

Combined cognitive modification and cognitive behaviour therapy on social anxiety

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ABSTRACT

The goal of this study is to see if combining Cognitive Bias Modification for Interpretative Biases (CBM-I) with Computerised Cognitive Behaviour Therapy (C-CBT) can improve interpretation biases and reduce social anxiety. Forty students with social anxiety were randomly allocated to one of two groups: intervention (positive CBM-I + C-CBT) or active control (neutral CBM-I + C-CBT). Pre-test assessments of social anxiety, interpretive bias, cognitive distortions, and social and job adjustment were completed by participants. They were given six 30-minute web-based therapies, one each day, including three sessions of either positive or neutral CBM-I and three sessions of C-CBT. Participants completed the

baseline measurements at the post-test and two-week follow-up. A positive CBM-I + C-CBT combination elicited fewer negative interpretations of ambiguous situations than a neutral CBM-I + C-CBT combination. Both positive CBM-I + C-CBT and neutral CBM-I + C-CBT reduced social anxiety and cognitive distortions, as well as enhancing work and social adjustment, according to the findings. The positive CBM-I + C-CBT condition, on the other hand, had larger effect sizes than the control. When compared to the neutral CBM-I + C-CBT condition, adding positive CBM-I to C-CBT improved the training effects on social anxiety, cognitive distortions, and social and job adjustment.

Key word: *Social anxiety; Cognitive bias modification; Computerised cognitive behaviour therapy*

OPINION

The inability to meet cognitive, emotional or motor Social Anxiety Disorder (SAD) (Kessler, Berglund, Demler, Jin, & Merikangas, 2005) is one of the most frequent anxiety disorders, and it is linked to bad outcomes in social functioning, family life, interpersonal relationships, occupational, and educational domains. Cognitive models of social anxiety emphasise the premise that specific types of negative thought content, frequently including the perception of social dangers, originate and perpetuate dysfunctional social anxiety. As a result, the intervention technique known as cognitive behaviour therapy has grown in popularity (CBT) [1]. Individuals must examine their thought content, recognise detrimental negative thinking patterns, and use rational appraisal and behavioural "experimentation" to test the truth of their negative thoughts in order to benefit from CBT. In terms of therapeutic improvement, CBT therapies have been reported to have small to substantial effect sizes. Despite its proven effectiveness, it is estimated that only around 25% of persons with SAD receive treatment because they are unable to cope with face-to-face encounters with doctors [2]. Some attempts

have been made to design computer-administered therapies that can be utilised without or with minimal therapist interaction in order to overcome this hurdle [3].

One of the first advancements centred on Computerised Cognitive Behaviour Therapy (C-CBT) as a more accessible alternative to face-to-face CBT. C-CBT appears to be useful in lowering social anxiety, according to research.

According to a large body of research, socially anxious people interpret ambiguous social information in a negative or less positive way. One of the clinical consequences of these research findings is to see if any of these negative cognitive biases may be altered [4].

CBM-I is a text-based computerised programme in which people are frequently exposed to ambiguous social circumstances and are taught to resolve them favourably by filling in a word fragment. CBM-I works by gradually shifting negative interpretation biases towards a more positive orientation through systematic and repetitive computer-based training. CBM-I could be a good treatment option for those with SAD, especially if they don't want to go to face-to-face therapy or don't want to take medicine. As a result, CBM-I may be particularly useful in involving this client group in psychological therapies.

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As a result, CBM-I may be particularly useful in involving this client group in psychological therapies. So far, a few published studies using various methods of CBM-I have shown that these computerised tasks can help people with non-clinical and clinical social anxiety by modifying interpretative biases and reducing anxiety [5].

In contrast to C-CBT, which focuses on changing conscious ideas, CBM-I focuses on the automatic cognitive processes that underpin information processing. In a recent study, found that a single session of CBM-I or C-CBT reduced anxiety symptoms in socially anxious individuals and boosted positive interpretations of ambiguous social events. Participants in the positive CBM-I training group were taught to consistently resolve ambiguous social circumstances in favour of either positive or neutral outcomes by completing word stems over the course of several trials [6]. Amir and Taylor (2012) employed a word-sentence association task in a Randomised Controlled Trial (RCT) in which patients with social anxiety decided whether a word with a threatening or benign connotation was associated to an ambiguous social context. In comparison to the control group, the results showed that this interpretation modification programme dramatically reduced threat interpretations and clinician-rated social anxiety symptoms from pre- to post-assessment. However, there were no effects on self-reported social anxiety symptoms. Salemink and colleagues discovered that anxious patients who received eight online positive CBM-I training sessions generated more positive interpretations of ambiguous events than patients in the control condition in another RCT research. Participants in this study reported feeling less worried in general, but they did not report feeling less apprehensive in specific situations [7].

The authors attributed the lack of a favourable effect on social anxiety to the fact that the patients had various anxiety disorders and the scenarios were not tailored to the specific concerns of each anxiety state.

Although studies have shown that both CBM-I and C-CBT can reduce social anxiety and modify negative interpretive biases, no study has yet looked into the effectiveness of combined CBM-I and C-CBT for social anxiety. As a result, the goal of this study is to see if combining CBM-I with C-CBT leads to improved positive treatment effects on interpretive biases and social anxiety symptoms. The study also looked into the effects of combining C-CBT and CBM-I on cognitive distortions as well as social and job adjustment.

As part of their online training, participants in both conditions underwent three sessions of C-CBT. Mobini et al. used an online enhanced version of C-CBT in this programme. It was based on self-help CBT guidebooks for social anxiety at first. The C-CBT for social anxiety consisted of three parts: (1) psychoeducation about CBT and SAD; (2) socialisation of participants to the CBT model of social anxiety and the role of anxiety provoking thoughts, assumptions, and core beliefs in causing and maintaining social anxiety; and (3) overcoming social anxiety using behavioural and cognitive strategies [8].

They were given imagery instructions to help them connect their thoughts, emotions, and actions. Participants were asked to identify their own thinking errors after reading a list of cognitive distortions with examples. Additionally, some cognitive restructuring tools were presented to assist in the modification of these thoughts. The maintenance cycle was explained to them, as well as how avoidant behaviours might exacerbate social anxiety. Following that, there were

conversations concerning some behavioural methods as well as picture exposure in social contexts. Participants in the final session practised certain behavioural methods (in vivo exposure) as well as cognitive restructuring strategies (e.g. evidence for and against, cost-benefit analysis, alternative explanations).

Participants were encouraged to personalise the materials and do CBT-based homework throughout the sessions, similar to face-to-face CBT for social anxiety. (e.g. thought diary, anxiety-provoking hierarchy). Each section concluded with a quiz that asked participants to answer seven pertinent questions. The purpose of these quizzes was to encourage participants to focus on the training materials and consolidate their learning; they were told that they were not taking an exam when they answered them. It takes about 30-40 minutes to finish each training session.

The Human Research Ethics Committee of the University of Newcastle, Australia, accepted the study procedure. Posters and the University's research participation database were used to seek potential volunteers. Out of 59 volunteer students, we were able to acquire 40 participation. Because the study was publicised for students with social anxiety, a large number of students with social anxiety volunteered to participate. Following the initial e-mail contact, they were requested to read the information sheet and consent form, and then complete the SPIN online if they agreed with the material. They also revealed their age and race, as well as whether or not they were receiving treatment for mental problems.

Participants who met the criteria were then invited to the psychology lab to perform a computerised task (interpretation bias assessment) as well as self-report surveys (CDS and WSAS). Participants were randomly assigned to one of two conditions: intervention (positive CBM-I + C-CBT) or active control (neutral CBM-I and C-CBT) using a computer-generated randomization process.

Participants in both groups were given an instruction sheet at the end of the first laboratory session, instructing them to complete six 30-minute online intervention sessions over the course of six days (one per day) in alternating order between CBM-I and C-CBT sessions. For each intervention session, the instruction sheets included links to the host websites as well as recommended dates for online completion.

Participants returned to the laboratory after completing all training sessions to perform post-training measurements, which included repeating the baseline scales. At a two-week follow-up session in the laboratory, these measurements were repeated. Participants were asked to evaluate the intervention programmes at the follow-up meeting, after which they were debriefed on the study's purpose.

CONCLUSION

Finally, the findings show that a combined positive CBM-I + C-CBT programme reduced negative interpretations of ambiguous circumstances more effectively than a neutral CBM-I + C-CBT condition. Furthermore, when comparing the neutral CBM-I + C-CBT condition to the positive CBM-I + C-CBT condition, it appears that adding positive CBM-I to C-CBT produced larger effect sizes, indicating stronger positive effects on social anxiety, cognitive distortions, and social and work adjustment. However, to determine the therapeutic effectiveness of a combined positive CBM-I + C-CBT programme as a treatment for social anxiety, a longer-term RCT is required.

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