



CHILD ANXIETY

Why this is a problem and what can we do about it?

Dr. Yaara Shimshoni

March 2024

Policy Brief



About The Author

Dr. Yaara Shimshoni is a Senior Research Fellow at the Community Impact Policy Institute as well as a clinical psychologist and a Community Faculty member, Clinical Assistant Professor, at the Yale School of Medicine.

Child anxiety is on the rise...

Anxiety disorders rank as the most prevalent category of mental health issues in children and adolescents (i.e., children). It is estimated that up to one in every three children will experience an anxiety disorder during their childhood (1, 2) with many children having multiple anxiety disorders or co-occurring mental health conditions like depression, attention deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD) and eating disorders(3). The recent COVID-19 pandemic has further exacerbated the prevalence of anxiety among children, with some estimates indicating a doubling of anxiety rates(1,4,5). Even prior to the pandemic, research consistently indicated an upward trend in anxiety prevalence among children. For example, Bitsko and colleagues(6) analyzed National Survey of Children's Health data and found anxiety and depression to increase from 4.7% in 2007 to 5.3% in 2011-2012 and Lebrun-Harris and colleagues(7) documented yet another increase, from 7.1% in 2016 to 9.2% in 2020.

Anxiety disorders in children lead to substantial impairment across critical areas of functioning, such as school attendance and academic performance, social functioning, family conflict, mood sleep and appetite(8). The ripple effects of a child with debilitating anxiety extend far beyond the individual child, reaching multiple spheres of influence. Consider for example a 9-year-old child with separation anxiety disorder. This child experiences persistent fear that something bad will happen to them or to their parents if they are not together. When parents try to part from the child, when they are leaving for work and at bedtime, the child's anxiety intensifies. They may experience physical symptoms such as rapid heartbeat, shortness of breath, stomachaches, and crying. Additionally, they are overwhelmed by frightening thoughts, leading them to refuse to separate from their parents.

”

It is estimated that up to one in every three children will experience an anxiety disorder during their childhood...

Why this matters



”

Anxiety disorders in children lead to substantial impairment across critical areas of functioning, such as school attendance and academic performance, social functioning, family conflict, mood sleep and appetite.



Anxiety disorders rank as the most prevalent category of mental health in the family system, the impact of the child's anxiety extends beyond the child alone. Parents often experience distress and concern for their child's mental health, leading them to also fear separation and anticipate the resulting reactions. In attempts to alleviate their child's anxiety, parents may reassure them that there is nothing to worry about and avoid separation whenever possible. This may involve allowing the child to sleep in their bed at night, which can affect their marriage, or adjusting work schedules, such as reducing work hours or working from home to be more available in case the child refuses to go to school, ultimately affecting work productivity. Consequently, parents find themselves spending a significant amount of time and energy managing their child's anxiety. Furthermore, if there are siblings in the family, parents may have fewer resources to dedicate to their well-being, and the overall family system may be negatively impacted. Overall, when parents provide care, assistance, and support to children with anxiety this can lead to physical, emotional, financial, and social strain.

Aside from the impairment and suffering experienced by individual children and their families, anxiety disorders pose a significant societal burden, with economic and social impact. Child anxiety increases health care costs and reduces productivity. Anxiety also limits individuals' opportunities for social inclusion, community participation, education, employment, and overall engagement in society, thereby reducing quality of life, and increasing dependence on social support systems.

According to The Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) from 2019(9), mental disorders were among the top ten leading causes of burden worldwide, with no evidence of global reduction in their prevalence or burden since 1990. Among mental health disorders, the two most disabling disorders were anxiety and depression, both ranked among the top 25 leading causes of burden worldwide. This burden was high across the entire lifespan, for both sexes, and across many locations.

When left untreated, child anxiety often persists well into adolescence or adulthood and predicts a cascade of negative outcomes such as poor overall adjustment, relationship quality, educational achievement, career satisfaction, and adult psychopathology (e.g., depression, substance use disorders)(10,11). For example, in a longitudinal cohort study ($N = 1,265$), 33.5% of adolescents meeting diagnostic criteria for anxiety disorders reported suicidal ideation compared with 10.9% of adolescents without anxiety disorders; and 25.4% compared with 4.7% reported attempting suicide (12).

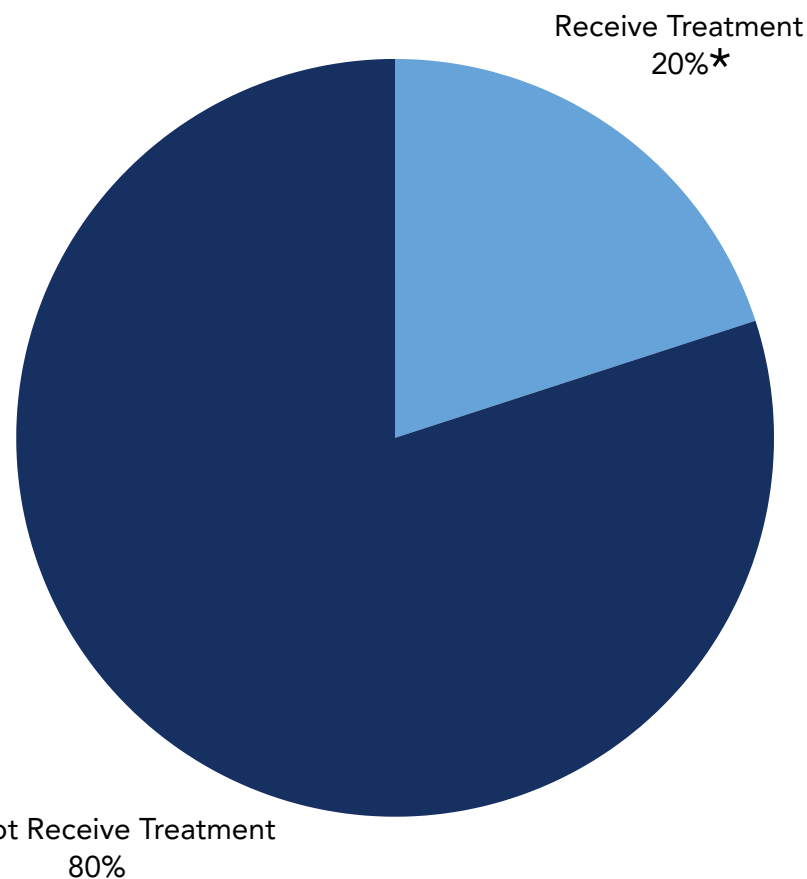
”

When left untreated, child anxiety often persists well into adolescence or adulthood and predicts a cascade of negative outcomes such as poor overall adjustment, relationship quality, educational achievement, career satisfaction, and adult psychopathology.



The prevalence and the short-term and long-term impact of child anxiety are alarming, particularly considering that currently less than 20% of children with anxiety disorders receive any form of treatment, and even fewer receive specialized anxiety-focused treatment. In a recent study, only 2% of children with anxiety disorders identified in the community in England had received anxiety-focused treatment (13). The ongoing rise in child anxiety rates is striking given the robust evidence supporting the efficacy of specialized treatments for anxiety in children (13,14). Accessibility and dissemination of these interventions to a broader population in need remain significant challenges contributing to this treatment gap.

Percentage of Children with Anxiety Disorders Receiving Treatment



*A little less than 20%

What Solutions do we Have for Child Anxiety?

The primary types of effective treatments for child anxiety include psychological interventions and medication. These interventions have been extensively studied in rigorous randomized controlled trials and have demonstrated efficacy.

1 Child-Focused Psychological Interventions

Child-focused cognitive behavioral therapy (CBT) currently stands as the most robustly researched treatment for anxiety disorders, with over 100 clinical trials demonstrating its efficacy, and with recovery rates ranging from 46% to 79% among participating children (15,16). CBT is a short-term intervention (approximately 12 sessions), in which the clinician works directly with the child on goals that relate to areas of functioning that are impacted by the anxiety. CBT emphasizes the underlying connections between thoughts, feelings, and behavior. The child's anxiety is understood as an intrapersonal phenomenon (i.e., occurring within the individual), characterized by exaggerated maladaptive physiological responses (e.g., increased heart rate), automatic negative thought patterns (e.g., worried thoughts), and behavioral reactions (e.g., avoidance of anxiety provoking stimuli). A course of CBT usually includes teaching the child about anxiety, identifying and challenging automatic negative thought patterns, practicing gradual exposures to the anxiety provoking stimuli or situations and teaching relaxation skills such as deep breathing and muscle relaxation.

Despite the strong support for CBT in anxious children, this approach is not without limitations. CBT is time and resource intensive and rising demand contributes to long wait lists. Another profound limitation is that the treatment itself requires insight and motivation on the part of the child. It is common for children with anxiety to show little interest in treatment and when motivation is lacking, active participation and success of the treatment process are significantly compromised (17). Relapse following even successful treatment is also a prevalent concern (14,18). These limitations underscore the need for ongoing development and empirical examination of additional treatment options and approaches for child anxiety.

2 Parent-Led Psychological Interventions

In an effort to improve outcomes for child anxiety treatment, clinicians and researchers began focusing on parents as active participants in treatment and found parent-only treatments to be effective in reducing child anxiety symptoms (19). The rationale for involving parents in treatment stems from consistently reported associations between child anxiety and various parent factors, suggesting that these factors could be contributing to the maintenance of the symptom and that addressing them could enhance treatment gains (20,21). For example, it is common for anxious children to have anxious parents and likewise, for anxious parents to have anxious children (22). Anxiety in children is also associated with parenting practices such as exhibiting critical, controlling, or overprotective behavior (23), and anxious parents may model avoidant behavior, thereby increasing children's anxious tendencies (24).

Working with the parents to improve child anxiety outcomes has profound potential benefits. Considering treatment accessibility, parent-only interventions are generally shorter in duration compared with interventions focused on the child. Moreover, they are conducive to group or telehealth delivery formats, which aligns with resource conservation and improved access to care (19). Delivering parent-only interventions also enables clinicians to help anxious children who are unable or unmotivated to participate in therapy themselves, consequently increasing the number of children who can benefit from specialized anxiety treatment. In addition to enhancing access to treatment, working with parents allows treatment to target parent-related anxiety maintaining mechanisms, such as controlling and overprotective parenting or family accommodation (i.e., changes that parents make in their own behavior to help the child avoid coping with their anxiety), thereby generating systemic changes that may have long term benefits for the anxious child and the family system as a whole (19).

An example of an effective parent-led treatment is Supportive Parenting for Anxious Childhood Emotions (SPACE)(25). SPACE is a short-term, manualized, evidence-based, parent-only intervention designed for children with anxiety and obsessive-compulsive disorder (OCD). Unlike CBT, SPACE places emphasis on interpersonal and systemic aspects of child anxiety, as well as on the unique role of parents in addressing this issue. Treatment is therefore conducted with the parents and focuses on how their behavior might impact the maintenance of their child's anxiety. In a large randomized non-inferiority trial involving parents of 124 children aged 7 to 14 years with primary anxiety disorders, SPACE was compared to CBT. The study found that SPACE was as effective as CBT in reducing anxiety symptom severity (26). Another recently published clinical trial found that a low-dose format of SPACE was as effective as a full 12-session course of SPACE conducted with a therapist in reducing child anxiety and OCD symptoms. In the low-dose format, parents met with a clinician only four times and worked independently using a book written for parents (Breaking Free of Child Anxiety and OCD[27]). This demonstrates the potential for a more resource-efficient delivery format that could increase reach and scalability (28).



3 Medication

Pharmacological treatment for child anxiety has been shown to be as effective as psychological treatments, at least in the short term, with approximately 58% of anxious children responding to antidepressant medication (particularly selective serotonin reuptake inhibitors (SSRIs), such as Prozac) compared with placebo medication (29). The combination of psychotherapy and medication has also been evaluated, with findings pointing to the potential benefit of combining CBT with SSRIs over each of these therapies alone (30). This benefit remained in 24–36-week follow-ups, but in 4–12-year follow-ups, all three conditions fared similarly (31). Despite positive outcomes, pharmacological treatments are not usually recommended as a first line treatment due to insufficient understanding of the long-term effects of medication on the anxiety symptoms and on the developing brain, high rates of attrition, potential side effects and low acceptability (32).

Future Directions and Recommendations

Improving Access to Treatment

The disparity between our current understanding of child anxiety and effective treatments, and the low rate of anxious children accessing these treatments, highlights the urgent need to enhance access to effective clinical care. Commonly reported barriers to accessing specialized help include challenges for parents in recognizing signs of anxiety in their child that exceed typical developmental norms, limited knowledge on how to seek professional assistance, concerns about potential negative consequences associated with seeking help (such as mental health stigma), and the restricted availability of treatment options (13).

Applying a stepped care model is one potential way to increase access to evidence-based interventions. In a stepped care approach, the initial delivery of the least costly intervention precedes the utilization of more intensive (and costly) interventions, which are reserved for individuals who either do not benefit from the initial intervention or are predicted not to benefit from it. An example for a stepped care model might be:

- **Screening and prevention.** Widespread screening, perhaps within the school setting, could enable early identification of children with, or at risk of developing, an anxiety problem. Early intervention, before the anxiety becomes ingrained and more challenging to treat has obvious advantages in reducing both the child's distress and suffering and the burden and cost associated with child anxiety disorders.
- **Brief on-line interventions.** Those identified at risk of developing anxiety disorders or already showing anxiety symptoms might sufficiently benefit from brief on-line interventions that could be administered on a large-scale. Teaching parents about child anxiety and offering simple tools for communicating and responding when the child is anxious has the potential of minimizing further the impairment and need for future, more intensive treatment.
- **Individually tailored interventions.** When anxiety persists or is identified as highly impairing, individually tailored evidence-based interventions, such as CBT or SPACE, should be administered, despite their higher cost.

Although there is initial support for the stepped care model, additional research is needed to refine our understanding of the optimal components of each step, so that integrity of the interventions and cost-effectiveness of the approach can be ensured.

Moderator Research

The effectiveness of the stepped care approach is likely to improve as additional research on child anxiety is carried out. While evidence supports the efficacy of psychological interventions for child anxiety, understanding who would respond better to which intervention, could significantly optimize treatment selection and improve treatment outcomes. For instance, studies indicate that children with social anxiety disorder may benefit less from CBT compared to those with other anxiety disorders, such as separation anxiety (18). Additionally, research suggests that demographic factors such as child age, sex, or family income may predict treatment response (33). In one study examining moderators of treatment response for CBT and SPACE, higher parental negativity, along with elevated child oxytocin levels, predicted greater improvement in SPACE, whereas low negativity predicted better response to CBT (34).

It is worth noting that much of the child anxiety research conducted thus far has predominantly focused on Caucasian, relatively affluent populations in Western countries. Therefore, there is a pressing need to expand research efforts to include more diverse populations, such as Hispanic/Latino children in the USA. This will enable the adaptation of treatment components to better address specific cultural considerations.

References

1. Collaborators GBDMD. Global, regional, and national burden of 12 mental disorders in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet Psychiatry*. 2022;9(2):137-150.
2. Essau CA, Lewinsohn PM, Lim JX, Ho MR, Rohde P. Incidence, recurrence and comorbidity of anxiety disorders in four major developmental stages. *J Affect Disord*. 2018;228:248-253.
3. Rapee RM, Schniering CA, Hudson JL. Anxiety disorders during childhood and adolescence: origins and treatment. *Annu Rev Clin Psychol*. 2009;5:311-341.
4. Liyanage S, Saqib K, Khan AF, et al. Prevalence of Anxiety in University Students during the COVID-19 Pandemic: A Systematic Review. *Int J Environ Res Public Health*. 2021;19(1).
5. Racine N, McArthur BA, Cooke JE, Eirich R, Zhu J, Madigan S. Global Prevalence of Depressive and Anxiety Symptoms in Children and Adolescents During COVID-19: A Meta-analysis. *JAMA Pediatr*. 2021;175(11):1142-1150.
6. Bitsko RH, Holbrook JR, Ghandour RM, et al. Epidemiology and impact of health care provider-diagnosed anxiety and depression among US children. *Journal of Developmental and Behavioral Pediatrics*. 2018;.39(5):pp.
7. Lebrun-Harris LA, Ghandour RM, Kogan MD, Warren MD. Five-Year Trends in US Children's Health and Well-being, 2016-2020. *JAMA Pediatr*. 2022;176(7):e220056.
8. Merikangas KR, He J-p, Burstein M, et al. Lifetime prevalence of mental disorders in US adolescents: results from the National Comorbidity Survey Replication-Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry*. 2010;49(10):980-989.
9. Global Burden of Disease C, Adolescent Health C, Kassebaum N, et al. Child and Adolescent Health From 1990 to 2015: Findings From the Global Burden of Diseases, Injuries, and Risk Factors 2015 Study. *JAMA Pediatr*. 2017;171(6):573-592.
10. Copeland WE, Angold A, Shanahan L, Costello EJ. Longitudinal patterns of anxiety from childhood to adulthood: The Great Smoky Mountains study. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2014;53(1).
11. Zucker NL, LaVia MC, Craske MG, et al. Feeling and body investigators (FBI): ARFID division-An acceptance-based interoceptive exposure treatment for children with ARFID. *Int J Eat Disord*. 2019;52(4):466-472.

References (cont)

12. Boden JM, Fergusson DM, Horwood LJ. Anxiety disorders and suicidal behaviours in adolescence and young adulthood: findings from a longitudinal study. *Psychol Med.* 2007;37(3):431-440.
13. Reardon T, Harvey K, Creswell C. Seeking and accessing professional support for child anxiety in a community sample. *Eur Child Adolesc Psychiatry.* 2020;29(5):649-664.
14. Levy HC, Stevens KT, Tolin DF, Id, Levy HCOhoo. Research Review: A meta-analysis of relapse rates in cognitive behavioral therapy for anxiety and related disorders in youth. *Journal of Child Psychology and Psychiatry.* 2022;.63(3):pp.
15. Silverman WK, Pina AA, Viswesvaran C. Evidence-based psychosocial treatments for phobic and anxiety disorders in children and adolescents. *J Clin Child Adolesc Psychol.* 2008;37(1):105-130.
16. Etkin RG, Lebowitz ER, Silverman W, K. Working with parents in the treatment of child and adolescent anxiety. In: Farrell LJ, Mrrihy RC, Essau CA, eds. *Handbook of Child and Adloescent Psychology Treatment Moduls: Personalized Care in Behavior and Emotion.* Academic Press Inc.; 2023:341-358.
17. Lebowitz ER. Parent-based treatment for childhood and adolescent OCD. *Journal of Obsessive-Compulsive and Related Disorders.* 2013;2(4):425-431.
18. Ginsburg GS, Kendall PC, Sakolsky D, et al. Remission after acute treatment in children and adolescents with anxiety disorders: findings from the CAMS. *J Consult Clin Psychol.* 2011;79(6):806-813.
19. Jewell C, Wittkowski A, Pratt D. The impact of parent-only interventions on child anxiety: A systematic review and meta-analysis. *Journal of Affective Disorders.* 2022;309.
20. Silverman WK, Kurtines WM, Jaccard J, Pina AA. Directionality of change in youth anxiety treatment involving parents: an initial examination. *J Consult Clin Psychol.* 2009;77(3):474-485.
21. Barmish AJ, Kendall PC. Should Parents Be Co-Clients in Cognitive-Behavioral Therapy for Anxious Youth? *Journal of Clinical Child and Adolescent Psychology.* 2005;34(3).
22. Lawrence PJ, Murayama K, Creswell C. Systematic review and meta-analysis: Anxiety and depressive disorders in offspring of parents with anxiety disorders. *Journal of the American Academy of Child & Adolescent Psychiatry.* 2019;58(1).

References (cont)

23. McLeod BD, Wood JJ, Weisz JR. Examining the association between parenting and childhood anxiety: A meta-analysis. *Clinical Psychology Review*. 2007;27(2):155-172.
24. Ginsburg GS, Siqueland L, Masia-Warner C, Hedtke KA. Anxiety disorders in children: Family matters. *Cognitive and Behavioral Practice*. 2004;11(1):28-43.
25. Lebowitz ER, Omer H, Hermes H, Scahill L. Parent training for childhood anxiety disorders: The SPACE program. *Cognitive and Behavioral Practice*. 2014;21(4):456-469.
26. Lebowitz ER, Marin C, Martino A, Shimshoni Y, Silverman WK. Parent-based treatment as efficacious as cognitive-behavioral therapy for childhood anxiety: A randomized noninferiority study of supportive parenting for anxious childhood emotions. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2019.
27. Lebowitz ER. *Breaking Free of Child Anxiety and OCD: A Scientifically Proven Program for Parents*. Oxford University Press; 2020.
28. Storch EA, Guzick AG, Ayton DM, et al. Randomized Trial Comparing Standard versus Light Intensity Parent Training for Anxious Youth. *Behaviour Research and Therapy*. in press.
29. Crouch L, Reardon T, Farrington A, Glover F, Creswell C. 'Just keep pushing': Parents' experiences of accessing child and adolescent mental health services for child anxiety problems. *Child Care Health Dev*. 2019;45(4).
30. Walkup JT, Albano AM, Piacentini J, et al. Cognitive behavioral therapy, sertraline, or a combination in childhood anxiety. *N Engl J Med*. 2008;359(26):2753-2766.
31. Piacentini J, Bennett S, Compton SN, et al. 24- and 36-week outcomes for the Child/Adolescent Anxiety Multimodal Study (CAMS). *J Am Acad Child Adolesc Psychiatry*. 2014;53(3):297-310.
32. Wang Z, Whiteside SPH, Sim L, et al. Comparative Effectiveness and Safety of Cognitive Behavioral Therapy and Pharmacotherapy for Childhood Anxiety Disorders: A Systematic Review and Meta-analysis. *JAMA Pediatr*. 2017;171(11):1049-1056.
33. Norris LA, Kendall PC. Moderators of Outcome for Youth Anxiety Treatments: Current Findings and Future Directions. *J Clin Child Adolesc Psychol*. 2021;50(4):450-463.

References (cont)

34. Lebowitz ER, Zilcha-Mano S, Orbach M, Shimshoni Y, Silverman WK. Moderators of response to child-based and parent-based child anxiety treatment: A machine learning-based analysis. *Journal of Child Psychology and Psychiatry*. 2021.



About The Community Impact Policy Institute

The Community Impact Policy Institute is the thinktank and research arm of The Fedcap Group, conducting leading research to provide solutions in breaking down barriers to economic well-being. The Institute, and its partners, have conducted groundbreaking analysis and solutions to many pressing needs including building wage and wealth for disadvantaged communities, effects of minimum wage increases, early childhood education, employment opportunities for individuals with disabilities, socially responsible investing, immigration and its impact on the economy, and more.

The Community Impact Policy Institute also provides technical assistance and training, products and hands on support to government agencies and community-based providers working to change their delivery of services and enhance the community integration of people with individuals with barriers to employment.