

Systematic Review of Cognitive Behavioral Therapy for Social Anxiety Disorder in Adults

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Abstract- Social anxiety is a common issue in the general population, leading to substantial challenges in social interaction. Although cognitive-behavioral therapy (CBT) has shown promise in treating social anxiety in people who are not psychotic, there is a dearth of randomized controlled trials examining the clinical efficacy of CBT for treating social anxiety. A comprehensive systematic review was conducted to summarize and evaluate the available research on the effectiveness of CBT interventions aimed at reducing social anxiety in the adult population. Three databases have been used, including PubMed, Google Scholar, and Wiley's Online Library with data restrictions from 2012-2022. The search limits were randomized controlled trials and English language only. The electronic search terms, including (social phobia OR social anxiety OR social anxiety disorder) AND (Cognitive Therapy OR Cognitive Behavioral Therapy OR CBT) AND (Randomized Controlled Trial), has been used. PRISMA guidelines have been used to select nine studies in the review to assess the efficacy of CBT for social anxiety in randomized controlled trials. Preliminary findings suggested that CBT is effective in managing symptoms of social anxiety. Future studies should include more databases to come up with multiple studies for the systematic review. The intervention model of Heimberg should be used to treat social anxiety in the adult population.

Index Terms- Social anxiety, randomized controlled trial, cognitive behavioral therapy, adults

I. INTRODUCTION

Social anxiety stands out as a common psychological disorder in modern culture. Given its widespread occurrence, numerous research projects have focused on comprehending this substantial emotional disorder, which is known to lead to a variety of psychiatric and behavioral problems [1]. People who struggle with social anxiety experience discomfort during social interactions and performances, which has notable negative effects on all aspects of their lives [2].

According to Carpenter et al., social anxiety has received more attention recently due to its rising prevalence and association with pronounced level of anxiety and depression [3]. Despite the fact that social anxiety is not a new idea, psychologists have shown increasing concern about it, particularly since it was first recognized as a psychiatric disorder in DSM-III, which was released by the American psychiatric association in 1980. Social anxiety is frequently conceptualized as a special type of phobia that is connected to various social situations [4].

II. RESEARCH ELABORATIONS

During the nineteenth century, considerable attention from psychologists and educators was directed towards the exploration of mental disorders, markedly focusing on social anxiety. As the twentieth century outspread, social anxiety emerged as a substantial concern, and in the twenty-first century, it has come to be labeled as the "age of anxiety" [5]. Furthermore, a number of studies have underlined the efficacy of Cognitive Behavioral Therapy (CBT) as a potent therapeutic approach across a broad spectrum of mental disorders, particularly for anxiety disorders, demonstrating noteworthy and positive long-term outcomes in younger individuals. Variations in treatment format, such as individual CBT versus group CBT, do not seem to yield obvious distinctions in both short and long-term effects, indicative of similar effect sizes. The pathogenic mechanisms contributing to the onset and persistence of anxiety disorder predominantly involve biases in information processing [6].

CBT is commonly used to assist individuals in identifying persistent thoughts and dysfunctional patterns of thinking and perception of reality. Its aim is to substitute or integrate these patterns with more constructive beliefs. Some researchers have indicated a potential link between heightened anxiety and the occurrence of paranoid thinking, probably mediated by a cognitive bias known as "jumping to conclusions." In this context, a study has shown both clinical and cognitive findings supporting the efficacy of an "enriched" cognitive-behavioral

group intervention designed to manage anxiety. This intervention seeks to improve symptoms, strengthen cognitive flexibility and social functioning. Giusti et al. demonstrated that even among young adults with anxiety, there existed a deficiency in cognitive flexibility and an inclination for jumping to conclusions – attributes extensively studied in individuals with psychosis [7]. Cognitive flexibility denotes a metacognitive facet encompassing the assessment and restructuring of cognitive distortions. It involves the capacity for accurate self-reflection, acknowledgment of one's fallibility, recognition of cognitive limitations, objectivity, reflection, and a commitment to comprise corrective response [4].

Research Gap

No systematic review of social anxiety has been conducted in adults without another medical or psychological condition in the past. The previous systematic reviews of social anxiety disorder are during psychosis [8], a protocol for a social anxiety disorder during psychosis [9], internet-based CBT for social anxiety [10], and anxiety-related disorders [11]. This empirical gap reflects the need for a systematic review of CBT for social anxiety disorder in the general population of adults.

Research Objective

This study aims to conduct a comprehensive systematic review to synthesize and critically assess the available evidence regarding the efficacy of CBT interventions in the improvement of social anxiety disorders among adults

Research Question

Does a Randomized Controlled Trial of Cognitive behavioral therapy is effective for adults with a social anxiety disorder?

III. RESEARCH METHODOLOGY

Study Design

This paper presents a systematic review following the guidelines outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement.

Search Strategy

The initial phase involved scoping the existing literature to ensure distinctiveness from previously published reviews. The following three databases are then searched including (i) PubMed (ii) Google Scholar, and (iii) Wiley Online Library. The researcher set the following search limits: (i) randomized controlled trials; (ii) English language only. Date restrictions (2012 -2022) have been applied to collect data for the use of Cognitive Behavioral therapy for social anxiety disorder. The following electronic search terms have been used: (social phobia OR social anxiety OR social anxiety disorder) AND (Cognitive Therapy OR Cognitive Behavioral Therapy OR CBT) AND (Randomized Controlled Trial).

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Inclusion Criteria

- Types of Studies – The studies that used the randomized controlled trial to study the effect of CBT on Social Anxiety are included in the systematic review. Pre-test and posttest design studies for CBT are preferred.
- Comparator - The studies with any other comparative treatment group along with CBT intervention, waitlist controls, or no controls were included in the study.
- Types of participants - The study participants should be adults diagnosed through any recognized diagnostic criteria.
- Outcome tool - Social anxiety symptoms were assessed using a reliable and valid scale, such as self-report or clinician-administered.

Exclusion Criteria

- The research participants are diagnosed with another physical or psychological issue along with social anxiety
- The studies focusing on only post-test design were excluded
- The studies conducted on children or adolescents

IV. FINDINGS

The findings of the study are given through PRISMA format and detailed description of the selected articles are given in the tabular form.

PRISMA

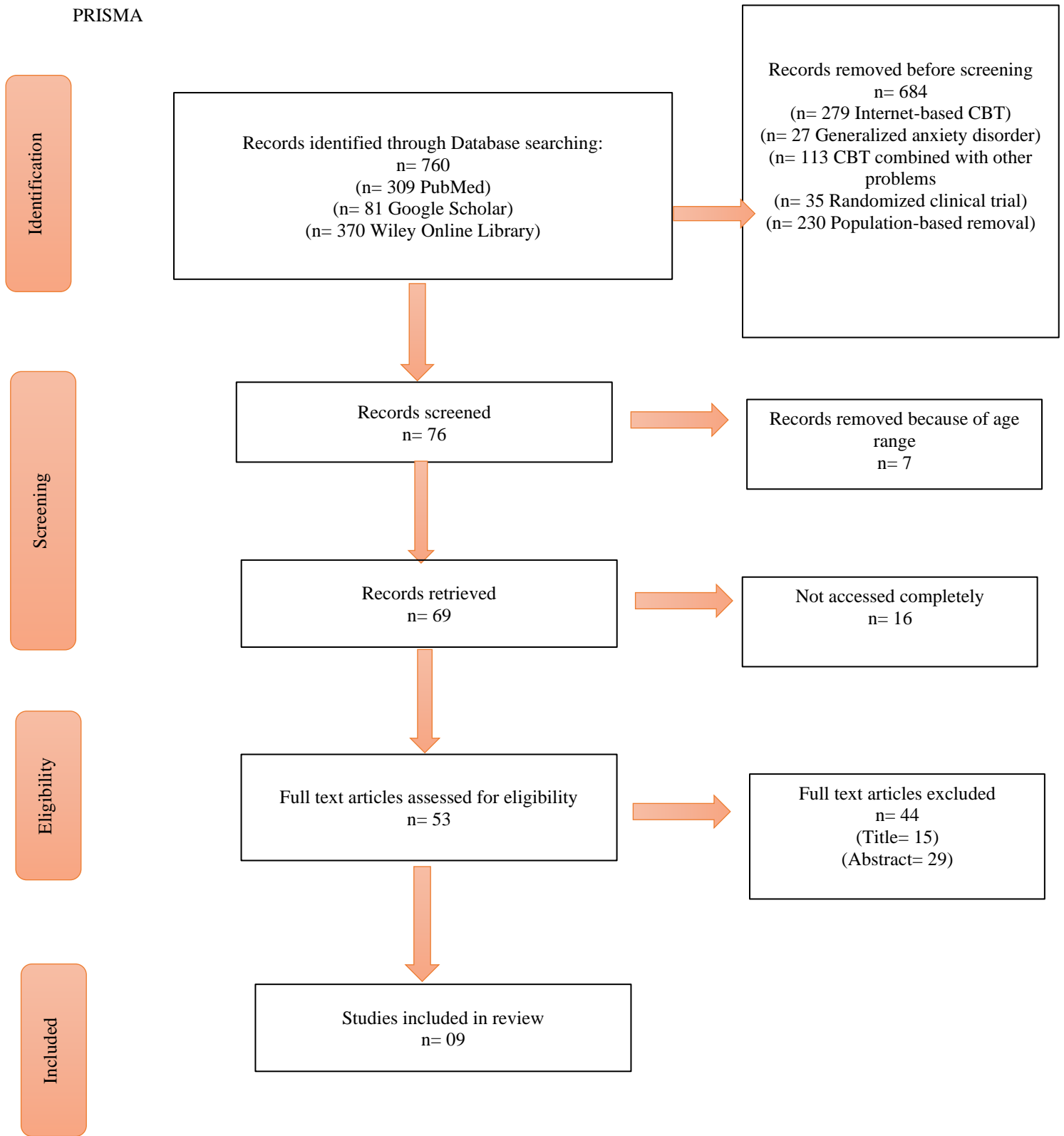


Figure 1: PRISMA flowchart illustrating identification of included studies

Table 1

Overview of characteristics of included studies

| Author/ Year | Design | Sample | Intervention | Control | Result |
|-----------------------------|-----------------------------|--------|--|------------------------|---|
| (Goldin et al., 2016) | Randomized Controlled Trial | 108 | Cognitive-Behavioral Group Therapy Mindfulness-based stress reduction | Waitlist controls | Both Cognitive-Behavioral Group Therapy and Mindfulness-Based Stress Reduction demonstrated larger improvements across most assessment metrics when compared to the Waitlist control group. Both interventions produced comparable developments in areas such as social anxiety symptoms, self-efficacy, frequency of cognitive reappraisal, cognitive distortions, mindfulness skills, attentional focus, and reduction of rumination [12]. |
| (Koszycki et al., 2021) | Randomized Controlled Trial | 97 | Cognitive behavior group therapy Mindfulness-based interventions | - | Cognitive behavior group therapy managed better than the Mindfulness-based interventions in alleviating symptoms of social anxiety [13]. |
| (Huppert et al., 2018) | Randomized Controlled Trial | 43 | Face-to-face Cognitive-behavioral Therapy Attention Bias Modification | - | Face-to-face Cognitive-behavioral Therapy was better to Attention Bias Modification in response rates and on symptom measures at the endpoint, but not on other measures [14]. |
| (Leichsenring et al., 2013) | Randomized Controlled Trial | 495 | Manual-guided Cognitive Behavioral Therapy Manual-guided psychodynamic therapy | Waitlist controls | Manual-guided Cognitive Behavioral Therapy and psychodynamic therapy were both effective in managing social anxiety disorder, but there were significant diversities in favor of Cognitive Behavioral therapy [15]. |
| Kocovski et al., 2013 | Randomized Controlled Trial | 137 | Cognitive-behavioral group therapy Mindfulness and acceptance-based group therapy | Waitlist control group | Both mindfulness and acceptance-based group therapy and cognitive behavioral group therapy were more effective as compared to control group but not significantly different from one another on social anxiety reduction and most other variables assessed [16]. |

| | | | | | |
|--------------------------|-----------------------------|-----------------|---|-------------------|--|
| (Craske et al., 2014) | Randomized Controlled Trial | 100 | Cognitive Behavioral Therapy Acceptance and commitment therapy | Waitlist controls | No distinctions were noted in public speaking outcomes between CBT and Acceptance and Commitment Therapy. However, CBT exhibited greater enhancement by the 12-month follow-up compared to Acceptance and Commitment Therapy. Moreover, CBT demonstrated a more favorable outcome in terms of self-reported fear of negative evaluation, whereas Acceptance and Commitment Therapy yielded less favorable results in this aspect [17]. |
| Willutzki et al., 2012 | Randomized Controlled Trial | 78 participants | Resource-oriented cognitive-behavioral therapy Cognitive therapy | No control | A prominent improvement was observed in two measures of social anxiety from posttreatment to the 10-year follow-up. Resource-oriented cognitive-behavioral therapy and Cognitive therapy exhibited comparable overall effectiveness [18]. |
| (Hunger et al., 2020) | Randomized Controlled Trial | 38 participants | Cognitive Behavioral Therapy Systemic Therapy | No control | Both Cognitive Behavioral Therapy and Systemic Therapy have demonstrated efficacy in reducing social anxiety, contributing to patient progress within the newly formulated Systematic Therapy for Social Anxiety [19]. |
| (Bjornsson et al., 2011) | Randomized Controlled Trial | 45 participants | Cognitive Behavioral Therapy Group Group psychotherapy | No control | Both therapies were found to reliable [20]. |

V. DISCUSSION

In this systematic review, the researcher has screened 760 journal articles from three databases, including PubMed, Google Scholar, and Wiley Online Library. Initially, 684 articles were removed as 279 articles studied the internet-based CBT, 27 articles were based on patients with generalized anxiety disorder, 113 articles studied the effectiveness of CBT for social anxiety combined with other health issues, 35 were randomized clinical trials, and 230 articles were population-based removal. As per PRISMA format, screened records were left with 76 at this point, and later on, 7 articles were removed because they did not fulfill the age range criteria. After that, 16 articles were removed because of their inaccessibility, 15 were removed as per title screening, and 29 after the abstract screening. Indeed, 09 articles were selected that contained information about the use of CBT for the management of social anxiety by using a randomized controlled trial. Very limited number of articles

have studied social anxiety in the general population. Many articles have been excluded because they researched patients with psychosis or with other medical or psychological conditions.

In closer examination, Goldin et al. stated that CBT and mindfulness-based stress reduction therapy are useful for patients with social anxiety as both therapies provide higher improvements when compared with the waitlist controls [12]. The thorough analysis reflected improvements in the symptoms of social anxiety, attention focusing, a mindfulness skill, and rumination. Unlike the work of Goldin et al., the study of Koszycki et al. reflected that CBT is more effective than mindfulness-based interventions because CBT declines the self-rated and clinically rated social anxiety faster than mindfulness-based therapy [13]. Another study by Kocovski et al. studied the efficacy of cognitive-behavioral group therapy and mindfulness and acceptance-based therapy against waitlist groups in patients

with social anxiety [16]. The study supported the work of Goldin et al. which stated that Cognitive-behavioral group therapy is equally effective the mindfulness-based stress reduction therapy [12]; Kocovski et al. also stated that the mindfulness and acceptance-based group therapy are both effective but not significantly varied in term of reduction of social anxiety [16].

Similar to the study of Kocovski et al., the study of Craske et al. argued that there is not any observed difference in CBT and acceptance and commitment therapy on public speaking anxiety [17]. Although a greater improvement has been observed in the Cognitive-behavioral therapy group in 12 months follow-up as the patients reported less fear of evaluation in this group similar to the study of Koszycki et al. [13]. The study of Huppert et al. comparatively analyzed the effectiveness of face-to-face CBT and attention bias modification therapy [14]. The study reflected that the outcomes in the symptoms of social anxiety of CBT are higher than attention bias modification in the symptoms measured at the endpoints. Another study by Leichsenring et al. also supported the existing studies that are in the favor of cognitive-behavioral therapy [15]. The study reflected that cognitive-behavioral therapy and psychodynamic therapy both are quite effective to treat the symptoms of social anxiety, but more positive changes are observed in the patients having the intervention of cognitive-behavioral therapy.

In addition, Willutzki et al. comparatively analyzed the cognitive therapy and resource-oriented CBT with no control group in the randomized controlled trial. The study revealed substantial improvements equally in the severity of social anxiety among participants in the longitudinal research design [18]. Likewise, the study of Hunger et al. reflected that CBT and systemic therapy both decline the symptoms of social anxiety and help the patient to improve their quality of life [19]. Supporting the work of Willutzki et al. and Hunger et al., the study of Bjornsson et al. researched 45 participants and showed that both treatments of cognitive-behavioral therapy and group psychotherapy are equally effective and credible [20].

The research question has been answered through the systematic literature review reflected that a Randomized controlled trial of CBT is quite effective in declining the social anxiety of adults. The research objectives are met because the data contained in the systematic review has critically analyzed the evidence of the effectiveness of CBT interventions to improve social anxiety disorder in adults.

Implications of Practice and Research

The National Institute for Health and Care Excellence recommends CBT for people with social anxiety to decline their symptoms' severity. There is a knowledge gap concerning the effectiveness of CBT in treating social anxiety symptoms, but this systematic review has addressed this knowledge gap. The evidence studied in the systematic review has been identified, appraised, and synthesized that gives tentative suggestions

about the effectiveness of CBT for patients with social anxiety as CBT proves effective to treat the symptoms of social anxiety. Heimberg et al. gave the intervention model to treat social anxiety that should be used for the adult population [21]. The core interventions such as exposure, psychoeducation, role play, cognitive restructuring, and intrasession assignments should be used with the patients to control the severity of the symptoms.

Limitations

The limitation of the included studies is that they were restricted to the English language only due to the lack of resources and feasibility concerns. The low number of studies has been included which is another limitation of this review concerning the practice implication.

VI. CONCLUSION

This systematic review has provided a detailed synthesis of the evidence on the effectiveness of CBT for the treatment of social anxiety in a general adult population. CBT is quite effective to treat the symptoms of social anxiety. The research has focused on the methodological rigorous randomized controlled trials to study the effectiveness of the CBT interventions that gave fruitful information. Future studies should include more databases to come up with vast information.

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