

# Preliminary Efficacy of a Family CBT in Children Aged 4-7 Years with Comorbid Anxiety Disorder and ADHD

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## Introduction

Up to 28% of preschoolers with an anxiety disorder (AD) also present an attention-deficit/hyperactivity disorder (ADHD). This comorbidity is associated with increased severity of consequences (e.g., difficulties in school and in social relationships, family problems).

Cognitive behavioral therapy (CBT) is the recommended treatment for AD in children. The literature also supports the use of a family-oriented CBT for the treatment of AD in younger children, such as preschoolers. Adaptations of this intervention are likely essential to meet the clinical challenges that arise from the comorbidity between AD and ADHD.

To our knowledge, despite the high prevalence of this comorbidity and its associated consequences, no study has evaluated the efficacy of a family-oriented psychological treatment for children with comorbid AD and ADHD.

## Objectives

The purpose of this study is to evaluate the preliminary effectiveness of a family-based CBT for AD in children aged 4 to 7 years with ADHD on: 1) the remission of AD and the severity of anxiety symptoms, 2) ADHD-associated behaviors (e.g., inattention, hyperactivity, and impulsivity), and 3) parental stress in the parent-child relationship.

## Methods

An A-B case series replication model with multiple, non-concurrent bases is used in the present study, as it is supported by the practice of evidence-based psychology.

Five children aged 4 to 7 with comorbid AD+ADHD were recruited with their parents via the Laval University (Quebec, Canada) mailing list. Interested families were contacted by telephone and invited to an initial appointment (consent form, semi-structured interviews, questionnaires).

Eligible families were then randomly assigned to a waiting period of 2, 3 or 4 weeks. Parents completed a daily observation diary of anxiety and ADHD symptoms of their child during the waiting phase and the intervention phase. Interview and questionnaires were administered before the waiting phase, after the intervention as well as 3 months later.

## Measures

- Schedule for Affective Disorders and Schizophrenia (KSADS-PL): AD and ADHD symptoms.
- Preschool Anxiety Scale (PAS-R) : severity of anxiety symptoms.
- Child Behavior Checklist (CBCL) severity of internalized (e.g., mood, anxiety) and externalized symptoms (e.g., ADHD-related difficulties).
- Parenting Stress Index (PSI) : intensity of parental stress in the parent-child relationship; the subscales of competence in the parental role and social isolation are reported in the study.
- Daily Diary Report of anxiety and ADHD symptoms: intensity of anxiety and ADHD-related symptoms on a daily basis (parent report).

## Intervention

The treatment is family-based CBT for AD adapted to young children with comorbid ADHD (Denis & Hébert, 2018). It consists of five 60-minute weekly sessions (4 sessions offered to the parent only and one session with a parent and his child). The sessions include a review of the week's activities, a presentation of the session's objectives and CBT strategies for dealing with anxiety, practical exercises and a discussion of the therapeutic exercises to be carried out at home. The main CBT strategies used are: education on anxiety and its components, diaphragmatic breathing and muscle relaxation, cognitive restructuring and in vivo exposure. The management of ADHD-related behaviors, such as motor agitation and difficulty maintaining attention on tasks, as well as the reinforcement of the child's self-esteem, are addressed. During the parent-child session, the CBT strategies previously learned with the parent are rehearsed.

## Results

**Table 1.** Participants' characteristics and anxiety disorders in children (pre-treatment)

Variables	Values
Girls, n (%)	3 (60%)
Mean age, years	5.8
Type of AD	
Separation anxiety	4 (80%)
Social anxiety	1 (20%)
Specific phobia	3 (60%)
Generalized anxiety	1 (20%)
Two or more AD	3 (60%)

**Remission of all AD in 90% of participants** at post-treatment assessment, and maintenance of these gains at the 3-month follow-up.

**Significant reduction in anxiety symptoms** at post-treatment in at least 50% of participants, and 40% maintained the gains at the 3-month follow-up.

**Improvement in ADHD-related behaviors is observed in at least 40% of participants** at the post-treatment assessment. At the 3-month follow-up, gains are maintained in 20% of participants.

**Parents reported feeling less socially isolated and more competent** in their parenting role after the intervention.

## Discussion

The results of the present study are encouraging, as they support the efficacy of this new family treatment for AD in children aged 4 to 7 years who also have ADHD. Indeed, an elevated remission rate of anxiety disorders was observed, as well as a significant decrease in anxiety symptoms and behaviors associated with ADHD. In addition, the parents reported feeling less socially isolated and more competent in their parental role after the intervention. It is possible that the parents' feeling of social isolation was dependent on the severity of their child's anxiety symptoms. The limited maintenance of gains regarding ADHD-related behaviors could be explained by the fact that these behaviors were not the main target of the intervention.

This study also highlights the importance of including parents in the treatment of preschool children in order to promote the generalization and maintenance of gains on a daily basis and in the longer term. Parental involvement is even more important in this age group, as these children have a greater need for support, guidance and reinforcement in the application of cognitive and behavioral strategies. Future research should incorporate more treatment components targeting ADHD behaviors in family-oriented CBT for comorbid AD and assess maintenance of gains on longer periods.

### Study Limitations:

- Sample size (n=5) and high homogeneity of the participants' characteristics
- One-week interval between the sessions, possibly limiting the consolidation of the strategies learned
- Only one session with the child; more sessions could have improved the intervention's efficacy



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