans using structured diagnostic interviews with the parents, behavioral inhibition tests in the lab, and parent surveys.</p>	<p>Among 57 participants who completed the program, the response rate (much or very much better on the Clinical Global Impression Scale for Anxiety) was 69% versus 32% (CBT vs. controls), p .01; the intent-to-treat rate was 59% versus 30%, p =.016. Children who received treatment displayed quiet good CGI improvement on social phobia/avoidant disorder (ES =.95), separation anxiety disorder (ES =.82), and specific phobia (ES =.78), but not on generalized anxiety disorder. Children who were treated also portrayed greater level of reduction in anxiety disorders (effect size [ES] =.55) and increase in parent-rated coping (ES =.69) than controls. the Infant Behavior Checklist's findings Low return rates put a cap on internalizing scale, which were not statistically significant. Parental worry and age had no effect on treatment response, but behavioral inhibition did. Improvements persisted after one year.</p>	<p>Not mentioned</p>	<p>Results implicated that developmentally adjusted parent-child CBT may prove effective in children aged 4 to 7.</p>
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<p>Scheinder et al, 2013</p>	<p>Randomized control trial</p>	<p>outpatients</p>	<p>N=64 children</p>	<p>In contrast to a general anxiety programme, a disorder-specific therapy programme (TrennungsAngstprogramm Für Familien [TAFF]; English: Separation Anxiety Family Therapy) is available for kids with separation anxiety disorder (SAD). 64 SAD-afflicted children aged 8 to 13 and the parents were assigned to either a 16-session treatment programme for the disorder randomly(TAFF), which included parent education and traditional cognitive-behavioral therapy (CBT) components, or a 16-week comparison group (Coping Cat [CC]), which was solely focused on the needs of the child. Parental cognitions and diagnoses were evaluated at baseline and follow-up visits. At the conclusion of treatment and during the follow-up, ratings of overall success were gathered.Scores for anxiety, impairment/distresses, and life quality were obtained at</p>	<p>52 therapy completers experienced a response rate (no SAD diagnosis) at 4-week follow-up that was 87.5% higher than 82.1% (TAFF vs. CC; intent-to-treat: 67.7% vs. 69.7%). The response was 83.3% versus 75% at the 1-year follow-up (TAFF vs. CC; purpose to treat: 64.5% vs. 63.6%). There were no notable differences.With minimal differences between groups and a few small impacts to the benefit of the TAFF program, rating scale data revealed progress for each group over time frames and evaluation areas.. There was a decrease in the dysfunctional parental beliefs with both treatment regimens.</p>	<p>Not mentioned</p>	<p>The TAFF programme appears to have a slight edge over a general child-based treatment for SAD, according to the results. These variations, however, were not as significant as was anticipated, suggesting that adding parent education to traditional child-based CBT does not have a significant impact on school-aged SAD patients. PsycINFO Database Document (c) 2013 APA, all rights reserved.</p>
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				Baseline 1, once more following a 4-week delay, periodically across treatment, after 4 weeks, and at 1-year follow-up.			
Wood J.J, et al, 2020	Random clinical trial	At three schools in US cities, recruitment for a random clinical trial began in April 2014.	N= 167	Randomized group of children (7-13 years old) with ASD and disruptive and maladaptive anxiety received TAU, standard CBT, or CBT tailored for ASD. The unbiased evaluators were not informed of any groupings. Up until January 2017, data was collected, and between December 2018 and February 2019, it was reviewed.	The CBT curriculum designed for ASD performed better than standard CBT. The On parent-reported measures of internalising symptoms, ASD-specific CBT fared better than conventional CBT and TAU. When weighed against TAU, both CBT conditions had a greater percentage of effective treatment results.	Not mentioned	In this study, CBT was helpful for children with disruptive anxiety and ASD, and a modified CBT strategy also showed added advantages. If clinicians are providing psychiatric care to school-aged children with Autism, they should consider learning CBT skills.

DISCUSSION

Clinical significance of the result

According to a 2020 study by Wood, et al, CBT was beneficial for kids with disruptive anxiety and ASD, and a modified CBT approach also demonstrated additional benefits. Clinicians should think about acquiring CBT techniques if they are giving psychiatric care to school-aged children with autism. Additionally, the review found that many different anxiety disorders could benefit from the use of therapeutic methods like CBT, ERT, exposure therapy, etc.

In their quasi-experimental study, Ollendick , et al. (2012) found that after eight sessions of therapy, irrespective of the research format they were in, over half of the sample, underwent CBT, were no more diagnosed with their primary anxiety disorder. Thirteen children and teenagers received individual treatment, while 20 received group therapy.

In their qualitative study, Chavira. et al. (2017) found that parents had a generally positive view of psychotherapies, and the vital elements of CBT for anxiety. Both parents and carers emphasized the importance of making adjustments to address real and observed hurdles to treatment, such as time, convenience, homework, and literacy. While providers were given more negative feedback, many parents praised a phoning-based approach as being able to overcome a number of their perceived obstacles. For the focus group discussion in this research, a sample of 28 mental health professionals was used. Parents of Latino descent were the topic of in-depth discussions.

LIMITATIONS

In some instances, it was also noted there wasn't any active control group which could be added to CBT in the control condition, and some studies indicated that the findings were derived from a small, homogeneous sample. A single study was conducted amid the COVID-19 epidemic, which might have impacted results. No clinical trials on CBT have taken place in Pakistan so far on children or adolescents having anxiety disorder. Both parents and carers emphasised the importance of

making adjustments to address real and observed hurdles to treatment, such as time, homework, literacy and convenience.

CONCLUSION

This systematic review study targeted clinical trials of cognitive behavior therapy to treat the psychological problems that arise in children and adolescents having anxiety disorder. In this review, it has been noted that CBT is an effective and goal-oriented therapy that can reduce the existing symptoms of anxiety in targeted population. It is effective for children as well as adolescents. It is important to further assess CBT through clinical trials on clients with anxiety specially adolescents and children to improve the prognosis and its effectiveness.

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