Anxiety Disorders in Children and Young People

Cathy Creswell, University of Oxford, Sasha Walters, Oxford Health Specialist Psychological Intervention Centre, Brynjar Halldorsson, Oxford Institute of Clinical Psychology Training and Research, and Peter J. Lawrence, University of Southampton

https://doi.org/10.1093/acrefore/9780190236557.013.849
Published online: 28 June 2021

Summary

Anxiety disorders are the most common psychiatric disorders among children and young people, affecting an estimated 6.5% of children and young people worldwide. Childhood anxiety disorders often persist into adulthood if left untreated and are associated with a significant emotional and financial cost to individuals, their families, and wider society. Models of the development and maintenance of childhood anxiety disorders have underpinned prevention and treatment approaches, and cognitive behavioral treatments have good evidence for their efficacy. Ongoing challenges for the field include the need to improve outcomes for those that do not benefit from current prevention and treatment, and to increase access to those who could benefit.

Keywords: anxiety, child, adolescent, parent, prevention, treatment, cognitive behavior therapy

Subjects: Psychology and Other Disciplines

Signs and Symptoms of Anxiety Disorders in Children and Young People

The *Diagnostic and Statistical Manual of Mental Disorders: Fifth Edition* (*DSM-5*) classifies the following subtypes within the anxiety disorders: agoraphobia, generalized anxiety disorder, panic disorder, selective mutism, separation anxiety disorder, specific phobia, and social anxiety disorder (formerly social phobia). In contrast to previous editions, in *DSM-5*, obsessive-compulsive disorder and post-traumatic stress disorder are not classified within the anxiety disorder category and are therefore not reviewed within this article. Each of the anxiety disorders share features of excessive fear and related behavioral disturbances, particularly avoidance, but their presentation in children and adolescents is distinguished by unique markers and developmental characteristics as outlined in table 1.

Table 1. Characteristics and Age of Onset of *DSM-5* Anxiety Disorders in Children and Adolescents

Anxiety Disorder	Clinical Characteristic (*DSM-5*)	Average Age of Onset
Selective mutism	A consistent failure to speak in certain social situations, such as the classroom, in the absence of any formal language difficulty and where speech may be present in other situations such as the home. Symptoms must be present for at least one month, excluding the first month of school.	3.7 years (mean; Kristensen, 2000)
Separation anxiety	Developmentally inappropriate and pervasive fear of being separated from key attachment figure(s). Persisting for four weeks or more.	seven years (median; Kessler et al., 2005)
Specific phobia	Marked fear of a specific object and/or situation associated with immediate and disproportionate anxiety and avoidance that causes substantial impairment present for six months or more.	eight years (median; Wardenaar et al., 2017)
Social anxiety disorder	Marked fear of social situations specifically with peers for children in which there is a disproportionate fear of negative judgement leading to avoidance or endurance under distress that has substantial impact on functioning. Persisting for six months or more.	15.1 years (mean; Grant et al., 2005)
Panic disorder	Persistent panic attacks (sudden surge of fear accompanied by heightened physiological symptoms of anxiety) followed by at least one month of fear of recurrent attack or their consequences and result in unhelpful behavioral change.	24 years (median; Kessler et al., 2005)
Agoraphobia	Marked and disproportionate fear of two or more of: • being outside the home • being in crowds • being in enclosed or open spaces • using public transport for fear of being unable to escape, leading to clinically significant distress or impairment. Persisting for six months or more.	20 years (median; Kessler et al., 2005)
Generalized anxiety disorder	Excessive worry with a sense of being uncontrollable and linked to irritability, concentration and sleep disturbance, fatigue and physical tension. Worry may be non-specific and is not better explained by any of the above conditions. Present more days than not and persisting for six months or more.	26 years (median; Goncalves & Byrne, 2012)

Prevalence and Onset

The broad category of anxiety disorders have a worldwide pooled prevalence of 6.5% among children and adolescents (Polanczyk et al., 2015); however, estimates vary widely across studies and between community and clinical samples (e.g., Costello et al., 2005; Essau & Gabbidon, 2013; Hansen et al., 2016). Notably, recent trends observed in England have suggested that the overall prevalence of anxiety disorders is rising in children and young people, increasing from 3.9% in 2004 to 5.8% in 2017 among 5–15-year-olds (Sadler et al., 2018), and particularly high rates (14.9%) were found among 17–19-year-olds (Sadler et al., 2018). Typically, clinically significant anxiety disorders are found to be more common in girls (10.0%) than boys (6.2%), with the gap becoming prominent in later adolescence; indeed, Sadler et al. (2018) found that 17–19-year-old females were almost three times more likely to experience an anxiety disorder than 17–19-year-old males.

As can be seen in table 1, the age of onset differs between the subtypes of anxiety disorders, seemingly in line with a developmental trajectory. Separation anxiety is consistently found to have one of the earliest ages of onset, in the preschool and primary school years when many children can be more dependent on, and fearful when separating from, caregivers as part of a typical and adaptive pattern of forming emotional bonds (Bell & Ainsworth, 1972). Social anxiety peaks in early adolescence alongside the typical increase in social awareness, independence, and establishment of new peer groups. The emergence of General Anxiety Disorder (GAD), panic, and agoraphobia increase later in adolescence and into early adulthood as independence and general life pressures increase (Beesdo et al., 2009). The fears and worries of children and young people with anxiety disorders, however, differ from normative developmental experiences in that they are characterized by persistent symptoms, marked distress, and attempts to avoid that cause substantial disruption to everyday life. The association between the onset of anxiety disorders and a normative developmental trajectory of fears and worries poses unique challenges in diagnosis, highlighting the importance of attending to the markers of pathology, including duration, distress, and impairment (James et al., 2020) in order to effectively identify and respond to anxiety disorders. The changing nature of anxiety disorders across childhood also highlights the importance of recognizing the developmental needs of children and adolescents in order to ensure that interventions effectively meet those needs (James et al., 2020; Waite & Creswell, 2014).

Course and Impact

Anxiety disorders are chronic in nature, often persisting into adulthood if left untreated (Beesdo-Baum et al., 2012). Anxiety disorders can have a pervasive impact, including school refusal, particularly in the context of social anxiety disorder, reducing opportunities for meaningful occupation (Egger et al., 2003; Heyne et al., 2011) and impaired family functioning (Hughes et al., 2008). Young people with anxiety disorders are also at increased risk of self-harm and suicidal ideation (Hill et al., 2011; Sadler et al., 2018). Due to these widespread personal, social, academic, and family costs, anxiety has been shown to be one of the most costly disorders in terms of societal and healthcare costs (Fineberg et al., 2013). The severity, duration, and personal and societal costs of anxiety disorders in children highlights the need for accessible, effective, and developmentally appropriate interventions.

Identification and Assessment

The gold standard method for assessing anxiety disorders in children and adolescents is a structured diagnostic interview, such as the anxiety disorders interview schedule for children and parents (ADIS-C/P) (Silverman & Albano, 1996), which provides a comprehensive assessment of anxiety (including symptoms, severity, and interference) using independent information from both the parent or carer and the child or adolescent. However, while standardized assessments such as the ADIS-C/P are commonly used in research trials, they are rarely used in clinical settings (due to concerns, for example, about "labelling" and a lack of appropriate training; Martin et al., 2011) bringing risks that specific anxiety disorders may be missed or misdiagnosed, and that children and young people may be offered non-specific interventions that prove to be ineffective (Craddock et al., 2008). These risks have led to recommendations that standardized diagnostic assessments that identify the presence of specific disorders should be used as an adjunct to clinical assessment that focuses more broadly on presenting problems and the wider and developmental context (Martin et al., 2011). As anxiety disorders are associated with comorbid conditions, such as depression (Kovacs, 1989), increased risk of suicidal ideation (O'Neil Rodriguez & Kendall, 2014), and other factors that increase the risk of suicidal ideation and behavior (e.g., being bullied by peers, alcohol and drug problems, and poor academic and vocational achievement; Reijntjes et al., 2010; Robinson et al., 2011), a comprehensive assessment should also include appropriate consideration of risk of low mood, suicide, and self-harm.

Diagnostic interviews are typically supplemented with psychometrically reliable and valid questionnaire measures of symptoms and the impact of anxiety symptoms on the child's life at home, outside the home, and the impact on the wider family. Using multiple sources (e.g., parent, young person, teacher), rather than relying on only one reporter, can lead to a richer and potentially more accurate understanding of the child's symptoms (Reardon et al., 2019a). Observational assessments are rarely used outside research settings but can be used to determine the level of fear or anxiety experienced when the child is exposed to threatening stimuli. For example, behavioral approach tasks (BAT) involve the child taking steps of increasing difficulty towards a feared object or situation in a controlled environment (Ollendick et al., 2012), which can be particularly useful to assess the severity of many specific phobias.

Development

A number of studies have indicated that anxiety disorders aggregate in families (Hirshfeld-Becker et al., 2008). For example, meta-analyses have shown that the prevalence of anxiety disorders in the offspring of parents with anxiety disorders is higher than in the offspring of parents without anxiety disorders (Lawrence et al., 2019; Micco et al., 2009), although the risks appear to vary by the subtype of parent anxiety disorder and offspring anxiety disorder (Lawrence et al., 2019). On the basis of the family aggregation findings, Murray et al. (2009) proposed a model for the development of anxiety disorders in childhood accounting for the roles of genetic factors, heritable factors such as infants' and children's temperament (Robinson et al., 1992), and environmental factors such as anxiogenic parenting behaviors—themselves more likely to occur in the context of parent anxiety.

Genetic Risk

Genetic research has shown that both genes and environmental factors play important roles in the development of anxiety symptoms and disorders in children. Twin studies (designed to compare differences between identical/monozygotic twins and fraternal/dizygotic twins) can parse the contribution of genetic factors from non-genetic factors to any particular trait. Heritability is a measure of the amount of difference between people in a given population in a particular trait that can be attributed to genetic variation within that population. In twin studies of heritability of anxious traits, the relative contributions of genetic and environmental factors differ depending on whether stability of traits or changes in traits are measured (Feigon et al., 2001; Nivard et al., 2015). The stability of anxious traits over time appears to be influenced primarily by genetic factors. For example, Zavos et al. (2012) found that the stability of anxiety sensitivity over time was accounted for by genetic, rather than environmental, factors. However, changes in specific anxiety symptoms over time appear to be associated more with environmental than genetic factors (Waszczuk et al., 2014).

While twin studies can tell us about the proportion of variance in anxiety traits within a given population due to genetic and environmental factors, they cannot inform us about the *transmission* of anxiety from parents to offspring. This limitation has begun to be addressed by genetic studies which use a “children of twins” design and have found that the association between parent and offspring anxiety was accounted for solely by environmental (non-genetic) factors (Eley et al., 2015). Ahmadzadeh et al. (2019) further demonstrated the importance of environmental (non-genetic) factors in the inter-generational transmission of anxiety by using an adoption design (i.e., free of genetic confounds); reporting the potentially interesting finding that fathers’ (but not mothers’) anxiety when their adopted child was 6 years of age prospectively predicted their adopted child’s anxiety symptoms at 8 years of age.

Temperamental Inhibition

Behavioral inhibition (BI) comprises shyness and the tendency to retreat from unfamiliar events, objects, or people (Coll et al., 1984). A meta-analysis of prospective longitudinal studies implicates BI in the development of anxiety disorders; compared to its absence, BI was associated with an almost threefold increase in odds of anxiety disorders (odds ratio [OR] = 2.80, 95%; confidence interval [CI] = 2.03–3.86) (Sandstrom et al., 2020). The most robust prospective association between BI and a particular subtype of anxiety disorder is for social anxiety disorder (Chronis-Tuscano et al., 2009; Essex et al., 2010; Schwartz et al., 1999). In a meta-analysis, Clauss and Blackford (2012) found that BI was associated with significantly increased risk for social anxiety disorder (OR = 7.59, 95%; CI = 3.03–19.00). These odds ratios may be further inflated when the stability of BI over time is taken into account. For example, Hirshfeld et al. (1992) found that children who showed BI consistently at each of four assessments (from 21 months to seven and a half years) were at increased risk of anxiety disorders when compared to those who did not show consistent BI (i.e., including children who showed BI at up to three assessments). Again, these findings may be accounted for largely by the increased risk for social anxiety disorder specifically. Indeed, Chronis-Tuscano et al. (2009) found that BI, when present at each of four assessments (conducted from 14 months to seven years), was associated with an increased risk of social anxiety disorder by 16-years of age (OR = 3.79, 95%; CI = 1.18–12.12), but not with anxiety disorders more generally (OR = 2.93, 95%; CI = 0.98–8.80).

Parenting Behaviors

Parenting behaviors which increase a child's sense of threat, or which limit a child's opportunities to obtain and develop a sense of mastery over their environment, have been implicated in the development of child anxiety disorders (see e.g., Murray et al., 2009). Broadly, these can be categorized as information transfer, modelling, overcontrol, and rejection or lack of warmth.

Information Transfer

Information transfer refers to the verbal communication by a parent, to their child, of threat-relevant information (e.g., reassurance giving). Percy et al. (2016) conducted a systematic review of studies examining the association between information transfer and child anxiety disorders. While there was evidence to suggest that this may be a promising route for further investigation, methodological variation prevented reliable or generalizable conclusions.

Modelling

Modelling refers to parents exhibiting particular behaviors which are observable by their child. Experimental (De Rosnay et al., 2006; Gerull & Rapee, 2002) and longitudinal (Aktar et al., 2014; Murray et al., 2008) studies have shown that infants' and children's behaviors are affected by their mothers modelling anxious behaviors—although it should be noted that studies have most commonly only included mothers—and that behaviorally inhibited children were more affected than non-BI children (e.g., De Rosnay et al., 2006). As such, research to date is consistent with modelling playing a causal role in the development of children's fears, although there is little research examining its role in the development of child anxiety disorders.

Overcontrol

Overcontrol refers to a broad set of parenting behaviors which can reinforce children's avoidant behaviors, discourage their independence, and limit the development of their competence. Meta-analyses have shown that the strength of the association between parental overcontrol and child anxiety varies according to how overcontrol is operationalized (McLeod et al., 2007) and, inter alia, whether studies use a correlational design (Cohen's $d = 0.20$) or compare clinically anxious parents with non-anxious parents ($d = 0.77$), and whether the outcome is anxiety symptoms generally ($d = 0.52$) or social anxiety symptoms in particular ($d = 0.76$) (Van Der Bruggen et al., 2008). Experimental studies with non-clinical mother–child dyads (Thirlwall & Creswell, 2010, with 4–5-year-olds and De Wilde & Rapee, 2008, with 7–13-year-olds) showed that, when mothers were trained to behave in more or less controlling ways while helping their child prepare to give a presentation, children showed more anxiety when their mothers behaved with more control. Crucially, Thirlwall and Creswell (2010) found that this was the case only for children high in trait anxiety, suggesting that child factors can moderate the effect of maternal overcontrol. Thus, the evidence suggests that features of parental overcontrol influence the development of child anxiety and that this might be greater still in the face of child risk factors.

Rejection or Lack of Warmth

Parental rejection or lack of warmth refers to a broad set of parental behaviors which might lead children to believe that their environment is hostile and threatening, to develop a sense of incompetence, and to expect that outcomes will be negative. Reviews of the relationship between parental rejection and child anxiety symptoms suggest that their association is weak (Wood et al., 2003) and inconsistent, with a pooled effect of r = 0.20 for “rejection,” and r = 0.06 for warmth (McLeod et al., 2007).

Relationships Between Risk Factors

Risk factors should be considered not only in terms of the adverse outcomes they predict, but also how the presence of more than a single risk factor affects adverse outcomes. Evidence from longitudinal studies of the development of internalizing problems suggests that there is a cumulative effect of the number of risks a child faces. Ashford et al. (2008) found an exponential relationship between the number of risks a child had experienced by age 4–5 years, and the probability of internalizing problems at age 11 years. It is unclear whether the risk factors for child anxiety disorders outlined in this “Development” section operate additively (i.e., the presence of one risk factor in the face of another risk factor does not affect either’s impact) or interact (i.e., the presence of one risk factor in the face of another alters its impact). For example, Hudson et al. (2011) found evidence, for additive risks specifically, that BI and maternal anxiety disorders at 4 years old independently predicted child anxiety disorders (two years later), however when longer term outcomes were considered, Hudson et al. (2019) found evidence for interaction of risks, specifically, that BI at 4 years old predicted anxiety symptoms eight years later *only* when children had faced another risk factor (maternal overcontrol) at 4 years of age. Furthermore, child risk factors and parent risk factors appear to have bidirectional relationships. For example, cross-sectional and longitudinal studies have found that infant and child inhibited temperament elicit maternal anxiogenic behaviors (information transfer and overcontrol) among mothers with anxiety disorders, but not in mothers without anxiety disorders (Hirshfeld et al., 1997; Murray et al., 2008).

Intervention

Theoretical models of childhood anxiety problems have typically focused on developmental and risk factors. While these developmental models have the potential to inform successful preventive interventions for at-risk individuals, an understanding of risk factors is less helpful when it comes to identifying what psychological factors keep the problem going once it has developed; that is, the targets in treatment. Nonetheless, both effective prevention (e.g., Lawrence et al., 2017) and treatment (e.g., James et al., 2020) programs have typically comprised features of cognitive behavioral therapy (CBT) rather than specifically targeting identified risk factors.

The hallmark of CBT is understanding individual’s reactions, emotional and behavioral, in terms of how they interpret situations. CBT uses a variety of cognitive and behavioral interventions (e.g., modifying anxiety-related thought content, exposure) to produce changes in anxiety symptoms. CBT interventions have typically been informed by general adult CBT treatment models and aim to target psychological processes that are shared across different

anxiety problems (e.g., interpretation biases, avoidance). This “multi-disorder”-focused approach is partly because of the clinical characteristics of child anxiety disorders, in that there is a high level of comorbidity between them; and is partly for theoretical reasons, in that there are no well-validated disorder-specific models of the maintenance of anxiety disorders in children. In contrast, several disorder-specific cognitive models have been developed for adult anxiety disorders. These models identify the key psychological mechanisms that keep different anxiety problems going, which are then specifically targeted in treatment. For example, the most well-established maintenance models of adult social anxiety disorder are those of Clark and Wells (1995) and Rapee and Heimberg (1997). Besides interpretation biases, the models propose that safety-seeking behaviors, self-focused attention, self-monitoring, and catastrophic anticipatory and post-event processing play a key role in the maintenance of social anxiety disorder. Critically, many of these mechanisms are not typically targeted in CBT for childhood anxiety disorders, and this omission may play a crucial role in explaining why, for example, socially anxious children are less likely than children with other anxiety disorders to benefit from existing (multi-disorder-focused) CBT interventions (Ginsburg et al., 2011; Hudson et al., 2013).

The extent to which both adult general and disorder-specific cognitive behavioral models are applicable to children has been debated. It has been questioned whether children have the cognitive maturation for some of the processes outlined in adult models (Waite et al., 2015) and children’s behavior is heavily influenced by contextual factors that are specific to childhood (e.g., experiences with family, peers, and in schools) (Halldorsson & Creswell, 2017), highlighting the need to specifically consider children’s experiences and the contextual factors that influence them.

Prevention

Prevention programs can be classified as either “universal” or “targeted” (Offord et al., 1998). Universal prevention programs are offered to all children, regardless of whether they are at risk of developing anxiety disorders. Targeted programs are offered only to children who are at risk of developing anxiety disorders, but do not yet have an anxiety disorder. Targeted prevention programs can be either “selective” or “indicated” (Offord et al., 1998). “Selective” programs are for those who are at risk of anxiety disorders in light of membership of a particular group, such as children of parents with anxiety disorders, or behaviorally inhibited children. “Indicated” programs are for those who experience symptoms or show early signs of anxiety disorders, but have not yet developed anxiety disorders.

Table 2. Summary of Findings from Meta-Analyses of Anxiety Prevention Programs

Studies	Prevention Level	Diagnostic Outcomes	Symptom Outcomes	Control Group
Stockings et al. (2016)	Universal	RR = 0.25 (0.01 to 0.65) (EoT)	*d* = –0.16* (–0.27 to –0.03)[a] (EoT)	mixed
		RR = 1.1 (0.45 to 2.51) (6–9m F/U)	*d* = –0.12* (–0.24 to –0.01)[a] (6–9m F/U)	mixed
			d = –0.22 (–0.52 to 0.08)[a] (12m F/U)	mixed
	Selective	Only one study, therefore meta-analysis is not achievable.	*d* = 0.10 (–0.10 to 0.30)[a] (EoT)	mixed
			d = –0.31 (–1.87 to 0.63)[a] (12m F/U)	mixed
	Indicated	Only one study, therefore meta-analysis is not achievable.	*d* = –0.01 (–0.27 to 0.26)[a] (EoT)	mixed
			d = 0.00 (–0.20 to 0.21)[a] (12m F/U)	mixed
Caldwell et al. (2019)	Universal	Not reported	smd = –0.17 (–0.51 to 0.17)[b]	active
	Primary school	Not reported	smd = 0.02 (–0.20 to 0.22)[b]	waitlist
	Secondary school		smd = –0.15 (–0.51 to 0.16)[b]	active
			smd = –0.05 (–0.28 to 0.18)[b]	waitlist
	Targeted	Not reported	smd = –0.35 (–0.51 to 0.17)[b]	active
	Primary school	Not reported	Not reported	waitlist
	Secondary school		smd = –0.09 (–0.39 to 0.22)[b]	active
			smd = 0.30* (0.09 to 0.53)[b,c]	waitlist

Studies	Prevention Level	Diagnostic Outcomes	Symptom Outcomes	Control Group
Lawrence et al. (2017)	Targeted	Not reported	smd = –0.09 (–0.28 to 0.10) (EoT)	active
		RR = 0.09 (0.02 to 0.16)* (EoT)	smd = –0.43* (–0.73 to –0.12) (EoT)	passive
		RR = 0.17 (0.06 to 0.27)* (6m F/U)	smd = –0.46* (–0.62 to –0.30) (≤ 6m F/U)	passive
		RR = 0.31 (0.17 to 0.45)* (12m F/U)	smd = –0.32* (–0.63 to –0.01) (6–24m F/U)	passive

Notes:

***** $p < .05$

a represents the 95% confidence interval

b represents the 95% credibility interval

c indicates the control was favorable to prevention

d = Cohen's d

EoT = end of treatment

F/U = follow-up

Mixed (index treatments compared to active and passive controls)

RR = risk ratio

SMD = standardized mean difference

Universal Anxiety Prevention

Evidence from meta-analyses of universal anxiety prevention is inconsistent and suggests limited effectiveness at the end of programs, and little evidence of effectiveness at follow-up assessments. In relation to the effect of universal prevention for anxiety symptoms, this has been examined in at least three recent meta-analyses (see table 2 for a summary of characteristics and results of meta-analyses of anxiety prevention studies). Stockings et al. (2016) found small effects for universal prevention compared to a mixture of active and inactive controls (at end of treatment, d = –0.16, and, at six- to nine-month follow-ups, d = –0.12, but not at 12 months). Caldwell et al. (2019) reported a network meta-analysis of school-based anxiety prevention programs, and, at the end of treatment, universal prevention in primary schools was not better than usual curriculum in reducing anxiety symptoms, while in secondary schools, only mindfulness and relaxation was better than usual curriculum (standardized mean difference [SMD] = –0.65, 95%; credible interval [CrI] = –1.14 to –0.19; τ = 0.11). In follow-up assessments from 6 to 24 months, in both primary and secondary schools, compared to no intervention, prevention was ineffective in reducing anxiety symptoms. Notably, their particular finding regarding mindfulness in secondary schools contrasts with Odgers et al. (2020) who examined the effect of mindfulness-based interventions (MBIs) for anxiety symptom reduction, and found, compared to controls, at the end of school-based MBIs no significant difference in reduction of anxiety symptoms (d = 0.30, 95%; CI = –0.01 to 0.61). Both Caldwell et al. (2019) and Odgers et al. (2020) reported, compared to controls, no significant effects of anxiety programs delivered in schools at any follow-up assessment.

Only Stockings et al. (2016) examined universal prevention in relation to the onset of anxiety disorders in children and adolescents. Stockings et al. found that, compared to (active and inactive) control groups, universal psychological and education prevention programs effectively reduced the risk of onset at the end of the intervention by 75%, but there was no difference at all later assessment points.

Crucially, it is unclear whether universal anxiety prevention programs have a beneficial impact for those who most need it; that is, those at risk of developing problems with anxiety. Stallard et al. (2014) reported a randomized controlled trial (RCT) of universal anxiety prevention for 9–10-year-olds in schools in England, where, compared to usual school provision, the prevention program effectively reduced anxiety symptom severity compared to standard school provision when delivered by health (but not school) staff. However, notably, children who had the most severe anxiety symptoms at baseline (i.e., those at risk) showed no significant improvement (compared to usual school provision), while those who did not have severe anxiety symptoms at baseline did benefit (compared to usual school provision). These findings highlight that universal anxiety prevention might be ineffective for those who are most at risk of developing anxiety disorders.

Targeted Anxiety Prevention

Evidence from meta-analyses of targeted anxiety prevention is mixed and highlights key methodological considerations. At least three recent meta-analyses have examined the effects of targeted prevention on anxiety symptoms. Stockings et al. (2016) found no difference between indicated prevention and controls at any time point, and Lawrence et al. (2017) found that although targeted programs were effective compared to inactive controls at the end of programs, and follow-ups at up to 24 months, they were no better than active controls at the end of programs. In their network meta-analysis, Caldwell et al. (2019) found that, at the end of treatment, in primary schools, targeted prevention was no more effective than a waitlist control and that, in secondary schools, compared to no intervention, exercise effectively reduced anxiety symptoms (SMD = –0.47, 95% CrI = –0.86 to 0.09; $\tau = 0.06$). In follow-ups from 6 to 12 months, in primary and secondary schools, anxiety prevention was ineffective. The review identified only one study that found that prevention (CBT) in secondary schools effectively reduced anxiety symptoms at follow-up between 13 and 24 months (SMD = –0.26, 95% CrI = –0.52 to 0.01).

Two meta-analyses have examined prevention of anxiety disorders. Stockings et al. (2016) found that, compared to controls, selective programs were ineffective, but that an indicated program reduced the risk of anxiety disorders at six-month follow-up. Crucially, in this indicated program (Dadds et al., 1997) over 50% of children had an identified anxiety disorder at baseline, and this could therefore be considered a mix of prevention and early intervention. Lawrence et al. (2017) conducted a meta-analysis of studies which only included children who had no identified anxiety disorders at baseline and found that targeted prevention could effectively reduce the risk of onset of anxiety disorders at the end of treatment and at 6- and 12-month follow-up assessments, but this was based on only two studies.

In summary, evidence for efficacy of prevention for anxiety symptoms is inconsistent, with some evidence of superiority compared to inactive controls at the end of program and follow-up assessments up to 24 months, and non-superiority to active controls. In terms of targeted prevention of anxiety disorders, evidence is limited to very few studies. Overall conclusions are limited by methodological issues (e.g., comparison with only inactive controls, inclusion of children with identified anxiety disorders at baseline, and omission of assessment of anxiety disorders as outcomes).

Whom to Target and How?

Universal prevention programs might be ineffective for those most at risk of developing anxiety disorders, and the evidence for targeted prevention is inconclusive, but there appears to be clear room for improvement. There are at least three ways the effectiveness of anxiety prevention might be improved. First, given the possible costs of offering targeted prevention to children who are not at risk (Fox et al., 2013), outcomes might be strengthened if individual children are identified on the basis of the risk factors, such as inhibited temperament (e.g., Rapee, 2013). Second, in light of theoretical accounts of the development of child anxiety (Murray et al., 2009) and the evidence of cumulative and interactive relationships between risk factors (e.g., Ashford et al., 2008; Hudson et al., 2019), rather than identifying children on the basis of only a single risk factor (e.g., O'Leary-Barrett et al., 2013), outcomes may be enhanced by identifying children on the basis of multiple risk factors (e.g., Berry & Hunt,

2009; Kennedy et al., 2009). Third, given that theory (Murray et al., 2009) and evidence regarding risk factors for the *development* of anxiety disorders is not identical to the literature regarding the *maintenance* of anxiety disorders (Wong & Rapee, 2016), rather than focusing prevention on modifying factors that are hypothesized to maintain anxiety disorders (e.g., Kösters et al., 2015; Miller et al., 2011; see also the section "Treatment of Child Anxiety Problems"), outcomes may be improved by focusing on modifying those risk factors used to identify children as at risk. For example, Ginsburg et al. (2015) identified children as at risk in light of parent anxiety disorders, focused on modifying particular risk factors, including parenting behaviors, and thereby showed that reduced parental modeling of anxiety mediated improvement in child anxiety symptoms.

Treatment of Childhood Anxiety Problems

Cognitive Behavior Therapy

CBT is the most extensively evaluated treatment (Creswell et al., 2020) and is recommended by national clinical guidelines (e.g., NICE CG159 and CG31). In a recent Cochrane review, James et al. (2020) evaluated the findings of 87 RCTs of CBT for anxiety disorders in children and adolescents and concluded that CBT was superior to waitlist controls and could be recommended within clinical practice. Overall, studies reported a 49% remission rate in children who completed treatment (James et al., 2020). However, there were a number of limitations in the available literature, in particular that there was not currently sufficient evidence to determine whether CBT was superior to other active treatments or medication, whether treatment gains were sustained in the long term, and whether CBT was effective for younger children or children with intellectual deficits. In addition, there is clear room for improvement, particularly given that outcomes vary considerably across trials and between specific anxiety disorders (e.g., Ginsburg et al., 2011; Leigh & Clark, 2018; McKinnon et al., 2018) and is also lower than that achieved with some adult populations (71%–86%; Clark et al., 2003, 2006). These trials have typically evaluated multi-disorder CBT (CBT programs that are applied across a range of anxiety disorders; e.g., Kendall & Hedtke, 2006). However, there is some indication that disorder-specific treatments, based on an understanding of disorder-specific cognitive and behavioral maintenance factors, may have potential in improving treatment outcomes for youth, at least for some types of anxiety disorders (i.e., social anxiety) (Ingul et al., 2014).

What Are the Active Ingredients of CBT?

Very few studies have systematically explored the contribution of each component of CBT among children and adolescents. Those that have, have highlighted the important contribution of exposure but have raised questions about the benefits (and potential harms) of other anxiety management strategies. For example, Voort et al. (2010) evaluated the delivery of the *Coping Cat Workbook* to young people with anxiety disorders (and the March and Mulle, 1998 manual for young people with obsessive-compulsive disorder) and found that more frequent exposure was positively correlated with functional improvement, while the use of anxiety management techniques was negatively related to functional improvement. Furthermore, Whiteside et al. (2015) found large effects on child-rated anxiety and parent-rated functioning for children with mixed anxiety disorders who received an exposure intervention (involving

psychoeducation, building a hierarchy, parent-coached and parent-led exposures) compared to medium and minimal effect sizes, for anxiety and functioning respectively, for the children who received anxiety management (including relaxation, identifying negative thoughts, and problem solving). The importance of exposure for good outcomes was further supported by Peris et al. (2015) who found that the introduction of anxiety management techniques within a CBT program for the treatment of anxiety disorders was *not* associated with change in symptom severity. However, the introduction of cognitive restructuring and exposure were both associated with improvement in anxiety symptoms and functioning. Notably children responded faster than adolescents to the introduction of exposure tasks, as did children and young people receiving CBT alone compared to young people receiving CBT with medication. Thus, suggesting that the behavioral element of any CBT intervention may be the active ingredient to effect change, especially for younger children and those for whom CBT, is trialed before, or in the absence of, medication.

CBT Delivery Format

CBT has been manualized to support delivery in a number of ways, including individual or group child-focused (e.g., *Coping Cat*; Kendall & Hedtke, 2006), child- and parent-focused (e.g., *Cool Kids*, Rapee et al., 2006b), parent-led (e.g., Cobham, 2012; Creswell et al., 2019; Rapee et al., 2006a), and computerized (Pennant et al., 2015). The evidence is mixed regarding the relative outcomes achieved in these different formats. Several trials (e.g., Liber et al., 2008; Manassis et al., 2002) and most reviews (e.g., In-Albon & Schneider, 2007; James et al., 2020; Reynolds et al., 2012) have reported no significant differences between methods of delivery. For those that have identified differences, there appears to be little consistency in findings, limiting the confidence with which any conclusions can be drawn. For example, a recent network meta-analysis indicated that group therapy appeared to be superior to other formats (Zhou et al., 2019), but the quality of evidence was rated as low. Furthermore, studies recruited samples with mixed anxiety disorders and a wide age range leading to the conclusion that results should be interpreted with caution. Conversely, McKinnon et al. (2018) indicated that individual therapy was superior to group therapy for specific phobia, highlighting the potential for variation in efficacy across different treatment formats depending on children's age and presenting problem.

Alternative Psychological Treatments

Health guidelines recommend that "people with an anxiety disorder are offered evidence-based interventions" (p. 37; NICE QS53). However, there is a dearth of evidence evaluating the relative, or unique, benefits of non-CBT interventions for treating anxiety disorders in children and adolescents. In their review to evaluate the efficacy of counselling for young people, Pattison and Harris (2006) identified only three studies (two of which were uncontrolled) in which an alternative model to CBT was used to target anxiety (symptoms), specifically psychoanalytic psychotherapy. While CBT was an effective intervention, there was not enough evidence to support "other counselling approaches" (Pattison & Harris, 2006, p. 235). Subsequent literature has identified emerging evidence regarding the efficacy of alternative psychological treatment approaches for treating anxiety in children and adolescents, although this remains limited and inconclusive. For example, a recent meta-analysis concluded that MBIs had only a small effect on anxiety, and these benefits were not

maintained over time nor demonstrated across settings (Odgers et al., 2020). Hancock et al. (2018) evaluated the acceptance and commitment therapy (ACT) for anxiety disorders in children and adolescents in a RCT with 157 7- to 17-year-olds. Their study yielded promising results in which both ACT and CBT were superior to a waitlist control but did not significantly differ from each other (Hancock et al., 2018). Further work is needed to increase the confidence with which conclusions can be drawn about alternative psychological treatments to CBT for anxiety disorders in children and adolescents.

Pharmacological Approaches to Treatment

Selective serotonin reuptake inhibitor (SSRI) medication has been shown to significantly reduce anxiety symptoms compared to waitlist and appears to achieve similar outcomes to general forms of CBT (Ipser et al., 2009; Walkup et al., 2008). Data from the multicenter Child/adolescent Anxiety Multimodal Study (CAMS) trial in the United States indicated that the combination of CBT and an SSRI (Sertraline) augmented treatment effects; however, children prescribed Sertraline were more likely to experience restlessness, fatigue, insomnia, and sedation (e.g. Walkup et al, 2008). This finding, in combination with patient preferences, has typically led to the recommendation that CBT, rather than medication, be delivered as the first-line treatment approach for childhood anxiety disorders (Brown et al., 2007).

Developmental Considerations

RCTs for childhood CBT have typically included children from across broad age ranges, between 7 and 18 years of age, and there has been limited attention to possible developmental differences in both presentation and maintenance factors associated with anxiety problems in children and adolescents. For example, in Zhou et al. (2019), only 14 of 101 trials specifically focused on preadolescent children (i.e., those younger than 11 years) and only 23 focused specifically on adolescents (i.e., those aged 11 or older), with the rest spanning these age ranges. This is surprising given the differing clinical characteristics of children and adolescents, with children being significantly more likely to have separation anxiety disorder, and adolescents significantly more likely to have primary social anxiety disorder, a comorbid mood disorder, more severe anxiety, and school attendance difficulties (Waite & Creswell, 2014). It is also important to consider differences in children's and adolescents' cognitive maturation. There is of course substantial brain development experienced during childhood, adolescence, and adulthood (Casey et al., 2005), and it remains unclear at what age the psychological processes that have been identified to maintain anxiety problems come "online" in children and adolescents. For example, there is some evidence that, compared to children or adults, adolescents have different neurological pathways underpinning fear extinction, with adolescents less likely to retain new non-fearful information (Waters et al., 2017). Furthermore, the role of social-environmental factors, including the influence of particular people (e.g., peers, parents, teachers) on children's and adolescents' developing cognitions, changes markedly throughout development (Cole et al., 1997, 2001). Thus, developing further understanding of the cognitive, behavioral, and environmental factors that contribute to the maintenance of anxiety disorder and to treatment outcomes in psychological and pharmacological therapies, and how these operate across development and among particular populations, will be critical to enable us to continue to improve treatment outcomes for children and adolescents.

Treating Anxiety Disorders in the Context of Comorbidity

Anxiety disorders are highly comorbid with other mood and affective disorders, including depression (Kovacs, 1989), substance abuse (Kushner et al., 1990; Sadler et al., 2018), and disordered eating (Touchette et al., 2011). Furthermore, young people with neurodevelopmental conditions such as attention-deficit/hyperactivity disorder (ADHD) and autism spectrum conditions (ASCs) are at greater risk than neurotypical peers of developing an anxiety disorder (Davis et al., 2011; Kessler et al., 2005). Evidence surrounding the impact of comorbidity (particularly of emotional and behavioral problems) on treatment outcomes is mixed with several studies, suggesting that heightened comorbidity and complexity predict poorer treatment response in the longer term (e.g., Farrell et al., 2012; Hudson et al., 2013), while others have not found significant differences in outcomes for young people with and without comorbidity (e.g., Krebs et al., 2013). Similarly, James et al. (2020) found that comorbidity only accounted for a modest amount of variability in remission in anxiety diagnoses across studies. There is particular promise for modular approaches to CBT to target anxiety problems alongside other common comorbidities, such as low mood and behavioral problems (Weisz et al., 2012), but further work is needed to confirm efficacy over disorder-specific interventions.

Several RCTs have confirmed the efficacy of CBT for children and adolescents with anxiety disorders and comorbid ASCs yielding large effect sizes compared to treatment as usual on anxiety symptoms and functional impairment (e.g., Reaven et al., 2012; Storch et al., 2015). These trials have typically delivered manualized CBT that included modifications to meet the sensory and communication needs of the participants. As yet, there are no studies that compare modified CBT to standard CBT and so it is difficult to draw firm conclusions regarding the additive effect of such modifications.

There is some evidence to suggest that CBT can be delivered to effectively treat anxiety in the context of comorbid ADHD, with CBT appearing to be associated with a greater reduction in number of diagnoses, anxiety symptoms, and improved parent-reported functioning, in comparison with treatment as usual (Sciberras et al., 2018)—although this study relied on a small sample size precluding statistical comparisons. Maric et al. (2018) conducted a much larger-scale RCT comparing individual CBT to family CBT. Both groups experienced improvement in anxiety symptoms, and family CBT appeared superior to individual CBT at the one-year follow-up time, for children with more severe ADHD. These studies show promise for the effect of CBT at reducing anxiety symptoms in the context of neurodevelopmental conditions but the superiority of CBT over other treatment models has not been established. Notably, all of the above studies excluded children with an intelligence quotient of less than 70 and, to date, there have been no studies evaluating the efficacy of CBT for anxiety disorders in children and adolescents with intellectual disabilities (ID). This is a significant oversight in light of findings that children with ID are, on average, more likely to experience heightened levels of anxiety than peers without ID (e.g., Alesi et al., 2014; Nelson & Harwood, 2011).

Increasing Access to Effective Treatments for Children and Adolescents with Anxiety Disorders

While there is clear room for improvement in both prevention and treatment efforts, it is also clear that a good number of children and adolescents with anxiety disorders can benefit from interventions, with CBT typically recommended as the first-line approach. However, very few children and adolescents with anxiety disorders access CBT; for example, only 2% of children with anxiety disorders in England identified in the community (Reardon et al., 2019b). Similarly low rates of service use have been found more broadly in the United Kingdom, Australia, and the United States (Green et al., 2005; Lawrence et al., 2015; Merikangas et al., 2011). One potential way to increase access to evidence-based interventions is a stepped care model in which the least costly intervention is delivered initially, with more intensive interventions saved for those who do not, or can be predicted not to, benefit from the first step treatment (Bower & Gilbody, 2005). A number of brief interventions that can be delivered by non-specialist therapists have been developed and evaluated and provide promising ways to improve treatment access. For example, for preadolescents there is now good evidence that brief therapist-guided parent-led CBT is effective (e.g., Cobham, 2012; Rapee et al., 2006a; Thirlwall et al., 2013) and more cost effective than an alternative brief intervention (Creswell et al., 2017). With regard to low-intensity approaches for adolescents, there is promising evidence for online CBT (Pennant et al., 2015; Spence et al., 2011) although the positive benefits have been less clear in routine practice (Waite et al., 2019).

In the first systematic evaluation of a stepped care treatment approach for child anxiety disorders, Rapee et al. (2017) found that a stepped care approach (Step 1: low-intensity CBT, including guided parent-led CBT for under 13-year-olds and computerized self-help for those 13 years of age or older; Step 2: standard individual CBT; Step 3: then individually tailored treatment) achieved similar outcomes to standard CBT, although it required significantly less therapist time and lower costs from a societal perspective (Chatterton et al., 2019). Notably, the final step in the stepped care model failed to deliver particularly strong additional benefits, which is likely to have reduced the economic advantage of the stepped care approach.

Conclusions

Considerable advancement in the understanding, prevention, and treatment for anxiety disorders in children and adolescents has been made since the 1980s. However, there is still a great deal of room for improvement in both access to and outcomes from treatments. Given the high prevalence, impairment, and chronicity of childhood anxiety problems, achieving these improvements must be a major priority for public mental health research and practice.

References

Ahmadzadeh, Y. I., Eley, T. C., Leve, L. D., Shaw, D. S., Natsuaki, M. N., Reiss, D., Neiderhiser, J. M., & McAdams, T. A. (2019). Anxiety in the family: A genetically informed analysis of transactional associations between mother, father and child anxiety symptoms <https://doi.org/10.1111/jcpp.13068>. *Journal of Child Psychology and Psychiatry*, *60*(12), 1269–1277.

Aktar, E., Majdandžić, M., De Vente, W., & Bögels, S. M. (2014). Parental social anxiety disorder prospectively predicts toddlers' fear/avoidance in a social referencing paradigm. *Journal of Child Psychology and Psychiatry*, *55*(1), 77–87.

Alesi, M., Rappo, G., & Pepi, A. (2014). Depression, anxiety at school and self-esteem in children with learning disabilities. *Journal of Psychological Abnormalities*, *3*(3), 1–8.

Ashford, J., Smit, F., Van Lier, P. A., Cuijpers, P., & Koot, H. M. (2008). Early risk indicators of internalizing problems in late childhood: A 9-year longitudinal study. *Journal of Child Psychology and Psychiatry*, 49(7), 774–780.

Beesdo, K., Knappe, S., & Pine, D. S. (2009). Anxiety and anxiety disorders in children and adolescents: Developmental issues and implications for DSM-V. *Psychiatric Clinics*, *32*(3), 483–524.

Beesdo-Baum, K., Knappe, S., Fehm, L., Höfler, M., Lieb, R., Hofmann, S. G., & Wittchen, H. U. (2012). The natural course of social anxiety disorder among adolescents and young adults. *Acta Psychiatrica Scandinavica*, 126(6), 411–425.

Bell, S. M., & Ainsworth, M. D. S. (1972). Infant crying and maternal responsiveness. *Child Development*, *43*(4), 1171–1190.

Berry, K., & Hunt, C. J. (2009). Evaluation of an intervention program for anxious adolescent boys who are bullied at school. *Journal of Adolescent Health*, *45*(4), 376–382.

Bower, P., & Gilbody, S. (2005). Stepped care in psychological therapies: Access, effectiveness and efficiency: Narrative literature review. *The British Journal of Psychiatry*, *186*(1), 11–17.

Brown, A. M., Deacon, B. J., Abramowitz, J. S., Dammann, J., & Whiteside, S. P. (2007). Parents' perceptions of pharmacological and cognitive-behavioral treatments for childhood anxiety disorders. *Behaviour Research and Therapy*, *45*(4), 819–828.

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 *<https://doi.org/10.1016/S2215-0366(19)30403-1>*. *The Lancet Psychiatry*, *6*(12), 1011–1020.

Casey, B. J., Tottenham, N., Liston, C., & Durston, S. (2005). Imaging the developing brain: What have we learned about cognitive development? *<https://doi.org/10.1016/j.tics.2005.01.011>* *Trends in Cognitive Sciences*, *9*(3), 104–110.

Chatterton, M. L., Rapee, R. M., Catchpool, M., Lyneham, H. J., Wuthrich, V., Hudson, J. L., Kangas, M., & Mihalopoulos, C. (2019). Economic evaluation of stepped care for the management of childhood anxiety disorders: Results from a randomised trial. *Australian & New Zealand Journal of Psychiatry*, *53*(7), 673–682.

Chronis-Tuscano, A., Degnan, K. A., Pine, D. S., Perez-Edgar, K., Henderson, H. A., Diaz, Y., Raggi, V. L., & Fox N. A. (2009). Stable early maternal report of behavioral inhibition predicts lifetime social anxiety disorder in adolescence *<https://doi.org/10.1097/CHI.0b013e3181ae09df>*. *Journal of the American Academy of Child & Adolescent Psychiatry*, *48*(9), 928–935.

Clark, D. M., Ehlers, A., Hackmann, A., McManus, F., Fennell, M., Grey, N., Waddington, L., & Wild, J. (2006). Cognitive therapy versus exposure and applied relaxation in social phobia: A randomized controlled trial <https://psycnet.apa.org/doi/10.1037/0022-006X.74.3.568>. *Journal of consulting and clinical psychology*, *74*(3), 568–578.

Clark, D. M., Ehlers, A., McManus, F., Hackmann, A., Fennell, M., Campbell, H., Flower, T., Davenport, C., & Louis, B. (2003). Cognitive therapy versus fluoxetine in generalized social phobia: A randomized placebo-controlled trial. *Journal of consulting and clinical psychology*, *71*(6), 1058–1067.

Clark, D. M., & Wells, A. (1995). R. G. Heimberg, M. Liebowitz, D. Hope, F. Schneier (Eds.). A cognitive model of social phobia. *Social phobia: Diagnosis, assessment, and treatment* (pp. 69–93). Guilford Press.

Clauss, J. A., & Blackford, J. U. (2012). Behavioral inhibition and risk for developing social anxiety disorder: A meta-analytic study. *Journal of the American Academy of Child & Adolescent Psychiatry*, *51*(10), 1066–1075.

Cobham, V. E. (2012). Do anxiety-disordered children need to come into the clinic for efficacious treatment? <https://doi.apa.org/doi/10.1037/a0028205> *Journal of Consulting and Clinical Psychology*, *80*(3), 465–476.

Cole, D. A., Jacquez, F. M., & Maschman, T. L. (2001). Social origins of depressive cognitions: A longitudinal study of self-perceived competence in children <https://doi.org/10.1023/A:1005582419077>. *Cognitive Therapy and Research*, *25*(4), 377–395.

Cole, D. A., Maxwell, S. E., & Martin, J. M. (1997). Reflected self-appraisals: Strength and structure of the relation of teacher, peer, and parent ratings to children's self-perceived competencies. *Journal of Educational Psychology*, *89*(1), 55–70.

Coll, C. G., Kagan, J., & Reznick, J. S. (1984). Behavioral inhibition in young children. *Child Development*, *55*(3), 1005–1019.

Copeland, W. E., Angold, A., Shanahan, L., & Costello, E. J. (2014). Longitudinal patterns of anxiety from childhood to adulthood: The Great Smoky Mountains study. *Journal of the American Academy of Child & Adolescent Psychiatry*, *53*(1), 21–33.

Costello, E. J., Egger, H. L., & Angold, A. (2005). The developmental epidemiology of anxiety disorders: Phenomenology, prevalence, and comorbidity. *Child and Adolescent Psychiatric Clinics*, *14*(4), 631–648.

Craddock, N., Antebi, D., Attenburrow, M. J., Bailey, A., Carson, A., Cowen, P., Craddock, B., Eagles, J., Ebmeier, K., Farmer, A., & Fazel, S. (2008). Wake-up call for British psychiatry. *The British Journal of Psychiatry*, *193*(1), 6–9.

Creswell, C., Parkinson, M., Thirlwall, K., & Willetts, L. (2019). *Parent-led CBT for child anxiety: Helping parents help their kids*. Guilford Press.

Creswell, C., Violato, M., Fairbanks, H., White, E., Parkinson, M., Abitabile, G., Leidi, A., & Cooper, P. J. (2017). Clinical outcomes and cost-effectiveness of brief guided parent-delivered cognitive behavioural therapy and solution-focused brief therapy for treatment of childhood anxiety disorders: A randomised controlled trial. *The Lancet Psychiatry*, *4*(7), 529–539.

Creswell, C., Waite, P., & Hudson, J. (2020). Practitioner review: Anxiety disorders in children and young people–assessment and treatment. *Journal of Child Psychology and Psychiatry*, *61*(6), 628–643.

Dadds, M. R., Spence, S. H., Holland, D. E., Barrett, P. M., & Laurens, K. R. (1997). Prevention and early intervention for anxiety disorders: A controlled trial. *Journal of Consulting and Clinical Psychology*, *65*(4), 627–635.

Davis, T. E. III, Moree, B. N., Dempsey, T., Reuther, E. T., Fodstad, J. C., Hess, J. A., Jenkins, W. S., & Matson, J. L. (2011). The relationship between autism spectrum disorders and anxiety: The moderating effect of communication. *Research in Autism Spectrum Disorders*, *5*(1), 324–329.

De Rosnay, M., Cooper, P. J., Tsigaras, N., & Murray, L. (2006). Transmission of social anxiety from mother to infant: An experimental study using a social referencing paradigm <https://doi.org/10.1016/j.brat.2005.09.003>. *Behaviour Research and Therapy*, *44*(8), 1165–1175.

De Wilde, A., & Rapee, R. M. (2008). Do controlling maternal behaviours increase state anxiety in children's responses to a social threat? A pilot study. *Journal of Behavior Therapy and Experimental Psychiatry*, *39*(4), 526–537.

Egger, H. L., Costello, J. E., & Angold, A. (2003). School refusal and psychiatric disorders: A community study. *Journal of the American Academy of Child & Adolescent Psychiatry*, *42*(7), 797–807.

Eley, T. C., McAdams, T. A., Rijsdijk, F. V., Lichtenstein, P., Narusyte, J., Reiss, D., Spotts, E. L., Ganiban, J. M., & Neiderhiser, J. M. (2015). The intergenerational transmission of anxiety: A children-of-twins study <https://doi.org/10.1176/appi.ajp.2015.14070818>. *American Journal of Psychiatry*, *172*(7), 630–637.

Essau, C. A., Conradt, J., & Petermann, F. (2000). Frequency, comorbidity, and psychosocial impairment of anxiety disorders in German adolescents. *Journal of anxiety disorders*, *14*(3), 263–279.

Essau, C. A., & Gabbidon, J. (2013). Epidemiology, comorbidity and mental health service utilization. In C. A. Essau and T. H. Ollendick (Eds.), *The Wiley Blackwell handbook of the treatment of childhood and adolescent anxiety* (pp. 23–42). Wiley Blackwell.

Essex, M. J., Klein, M. H., Slattery, M. J., Goldsmith, H. H., & Kalin, N. H. (2010). Early risk factors and developmental pathways to chronic high inhibition and social anxiety disorder in adolescence <https://doi.org/doi:10.1176/appi.ajp.2009.07010051>. *American Journal of Psychiatry*, *167*(1), 40–46.

Farrell, L., Waters, A., Milliner, E., & Ollendick, T. (2012). Comorbidity and treatment response in pediatric obsessive-compulsive disorder: A pilot study of group cognitive-behavioral treatment. *Psychiatry Research*, *199*(2), 115–123.

Feigon, S. A., Waldman, I. D., Levy, F., & Hay, D. A. (2001). Genetic and environmental influences on separation anxiety disorder symptoms and their moderation by age and sex <https://doi.org/10.1023/A:1012738304233>. *Behavior Genetics*, *31*(5), 403–411.

Fineberg, N. A., Haddad, P. M., Carpenter, L., Gannon, B., Sharpe, R., Young, A. H., Joyce, E., Rowe, J., Wellsted, D., Nutt, D. J., & Sahakian, B. J. (2013). The size, burden and cost of disorders of the brain in the UK. *Journal of Psychopharmacology*, *27*(9), 761–770.

Fox, N. A., Barker, T. V., White, L. K., Suway, J. G., & Pine, D. S. (2013). Commentary: To intervene or not? Appreciating or treating individual differences in childhood temperament—remarks on Rapee (2013). *Journal of Child Psychology and Psychiatry*, *54*(7), 789–790.

Gerull, F. C., & Rapee, R. M. (2002). Mother knows best: Effects of maternal modelling on the acquisition of fear and avoidance behaviour in toddlers *<https://doi.org/10.1016/S0005-7967(01)00013-4>*. *Behaviour Research and Therapy*, *40*(3), 279–287.

Ginsburg, G. S., Drake, K. L., Tein, J.-Y., Teetsel, R., & Riddle, M. A. (2015). Preventing onset of anxiety disorders in offspring of anxious parents: A randomized controlled trial of a family-based intervention. *American Journal of Psychiatry*, *172*(12), 1207–1214.

Ginsburg, G. S., Kendall, P. C., Sakolsky, D., Compton, S. N., Piacentini, J., Albano, A. M., Walkup, J. T., Sherrill, J., Coffey, K. A., Rynn, M. A., & Keeton, C. P. (2011). Remission after acute treatment in children and adolescents with anxiety disorders: Findings from the CAMS. *Journal of Consulting and Clinical Psychology*, *79*(6), 806–813.

Goncalves, D. C., & Byrne, G. J. (2012). Sooner or later: Age at onset of generalized anxiety disorder in older adults. *Depression and Anxiety*, *29*(1), 39–46.

Grant, B. F., Hasin, D. S., Blanco, C., Stinson, F. S., Chou, S. P., Goldstein, R. B., Dawson, D. A., Smith, S., Saha, T. D., & Huang, B. (2005). The epidemiology of social anxiety disorder in the United States: Results from the national epidemiologic survey on alcohol and related conditions. *The Journal of clinical psychiatry*, *66*(11), 1351–1361.

Green, H., McGinnity, Á., Meltzer, H., Ford, T., & Goodman, R. (2005). *Mental health of children and young people in Great Britain, 2004*. Palgrave Macmillan.

Halldorsson, B., & Creswell, C. (2017). Social anxiety in pre-adolescent children: What do we know about maintenance?. *Behaviour Research and Therapy*, *99*, 19–36.

Hancock, K. M., Swain, J., Hainsworth, C. J., Dixon, A. L., Koo, S., & Munro, K. (2018). Acceptance and commitment therapy versus cognitive behavior therapy for children with anxiety: Outcomes of a randomized controlled trial. *Journal of Clinical Child & Adolescent Psychology*, *47*(2), 296–311.

Hansen, B., Oerbeck, B., Skirbekk, B., & Kristensen, H. (2016). Non-obsessive-compulsive anxiety disorders in child and adolescent mental health services: Are they underdiagnosed, and how accurate is referral information?. *Nordic journal of psychiatry*, *70*(2), 133–139.

Heyne, D., Sauter, F., Van Widenfelt, B., Vermeiren, R., & Westenberg, P. M. (2011). School refusal and anxiety in adolescence: Non-randomized trial of a developmentally sensitive cognitive behavioral therapy. *Journal of anxiety disorders*, *25*(7), 870–878.

Hill, R. M., Castellanos, D., & Pettit, J. W. (2011). Suicide-related behaviors and anxiety in children and adolescents: A review. *Clinical Psychology Review*, *31*(7), 1133–1144.

Hirshfeld, D., Biederman, J., Brody, L., Faraone, S. V., & Rosenbaum, J. F. (1997). Expressed emotion toward children with behavioral inhibition: Associations with maternal anxiety disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, *36*(7), 910–917.

Hirshfeld, D. R., Rosenbaum, J. F., Biederman, J., Bolduc, E. A., Faraone, S. V., Snidman, N., Reznick, J. S., & Kagan, J. (1992). Stable behavioral inhibition and its association with anxiety disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, *31*(1), 103–111.

Hirshfeld-Becker, D. R., Micco, J. A., Simoes, N. A., & Henin, A. (2008). High risk studies and developmental antecedents of anxiety disorders. *American Journal of Medical Genetics Part C: Seminars in Medical Genetics*, *148C*, 99–117.

Hudson, J. L., Dodd, H. F., Lyneham, H. J., & Bovopoulous, N. (2011). Temperament and family environment in the development of anxiety disorder: Two-year follow-up <*http://dx.doi.org/10.1016/j.jaac.2011.09.009*>. *Journal of the American Academy of Child & Adolescent Psychiatry*, *50*(12), 1255–1264.

Hudson, J. L., Lester, K. J., Lewis, C. M., Tropeano, M., Creswell, C., Collier, D. A., Cooper, P., Lyneham, H. J., Morris, T., Rapee, R. M., & Roberts, S. (2013). Predicting outcomes following cognitive behaviour therapy in child anxiety disorders: The influence of genetic, demographic and clinical information. *Journal of Child Psychology and Psychiatry*, *54*(10), 1086–1094.

Hudson, J. L., Murayama, K., Meteyard, L., Morris, T., & Dodd, H. F. (2019). Early childhood predictors of anxiety in early adolescence. *Journal of abnormal child psychology*, *47*(7), 1121–1133.

Hughes, A. A., Hedtke, K. A., & Kendall, P. C. (2008). Family functioning in families of children with anxiety disorders. *Journal of Family Psychology*, *22*(2), 325.

In-Albon, T., & Schneider, S. (2007). Psychotherapy of childhood anxiety disorders: A meta-analysis. *Psychotherapy and Psychosomatics*, *76*(1), 15–24.

Ingul, J. M., Aune, T., & Nordahl, H. M. (2014). A randomized controlled trial of individual cognitive therapy, group cognitive behaviour therapy and attentional placebo for adolescent social phobia. *Psychotherapy and Psychosomatics*, *83*(1), 54–61.

Ipser, J. C., Stein, D. J., Hawkridge, S., & Hoppe, L. (2009). Pharmacotherapy for anxiety disorders in children and adolescents <*https://doi.org/10.1002/14651858.CD005170.pub2*>. *Cochrane Database of Systematic Reviews*, *3*.

James, A. C., Reardon, T., Soler, A., James, G., & Creswell, C. (2020). Cognitive behavioural therapy for anxiety disorders in children and adolescents <*https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD013162.pub2/full*>. *Cochrane Database of Systematic Reviews*, *11*.

Kendall, P. C., & Hedtke, K. A. (2006). *Cognitive-behavioral therapy for anxious children: Therapist manual*. Workbook.

Kendall, P. C., & Hedtke, K. A. (2006). *Coping cat workbook* (2nd ed.). Workbook.

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.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of general psychiatry*, *62*(6), 593–602.

Kösters, M. P., Chinapaw, M. J., Zwaanswijk, M., Van der Wal, M. F., & Koot, H. M. (2015). Indicated prevention of childhood anxiety and depression: Results from a practice-based study up to 12 months after intervention. *American Journal of Public Health*, *105*(10), 2005–2013.

Kovacs, M. (1989). Affective disorders in children and adolescents. *American Psychologist*, *44*(2), 209–215.

Krebs, G., Bolhuis, K., Heyman, I., Mataix-Cols, D., Turner, C., & Stringaris, A. (2013). Temper outbursts in paediatric obsessive-compulsive disorder and their association with depressed mood and treatment outcome. *Journal of Child Psychology and Psychiatry*, *54*(3), 313–322.

Kristensen, H. (2000). Selective mutism and comorbidity with developmental disorder/delay, anxiety disorder, and elimination disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, *39*(2), 249–256.

Kushner, M. G., Sher, K. J., & Beitman, B. D. (1990). The relation between alcohol problems and the anxiety disorders. *The American Journal of Psychiatry*, 147(6), 685–695

Lawrence, D., Johnson, S., Hafekost, J., De Haan, K. B., Sawyer, M., Ainley, J., & Zubrick, S. R. (2015). *The mental health of children and adolescents* [Report]. Department of Health.

Lawrence, P. J., Murayama, K., & Creswell, C. (2019). 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*, *58*(1), 46–60.

Lawrence, P. J., Rooke, S. M., & Creswell, C. (2017). Prevention of anxiety among at-risk children and adolescents: A systematic review and meta-analysis *<https://doi.org/10.1111/camh.12226>*. *Child and Adolescent Mental Health*, *22*(3), 118–130.

Leigh, E., & Clark, D. M. (2018). Understanding social anxiety disorder in adolescents and improving treatment outcomes: Applying the cognitive model of Clark and Wells (1995). *Clinical Child and Family Psychology Review*, *21*(3), 388–414.

Liber, J. M., Van Widenfelt, B. M., Utens, E. M., Ferdinand, R. F., Van der Leeden, A. J., Gastel, W. V., & Treffers, P. D. (2008). No differences between group versus individual treatment of childhood anxiety disorders in a randomised clinical trial. *Journal of Child Psychology and Psychiatry*, *49*(8), 886–893.

Manassis, K., Mendlowitz, S. L., Scapillato, D., Avery, D., Fiksenbaum, L., Freire, M., Monga, S., & Owens, M. (2002). Group and individual cognitive-behavioral therapy for childhood anxiety disorders: A randomized trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, *41*(12), 1423–1430.

March, J. S., & Mulle, K. (1998). *OCD in children and adolescents: A cognitive-behavioral treatment manual*. Guilford Press.

Maric, M., van Steensel, F. J., & Bögels, S. M. (2018). Parental involvement in CBT for anxiety-disordered youth revisited: Family CBT outperforms child CBT in the long term for children with comorbid ADHD symptoms. *Journal of Attention Disorders*, *22*(5), 506–514.

Martin, A. M., Fishman, R., Baxter, L., & Ford, T. (2011). Practitioners' attitudes towards the use of standardized diagnostic assessment in routine practice: A qualitative study in two child and adolescent mental health services. *Clinical Child Psychology and Psychiatry*, *16*(3), 407–420.

McKinnon, A., Keers, R., Coleman, J. R., Lester, K. J., Roberts, S., Arendt, K., Bögels, S. M., Cooper, P., Creswell, C., Hartman, C. A., & Fjermestad, K. W. (2018). The impact of treatment delivery format on response to cognitive behaviour therapy for preadolescent children with anxiety disorders. *Journal of Child Psychology and Psychiatry*, *59*(7), 763–772.

McLeod, B. D., Wood, J. J., & Weisz, J. R. (2007). Examining the association between parenting and childhood anxiety: A meta-analysis *<https://doi.org/10.1016/j.cpr.2006.09.002>*. *Clinical Psychology Review*, *27*(2), 155–172.

Merikangas, K. R., He, J. P., Burstein, M., Swendsen, J., Avenevoli, S., Case, B., Georgiades, K., Heaton, L., Swanson, S., & Olfson, M. (2011). Service utilization for lifetime mental disorders in US adolescents: Results of the National Comorbidity Survey—Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry*, *50*(1), 32–45.

Merikangas, K. R., Nakamura, E. F., & Kessler, R. C. (2009). Epidemiology of mental disorders in children and adolescents. *Dialogues in Clinical Neuroscience*, *11*(1), 7–20.

Micco, J. A., Henin, A., Mick, E., Kim, S., Hopkins, C. A., Biederman, J., & Hirshfeld-Becker, D. R. (2009). Anxiety and depressive disorders in offspring at high risk for anxiety: A meta-analysis. *Journal of Anxiety Disorders*, *23*(8), 1158–1164.

Miller, L. D., Laye-Gindhu, A., Liu, Y., March, J. S., Thordarson, D. S., & Garland, E. J. (2011). Evaluation of a preventive intervention for child anxiety in two randomized attention-control school trials. *Behaviour Research and Therapy*, *49*(5), 315–323.

Murray, L., Creswell, C., & Cooper, P. J. (2009). The development of anxiety disorders in childhood: An integrative review *<https://doi.org/10.1017/S0033291709005157>*. *Psychological Medicine*, *39*(9), 1413–1423.

Murray, L., De Rosnay, M., Pearson, J., Bergeron, C., Schofield, E., Royal-Lawson, M., & Cooper, P. J. (2008). Intergenerational transmission of social anxiety: The role of social referencing processes in infancy. *Child development*, *79*(4), 1049–1064.

Nelson, J. M., & Harwood, H. (2011). Learning disabilities and anxiety: A meta-analysis. *Journal of learning disabilities*, *44*(1), 3–17.

NICE (National Institute for Health and Care Excellence). (2014, February 6). Anxiety disorders *<https://www.nice.org.uk/guidance/qs53>* [Quality standard QS53].

NICE (National Institute for Health and Care Excellence). (2005, November 29). *Obsessive-compulsive disorder and body dysmorphic disorder: Treatment—Guidance <https://www.nice.org.uk/guidance/cg31/chapter/1-Guidance>* [Clinical guideline CG31].

NICE (National Institute for Health and Care Excellence). *Social anxiety disorder: Recognition, assessment and treatment* <https://www.nice.org.uk/guidance/cg159>. [Clinical guideline CG159].

Nivard, M., Dolan, C., Kendler, K., Kan, K., Willemsen, G., Van Beijsterveldt, C., Lindauer, R. J. L., van Beek, J. H. D. A., Geels, L. M., Bartels, M., Middeldorp, C. M., & Boomsma, D. I. (2015). Stability in symptoms of anxiety and depression as a function of genotype and environment: A longitudinal twin study from ages 3 to 63 years *Psychological Medicine*, *45*(5), 1039–1049.

O'Leary-Barrett, M., Topper, L., Al-Khudhairy, N., Pihl, R. O., Castellanos-Ryan, N., Mackie, C. J., & Conrod, P. J. (2013). Two-year impact of personality-targeted, teacher-delivered interventions on youth internalizing and externalizing problems: A cluster-randomized trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, *52*(9), 911–920.

O'Neil Rodriguez, K. A., & Kendall, P. C. (2014). Suicidal ideation in anxiety-disordered youth: Identifying predictors of risk <https://doi.org/10.1080/15374416.2013.843463>. *Journal of Clinical Child & Adolescent Psychology*, *43*(1), 51–62.

Odgers, K., Dargue, N., Creswell, C., Jones, M. P., & Hudson, J. L. (2020). The limited effect of mindfulness-based interventions on anxiety in children and adolescents: A meta-analysis. *Clinical child and family psychology review*, *23*(3), 407–426.

Offord, D. R., Kraemer, H. C., Kazdin, A. E., Jensen, P. S., & Harrington, R. (1998). Lowering the burden of suffering from child psychiatric disorder: Trade-offs among clinical, targeted, and universal interventions. *Journal of the American Academy of Child & Adolescent Psychiatry*, *37*(7), 686–694.

Ollendick, T. H., Lewis, K. M., Cowart, M. J. W., & Davis, T. (2012). Prediction of child performance on a parent–child behavioral approach test with animal phobic children <https://doi.org/10.1177%2F0145445512448191>. *Behavior Modification*, *36*(4), 509–524.

Pattison, S., & Harris, B. (2006). Counselling children and young people: A review of the evidence for its effectiveness. *Counselling and Psychotherapy Research*, *6*(4), 233–237.

Pennant, M. E., Loucas, C. E., Whittington, C., Creswell, C., Fonagy, P., Fuggle, P., Kelvin, R., Naqvi, S., Stockton, S., Kendall, T., & Group, E. A. (2015). Computerised therapies for anxiety and depression in children and young people: A systematic review and meta-analysis. *Behaviour Research and Therapy*, *1*(67), 1–18.

Percy, R., Creswell, C., Garner, M., O'Brien, D., & Murray, L. (2016). Parents' verbal communication and childhood anxiety: A systematic review. *Clinical Child and Family Psychology Review*, *19*(1), 55–75.

Peris, T. S., Compton, S. N., Kendall, P. C., Birmaher, B., Sherrill, J., March, J., Gosch, E., Ginsburg, G., Rynn, M., McCracken, J. T., & Keeton, C. P. (2015). Trajectories of change in youth anxiety during cognitive: Behavior therapy. *Journal of Consulting and Clinical Psychology*, *83*(2), 239.

Polanczyk, G. V., Salum, G. A., Sugaya, L. S., Caye, A., & Rohde, L. A. (2015). Annual research review: A meta-analysis of the worldwide prevalence of mental disorders in children and adolescents. *Journal of Child Psychology and Psychiatry*, *56*(3), 345–365.

Rapee, R., Abbott, M., & Lyneham, H. (2006a). Bibliotherapy for children with anxiety disorders using written materials for parents: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, *74*(3), 436.

Rapee, R., Lyneham, H., Schniering, C., Wuthrich, V., Abbott, M., Hudson, J., *et al*. (2006b). *Cool Kids therapist manual: For the Cool Kids child and adolescent anxiety programs*. Centre for Emotional Health, Macquarie University.

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.

Rapee, R. M., & Heimberg, R. G. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behaviour Research and Therapy*, *35*(8), 741–756.

Rapee, R. M., Lyneham, H. J., Wuthrich, V., Chatterton, M. L., Hudson, J. L., Kangas, M., & Mihalopoulos, C. (2017). Comparison of stepped care delivery against a single, empirically validated cognitive-behavioral therapy program for youth with anxiety: A randomized clinical trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, *56*(10), 841–848.

Reardon, T., Creswell, C., Lester, K. J., Arendt, K., Blatter-Meunier, J., Bögels, S. M., Coleman, J. R., Cooper, P. J., Heiervang, E. R., Herren, C., & Hogendoorn, S. M. (2019a). The utility of the SCAS-C/P to detect specific anxiety disorders among clinically anxious children. *Psychological Assessment*, *31*(8), 1006.

Reardon, T., Harvey, K., & Creswell, C. (2019b). Seeking and accessing professional support for child anxiety in a community sample. *European Child & Adolescent Psychiatry*, *29*, 649–664.

Reaven, J., Blakeley-Smith, A., Culhane-Shelburne, K., & Hepburn, S. (2012). Group cognitive behavior therapy for children with high-functioning autism spectrum disorders and anxiety: A randomized trial. *Journal of Child Psychology and Psychiatry*, *53*(4), 410–419.

Reijntjes, A., Kamphuis, J. H., Prinzie, P., & Telch, M. J. (2010). Peer victimization and internalizing problems in children: A meta-analysis of longitudinal studies. *Child Abuse & Neglect*, *34*(4), 244–252.

Reynolds, S., Wilson, C., Austin, J., & Hooper, L. (2012). Effects of psychotherapy for anxiety in children and adolescents: A meta-analytic review. *Clinical Psychology Review*, *32*(4), 251–262.

Robinson, J., Kagan, J., Reznick, J. S., & Corley, R. (1992). The heritability of inhibited and uninhibited behavior: A twin study. *Developmental Psychology*, *28*(6), 1030–1037.

Robinson, J., Sareen, J., Cox, B. J., & Bolton, J. M. (2011). Role of self-medication in the development of comorbid anxiety and substance use disorders: A longitudinal investigation. *Archives of General Psychiatry*, *68*(8), 800–807.

Sadler, K., Vizard, T., Ford, T., Goodman, A., Goodman, R., & McManus, S. (2018). *Mental health of children and young people in England, 2017: Trends and characteristics*. NHS Digital.

Sandstrom, A., Uher, R., & Pavlova, B. (2020). Prospective association between childhood behavioral inhibition and anxiety: A meta-analysis *<https://doi.org/10.1007/s10802-019-00588-5>*. *Journal of Abnormal Child Psychology*, *48*(1), 57–66.

Schwartz, C. E., Snidman, N., & Kagan, J. (1999). Adolescent social anxiety as an outcome of inhibited temperament in childhood <http://doi.org/10.1097/00004583-199908000-00017>. *Journal of the American Academy of Child & Adolescent Psychiatry*, *38*(8), 1008–1015.

Sciberras, E., Mulraney, M., Anderson, V., Rapee, R. M., Nicholson, J. M., Efron, D., Lee, K., Markopoulos, Z., & Hiscock, H. (2018). Managing anxiety in children with ADHD using cognitive-behavioral therapy: A pilot randomized controlled trial. *Journal of Attention Disorders*, *22*(5), 515–520.

Silverman, W. K., & Albano, A. M. (1996). *The anxiety disorders interview schedule for DSM-IV—child and parent versions*. Psychological Corporation.

Spence, S. H., Donovan, C. L., March, S., Gamble, A., Anderson, R. E., Prosser, S., & Kenardy, J. (2011). A randomized controlled trial of online versus clinic-based CBT for adolescent anxiety. *Journal of Consulting and Clinical Psychology*, *79*(5), 629–642.

Stallard, P., Skryabina, E., Taylor, G., Phillips, R., Daniels, H., Anderson, R., & Simpson, N. (2014). Classroom-based cognitive behaviour therapy (FRIENDS): A cluster randomised controlled trial to Prevent Anxiety in Children through Education in Schools (PACES). *The Lancet Psychiatry*, *1*(3), 185–192.

Stockings, E., Degenhardt, L., Dobbins, T., Lee, Y., Erskine, H., Whiteford, H., & Patton, G. (2016). Preventing depression and anxiety in young people: A review of the joint efficacy of universal, selective and indicated prevention <https://doi.org/10.1017/S0033291715001725>. *Psychological Medicine*, *46*(1), 11–26.

Storch, E. A., Lewin, A. B., Collier, A. B., Arnold, E., De Nadai, A. S., Dane, B. F., Nadeau, J. M., Mutch, P. J., & Murphy, T. K. (2015). A randomized controlled trial of cognitive-behavioral therapy versus treatment as usual for adolescents with autism spectrum disorders and comorbid anxiety. *Depression and Anxiety*, *32*(3), 174–181.

Thirlwall, K., Cooper, P. J., Karalus, J., Voysey, M., Willetts, L., & Creswell, C. (2013). Treatment of child anxiety disorders via guided parent-delivered cognitive–behavioural therapy: Randomised controlled trial. *The British Journal of Psychiatry*, *203*(6), 436–444.

Thirlwall, K., & Creswell, C. (2010). The impact of maternal control on children's anxious cognitions, behaviours and affect: An experimental study. *Behaviour Research and Therapy*, *48*(10), 1041–1046.

Touchette, E., Henegar, A., Godart, N. T., Pryor, L., Falissard, B., Tremblay, R. E., & Côté, S. M. (2011). Subclinical eating disorders and their comorbidity with mood and anxiety disorders in adolescent girls. *Psychiatry Research*, *185*(1–2), 185–192.

Van Der Bruggen, C. O., Stams, G. J. J., & Bögels, S. M. (2008). Research review: The relation between child and parent anxiety and parental control: A meta-analytic review <https://doi.org/10.1111/j.1469-7610.2008.01898.x>. *Journal of Child Psychology and Psychiatry*, *49*(12), 1257–1269.

Voort, J. L. V., Svecova, J., Jacobson, A. B., & Whiteside, S. P. (2010). A retrospective examination of the similarity between clinical practice and manualized treatment for childhood anxiety disorders. *Cognitive and Behavioral Practice*, *17*(3), 322–328.

Waite, P., Codd, J., & Creswell, C. (2015). Interpretation of ambiguity: Differences between children and adolescents with and without an anxiety disorder <http://doi.org/10.1016/j.jad.2015.08.022>. *Journal of Affective Disorders*, *188*(1), 194–201.

Waite, P., & Creswell, C. (2014). Children and adolescents referred for treatment of anxiety disorders: Differences in clinical characteristics. *Journal of Affective Disorders*, *167*, 326–332.

Waite, P., Marshall, T., & Creswell, C. (2019). A randomized controlled trial of internet-delivered cognitive behaviour therapy for adolescent anxiety disorders in a routine clinical care setting with and without parent sessions. *Child and Adolescent Mental Health*, *24*(3), 242–250.

Walkup, J. T., Albano, A. M., Piacentini, J., Birmaher, B., Compton, S. N., Sherrill, J. T., Ginsburg, G. S., Rynn, M. A., McCracken, J., Waslick, B., & Iyengar, S. (2008). Cognitive behavioral therapy, sertraline, or a combination in childhood anxiety. *New England Journal of Medicine*, *359*(26), 2753–2766.

Wardenaar, K. J., Lim, C. C., Al-Hamzawi, A. O., Alonso, J., Andrade, L. H., Benjet, C., Bunting, B., de Girolamo, G., Demyttenaere, K., Florescu, S. E., Gureje, O., Hisateru, T., Hu, C., Huang, Y., Karam, E., Kienja, A., Lepine, J. P., Navarro-Mateu, F., Browne, M. O., Piaza, M., Posada- Villa, J., ten Have, M. L., Torres, Y., Xavier, M., Zarkov, Z., Kessler, E. C., Scott, K. M., & de Jong, P. (2017). The cross-national epidemiology of specific phobia in the World Mental Health Surveys. *Psychological Medicine*, *47*(10), 1744.

Waszczuk, M. A., Zavos, H. M., Gregory, A. M., & Eley, T. C. (2014). The phenotypic and genetic structure of depression and anxiety disorder symptoms in childhood, adolescence, and young adulthood. *JAMA Psychiatry*, *71*(8), 905–916.

Waters, A. M., Theresiana, C., Neumann, D. L., & Craske, M. G. (2017). Developmental differences in aversive conditioning, extinction, and reinstatement: A study with children, adolescents, and adults. *Journal of Experimental Child Psychology*, *159*, 263–278.

Weisz, J. R., Chorpita, B. F., Palinkas, L. A., Schoenwald, S. K., Miranda, J., Bearman, S. K., Daleiden, E. L., Ugueto, A. M., Ho, A., Martin, J., & Gray, J. (2012). Testing standard and modular designs for psychotherapy treating depression, anxiety, and conduct problems in youth: A randomized effectiveness trial. *Archives of General Psychiatry*, *69*(3), 274–282.

Whiteside, S. P., Ale, C. M., Young, B., Dammann, J. E., Tiede, M. S., & Biggs, B. K. (2015). The feasibility of improving CBT for childhood anxiety disorders through a dismantling study. *Behaviour Research and Therapy*, *73*, 83–89.

Wong, Q. J., & Rapee, R. M. (2016). The aetiology and maintenance of social anxiety disorder: A synthesis of complementary theoretical models and formulation of a new integrated model. *Journal of Affective Disorders*, *203*, 84–100.

Wood, J. J., McLeod, B. D., Sigman, M., Hwang, W. C., & Chu, B. C. (2003). Parenting and childhood anxiety: Theory, empirical findings, and future directions <https://doi.org/10.1111/1469-7610.00106>. *Journal of Child Psychology and Psychiatry*, *44*(1), 134–151.

Zavos, H., Gregory, A. M., & Eley, T. C. (2012). Longitudinal genetic analysis of anxiety sensitivity <http://research.gold.ac.uk/7014/2/AnxietySensitivity_rev_140411.pdf>. *Developmental Psychology*, *48*(1), 204–212.

Zhou, X., Zhang, Y., Furukawa, T. A., Cuijpers, P., Pu, J., Weisz, J. R., Yang, L., Hetrick, S. E., Del Giovane, C., Cohen, D., & James, A. C. (2019). Different types and acceptability of psychotherapies for acute anxiety disorders in children and adolescents: A network meta-analysis. *JAMA Psychiatry*, *76*(1), 41–50.

Related Articles

Anxiety Disorders in Late Life

Anxiety and Fear in Sport and Performance