

Assessing the Effectiveness of Cognitive Behavioural Therapy among Patients with Severe Anxiety Disorder

Nusrath M

Abstract: *Anxiety symptoms can cause distress and interfere with social, occupational, and everyday functioning. Cognitive behavioural therapy (CBT) is a structured psychological intervention widely used in the treatment of anxiety disorders. This manuscript is based on the dissertation titled "A Study to Assess the Effectiveness of Cognitive Behavioural Therapy Among Patients with Severe Anxiety Disorder." The dissertation reports Beck Anxiety Inventory (BAI) results for 20 participants: 12 (60%) were in the minimal or "not at all" category, five (25%) in the mild category, two (10%) in the moderate category, and one (5%) in the severe category. These findings describe the anxiety-severity profile of the sample. The available results do not include verified pre-treatment and post-treatment scores, a comparison-group analysis, or inferential statistics sufficient to establish CBT effectiveness. The reported data therefore cannot demonstrate that CBT reduced anxiety in this sample. Findings should be interpreted cautiously because of the small sample and limited information about recruitment, participant characteristics, and intervention delivery.*

Keywords: cognitive behavioural therapy; anxiety symptoms; Beck Anxiety Inventory; clinical psychology; psychological intervention

1. Introduction

Anxiety is a common emotional response to perceived threat, uncertainty, or anticipated difficulty. In moderate amounts, anxiety can help people prepare for challenges and respond to potentially dangerous situations. However, when it becomes excessive, persistent, or difficult to manage, it may interfere with daily activities, relationships, academic or occupational performance, and general well-being. Anxiety disorders include different clinical presentations, such as generalized anxiety disorder, panic disorder, and social anxiety disorder. Although these conditions differ in their specific features, they may involve heightened threat expectations, distressing physical sensations, worry, and avoidance of feared situations.

Assessment of anxiety symptoms is important for understanding the level of distress experienced by an individual and informing further evaluation. Standardized measures can provide a structured indication of symptom severity, but scores must be interpreted in context and are not a substitute for clinical assessment. Researchers must distinguish between a questionnaire score and a confirmed clinical diagnosis.

Cognitive behavioural therapy (CBT) is a structured, goal-oriented form of psychotherapy based on the relationship between thoughts, emotions, physical responses, and behaviour. It aims to help individuals identify patterns that may maintain distress and develop more adaptive responses. CBT may include psychoeducation, cognitive restructuring, behavioural experiments, exposure-based exercises when clinically appropriate, and coping-skills training. Treatment is adapted to the presenting problem and the individual's needs.

In anxiety treatment, CBT may address catastrophic interpretations, persistent worry, fear of bodily sensations, and avoidance. Cognitive techniques encourage individuals to examine whether interpretations are balanced and supported by evidence. Behavioural techniques can provide opportunities to approach feared situations gradually and

learn from experience rather than relying on avoidance. Progress should be monitored through suitable measures and clinical review.

The dissertation underlying this manuscript aims to assess CBT effectiveness among patients described as having severe anxiety disorder. Yet the reported results provide a distribution of BAI categories for 20 participants, with only one participant in the severe category. This paper presents the descriptive findings available in the dissertation and distinguishes them from treatment-effectiveness claims that would require additional outcome data.

2. Aim and Objectives

The stated aim was to assess the effectiveness of CBT in reducing anxiety symptoms among patients with severe anxiety disorder.

- To describe the distribution of anxiety-severity categories reported among the 20 participants using the BAI.
- To examine change in anxiety symptoms following CBT, if verified pre-treatment and post-treatment data are available.
- To compare outcomes between a CBT group and a comparison condition, if such groups were actually recruited and assessed.

Only the descriptive distribution can be summarized from the results provided. The remaining objectives cannot be answered unless intervention and repeated-measure data are available and verified.

3. Review of Relevant Literature

CBT is based on the understanding that interpretations and behavioural responses can contribute to emotional distress. Cognitive strategies may help individuals identify unhelpful predictions, examine evidence, and develop more balanced interpretations. Behavioural strategies can reduce avoidance and provide opportunities to learn that feared situations or sensations may be more manageable than expected.

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Hofmann and Smits (2008) reviewed randomized placebo-controlled trials of CBT for adult anxiety disorders and reported evidence supporting its efficacy. Hofmann et al. (2012) reviewed meta-analyses across psychological disorders and described a substantial evidence base for CBT. These reviews provide a rationale for investigating CBT in clinical populations. However, general evidence from earlier research cannot establish the treatment outcome of the current sample; the study's own intervention and outcome data are required.

The Beck Anxiety Inventory (BAI) was developed as a self-report measure of anxiety symptoms (Beck et al., 1988). A single administration provides a snapshot of symptoms at one point in time. Treatment-effectiveness research requires documentation of the intervention and comparison of outcomes collected at relevant time points. A suitable comparison group, clear eligibility criteria, and reporting of effect sizes can further strengthen a study.

A sound treatment study should define its target population, specify inclusion and exclusion criteria, describe recruitment, and explain how the diagnosis or clinical status of participants was established. It should report who delivered the intervention, its duration and frequency, and whether participants completed the planned sessions. If a comparison group is included, the paper should describe the condition received by that group and how group allocation occurred.

Outcome reporting should match the research design. A pre-post design can examine within-participant change, while a controlled design can compare changes between groups. Effect sizes and confidence intervals help readers understand the magnitude and precision of observed differences. Statistical significance alone does not establish clinical importance, and no treatment effect should be reported without supporting data.

4. Methodology

4.1 Research design

The dissertation describes a proposed randomized controlled framework involving a CBT group and a comparison group, with assessments before and after intervention and at follow-up. However, the results available report a single distribution of BAI categories for 20 participants. They do not confirm that random allocation, a comparison group, or repeated assessments were completed. The actual design must be verified against the original records before submission. This manuscript therefore avoids presenting the study as a completed randomized controlled trial unless the author confirms those procedures were implemented.

4.2 Participants and sample

The reported sample comprised 20 participants. The results reviewed do not provide sufficient detail about participant age, gender, recruitment setting, diagnostic confirmation, or the number of participants who received CBT. These characteristics should be added only after verification from the original records. The paper should identify the recruitment method and the criteria used to determine eligibility. If the

intended population was patients with severe anxiety disorder, the author should clarify whether severity was established through clinical diagnosis, a BAI threshold, or another procedure.

4.3 Assessment measure

The dissertation identifies the BAI as the assessment measure and describes it as a 21-item self-report inventory, with each item scored from 0 to 3 and a total score ranging from 0 to 63. The categories reported in the dissertation are 0–7 (minimal or “not at all”), 8–15 (mild), 16–25 (moderate), and 26–63 (severe). The exact version, language, administration instructions, and scoring procedure should be confirmed against the original materials. Questionnaire severity categories should not be treated as equivalent to a formal clinical diagnosis.

4.4 Intervention and procedure

The dissertation proposes approximately 10–12 weekly CBT sessions. Suggested components include psychoeducation, cognitive restructuring, exposure or behavioural experiments, relaxation, and coping-skills training. The annexure does not fully document the actual duration and frequency delivered. Consequently, this manuscript cannot claim that the proposed programme was completed. Before publication, verify the number of sessions delivered and attended, therapist qualifications, adherence, concurrent medication or therapy, and any adverse events. The paper should distinguish clearly between an intervention planned in a proposal and one actually administered.

4.5 Data analysis

The available results support descriptive frequencies and percentages. They do not provide participant-level pre- and post-treatment scores or a verified comparison-group dataset. Change scores, confidence intervals, effect sizes, and inferential tests of treatment effectiveness cannot be calculated from the reported table alone. If repeated measurements exist, statistical procedures should be selected to match the actual design and data distribution. The final report should include sample sizes at each time point, missing data, estimated changes, effect sizes, confidence intervals, and exact p-values where appropriate.

4.6 Ethical considerations

The dissertation includes a consent form and states that participation is voluntary and confidentiality will be maintained. The material reviewed does not establish an ethics approval number or confirm the approval status of the completed study. The author should verify applicable ethics approval, consent procedures, confidentiality safeguards, and the university's written permission requirements for publication. Ethics approval must not be claimed unless it was actually granted. Publication permission from the guide or institution should also be confirmed where required.

5. Results

The dissertation reports BAI anxiety-category results for 20 participants. The distribution is presented in Table 1.

Table 1: Reported distribution of BAI anxiety categories (N = 20)

Anxiety category	Frequency (n)	Percentage (%)
Minimal / "Not at all"	12	60
Mild anxiety	5	25
Moderate anxiety	2	10
Severe anxiety	1	5
Total	20	100

Twelve participants (60%) were classified in the minimal or "not at all" category, five participants (25%) in the mild category, two (10%) in the moderate category, and one (5%) in the severe category. Thus, seven participants (35%) fell within the mild-to-moderate categories combined, while one participant (5%) was in the severe category.

These figures summarize the distribution reported in the dissertation. They do not indicate whether anxiety scores changed after treatment, because no pre-treatment and post-treatment comparison is provided in the reported results. The table also does not show whether participants received CBT or whether outcomes differed from a comparison group. No conclusion about CBT effectiveness can be drawn from this table alone.

6. Discussion

The reported distribution indicates that most participants were classified in the minimal-anxiety category, while 25% were in the mild category, 10% in the moderate category, and 5% in the severe category. This describes symptoms reported by the sample at the assessment point. Given the small sample, the distribution should not be generalized to a wider clinical population without additional evidence. The percentages are descriptive and should be interpreted as a summary of these participants rather than as population estimates.

An important issue is the alignment between the research title and the reported distribution. The title refers to patients with severe anxiety disorder, but only one participant was classified in the severe BAI category. This does not prove that other participants lacked a clinical diagnosis, because BAI severity categories and clinical diagnoses are not interchangeable. Nevertheless, the inclusion criteria, diagnostic procedure, and recruitment records should be reviewed so that the paper accurately describes the population studied.

Earlier research supports CBT as a treatment for anxiety disorders (Hofmann & Smits, 2008; Hofmann et al., 2012), but the current descriptive results do not test treatment effects. A conclusion that CBT was effective would require documented treatment delivery and suitable outcome data, ideally pre- and post-treatment assessments and an appropriate comparison group. If these data were not collected, the title and research question should be revised to reflect the descriptive study that was actually conducted.

The results also highlight the importance of matching the research question to the data collected. A study designed to assess treatment effectiveness needs to measure outcomes before and after intervention and document the treatment received. If the available dataset contains only one assessment of anxiety, it can describe symptom categories but cannot show improvement or deterioration. If pre- and post-treatment scores exist in another record, those data should be checked and analyzed before the manuscript is finalized.

The sample size is another consideration. With 20 participants, each individual represents five percentage points in the sample distribution. Percentages can therefore change substantially when one or two participants are classified differently. Larger samples and clear recruitment procedures would improve precision and support stronger conclusions.

7. Limitations

- The sample was small (N = 20), limiting precision and generalizability.
- The reported findings are descriptive and rely on a self-report assessment.
- Participant demographics, recruitment details, diagnostic confirmation, and clinical characteristics are not sufficiently reported in the available results.
- Pre- and post-treatment scores, comparison-group outcomes, and follow-up results are not presented; CBT effectiveness therefore cannot be established.
- Actual intervention details, including duration, frequency, attendance, and adherence, require verification.
- The stated target population does not clearly align with the reported BAI distribution, in which one participant was in the severe category.
- Ethics approval status and publication permissions must be confirmed from institutional records.

8. Implications and Recommendations

The results show that anxiety symptom categories varied across the sample. In clinical practice, screening results should be interpreted alongside clinical assessment and contextual information rather than used alone to assign a diagnosis or select treatment. Participants reporting substantial distress should receive appropriate clinical evaluation according to professional practice and service procedures.

Future research should recruit participants who meet clearly defined eligibility criteria and document how anxiety severity or diagnosis was established. The CBT protocol should specify session number, duration, content, therapist training, and adherence monitoring. Validated outcome measures should be administered before and after treatment, and follow-up assessment can help determine whether improvements persist. Where ethically and practically appropriate, a suitable comparison group would strengthen conclusions about treatment effects.

A future analysis should begin with data-quality checks, confirmation of scoring, and documentation of missing data. The statistical approach should be selected only after the

actual design and available measurements are established. The report should present descriptive statistics for each assessment point, estimated changes, effect sizes, confidence intervals, and exact p-values where relevant. Clinical interpretation should consider the magnitude and practical significance of change, not only statistical significance.

Researchers should describe participant flow, including the number screened, eligible, enrolled, completing treatment, and included in each analysis. If participants did not complete sessions or assessments, the reasons and handling of missing data should be reported. Transparent reporting allows readers to judge the quality and relevance of findings.

9. Conclusion

Among the 20 participants reported in the dissertation, 60% were classified in the minimal-anxiety category, 25% in the mild category, 10% in the moderate category, and 5% in the severe category on the BAI. These results describe anxiety symptom categories but do not demonstrate the effectiveness of CBT. The conclusion supported by the available data is descriptive. A defensible conclusion about treatment effectiveness requires verified intervention details and pre- and post-treatment outcomes, preferably with a suitable comparison group.

Declarations

Ethics approval and consent: Verify institutional approval status and consent procedures from original records before submission.

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Data availability: To be completed in accordance with participant consent and institutional policy.

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