TITLE: Group Therapy for Anxiety: A Review of the Clinical Effectiveness

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CONTEXT AND POLICY ISSUES:

Anxiety is a chronic condition associated with a lifetime prevalence of approximately 28%. Anxiety disorders include: generalized anxiety disorder (GAD), panic disorder, social phobia, specific phobia, obsessive-compulsive disorder (OCD), and post-traumatic stress disorder (PTSD). The treatments for anxiety include pharmacotherapy and psychotherapy. The results from meta-analyses have demonstrated that cognitive behavioural therapy (CBT) can have beneficial effects when used in patients with anxiety disorders. Traditionally, CBT has been delivered in a one on one format to individual patients. More recently, group CBT therapy programs, in which patients with a range of anxiety disorders are treated together, have been used.

This report will review the evidence regarding the clinical effectiveness of group therapy interventions, including CBT, for the treatment of patients with anxiety.

RESEARCH QUESTION:

What is the clinical effectiveness of group therapy interventions for the treatment of patients with anxiety disorders to improve functioning, health-related quality of life, and reduce hospitalization?

METHODS:

A focused search (main concepts appeared in subject heading) was conducted in Medline and PsycINFO. A limited literature search was conducted on all other key health technology assessment resources, including PubMed in process, The Cochrane Library (Issue 3, 2009), University of York Centre for Reviews and Dissemination (CRD) databases, ECRI, EuroScan, international health technology agencies, and a focused Internet search. The search was limited to English language articles published between 2004 and September 2009. Filters were applied.
to limit the retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, controlled clinical trials, and observational studies.

**SUMMARY OF FINDINGS:**

The literature search identified five RCTs and two observational studies. No health technology assessments, systematic reviews, meta-analyses, or controlled clinical trials were identified by our literature search. All of the studies that were identified evaluated the use of group CBT for the treatment of patients with anxiety.

HTIS reports are organized so that the higher quality evidence is presented first. Therefore, randomized controlled trials (RCTs) are presented first, followed by observational studies.

**Randomized controlled trials**

The results from a pilot RCT examining the effectiveness of a group CBT program involving patients with anxiety disorders were published by Merom et al. in 2008. The study took place in Australia. The RCT examined the effect of adding a home-based walking program to a standard CBT program. The patients were recruited from an outpatient anxiety clinic and were assessed for anxiety disorders including GAD, social phobia, or panic disorder using criteria set by the DSM-IV. The assessment was performed by a trained psychologist. A total of 85 patients were randomized to either the exercised-enhanced CBT (n=45; mean age 38.7 years) or the education-enhanced CBT group (n=40; mean age 39.4 years). The representation of clinical diagnoses was relatively uniform in the exercise-enhanced group. The education-enhanced group had twice as many patients with GAD than with social phobia. The exercise group participated in 30 minute exercise sessions in addition to CBT. By the end of the treatment period, the goal was for patients to have engaged in at least 150 minutes of exercise per week. The CBT program involved once-weekly, 90 minute sessions for eight (for GAD and panic disorder patients) to 10 weeks (for patients with social phobia) and focused on standard principles of CBT. The patients in the education-enhanced group participated in three educational sessions on nutrition and healthy living over the treatment period in addition to the CBT. The primary outcomes were change in depression, anxiety, and stress scores as measured by the Depression Anxiety Stress Scale (DASS). The DASS tool is a standardized 21-point questionnaire to assess the severity of depression, anxiety, and stress in an individual. The adherence rate (adherence was defined as attendance of five of eight group sessions for GAD and panic disorder and seven of 10 group sessions for social phobia patients) was approximately 73%. The authors reported a statistically significant improvement in patients in the exercise-enhanced group compared to those in the education group on depression scores (mean change of -9.2 in exercise group versus -2.6 in the control group). The mean change of anxiety and stress scores for patients in the exercise group was higher than in the control group, although not statistically significant. The authors noted that further research is required to confirm their findings.

Erickson et al. (2007) conducted a RCT evaluating the clinical effectiveness of a group CBT program to treat patients with anxiety disorders. The objective of the study was to determine if patients with different types of anxiety disorders could be treated together. The study took place in Canada. Patients were excluded if they had active substance abuse problems or if they had psychoses. A total of 152 patients were randomized to receive either group CBT (n=73, 62%...
female, mean age 40.7 years) or to be wait-listed for treatment (n=79, 66% female, mean age 41.0 years). The principal diagnoses included social phobia (n=46), panic disorder with or without agoraphobia (n=36), GAD (n=31), PTSD (n=16), OCD (n=16), and specific phobia (n=7). The standard-content CBT program consisted of once-weekly two-hour sessions delivered for an 11 week period. The sample of patients receiving CBT was divided into groups ranging in size from nine to 13 patients and included a mix of diagnoses. Pre- and post-treatment anxiety was assessed using the Beck Anxiety Inventory (BAI) tool. The proportion of patients that reported a clinically significant improvement (a minimum decrease by 40%) in anxiety score over the 11 week period was statistically significantly higher in the CBT group compared with the wait-listed group. The authors concluded that group CBT was effective for a range of anxiety disorders.

Seligman et al. (2007) conducted a RCT to evaluate the effectiveness of a classroom-based CBT program given to college students with depressive and anxiety symptoms. Eligibility was assessed using the Beck Depression Inventory (BDI) tool. All incoming first year students at a US-based college were invited to participate. Students whose BDI scores suggested that they were exhibiting symptoms consistent with depression or anxiety were invited to participate. A total of 240 patients were eligible for the study (65% female). One-hundred and thirteen students were randomized to the CBT group and 127 were randomized to the wait-listed control group. The CBT program was delivered in once-weekly, two hour sessions for eight weeks. A single one on one session was held with the group leader early in the study period. Following completion of the eight week period, there was email follow-up for six months by the group leaders. Once a month, the group leader sent an email message to the study participants that reviewed topics covered in group sessions, tips, and exercises. The content of the email messages was standardized ensuring that all study participants received the same information. The groups were comprised of 10 to 12 participants. The content of the CBT program included topics such as the relationship between thoughts, feelings, and behaviours; controlling emotions; and stress management. The outcomes of interest were depressive symptoms and anxiety as measured by the BAI tool. The authors’ goal is to follow the students for three years. The authors reported an attrition rate of 5.4% (13/240) to date. Preliminary results at six months of follow are reported in this publication. At six months follow-up, the CBT group demonstrated statistically significantly fewer depressive symptoms and anxiety scores compared with those in the control group. The authors concluded that in the short-term, CBT appears to be effective in treating college-aged students with symptoms of depression and anxiety. They also suggested that targeting at-risk young adults may result in a public health benefit in the future.

Norton and Hope (2005) published a RCT evaluating the use of a CBT program for the treatment of patients with anxiety. The Canadian-based study recruited through direct advertisements. To be considered for inclusion, participants had to meet the DSM-IV criteria for a primary diagnosis of anxiety, be at least 19 years of age, and have no evidence of dementia, suicidality, or substance abuse. A total of 19 patients were recruited and were randomized to receive CBT (n=9) or be wait-listed to the control group (n=10). The included patients had a primary diagnosis of GAD, panic disorder, OCD, or social anxiety disorder. The mean age of the population was 39.6 years and 47.4% were male. The DASS tool was used for self-reporting of the frequency and severity of experiencing negative emotions. There was no statistically significant difference when DASS scores were compared between CBT and control groups. The authors concluded that there was no overall treatment effect of CBT, but suggested that this was likely due to a small sample size.
A RCT was conducted by Dannon et al. (2004)⁶ to compare the effectiveness of group CBT to paroxetine pharmacotherapy for the treatment of patients with panic disorder. The study took place in Israel. Patients were referred to an anxiety disorder clinic and evaluated by a psychiatrist. Patients were excluded if they were less than 18 years of age, had co-morbid psychiatric disorder, had substance abuse problems, or if they had received psychological treatment within the past year. A total of 57 patients (50.8% female; mean age, 44.9 years) were enrolled in the trial and randomized to receive either group CBT (n=24) or paroxetine (n=33). The CBT program consisted of once-weekly, two-hour sessions over an eight week period. The topics covered in the CBT program consisted of coping strategies to control panic attacks, reframing negative self-talk, and assertiveness training. Self-reporting for symptoms of anxiety was performed at baseline, and weeks four and 12. Patients treated with paroxetine were started on a dose of 10 milligrams (mg) per day which was increased to a maximum dose of 40 mg per day. The criterion for response in both groups was zero panic attacks in a week. There were no differences in anxiety between groups at weeks four and 12. Both groups reported a reduction in anxiety symptoms and the number of panic attacks. The authors concluded that CBT is effective in treating patients with anxiety.

Observational studies

Oei and Boschen (2009)² conducted a study to evaluate the clinical effectiveness of a group CBT program for the treatment of patients with anxiety disorders. A total of 396 patients were referred to an outpatient CBT treatment program at a hospital in Australia. A total of 260 patients were female, 88 male, and the gender of the remaining 48 patients was not recorded. The mean age of the population was 42.6 years. Of the referred patients, specific information relating to the diagnosis was available for 179. A diagnosis of panic disorder accounted for 30.2% of cases, 14% had GAD, 8.4% had post-traumatic stress disorder, and 17.3% had major depressive disorder. The study included all patients that were referred for treatment by a psychiatrist and included those patients with co-morbidities and were on medications for anxiety. The primary outcome was an assessment of anxiety using the BAI tool. An assessment of fears, thoughts associated with anxiety, and overall quality of life were also made. The group CBT program was delivered in two, four-hour sessions per week over a four-week period. Between eight and 14 patients were in each group. A variety of modules was covered over the treatment period and included psycho-education, group discussions, and role-play exercises. The CBT program was delivered by two clinical psychologists and a psychiatric nurse. Both pre-treatment and post-treatment evaluations were made.

A subset of the study population (159/396) was evaluated for a clinically-significant change. This subset was selected because they met the following criteria: 1) both pre- and post-treatment BAI scores were available, and 2) had a pre-treatment score of 11 or greater. A clinically significant change was denoted by a reduction in BAI score by at least 10 points. Seventeen percent (27/159) of patients showed a clinically significant improvement and 43% showed a relative change (less than a 10 point drop). The authors concluded that group CBT was effective for the treatment of a range of anxiety disorders in the clinical practice setting.

Evans et al. (2008)⁷ conducted a study evaluating the effectiveness of a group mindfulness-based CBT program for the treatment of GAD. The study took place in the US. The 8-week program included 11 patients (6 females and 5 males with a mean age of 49 years) and
combined practices from mindfulness meditation with CBT. Patients were screened for eligibility by a clinical psychologist or psychiatrist. To be considered for inclusion, patients were required to be between 18 to 80 years of age and to have been diagnosed with GAD. Patients were excluded if they had suicidal or homicidal thoughts or if they were currently experiencing dissociative states. The group CBT program involved a once-weekly two-hour session over the course of eight weeks and was led by an experienced practitioner. The group mindfulness meditation included body scan meditation, sitting meditation, and gentle hatha yoga. In addition to group therapy, patients were instructed to meditate for at least 30 minutes a day using guided meditation recorded compact discs. Patients were assessed for measures including anxiety, worry, depressive symptoms, and mindful awareness. Self report measures were completed at the beginning and end of the treatment period.

Five patients had a clinically significant improvement in anxiety scores as assessed by the BAI tool. Three of five patients who had pre-treatment scores consistent with clinically significant depressive symptoms, had non-clinical scores following treatment. Five patients with clinically significant pre-treatment scores for pathological worry had non-significant scores following treatment. The authors concluded that the mindfulness-based CBT program had a beneficial effect on anxiety, worry, and depressive symptoms in patients. The authors noted that further research including RCTs using the mindfulness-based CBT approach were needed to confirm findings.

Limitations

No health technology assessments, systematic reviews, or meta-analyses were identified by our literature search. All of the identified studies used a group CBT-based approach, although the specific details of the program content differed between the included studies. For example, some used a traditional CBT program that included a focus on the development of coping strategies and a reduction in negative self-thought, whereas others included a meditation or mindfulness component.

Several of the included studies had sample sizes of less than 20 participants. These studies may not have adequate power to identify treatment effects. Several of the included studies experienced study participant drop-out, which further decreased the sample size and may represent a limitation when used in clinical practice. Patients who had a substance abuse or co-morbid psychiatric disorders were excluded in several of the included studies. This may limit the generalizability to all patients with anxiety. All but one of the studies had relatively short follow-up durations, typically less than 12 weeks. The one study that proposed a follow-up time of three years is on-going. All of the studies evaluated measures based on self-report and it is possible that patient recall may have been distorted in some instances.

CONCLUSIONS AND IMPLICATIONS FOR DECISION OR POLICY MAKING:

The evidence from the included studies suggests that group CBT may be an effective treatment approach to reduce anxiety and symptoms associated with anxiety disorders. No conclusions can be made regarding the effectiveness of group therapy on hospitalization and quality of life given that no evidence was reported in the identified literature.
The majority of the studies included a sample population that had a mix of patients with anxiety disorders. This limits the conclusions that can be made regarding specific anxiety disorders. Several of the studies recommended that further research be conducted to confirm findings.

The choice of setting, the method of assessment, the approach to deal with compliance, the availability of trained practitioners to deliver group therapy, and the specific details of the treatment (length of time, assessment tools, or group therapy intervention) may wish to be considered when deciding whether to use group therapy for the treatment of patients with anxiety disorders.

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