Journal of Child and Family Studies (2023) 32:2546–2557
https://doi.org/10.1007/s10826-023-02596-y

REVIEW

The Effectiveness of Anxiety Interventions for Young Children: A Meta-Analytic Review

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Received: 11 April 2022 / Accepted: 4 May 2023 / Published online: 24 May 2023
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Abstract

Anxiety symptoms and disorders are prevalent and impairing in young children and these symptoms often persist and worsen over time, indicating the need for efficacious interventions for this age group. The purpose of this study was to evaluate the effectiveness of psychosocial interventions targeting anxiety in younger children and to assess the potential moderators of outcome. The effect sizes from 24 trials were assessed based on a random effect model. The mean weighted effect size was found to be significant and moderate in magnitude. Moderators, including level of intervention, intervention approach, rater, and level of training of the provider/program facilitator, are assessed and discussed. Overall, the findings indicate that anxiety interventions are effective in reducing anxiety in young children, and targeted trials show particularly strong promise.

Keywords Meta-analysis · Anxiety · Preschool · Early intervention · Treatment · Prevention

Highlights

- The study provides a meta-analytic review of intervention programs for young children.
- Twenty-four trials were identified, and overall, interventions were found to be effective in reducing anxiety symptoms.
- Moderator analyses were conducted, including level of intervention, intervention approach, level of training of facilitator, and rater of symptoms.
- Both targeted prevention trials and treatment trials were to be significant, with targeted programs showing particular promise.
- The meta-analysis informs directions for future research for anxiety interventions in young children.

Anxiety disorders are common in young children, including preschool-aged children, with estimated prevalence rate of 10 to 20% (Whalen, Sylvester, & Luby, 2017). Furhter, anxiety symtoms often persist and worsen over time (Barrios et al., 2019), and child anxiey tis the assoicated with the development of other psychiatric disorders, incluiding depression (Cummings et al., 2014). In addition, child anxiety disroders are assoicated with a reduced quality of life (Ramsawh & Chavira, 2016), and child anxiety has been found to have a negativ empact on a number of domains of functioning, including academic functining and performance (Mazzone et al., 2007), peer relationships (Mikami et al., 2011), and famiy functioning (Towe-Goodman et al., 2014). Given the high prevalence and risk posed by anxiety in young children, there are significant advantages to the implementation of early intervention and prevention programs (Bayer et al., 2011; Hirshfeld-Becker & Biederman, 2002; Rapee, 2002).

The results from a growing body of research suggest that early intervention and prevention programs can be effective at treating or ameliorating anxiety symptoms in younger children (i.e., ages 6 and younger). While more research on

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early intervention and prevention programs is needed, there is now enough research to warrant synthesizing results into a meta-analytic review. Meta-analysis has the potential to assess the overall magnitude of the effectiveness of preschool anxiety interventions, moderators of effect sizes, and intervention approaches that yield the most optimal results.

Interventions for emotional disorders in preschool-age children are generally grouped into two broad categories: treatment and prevention. Treatment programs include children who have been diagnosed with an anxiety disorder, whereas prevention programs target children whose symptoms do meet diagnostic criteria. Using Mrazek and Haggerty's (1994) model, prevention programs can be further parsed into *universal* prevention programs, which target all children, *selective* prevention programs, which target children with an identifiable risk factor, and *indicated* prevention programs, which target children with elevated symptoms (I.e., subthreshold symptoms) or in the early stages of a disorder.

In the context of anxiety, it can be difficult to differentiate these models; for example, behavioral inhibition (BI), a known risk factor for anxiety, is perhaps the most common inclusion criterion for prevention studies (Kennedy et al., 2009). However, it has been debated whether BI is truly a risk factor or an early manifestation of symptomology (Rapee & Coplan, 2010), blurring the line between selective and indicated prevention approaches. As such, some researchers have combined selective and indicated approaches under the umbrella term "targeted" (Caldwell et al., 2019). Finally, because anxiety in young children is a risk factor for later psychopathology, even treatment programs that target children with anxiety diagnoses may be inherently preventive (Mian, 2014), further blurring the line between treatment and prevention.

All levels of intervention mentioned above have been used with young children to address anxiety, and there is value in considering each approach. Universal programs have the potential to reach the most children but would generally be expected to be considered a "low dosage" intervention. Further, many individuals who receive universal intervention are at relatively low risk for anxiety at the outset and exhibit low baseline scores, which can create a floor effect. These characteristics often lead to relatively small overall effect sizes. In contrast, treatment programs and targeted prevention programs reach children with elevated risk or symptoms, and more intensive intervention is often provided. Consequently, larger effect sizes are typically expected (Bienvenu & Ginsburg, 2007; Mrazek & Haggerty, 1994). Based on these observations, level intervention is an imporant factor to consider when evaluating effect sizes.

Previous reviews have found psychosocial interventions to be efficacious in the treatment of children and adolescents with anxiety disorders (Crowe & McKay (2017); Sigurvinsdóttir et al., 2020; Wang et al., 2017; Zhang et al., 2017). This is particularly the case for clinical trials that compare cognitive-behavioral therapy (CBT) to non-intervention control groups (e.g., Crowe and McKay (2017); Sigurvinsdóttir et al., 2020; Wang et al., 2017). Based on meta-analytic reviews, CBT has been found to be to be as effective as antidepressants (Wang et al., 2017), and initial findings indicate that both CBT and behavioral interventions are effective in the treatment of anxiety in children younger than the age of seven (Zhang et al., 2017). It is noteworthy that CBT appears to be the most commonly utilized treatment approach for child and adolescent anxiety; however, emerging models, including parent-child interaction therapy (PCIT) (Phillips & Mychailyszyn, 2021) and emotion-focused therapy (Edrissi et al., 2019) also show promise.

Several reviews have assessed the effectiveness of anxiety prevention programs in children and adolescents (Fisak et al., 2011; Howes Vallis et al., 2020; Johnstone et al., 2018; Neil & Christensen, 2009). However, it is noteworthy that these reviews are typically performed with older children and adolescents. In addition, these reviews also tend to focus exclusively on school-based prevention programs rather than community-based programs. For example, Neil & Christensen (2009) conducted a meta-analysis of school-based anxiety prevention programs (although some also included depression as a primary target). Anxiety-prevention programs were found to be effective in the prevention and reduction of anxiety; however, most trials focused on adolescents, and none of the included studies targeted anxiety in children younger than age 10.

In another review, Johnstone and colleagues (2018) examined the effectiveness of school-based, universal prevention programs for anxiety and depression in children aged 13 years and younger. While the results were encouraging for depression, the authors did not find a significant overall effect for anxiety reduction at any time interval, including post-intervention, short-term follow-up, or longer-term follow-up. However, the authors did find some evidence suggesting that certain programs, including FRIENDS—the most widely used prevention program that targets anxiety—were effective (Johnstone et al., 2018). As mentioned above, it is noteworthy that significant effect sizes for universal trials are often difficult to detect, as these effects are often small relative to treatment and indicated prevention trials.

Meta-analyses that are not limited to school-based interventions have had somewhat more favorable findings. Fisak and colleagues included 35 studies that focused on prevention (excluding treatment studies) of child anxiety through adolescence (Fisak et al., 2011). Results indicated that prevention programs were effective, with mean weighted effect size of 0.18, and that these effects were largely maintained at 6-month follow-up. The authors also completed several moderator analyses but did not find a significant moderator effect for type (universal versus targeted), number of sessions, or age.

While all the previously mentioned meta-analyses focused on older children and adolescents, one recent review and meta-analysis, completed by Howes Vallis and colleagues, focused specifically on cognitive-behavioral approaches targeting anxiety disorders, OCD, and PTSD for young children (ages 3–8 years; mean = 5.45) (Howes Vallis et al., 2020). Greater reductions in anxiety symptoms were found for participants in CBT conditions relative to control conditions. Based on moderator analyses, the reporter of the anxiety symptoms was not significant, interventions that targeted anxiety symptoms or disorders were more effective than those that targeted behavioral inhibition, interventions children were slightly more effective than those including parents only, and in-person delivery models tended to be more effective than internet-delivered approaches (Howes Vallis et al., 2020).

The Howes Vallis (2020) study provides unique contributions to the understanding of anxiety interventions for young children. At the same time, number of features of the Howes Vallis et al. (2020) study warrant additional research. In particular, the authors only included trials that utilized a cognitive-behavioral approach. Consequently, the effectiveness of other intervention approaches was not assessed, including PCIT. Further, in addition to anxiety disorders, the Howes Vallis review included anxiety-related disorders (i.e., OCD and PTSD), which reduces the focus on interventions specifically designed to address anxiety disorders and symptoms. Finally, the previous authors emphasized change scores from pre-to-post intervention, and it appears that standardized mean differences between intervention groups and comparison groups were not assessed.

The Present Study

The present study aims to provide an up-to-date meta-analysis of prevention and intervention programs for anxiety in young children. The current review provides unique contributions and can be distinguished from Howes Vallis in a number of ways. In particular, the current review focused exclusively on anxiety disorders, isolating the efficacy of these disorders. Anxiety-related disorders such as OCD and PTSD were excluded as these disorders require disparate and specialized treatment protocols (Freeman et al., 2012; Scheeringa et al., 2011). In addition, the authors of the current review did not exclude studies based on intervention approach (i.e., CBT only). This allows for the inclusion of emerging models for treating child anxiety in young children, including Parent-Child Interaction Therapy (PCIT) (Phillips & Mychailyszyn, 2021) and emotion-focused interventions (Edrissi et al., 2019; Havighurst & Harley 2007). In addition, rather than focusing on relative change between intervention groups and comparison groups from pre-to-post intervention, the current study focused on standardized mean differences between intervention groups and control groups following intervention, which is a more common approach evaluating effect sizes. Finally, the current study conducted a relatively extensive examination of subgroup effect sizes and moderators of effect sizes.

Method

The primary search was conducted using PsychInfo. Search terms included combinations of the following: “anxiety”, “preschool”, “child*” “early intervention”, “young children” “treatment” “prevention”. Secondary searches using other databases including Google Scholar and PsychArticles were also conducted. Further, reference sections of articles included in the current study and previous meta-analyses of child anxiety prevention and treatment trials were also searched. Results of the searches are provided in a PRISMA chart (see Fig. 1).

Inclusion criteria were as follows: (1) controlled trials, mean age of participants was below 7 years, (2) anxiety prevention or treatment was primary goal of the study, (3) anxiety and/or behavioral inhibition were included as continuous outcome variables. It is noteworthy that studies designed to treat anxiety-related disorder (i.e., OCD or PTSD) were not included in this meta-analysis, and studies designed to prevent or decrease anxiety related to medical procedures and test anxiety were excluded.

Effect sizes were calculated using Cohen’s d, the standardized mean difference between the intervention groups and comparison groups at post-intervention. Comprehensive Meta-Analysis Software was utilized to assist with the calculations. A random effects model was used, and when more than one measure of effect size was provided for a given study, an aggregated effect size calculated. The primary time interval of interest was immediate post-intervention.

Encoding for moderators was also conducted, and included level of intervention (universal prevention, targeted prevention, or treatment), participants (parents only, parents & children, or children only), setting (school, internet-based, or clinic-based), rater of symptoms (parent-report, teacher-report, child-report, clinician observation/interview), background/level training of program facilitator (mental health clinician, non-clinician). Continuous variables were also assessed, including the number of sessions and participant age. In addition, analysis of effect sizes at follow-up were planned.

Results

Twenty-four trials met criteria for inclusion. Based on a random effects model, the mean weighed effect size

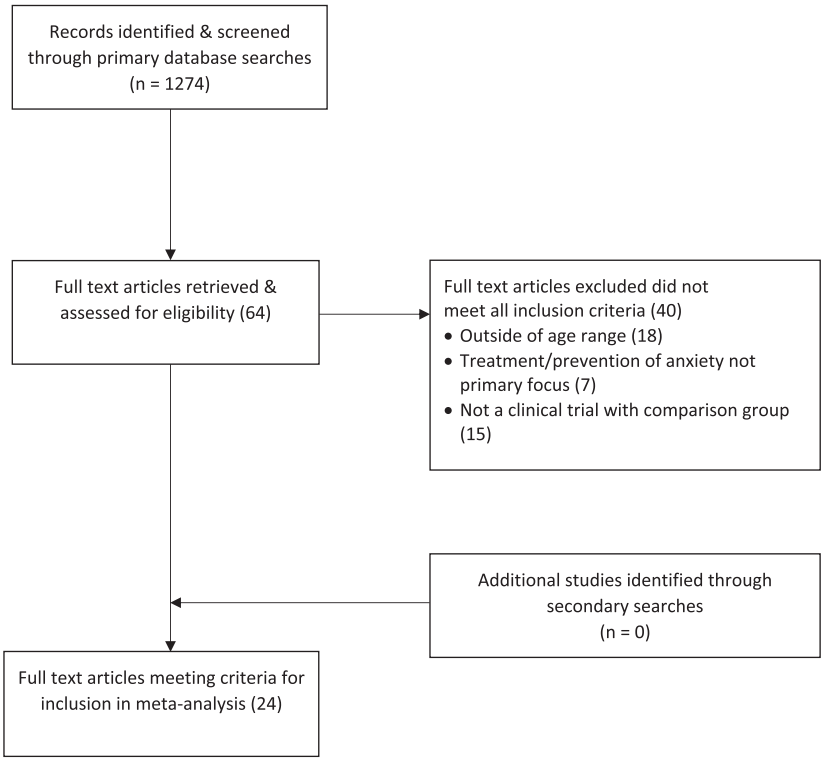

Fig. 1 PRISMA flow chart for database searches

scores at post-intervention was significant and between moderate in magnitude, $d = -0.55$, $Z = -4.34$, $p < 0.001$ (see Table 1). This finding indicates that intervention groups scored significantly lower than control groups on measures of anxiety. Effect sizes ranged from 0.85 to −2.59 (with negative values indicating effect sizes in favor of intervention groups). Fail-safe N was 415, indicating 415 missing studies with effect size of 0 would be needed to reduce the effect size to non-significance.

The mean weighted effect size at follow-up was also assessed. In particular, the last effect size available between 6 and 12 months was included in the analysis. This range was used to maximize power and study inclusion. Effect sizes were available for 11 trials, and the mean weighted effect sizes was significant and moderate in magnitude, $d = -0.47$, $Z = -3.41$, $p < 0.01$. It was noteworthy that, despite the relatively small number of trials included in this analysis, the range of effect sizes was quite large (i.e., Cohen's d values ranged from 0.16 to −2.21). Fail safe N value was 119.

Moderator Variables

Level of intervention

Level of intervention (universal, targeted, and treatment) was examined as a potential moderator of effect size. Targeted trials were the most common ($n = 10$), followed by treatment ($n = 9$), and universal ($n = 5$). Level of intervention was found to be a significant moderator of effect size, $Q(2) = 16.97$, $p < 0.001$. In terms of specific levels, the effect size for treatment trials was found to be statically significant in favor of the intervention groups and large in magnitude, $d = -0.82$, $Z = -3.37$, $p < 0.001$. Targeted trials were found to be significant and between moderate and large in magnitude, $d = -0.72$, $Z = -3.90$, $p < 0.001$, with scores favoring the intervention group. In contrast, the effect size for universal programs was not significant, $d = 0.13$, $Z = 0.80$, $p = 0.42$, indicating no differences intervention groups relative to control groups on measures of anxiety. However, this finding should be interpreted with some caution due to the relatively small number of universal trials. Further, due to differences in effect size and other features unique to universal trials, universal trials were excluded from subsequent moderator analyses.

Program Participants

Program participants, individuals who directly took part in the intervention, was examined as a potential moderator of effect size. Three categories were coded: parents only ($n = 5$), parent & children ($n = 14$), and child only ($n = 4$). Child only category was excluded from the moderator analysis, as this category is confounded with level of intervention (i.e., only universal programs were classified as child only).

Table 1 Effect sizes and characteristics of studies included in the meta-analytic review

Author(s)	Program participants	Level of intervention	Sample targeted	Setting	Provider/ program facilitator	Mean age	Number of sessions	Program description/ intervention approach	Effect size post intervention	Effect size follow-up (6–12mo)
Morgan et al. (2017); Morgan et al. (2018)	Parents	Targeted prevention	Behavioral inhibition/inhibited temperament	Internet-Based	Clinician	4.8	6	CBT	−0.31	−0.31
Chronis-Tuscano et al. (2015)	Parent & children	Targeted prevention	Behavioral inhibition/inhibited temperament	Clinic	Clinician	4.38	8	PCIT	−1.71	–
Rapee et al. (2005); Rapee, et al. (2010); Rapee (2013)	Parents	Targeted prevention	Behavioral inhibition/inhibited temperament	Clinic	Clinician	3.9	6	CBT	−0.09	−0.09
Kennedy et al. (2009)	Parents	Targeted prevention	Behavioral inhibition/inhibited temperament + At least 1 parent with anxiety disorder	Clinic	Clinician	3.98	8	CBT	−0.54	−0.54
LaFreniere & Capuano (1997)	Parent & children	Targeted	Behavioral inhibition/inhibited temperament	Home	Clinician	4.45	20	Attachment-Based	−1.03	–
Dadds & Roth (2008)	Parents	Universal	Universal	School	Clinician	5	6	CBT	0.36	0.16
Lewis (2016)	Children	Universal	Universal	School	School Staff	5.1	15	CBT	0.84	–
Waters et al. (2009) (Parent + Child Condition)	Parents & children	Treatment	Anxiety disorder	Clinic	Clinician	6.89	10	CBT	−0.96	–
Waters et al. (2009) (Parent Only Condition)	Parents	Treatment	Anxiety disorder	Clinic	Clinician	6.68	10	CBT	−0.79	–
Cartwright-Hatton et al. (2011)	Parent & children	Treatment	Anxiety disorder	Clinic	Clinician	6.57	6	CBT	−0.39	−0.31
Donovan & March (2014)	Parents & children	Treatment	Anxiety disorder	Online	Clinician	4.08	8	CBT	−0.21	–
Santacruz,et al. (2006) (Group 1)	Parents & children	Treatment	Darkness phobia	Home	Clinician	6.48	15	Play Therapy	−2.59	−2.21
Santacruz,et al. (2006) (Group 2)	Parents & children	Treatment	Darkness phobia	Home	Clinician	6.48	15	Play Therapy	−1.53	−1.77
Hirshfeld-Becker et al., 2010	Parents & children	Treatment	Anxiety disorder	Clinic	Clinician	5.4	20	CBT	−0.34	−0.54

Table 1 (continued)

Author(s)	Program participants	Level of intervention	Sample targeted	Setting	Provider/ program facilitator	Mean age	Number of sessions	Program description/ intervention approach	Effect size post intervention	Effect size follow-up (6–12mo)
Pahl & Barrett (2010)	Children	Universal	Universal	School	Clinician	4.56	9	CBT	−0.10	–
Edrissi et al. (2019)	Parents	Targeted	Elevated anxiety symptoms	Community	Clinician	4.4	8	Emotion-Focused Therapy	−1.66	–
Barstead et al. (2018)	Parents & children	Targeted	Behavioral inhibition/inhibited temperament	School	Clinician	4.26	8	PCIT	−0.19	–
Ruocco et al. (2016)	Parent & children	Targeted	Anxiety symptoms	School	School Staff	6.82	8	CBT	−0.63	–
Sabey et al. (2013)	Parent & children	Targeted	Elevated anxiety symptoms	Community	Clinician	5	14	CBT	−1.12	–
Bergman et al. (2013)	Parent & children	Treatment	Selective mutism	Clinic	Clinician	5.43	20	CBT	−0.30	–
Schneider et al. (2011)	Parent & children	Treatment	Separation anxiety	Clinic	Clinician	6.23	12	CBT	−0.92	–
Comer et al. (2021)	Parent & children	Treatment	Children with social anxiety disorder	Online/Home	Clinician	6.2	12	PCIT	−0.22	–
Anticich et al. (2013) (FF)	Children	Universal	Universal	School	School Staff	5.42	12	CBT	−0.21	−0.21
Anticich et al. (2013) (YCDI)	Children	Universal	Universal	School	School Staff	5.42	12	CBT	−0.13	−0.13

Participants program participants (Parents only, Parents & Children, or Children only), *Level of Intervention* Treatment, Universal Prevention, or Targeted Prevention (Selective or Indicated Prevention), *Setting* setting in which the program was conducted (Clinic, School, Community, Internet-Based, or Home-Based), *Provider/Program Facilitator* credentials of individuals facilitating the program (clinician includes therapists in training), School Staff (includes teachers or guidance counselors), *Program Description* refers to general intervention approach (*CBT* Cognitive-Behavioral Therapy Focused, *PCIT* Parent-Child Interaction Therapy Focused), Effect sizes reported based on Cohen's d, *Follow-up effect size* last measured effect size between 6 and 12 months, "–" indicates that no follow-up data was available for this time interval

Significant effect sizes were observed for trials that included both parents and children, $d = -0.85$, $Z = -4.88$, $p < 0.001$, and in which parents were the only participants, $d = -0.60$, $Z = -2.77$, $p < 0.01$. Although the two conditions did not differ significantly in magnitude, $Q(1) = 0.81$, $p = 0.34$, the trend towards larger effect sizes for parent-child programs relative to parent only programs is noteworthy.

Setting

The setting in which the program was conducted was examined as a potential moderator of effect size. The following categories were encoded: web-based/internet ($n = 3$), school-based ($n = 2$), clinic ($n = 9$), home ($n = 3$), and community ($n = 2$). A formal moderator analysis was not conducted, due to the number of categories and relatively small sample size by category. Rather, effect size by category is reported. Effect sizes were significant for all settings (see Table 2). In particular, the effect size for clinic-based trials was moderate in magnitude, and the effect size for school-based trials was also moderate in magnitude. The effect size for home-based and community-based trials were large in magnitude. In contrast, the effect size for internet/web-based trials was small in magnitude

Intervention approach

Although significant variation was found in terms of specific approaches and skills emphasized, a majority of the trials were based on behavioral or cognitive-behavioral interventions. Examples of the variations in CBT models include traditional CBT (e.g., Hirshfeld-Becker et al., 2012) and trials that include a combination of resilience building and CBT skills (e.g., Pahl & Barrett, 2010). In addition to CBT and behavioral approaches, it is noteworthy that 3 trials were based on PCIT (Barstead et al., 2018; Chronis-Tuscano et al., 2015; Comer et al., 2021). One trial utilized an emotion-focused approach (Edrissi, 2019), and the remaining trials were a combination of other interventions, including *en vivo* exposure implemented through play therapy (Santacruz et al., 2006) and attachment-based intervention (LaFreniere & Capuano, 1997).

The magnitude of the two most utilized approaches, CBT and PCIT, were compared. These approaches did not differ significantly (see Table 2). The mean weighted effect size for CBT programs ($n = 17$) was statistically significant, $d = -0.26$, $Z = -5.08$, $p < 0.001$, with an effect size that was small in magnitude. The effect size for PCIT trials ($n = 3$) was between not statically significant, $d = -0.68$, $Z = -1.45$, $p = 0.14$, but between medium and large in magnitude. The non-significant effect size may be due to relatively small number of PCIT and relatively large variation amongst these effect sizes, as the range was from −0.19 to −1.71.

Table 2 Results of categorical moderator analyses of effect sizes at post-intervention

Category	*K*	*Cohen's d*	*Z*	$Q_{between}$
Overall	23	−0.55	−4.34***	
Level of Intervention				16.97***
Universal	5	0.13	0.80	
Targeted	9	−0.72	−4.26***	
Treatment	10	−0.82	−3.53***	
Participant				0.81
Parent	5	−0.60	−2.77**	
Parent/child	14	−0.85	−4.88***	
Setting[a]				
Clinic	9	−0.61	−3.91*	
Home	3	−1.70	−3.76**	
School	2	−0.51	−2.62*	
Other/Community	2	−1.48	−5.34**	
Internet/Web-Based	3	−0.29	−3.01*	
Intervention Type				0.75
CBT-focused	17	−0.26	−2.37*	
PCIT-focused	3	−0.69	−1.44	

Moderators only examined for targeted and treatment programs

[a]No moderator analysis conducted due to the number of conditions & small n per condition

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Rater

The source of the outcome variables (rater) was examined, and the following categories were coded: parent-report ($n = 33$), child-report ($N = 3$), teacher-report ($N = 7$), and clinician observation or interview ($n = 20$). Parents were the most common rater, and effect size for parent ratings was significant, $d = -0.64$, $Z = -6.56$, $p < 0.001$. The effect sizes for researcher/clinician observations or interview, $d = -0.48$, $Z = -3.29$, $p < 0.01$, and for child self-report, $d = -0.65$, $Z = -3.62$, $p < 0.001$, were also significant. However, the mean weighted effect size for teacher ratings was not significant, $d = -0.14$, $Z = -0.66$, $p = 0.51$. Effect sizes for two of the most common sources of outcome data, parents and researcher/clinician, were compared, but these categories did not differ significantly, $Q(1) = 0.76$, $p = 0.38$.

Provider/program facilitator

Most treatment and targeted trials were led by mental health providers/clinicians ($n = 17$). The effect size for trails run by clinician was significant and large in magnitude, $d = 0.83$, $Z = -5.29$, $p < 0.001$.

Continuous moderator variables

Age and number of sessions were examined as potential predictors of effect size using a meta-regression. Age was not found to be a significant predictor of effect size, $Q(1) = 0.79$, $Z = -0.89$, $p = 0.37$. In contrast, the number of sessions was found to be associated with effect size, $Q(1) = 4.26$, $Z = -2.06$, $p < 0.05$, as programs with a greater number of sessions tended have slightly larger effect sizes. However, the effect was relatively small in magnitude.

Discussion

This review focused on the efficacy of anxiety interventions for young children (ages 6 and younger) across the intervention continuum. Twenty-four trials were identified, and the mean weighted effect size (standardized mean difference) was 0.57 in favor of the intervention group. This finding indicates that, across all trails, intervention groups scored 0.57 standard deviation units lower on measures of anxiety relieve to comparison groups. Further, the significant effect was generally maintained at 6-to-12-month follow-up. These findings suggest that anxiety interventions for preschool children are generally effective.

Level of intervention (universal prevention, targeted prevention, and treatment) was considered as potential moderator of effect size. The largest effect size was found for treatment trials (standardized mean difference = 0.82), which was statistically significant. The effect size for targeted programs was also statistically significant (standardized mean difference = 0.72). The smallest effect size was found for universal programs, and this effect size was not statistically significant (standardized mean difference of 0.13). In general, the above findings seem to be indicative of a general trend in which larger effect sizes were obtained based on level of symptom severity, which generally corresponds with treatment "dosage" in terms of the number of sessions or the intensity of the intervention.

The effect sizes for treatment and targeted prevention programs suggest a relatively robust response to intervention for individuals with elevated symptoms. In terms of treatment, the current effect size of 0.82 is large by Cohen's (1988) standards. This finding indicates that gains made by intervention groups seem consistent with the effect sizes typically reported for treatment trials focused on older children and adolescents. For example, in a review of meta-analyses, Crowe and McKay (2017) found a mean effect size of 0.76 for child and adolescent anxiety treatment programs.

Regarding targeted prevention programs (selective and indicated programs), it is noteworthy that the standardized mean difference of 0.72 approaches large in magnitude based on Cohen's conventions. This finding is particularly promising considering that the obtained effect size is substantially larger than the typical effect sizes observed for targeted anxiety prevention trials conducted with older children and adolescents. For example, based on previous meta-analyses, mean weighted effect sizes for targeted anxiety trails have been found to range from 0.22 to 0.28, in favor of intervention conditions (Fisak et al., 2011, Hugh-Jones, et al., 2020, Werner-Seidler et al., 2017).

The above finding is consistent with the perspective that the preschool years may be an optional developmental window in which to identify children at risk for developing anxiety and to implement targeted prevention (Mian, 2014). Further, most of these studies recruit children with an inhibited temperament/behavioral inhibition, suggesting that behavioral inhibition appears to be a particularly important risk factor to consider in the identification and recruitment of at-risk children. Once again, this finding brings up the question of whether a substantial portion of these children identified with behavioral inhibition may have also met criteria for an anxiety disorder and therefore more closely represented children in the treatment studies. Consequently, it recommended that diagnostic status is considered when implementing targeted prevention programs.

The effect size for universal programs was not significant, with a standardized mean difference of 0.13. However, a few considerations are relevant to the interpretation of these null results. First, it is noteworthy that only 5 universal trials were identified. This small n, along with substantial variability in effect sizes for universal programs, may have led to lower statistical power and inflated risk of type II error. In relation to power, it is also noteworthy that the effect sizes for universal programs are typically small relative to trials that focus on elevated symptoms (i.e., targeted prevention and treatment). A review of universal programs by Tanner-Smith et al. (2018) illustrates this point. The authors suggest that Cohen's (1988) traditional conventions to assess the magnitude of effect sizes (i.e., standardized mean differences: small = 0.2, medium = 0.5, and large = 0.8) may not be applicable to universal programs. In particular, Tanner-Smith et al. (2018) found that effect sizes for child and adolescent universal trials typically fall between 0.07 and 0.16. In this context, the obtained standardized mean difference of 0.13 is consistent with similar universal programs.

The relatively small effect sizes for universal anxiety trials may be related to floor effects. More specifically, a significant portion of participants in universal trials present with low baseline scores, as universal trials do not recruit based on risk status. A reduction of anxiety symptoms from pre- to post-intervention is not likely for these low-risk

individuals. Based on this observation, it may be important for researchers conducting subsequent universal trials to consider effect size based on relative risk and baseline scores. For example, Lowry-Webster, Barrett, and Dadds (2001) found that universal anxiety prevention programs may be particularly beneficial for individuals with elevated symptoms, even though they do not specifically target these individuals. At the same time, it is possible that basic stress management strategies and resilience building skills, often taught in anxiety prevention programs, are beneficial to all children (and adults) regardless of risk status. This may lead to at least small improvements, which would require very large samples to detect. This is consistent with findings from reviews that included trials that targeted shyness (rather than anxiety) and more generalized psychoeducation and skill instruction (e.g., Cordier et al., 2021).

The effect size based on intervention approach was also examined. Interventions generally classified as CBT were, by far, the most common intervention approach. The effect size for CBT programs was significant and small in magnitude, with a standardized mean difference of 0.26. This may, in part, be due to the fact that many of the CBT trials were universal. Overall, it is not surprising that CBT was found to be effective, as this has been found to be a well-established intervention approach for child and adolescent anxiety disorders (Bennett et al., 2013). The current findings, along with previous reviews, indicate that CBT is an effective intervention (targeted and treatment) approach for preschool-aged children (Howes Vallis et al., 2020; Zhang et al., 2017).

Parent-child interaction therapy (PCIT), originally developed to treat early childhood disruptive behavior problems, is an emerging treatment for anxiety disorders in an adapted format (Phillips & Mychailyszyn, 2021). In the current review, 3 PCIT trials met inclusion criteria. The effect size was significant and moderate in magnitude, with a standardized mean difference of 0.69. In general, PCIT seems to be promising intervention to treat anxiety in young children (Phillips & Mychailyszyn, 2021); however, more research is needed to assess the efficacy and effectiveness of PCIT. Due to its complex delivery mode, it is challenging to disseminate PCIT in community settings, although newer, web-based adaptations have shown promise (Comer et al., 2021). Further, it may be beneficial to examine the efficacy of PCIT relative to CBT. Consistent with this suggestion, it would be of interest to explore the relative efficiency of each of these approaches (e.g., comparisons of the number of required sessions for equal clinical benefit) and the relative benefit to secondary outcomes, such as parent stress. Finally, it is also worth noting that PCIT is still a behavioral intervention, and the major differences from CBT are in its format. PCIT adaptations for anxiety include coaching parents to encourage and model approach behaviors and to lead exposures with children—central components of any CBT program for anxiety (Phillips & Mychailyszyn, 2021).

The setting in which the intervention was conducted was also examined as a potential moderator of effect size. Clinic-based trials were the most common, and the effect size was moderate in magnitude. All other setting categories consisted of 3 or fewer trials, which limits the conclusions that can be made about the effect sizes in these settings (see Table 2). However, the limited information derived from these categories provides some initial trends that are worthy of description and further exploration. More specifically, particularly large effect sizes were found for home-based and community-based trials. The effect size for school-based trials was moderate in magnitude. Finally, the smallest effect size was found for internet-based interventions. While the effects of such interventions may be weaker, they offer substantial benefits for reaching certain populations that are not reached by traditional methods, such as rural populations (Comer et al., 2017). Due to the recent move toward of telehealth precipitated by the COVID-19 pandemic, research on internet-delivered treatment programs is of utmost importance.

The source of the outcome data (i.e., the rater) was examined as a potential moderator of effect size, and ratings most commonly came from parents, with 33 observations. Clinician interviews/observations were also common, with 20 observations. The effect sizes for parents and clinician ratings were both significant, with standardized mean differences of 0.64 and 0.48, respectively. However, the magnitude of the difference was not significant. Collectively, data from both parent and clinician ratings provide support for the effectiveness of preschool anxiety intervention programs.

In contrast to parent and clinician ratings, trials were less likely to rely on teacher ratings and child-report ratings. Only seven observations were based on teacher data and only three observations were based on child-report data. Teacher report was not significant, and the magnitude of the effect was much smaller than clinician and parent-report. However, due to a relatively small number of studies, the null finding ought to be interpreted with caution and may, in part, be related to limited statistical power. However, it is also possible that smaller effect sizes for teachers occur because teacher observation is limited to a narrower range of behaviors, and many anxiety symptoms are generally less easily observed in classroom settings (De Los Reyes & Kazdin, 2005). An alternative explanation is that the program benefits do not generalize to child behavior at school.

It is noteworthy that rater discrepancies could also, in part, be due to respondent bias, including demand characteristics. Caldwell et al. (2019) raise more general concerns about bias in depression and anxiety prevention trials,

including potential Hawthorne effects, and biases related to randomization. It is recommended that researchers conducting subsequent trials in this area take steps to reduce these forms of bias and to clearly describe attempts to manage biases. For example, whenever possible, it is recommended that, when possible, raters are blind to experimental conditions. In general, while there is a robust literature on informant discrepancies, including the general finding that discrepancies are higher for internalizing compared to externalizing symptoms (De Los Reyes & Kazdin, 2005), this topic is understudied in the context of prevention trials.

Regarding child-report, the obtained effect size was significant. However, as with teacher ratings, this finding should be interpreted with caution as only 3 observations were based on child-report data. Limited use of child-report may be due to perceptions of the limited cognitive capacities of preschool-aged children. This could inhibit their ability to accurately self-report symptoms. However, it is noteworthy that several self-report measures have been developed specifically for this age-group (see Muris, 2019). As little is known about the child's perspective in terms of retention of program content and use of skills, it is recommended that subsequent studies include child-report measures to better understand the child's response to intervention and to better understand their perceptions of the intervention.

Bienvenu and Ginsburg (2007) discuss several considerations for researchers to address in anxiety prevention research. This includes establishment of optimal timing or developmental stages in which to implement intervention (e.g., when in the life course), the optimal target for prevention programs (e.g., level of intervention and risk factors used to recruit), and optimal intervention strategies. The current meta-analysis provides insight into the issue of timing, by focusing on the effectiveness of early anxiety intervention. As mentioned, the findings of the current study indicate that intervention programs in young children appear to be effective, and targeted intervention focused on children with inhibited temperament or slightly elevated anxiety symptoms appear to be particularly effective, especially in relation to older age groups. In terms of intervention approaches, cognitive-behavioral approaches are a well-established intervention across all levels of intervention. However, it is noteworthy that PCIT and TIK also appear to be emerging models that may also be effective in the selective prevention and treatment of anxiety.

Overall, preschool anxiety intervention programs were found to be effective, with lasting effects at follow-up. Perhaps one of the most salient findings is that relative to anxiety intervention programs for older children, few trials have focused on younger children. Consequently, although this study is a review of the existing literature, it should also be considered a call for additional research, and this review informs a number of directions for future research, many of which were derived from the subgroup analyses.

Compliance with Ethical Standards

Conflict of Interest The authors declare no competing interests.

Ethics Approval Research was conducted in compliance with national and interational ethical research standards, inlcuding research involving research involving human subjects, informed consent, and publiction.

References (*Denotes studies included in meta-analysis)

Anticich, S. A. J., Barrett, P. M., Silverman, W., Lacherez, P. & Gillies, R. (2013). The prevention of childhood anxiety and promotion of resilience among preschool-aged children: A universal school-based trial. *Advances in School Mental Health Promotion*, *6*(2), 93–121. https://doi.org/10.1080/1754730X.2013.784616.*.

Barstead, M. G., Danko, C. M., Chronis-Tuscano, A., O'Brien, K. A., Coplan, R. J. & Rubin, K. H. (2018). Generalization of anearly intervention for inhibited preschoolers to the classroom setting. *Journal of Child and Family Studies*, *27*(9), 2943–2953. https://doi.org/10.1007/s10826-018-1142-0.*.

Bayer, J. K., Rapee, R. M., Hiscock, H., Ukoumunne, O. C., Mihalopoulos, C., & Wake, M. (2011). Translational research to prevent internalizing problems early in childhood. *Depression and Anxiety*, *28*(1), 50–57. https://doi.org/10.1002/da.20743.

Bergman, R. L., Gonzalez, A., Piacentini, J. & Keller, M. L. (2013). Integrated Behavior Therapy for Selective Mutism: A randomized controlled pilot study. *Behav. Res. Therapy*, *51*(10), 680–689. https://doi.org/10.1016/j.brat.2013.07.003.*.

Bennett, K., Manassis, K., Walter, S. D., Cheung, A., Wilansky, T. P., Diaz, G. N., Duda, S., Rice, M., Baer, S., Barrett, P., Bodden, D., Cobham, V. E., Dadds, M. R., Flannery, S. E., Ginsburg, G., Heyne, D., Hudson, J. L., Kendall, P. C., Liber, J., & Wood, J. J. (2013). Cognitive behavioral therapy age effects in child and adolescent anxiety: An individual patient data metaanalysis. *Depression and Anxiety*, *30*(9), 829–841. https://doi.org/10.1002/da.22099.

Bienvenu, O. Joseph, & Ginsburg, G. S. (2007). Prevention of anxiety disorders. *International Review of Psychiatry*, *19*(6), 647–654.

Barrios, C. S., Leppert, K. A., & Dougherty, L. R. (2019). Epidemiology and nosology of preschool anxiety disorders. In B. Fisak & P. Barrett (Eds.), *Anxiety in preschool children: Assessment, treatment, and prevention* (pp. 1–28). Routledge/Taylor & Francis Group. https://doi.org/10.4324/9781315213828-1.

Caldwell, D. M., Davies, S. R., Hetrick, S. E., Palmer, J. C., Caro, P., López-López, J. A., Gunnell, D., Kidger, J., Thomas, J., French, C., Stockings, E., Campbell, R., & Welton, N. J. (2019). School-based interventions to prevent anxiety and depression in children and young people: A systematic review and network meta-analysis. *The Lancet Psychiatry*, *6*(12), 1011–1020. https://doi.org/10.1016/S2215-0366(19)30403-1.

Cartwright-Hatton, S., McNally, D., Field, A. P., Rust, S., Laskey, B., Dixon, C., Gallagher, B., Harrington, R., Miller, C., Pemberton, K., Symes, W., White, C. & Woodham, A. (2011). A new parenting-based group intervention for young anxious children:

Results of a randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, *50*(3), 242–251. https://doi.org/10.1016/j.jaac.2010.12.015.*.

Chronis-Tuscano, A., Rubin, K. H., O'Brien, K. A., Coplan, R. J., Thomas, S. R., Dougherty, L. R., Cheah, C. S. L., Watts, K., Heverly-Fitt, S., Huggins, S. L., Menzer, M., Begle, A. S. & Wimsatt, M. (2015). Preliminary evaluation of a multimodal early intervention program for behaviorally inhibited preschoolers. *Journal of Consulting and Clinical Psychology*, *83*(3), 534–540. https://doi.org/10.1037/a0039043.*.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Routledge. https://doi.org/10.4324/9780203771587.

Comer, J. S., Furr, J. M., del Busto, C., Silva, K., Hong, N., Poznanski, B., Sanchez, A., Cornacchio, D., Herrera, A., Coxe, S., Miguel, E., Georgiadis, C., Conroy, K. & Puliafico, A. (2021). Therapist-led, Internet-delivered treatment for early child social anxiety: A waitlist-controlled evaluation of the iCALM telehealth program. *Behavior Therapy*, *52*(5), 1171–1187. https://doi.org/10.1016/j.beth.2021.01.004.*.

Comer, J. S., Furr, J. M., Miguel, E. M., Cooper-Vince, C. E., Carpenter, A. L., Elkins, R. M., Kerns, C. E., Cornacchio, D., Chou, T., Coxe, S., DeSerisy, M., Sanchez, A. L., Golik, A., Martin, J., Myers, K. M. & Chase, R. (2017). Remotely delivering real-time parent training to the home: An initial randomized trial of Internet-delivered parent–child interaction therapy (I-PCIT). *Journal of Consulting and Clinical Psychology*, *85*(9), 909–917. https://doi.org/10.1037/ccp0000230.

Cordier, R., Speyer, R., Mahoney, N., Arnesen, A., Mjelve, L. H., & Nyborg, G. (2021). Effects of interventions for social anxiety and shyness in school-aged children: A systematic review and meta-analysis. *PLoS One*, *16(7)*. https://doi.org/10.1371/journal.pone.0254117.

Crowe, K., & McKay, D. (2017). Efficacy of cognitive-behavioral therapy for childhood anxiety and depression. *Journal of Anxiety Disorders*, *49*, 76–87. https://doi.org/10.1016/j.janxdis.2017.04.001.

Cummings, C. M., Caporino, N. E., & Kendall, P. C. (2014). Comorbidity of anxiety and depression in children and adolescents: 20 years after. *Psychological Bulletin*, *140*(3), 816–845. https://doi.org/10.1037/a0034733.

Dadds, M. R. & Roth, J. H. (2008). Prevention of anxiety disorders: results of a universal trial with young children. *Journal of Child and Family Studies*, *17*(3), 320–335. https://doi.org/10.1007/s10826-007-9144-3.*.

De Los Reyes, A., & Kazdin, A. E. (2005). Informant discrepancies in the assessment of childhood psychopathology: a critical review, theoretical framework, and recommendations for further study. *Psychological Bulletin*, *131*(4), 483–509. https://doi.org/10.1037/0033-2909.131.4.483.

Donovan, C. L. & March, S. (2014). Online CBT for preschool anxiety disorders: A randomised control trial. *Behaviour Research and Therapy*, *58*, 24–35. https://doi.org/10.1016/j.brat.2014.05.001.*.

Edrissi, F., Havighurst, S. S., Aghebati, A., Habibi, M. & Arani, A. M. (2019). A pilot study of the tuning into kids parenting program in Iran for reducing preschool children's anxiety. *Journal of Child and Family Studies*, *28*(6), 1695–1702. https://doi.org/10.1007/s10826-019-01400-0.*.

Fisak, B., Richard, D., & Mann, A. (2011). The prevention of child and adolescent anxiety: A meta-analytic review. *Prevention Science*, *12*(3), 255–268. https://doi.org/10.1007/s11121-011-0210-0.

Freeman, J., Garcia, A., Benito, K., Conelea, C., Sapyta, J., Khanna, M. …, & Franklin, M. (2012). The Pediatric Obsessive Compulsive Disorder Treatment Study for Young Children (POTS jr): developmental considerations in the rationale, design, and methods. *Journal of Obsessive-Compuslive and Related Disorders*, *1*(4), 294–300.

Havighurst, S. S., & Harley, A. (2007). *Tuning in to Kids: Emotionally intelligent parenting program manual*. Melbourne: University of Melbourne.

Hirshfeld-Becker, D. R., & Biederman, J. (2002). Rationale and principles for early intervention with young children at risk for anxiety disorders. *Clinical Child and Family Psychology Review*, *5*(3), 161–172.

Hirshfeld-Becker, D. R., Masek, B., Henin, A., Blakely, L. R., Pollock-Wurman, R. A., McQuade, J., DePetrillo, L., Briesch, J., Ollendick, T. H., Rosenbaum, J. F. & Biederman, J. (2010). Cognitive behavioral therapy for 4- to 7-year-old children with anxiety disorders: A randomized clinical trial. *Journal of Consulting and Clinical Psychology*, *78*(4), 498–510. https://doi.org/10.1037/a0019055.*.

Howes Vallis, E., Zwicker, A., Uher, R., & Pavlova, B. (2020). Cognitive-behavioural interventions for prevention and treatment of anxiety in young children: A systematic review and meta-analysis. *Clinical Psychology Review*, *81*. https://doi.org/10.1016/j.cpr.2020.101904.

Hugh-Jones, S., Beckett, S., Tumelty, E., & Mallikarjun, P. (2020). Indicated prevention interventions for anxiety in children and adolescents: A review and meta-analysis of school-based programs. *European Child & Adolescent Psychiatry*. https://doi.org/10.1007/s00787-020-01564-x.

Johnstone, K. M., Kemps, E., & Chen, J. (2018). A meta-analysis of universal school-based prevention programs for anxiety and depression in children. *Clinical Child and Family Psychology Review*, *21*(4), 466–481. https://doi.org/10.1007/s10567-018-0266-5.

Kennedy, S. J., Rapee, R. M. & Edwards, S. L. (2009). A selective intervention program for inhibited preschool-aged children of parents with an anxiety disorder: Effects on current anxiety disorders and temperament. *Journal of the American Academy of Child & Adolescent Psychiatry*, *48*(6), 602–609. https://doi.org/10.1097/CHI.0b013e31819f6fa9.*.

LaFreniere, P. J. & Capuano, F. (1997). Preventive intervention as means of clarifying direction of effects in socialization: Anxious-withdrawn preschoolers case. *Development and Psychopathology*, *9*(3), 551–564. https://doi.org/10.1017/S0954579497001302.*.

Lewis, K. M. (2016). An ounce of prevention: Evaluation of the fun FRIENDS program for kindergarteners in a rural school [ProQuest Information & Learning]. In *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 76, Issue 10–B(E).*.

Mazzone, L., Ducci, F., Scoto, M. C., Passaniti, E., D'Arrigo, V. G., & Vitiello, B. (2007). The role of anxiety symptoms in school performance in a community sample of children and adolescents. *BMC Public Health*, *7*, 347 https://doi.org/10.1186/1471-2458-7-347.

Mian, N. D. (2014). Little children with big worries: Addressing the needs of young, anxious children and the problem of parent engagement. *Clinical Child and Family Psychology Review*, *17*(1), 85–96. https://doi.org/10.1007/s10567-013-0152-0.

Mikami, A. Y., Ransone, M. L., & Calhoun, C. D. (2011). Influence of anxiety on the social functioning of children with and without ADHD. *Journal of Attention Disorders*, *15*(6), 473–484. https://doi.org/10.1177/1087054710369066.

Morgan, A. J., Rapee, R. M., Salim, A., Goharpey, N., Tamir, E., McLellan, L. F. & & Bayer, J. K. (2017). Internet-delivered parenting program for prevention and early intervention of anxiety problems in young children: Randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, 56(5), 417–425. https://doi.org/10.1016/j.jaac.2017.02.010.*.

Morgan, A. J., Rapee, R. M., Salim, A. & Bayer, J. K. (2018). Predicting response to an Internet-delivered parenting program for

anxiety in early childhood. *Behavior Therapy*, 49(2), 237–248. https://doi.org/10.1016/j.beth.2017.07.009.*.

Mrazek, P. J., & Haggerty, R. J. (1994). *Reducing risks for mental disorders: Frontiers for preventive intervention research*. Washington, DC US: National Academy Press.

Muris, P. (2019). Assessment of fear and anxiety in preschool children: Self-report and observational measures. In B. Fisak & P. Barrett (Eds.), *Anxiety in preschool children: Assessment, treatment, and prevention*. (pp. 99–113). Routledge/Taylor & Francis Group. https://doi.org/10.4324/9781315213828-5.

Neil, A. L., & Christensen, H. (2009). Efficacy and effectiveness of school-based prevention and early intervention programs for anxiety. *Clinical Psychology Review*, *29*(3), 208–215. https://doi.org/10.1016/j.cpr.2009.01.002.

Pahl, K. M. & Barrett, P. M. (2010). Preventing anxiety and promoting social and emotional strength in preschool children: A universal evaluation of the Fun FRIENDS program. *Advances in School Mental Health Promotion*, *3*(3), 14–25. https://doi.org/10.1080/1754730X.2010.9715683.*.

Phillips, S., & Mychailyszyn, M. (2021). A review of Parent-Child Interaction Therapy (PCIT): Applications for youth anxiety. *Children and Youth Services Review*, 125. https://doi.org/10.1016/j.childyouth.2021.105986

Ramsawh, H. J., & Chavira, D. A. (2016). Association of childhood anxiety disorders and quality of life in a primary care sample. *Journal of Developmental and Behavioral Pediatrics*, *37*(4), 269–276. https://doi.org/10.1097/DBP.0000000000000296.

Rapee, R. M. (2002). The development and modification of temperamental risk for anxiety disorders: Prevention of a lifetime of anxiety? *Biological Psychiatry*, *52*(10), 947–957.

Rapee, R. M., & Coplan, R. J. (2010). Conceptual relation between anxiety disorder and fearful temperament. In Heidi Gazelle & Kenneth Rubin (Eds.), *Social anxiety in childhood: Bridging developmental and clinical perspectives. New directions for child and adolescent development*. San Francisco: Jossey-Bass.

Rapee, R. M., Kennedy, S., Ingram, M., Edwards, S. & Sweeney, L. (2005). Prevention and early intervention of anxiety disorders in inhibited preschool children. *Journal of Consulting and Clinical Psychology*, 73(3), 488–497. https://doi.org/10.1037/0022-006X.73.3.488.*.

Rapee, R. M., Kennedy, S. J., Ingram, M., Edwards, S. L. & Sweeney, L. (2010). Altering the trajectory of anxiety in at-risk young children. *The American Journal of Psychiatry*, *167*(12), 1518–1525. https://doi.org/10.1176/appi.ajp.2010.09111619.*.

Rapee, R. M. (2013). The preventative effects of a brief, early intervention for preschool-aged children at risk for internalising: Follow-up into middle adolescence. *Journal of Child Psychology and Psychiatry*, *54*(7), 780–788. https://doi.org/10.1111/jcpp.12048.*.

Ruocco, S., Gordon, J. & McLean, L. A. (2016). Effectiveness of a school-based early intervention CBT group programme for children with anxiety aged 5–7 years. *Advances in School Mental Health Promotion*, 9(1), 29–49. https://doi.org/10.1080/1754730X.2015.1110495.*.

Santacruz, I., Méndez, F. J. & Sánchez-Meca, J. (2006). Play therapy applied by parents for children with darkness phobia: comparison of two programmes. *Child & Family Behavior Therapy*, 28(1), 19–35. https://doi.org/10.1300/J019v28n01_02.*.

Scheeringa, M. S., Weems, C. F., Cohen, J. A., Amaya-Jackson, L., & Guthrie, D. (2011). Trauma-focused cognitive-behavioral therapy for posttraumatic stress disorder in three-through six year-old children: A randomized clinical trial. *Journal of Child Psychology and Psychiatry*, *52*(8), 853–860. https://doi.org/10.1111/j.1469-7610.2010.02354.x.

Schneider, S., Blatter-Meunier, J., Herren, C., Adornetto, C., In-Albon, T. & Lavallee, K. (2011). Disorder-specific cognitive-behavioral therapy for separation anxiety disorder in young children: A randomized waiting-list-controlled trial. *Psychotherapy and Psychosomatics*, 80(4), 206–215. https://doi.org/10.1159/000323444.*.

Sigurvinsdóttir, A. L., Jensínudóttir, K. B., Baldvinsdóttir, K. D., Smárason, O., & Skarphedinsson, G. (2020). Effectiveness of cognitive behavioral therapy (CBT) for child and adolescent anxiety disorders across different CBT modalities and comparisons: A systematic review and meta-analysis. *Nordic Journal of Psychiatry*, *74*(3), 168–180. https://doi.org/10.1080/08039488.2019.1686653.

Tanner-Smith, E. E., Durlak, J. A., & Marx, R. A. (2018). Empirically based mean effect size distributions for universal prevention programs targeting school-aged youth: A review of meta-analyses. *Prevention Science*, *19*(8), 1091–1101. https://doi.org/10.1007/s11121-018-0942-1.

Towe-Goodman, N. R., Franz, L., Copeland, W., Angold, A., & Egger, H. (2014). Perceived family impact of preschool anxiety disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, *53*(4), 437–446. https://doi.org/10.1016/j.jaac.2013.12.017.

Wang, Z., Whiteside, S. P. H., Sim, L., Wigdan, F., Morrow, A. S., Alsawas, M., Barrionuevo, P., Tello, M., Asi, N., Beuschel, B., Daraz, L., Almasri, J., Zaiem, F., Larrea-Mantilla, L., Ponce, O. J., LeBlanc, A., Prokop, L. J., & Murad, M. H. (2017). Comparative effectiveness and safety of cognitive behavioral therapy and pharmacotherapy for childhood anxiety disorders: a systematic review and meta-analysis. *JAMA Pediatrics*, *171*, 1049–1056. https://doi.org/10.1001/jamapediatrics.2017.3036.

Waters, A. M., Ford, L. A., Wharton, T. A. & Cobham, V. E. (2009). Cognitive-behavioural therapy for young children with anxiety disorders: Comparison of a child + parent condition versus a parent only condition. *Behaviour Research and Therapy*, 47(8), 654–662. https://doi.org/10.1016/j.brat.2009.04.008.*.

Werner-Seidler, A., Perry, Y., Calear, A. L., Newby, J. M., & Christensen, H. (2017). School-based depression and anxiety prevention programs for young people: a systematic review and meta-analysis. *Clinical Psychology Review*, *51*, 30–47. https://doi.org/10.1016/j.cpr.2016.10.005.

Whalen, D. J., Sylvester, C. M., & Luby, J. L. (2017). Depression and anxiety in preschoolers: a review of the past 7 years. *Child and Adolescent Psychiatric Clinics of North America*, *26*(3), 503–522. https://doi.org/10.1016/j.chc.2017.02.006.

Zhang, H., Zhang, Y., Yang, L., Yuan, S., Zhou, X., Pu, J., Liu, L., Jiang, X., & Xie, P. (2017). Efficacy and acceptability of psychotherapy for anxious young children: a meta-analysis of randomized controlled trials. *Journal of Nervous and Mental Disease*, *205*(12), 931–941. https://doi.org/10.1097/NMD.0000000000000749.

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