Separation Anxiety Disorder

Aleta G. Angelosante, Magdalena A. Ostrowski, and Rachel R. Chizkov

Abstract Separation anxiety disorder (SAD) is one of the most commonly diagnosed anxiety disorders among children presenting for treatment. A child with SAD experiences excessive anxiety concerning separation from home or from caregivers as well as persistent, unrealistic worry about harm to self or loved ones. Fears may manifest as an unwillingness to leave home, reluctance to be alone, physical complaints around separation, and frequent reassurance seeking regarding safety. This chapter provides a review of the current literature regarding the course and etiology of SAD, with a focus on genetic studies, environmental factors, and parenting. The link between childhood SAD, panic disorder, and other forms of psychopathology in adulthood is also considered. Assessment and treatment of SAD are discussed, with a review of the empirical evidence for the use of traditional cognitive-behavioral therapy (CBT), camp-based CBT, modified parent–child interaction therapy, and psychopharmacological treatments. Research on assessments and treatments specifically for SAD has been scarce. Given the relatively high prevalence of this disorder, and its role as a predictor of later psychopathology, further study is warranted. Future research might examine treatments designed specifically for SAD or recruit a subject pool that would allow for independent investigation of results for those with SAD within a larger heterogeneous anxiety sample. Furthermore, additional attempts to understand SAD as a risk factor may lead to prevention of adult psychopathology in these children.

Keywords Separation anxiety disorder • Children • Etiology • Course • Cognitive-behavioral therapy • Parent–child interaction therapy

Case Scenario

Melissa is a 9-year-old girl in the 4th grade whose parents brought her in for an evaluation because of her fears of being away from them. Before going to school each morning, she checks in with her mother about who is picking her up and where she should wait. Her mother reminds her that the plan

A.G. Angelosante (✉)
NYU Child Study Center, NYU Langone Medical Center, New York, NY 10016, USA
e-mail: aleta.angelosante@nyumc.org

M.A. Ostrowski
Kean University, North Avenue, Hillside, NJ 07205, USA

R.R. Chizkov
Department of Child and Adolescent Psychiatry, NYU Langone Medical Center, One Park Avenue, 7th Floor, New York, NY 10016, USA

is always the same and that the schedule is on the refrigerator, but Melissa says she "just wants to be sure." Last week, when Melissa's mother got stuck in bad traffic on the way to pick her up and arrived 20 minutes late, she found Melissa in tears in the principal's office. When she saw her mother, Melissa hugged her tightly and said, "I thought you were dead!" Melissa has many friends, and although she will go to their homes, she much prefers to have play dates at her house. Her friends have recently begun having sleepovers for their birthday parties; Melissa will go to the party but will leave before everyone goes to bed. She tells her friends that her mom will not let her stay, but in truth, she is too nervous to sleep anywhere other than her own house. Each night, Melissa's mom reads to her and then must stay in her room until Melissa falls asleep. If Melissa wakes in the middle of the night, she will immediately go into her parents' room and either crawl into their bed or make a bed of blankets and sleep on their floor. Melissa was invited to go with her best friend to Disney World for a long weekend; although she was worried about it, she desperately wanted to go and said yes. The night before she was going to leave, she told her mother that she did not think she could go. She continued to cry all night and could not fall asleep. When her friend's family arrived to pick her up, she clung to her mother and refused to let go. The family left without Melissa, worried they would miss their flight. Melissa felt awful for having disappointed her friend and was extremely embarrassed about "acting like a baby."

Description of the Disorder

Separation anxiety is typical in infants between the ages of 8 and 14 months. Infants in this age range will often cry or become agitated when their parent or caregiver leaves. This behavior may wax and wane up until age 3 or 4 years when children are typically able to calm down shortly after the act of separation [1]. Separation anxiety becomes a disorder when the fear is excessive for the child's developmental age and begins to interfere with his/her daily functioning. The hallmark fear for children with separation anxiety disorder (SAD) is a developmentally inappropriate fear that something bad will happen to them (e.g., they will get kidnapped) or to their parents (e.g., they will get in a car accident or murdered) while they are apart. Children with SAD are often described as "clingy" and may stay extremely close to their parents even when they are nearby. For example, the child may not want to be on a separate floor of the house or even in a different room.

SAD is most often diagnosed in young children and therefore is classified within the "Disorders first recognized in infancy or childhood" section of the DSM-IV TR [2]. Diagnostic criteria for SAD state that symptoms must be present for at least 4 weeks and include the following: the child must experience excessive anxiety concerning separation from home or from caregivers; persistent, unrealistic worry about harm to self or loved ones; unwillingness to leave home, attend school, or go on outings; reluctance to be alone, especially at night; physical complaints when separation occurs or is anticipated; and frequent seeking of reassurance regarding safety of self and loved ones. Some researchers have found differences in symptom presentation across development. For example, Francis and colleagues [3] found that young children were more likely to have nightmares and bedtime separation fears, children in middle childhood were more likely to display distress when having to physically part from their parents (e.g., to attend school), and preteens and adolescents were most likely to experience significant somatic symptoms.

At the time of this writing, DSM-5 is undergoing field trials to test updates to various disorders. For SAD, the restriction of this disorder exclusively to childhood and adolescence is being lifted, and the presence of adult SAD is being recognized. Towards this end, SAD is being moved from the "Disorders first recognized in infancy or childhood" section to the "Anxiety Disorders" section. As a result, the language of the criteria is being changed throughout to more accurately describe the presentation of the disorder in both children and adults. For example, the word "child" is replaced with

"individual," reluctance to go to work is added to the criterion regarding unwillingness to leave home or attend school, and the phrase "major attachment figures" replaces "parents or caregivers" throughout, since for those with adult SAD, the anxiety is often regarding separation from spouses, partners, or children (www.dsm5.org).

Prevalence

SAD has a lifetime prevalence of 5.2 % [4] with the disorder being more common at younger ages. Peak age of onset for SAD appears to be between ages 7 and 9 [5]. Of youth who will develop SAD, 75 % will do so by age 10 and 90 % will do so by age 13 (Kessler et al., 2005) [4]. SAD prevalence appears to decline with age as findings show rates of 4.1 % in 9–10-year-old children, 1.2 % in 11-year olds, 0.6 % in 12-year olds, and progressively lower rates throughout adolescence. A study by Costello and colleagues [6] found a 3-month prevalence rate of 1 % in youth ages 9–16. SAD is also one of the most common anxiety disorders in children presenting for treatment. Last and colleagues [7] examined 73 consecutive admissions to their outpatient child anxiety-treatment clinic and found that SAD was the most common disorder, with approximately 1/3 of all children seeking treatment meeting criteria for the disorder. Reports of gender differences in SAD are mixed; several studies [7–10] found SAD to be more prevalent in girls, while others [3, 5] found no gender differences.

Course

There is significant evidence that SAD often remits in childhood or adolescence with persistent SAD being related to higher levels of comorbid externalizing behaviors. In a community sample of youth ages 8–16 followed over an average of 18 months, only 20 % of SAD cases persisted over the course of the follow-up period; at follow-up, 63 % of children diagnosed with SAD were new cases [10]. Last and colleagues [5] reevaluated a sample of anxious youth annually for 3 years and found that those diagnosed with SAD had the highest recovery rate (80 %).

Despite this high remission rate, SAD appears to be a risk factor for the development of other anxiety disorders in adolescence [11] and adulthood [12]. One study interviewed adults currently diagnosed with anxiety disorders about their history of symptoms and diagnoses; those who reported a history of SAD were more likely to have lifetime diagnoses of two or more additional disorders, including other anxiety disorders, depressive disorders, or substance use disorders. This suggests that SAD in childhood may be a vulnerability factor for the development of later psychopathology [12]. Another study examined the retrospective report of adults with panic disorder, from both referred and non-referred samples [13]. Both overanxious disorder and SAD during childhood independently predicted panic disorder in adulthood. In a follow-up study of the non-referred adults, Biederman and colleagues [14] found that SAD, along with specific phobia and social phobia, each independently predicted panic disorder.

Link Between Sad and Panic Disorder

In 1964, Donald Klein first postulated that separation anxiety in childhood was specifically linked to the development of panic disorder (with or without agoraphobia) in adulthood [15]. Since that time, many studies have examined the possibility of this link, which has resulted in mixed findings. Some studies examined retrospective reports of adults with panic disorder, while others examined

the offspring of adults with panic disorder to see if there is a high rate of SAD. Lewinsohn et al. [16] provided evidence for a specific link, using retrospective reports. It was found that children with SAD were more likely than children without SAD to develop panic disorder and depressive disorders in adulthood but were not more likely to develop other anxiety disorders. Another retrospective study found that retrospective reports of childhood SAD were associated with greater rates of adult panic disorder; however, it was also associated with nearly equal rates of adult social phobia [17]. Thus, retrospective studies have not provided unequivocal evidence as to whether the link between SAD and panic disorder is unique.

Others have looked at correlates of both SAD and panic disorder, such as ventilatory physiology. Hypersensitivity to CO_2 inhalation is a frequently observed biological correlate of panic disorder in adults [18–20]. Similarly, Pine and colleagues [21] found that children with SAD and to a lesser degree those with generalized anxiety also showed CO_2 hypersensitivity; no association was seen for social phobia. Another study examined this phenomenon by conducting a CO_2 challenge in the off-spring of matched samples of parents with and without panic disorder [22]. This study found that offspring of parents with panic disorder who met criteria for SAD had a threefold increase in the rate of panic attacks in response to CO_2 challenge as compared to offspring without SAD and to children with SAD whose parents did not have panic disorder. This group of children also showed increased rates of panting during the challenge, similar to panting behaviors displayed by adults with panic disorder in other studies, suggesting that youth with SAD who display hypersensitivity to CO_2 may be at increased risk for developing panic disorder in adulthood.

Several longitudinal studies have examined the course of SAD over time, specifically investigating this hypothesized link between childhood SAD and adult panic disorder. Pine and colleagues [23] examined a large sample of youth who had undergone psychiatric interviews between the ages of 9 and 18 (Time 1). This sample was reassessed 2 years later (Time 2) and again 10 years later (Time 3). SAD at Time 1 was significantly related to "fearful spells" (which closely resemble panic attacks) at Time 3. Although Time 1 SAD was positively related to a diagnosis of panic disorder at Time 3, the relationship did not reach statistical significance. Aschenbrand and Kendall [11] conducted a follow-up study of individuals who had participated in an anxiety-treatment program as children and adolescents, on average 7.4 years previously. Given the hypothesized link between SAD and panic disorder, they examined whether those youth who presented with SAD would be more likely to meet criteria for panic disorder than those who had presented with other anxiety disorders (e.g., social phobia or overanxious disorder). Both treatment successes and treatment failures were included. While a history of SAD was predictive of later anxiety disorders, it was not specifically predictive of panic disorder.

Comorbidity

Anxiety disorders are highly comorbid with one another, and it is in fact more likely for a child to meet criteria for more than one disorder than for just a single disorder. Last and colleagues [24] found that 79 % of youth with SAD met criteria for an additional disorder; in this study, those with SAD were most likely to have a concurrent diagnosis of overanxious disorder or major depression. More recent studies of SAD have found concurrent comorbidity of 20 % with generalized anxiety disorder and depressive disorders [25]. In addition to being comorbid with other anxiety disorders, SAD is most often associated with school refusal behavior; this is understandable given that school is the one place where children are required to be that separates them from their parents. One study of children who engaged in school refusal behavior found that SAD was the most common diagnosis, occurring in 22 % of the sample [26]. As discussed previously, there is a hypothesis that SAD leads to future panic disorder; one recent study examined youth who met criteria for both SAD and panic disorder concurrently [27]. Youth with comorbid SAD and panic disorder had a later onset of SAD and a greater number of additional comorbid diagnoses than those with only SAD.

Etiology

There are many pathways towards the development of SAD. In this section, we will review the genetics and biological vulnerabilities, parenting styles, and early developmental factors that appear to be influential in the onset of SAD.

Genetic and Biological Vulnerabilities

Family studies have revealed a genetic link for SAD. Weissman and colleagues [28] found significantly higher rates of anxiety disorders, particularly SAD, in the offspring of parents with anxiety and depressive disorders. Similarly, Biederman and colleagues [29] found increased rates of SAD in the offspring of parents with major depression, panic disorder with agoraphobia, or both, when compared to normal controls. Feigon and colleagues [30] examined separation anxiety symptoms, zygosity (i.e., physical similarity standing in for DNA markers), and shared environmental factors in a sample of twin pairs and their siblings. In the complete sample, genetics accounted for nearly 50 % of the variance, while shared environment factors accounted for about 20 %. However, this relationship was moderated by sex (with genetic influences greater in girls than boys, environmental factors greater in boys than girls) and by age (with genetic influences increasing with age). While this may suggest that shared genetics is more important than shared environmental factors, they also found that twins had a greater degree of shared environment variables than non-twin siblings, complicating interpretation of these data. Cronk and colleagues [31] also examined heritability and environmental influences in SAD by assessing the zygosity and shared environmental variables in female twin pairs. Unlike Feigon [30], they used categorical diagnostic criteria, rather than dimensional separation symptoms, as their measure of SAD. They found that genetics accounted for 62 % of the variance and shared environment accounted for 20 % of the variance, when examining participants who met full diagnostic criteria for SAD. Topolski and colleagues [32] investigated both genetic and environmental influences finding that genetics only accounted for 4 % while shared environment accounted for 40 % of the variance associated with an SAD diagnosis.

As our understanding of neurobiology grows, researchers have been examining the neurobiological bases of psychopathology. One recent study examined hypothalamic–pituitary–adrenocortical (HPA) system function in youth with SAD by measuring cortisol levels over the course of an experimental manipulation; all samples were collected in the afternoon [33]. Consistent with the study hypothesis, it was found that children diagnosed with SAD had higher cortisol secretion across all study timepoints (and therefore increased HPA activity) than controls. However, an additional hypothesis that children with SAD would also show additional cortisol increase following a separation paradigm (in which the child's mother left him/her alone with an unfamiliar examiner for a few minutes) was not confirmed; a ceiling effect could account for this lack of finding.

Parenting

Multiple studies have found that parents of anxious children tend to be overprotective [34], overly intrusive [35], and less likely to grant psychological autonomy [36] when compared with parents of non-anxious children. One study, directly examining adolescents' perceptions of psychological and behavioral control found that teens who endorsed high levels of separation anxiety symptoms reported that their parents were increasingly controlling and demanding and less sensitive to their needs [37]. Of note, however, is that the reports of adolescent anxiety symptoms and of parental behaviors were

based on adolescent report and therefore subject to reporting bias. Additional studies are needed to examine whether this relationship would hold in a sample of youth *diagnosed* with SAD and with observational evidence of parental control.

As noted previously, anxious youth often have parents who are anxious themselves, and these parents appear to both model and reinforce anxious behaviors, such as avoiding stressful or potentially dangerous situations [38]. One longitudinal study examined the role of parental anxiety on the development of SAD [39]. In a study of over 900 9-year-old children in New Zealand, mothers' reports of their own fear of being alone positively predicted children's separation anxiety symptoms 2 years later.

Early Developmental Factors

Several studies have examined the putative role of early experiences and behavioral tendencies in the development of SAD. One study examined whether early stranger anxiety could differentiate youth with SAD from those without [40]. This study found that parents of children with SAD (ages 4–14) described their children as having greater stranger anxiety as toddlers than parents of youth without SAD. While these data are compelling, it should be noted that this was a retrospective report of stranger anxiety; such parental report could be biased by the child's current separation anxiety. In addition, the retrospective report was simply one dichotomous variable, asking mothers to indicate whether or not the child had experienced stranger anxiety as a toddler. Additional prospective data would be useful here, as would dimensional measures that provide greater variability. Some researchers have wondered about the role that early separation experiences may have on the development of later separation anxiety. Poulton and colleagues [39] found that, in fact, early planned separations from parents (e.g., dropping child off at day care) were actually related to fewer separation anxiety symptoms in later childhood and adolescence. While this study offered prospective data, separation anxiety was examined only at a symptom level; it is not yet clear if these planned separations could actually act as a preventative measure against the development of SAD.

Assessment

General assessment of anxiety disorders is covered elsewhere in this volume. Here we will focus only on evaluations that specifically assess for symptoms of SAD. Questionnaire measures are not sufficient for diagnosing disorders, but they can provide valuable information about specific symptoms and/or their severity. While there are currently no questionnaires that assess solely for symptoms of SAD, several child anxiety questionnaires have subscales that are designed to reveal SAD symptoms.

Multidimensional Anxiety Scale for Children

The Multidimensional Anxiety Scale for Children (MASC) is a 39-item questionnaire normed for use with children ages 7–19 [41]. Both child-report and parent-report versions are available. The MASC assesses overall anxiety as well as four empirically derived domains of common childhood anxiety, one of which is called "separation anxiety/panic." This 9-item scale measures specific fears and worries that a child with SAD or panic might have using items such as "the idea of going away to camp scares me." The MASC has demonstrated adequate test-retest reliability and differentiates children with anxiety disorders from both those without any psychiatric disorders and those with psychiatric disorders other than anxiety [42].

Screen for Child Anxiety Related Emotional Disorders

The Screen for Child Anxiety Related Emotional Disorders (SCARED) was developed by Birmaher and colleagues [43] based on DSM-IV definitions of four of the most common anxiety disorders in children and adolescents: social phobia, SAD, panic disorder, and generalized anxiety disorder. It also contains a scale that assesses for school phobia, which, while not an official DSM-IV diagnosis, is a fear that is commonly seen in children with a wide array of diagnoses. The SCARED is comprised of 41 items on a 3-point Likert scale and has identical but separate versions for child-report and parent-report (only substituting you/your child). The SCARED has good internal consistency and reliability [43] and has also been found to have good reliability and validity when used in a clinical sample [44]. Unlike the MASC which combines symptoms of SAD and panic disorder into one scale, the SCARED has a separate 8-item scale specifically assessing symptoms of SAD, including items "I follow my mother or father wherever they go," and "I don't like to be away from my family."

Spence Children's Anxiety Scale

Like the SCARED, the Spence Children's Anxiety Scale (SCAS) was developed to assess specific DSM-IV factors of anxiety [45]. The SCAS is designed for use with children ages 8–12 and uses a 4-point Likert scale. It consists of 44 items, 6 of which are filler items asking about positive attributes of the child that are not factored into the total score or subscales; these items are meant to reduce the possibility of a negative response bias. In addition to a total anxiety score, the SCAS provides several subscale scores including a 6-item separation anxiety subscale that asks questions such as "I worry about being away from my parents," or "I feel scared if I have to sleep on my own." The SCAS has demonstrated good internal consistency, retest reliability, and convergent and discriminant validity [45]. As part of the move towards dimensional rather than categorical definitions of disorder in the new DSM-5, a 10-item scale from the SCAS has been developed that focuses specifically on SAD and is applicable across the life span. This measure is being assessed as part of the field trials and may be included in the DSM as a way of noting SAD severity.

Separation Anxiety Inventory

The Separation Anxiety Inventory (SAI) is a 12-item, 5-point Likert scale measure of separation anxiety symptoms in children that can be completed by the parent or the child (cf. [46]). Currently, it is not routinely available as it was developed as part of an unpublished thesis and appears to only be used by the research group that developed it. It demonstrated good reliability in one study [46], but more research is needed to determine if this will begin to fill the void of SAD measures.

Treatment

Many types of interventions are available for the treatment of SAD. Here, we will describe empirically supported treatments for SAD including traditional cognitive-behavioral approaches, novel behavioral approaches, and psychopharmacology.

Cognitive-Behavioral Approaches

In reviewing the literature, empirical evidence for treatment approaches for children with SAD is largely taken from trials conducted with groups of children with heterogeneous anxiety diagnoses. Randomized controlled studies of anxiety treatment in youth have primarily focused on a cognitive-behavioral therapy (CBT) approach. Psychoeducation, cognitive restructuring, exposure, modeling, relaxation strategies, and homework assignments are components of the CBT protocols for anxious youth. Recently, Silverman et al. [47] used the criteria of Chambless et al. [48] and Chambless and Hollon [49] to evaluate the evidence for various treatment approaches. According to these criteria, individual cognitive-behavior therapy (ICBT) and group cognitive-behavior therapy (GCBT) were classified as *probably efficacious* treatment approaches for children with anxiety disorders, including but not specific to SAD. Additional studies of CBT with various family components (FCBT) were assessed for which the evidence was found to be mixed. As children diagnosed with SAD were included in a majority of CBT trials [50–63], results provide evidence for the efficacy of these approaches for children with this disorder; however, none of those studies focused exclusively on outcomes for children diagnosed with SAD, nor did they examine the specific outcomes of those diagnosed with SAD. These treatments and their supporting evidence will be discussed in greater detail in Chap. 13.

The trials described above all include participants with diagnoses of SAD; however, results for children with that particular diagnosis were not reported in isolation from the rest of the group. Recently, a randomized controlled trial was conducted to evaluate a protocol specific to SAD, which includes CBT and parent-training components [46]. Within this trial, 43 children ages 5–7 were randomly assigned to either a wait-list or treatment condition. The treatment protocol included a combination of individual and family sessions, with SAD-specific psychoeducation, in addition to cognitive restructuring, exposure, and behavior management training. It was reported that 76 % of children receiving treatment were free of an SAD diagnosis 4 weeks after treatment completion, compared to 13.6 % of children assigned to the wait-list condition. It was noted that the disorder-specific nature of the protocol allowed for the inclusion of more severe SAD cases and that the effects of treatment were larger than those reported in meta-analyses of treatments for groups with various anxiety disorders. These results are promising, and further evaluations of SAD-specific protocols are warranted in order to determine whether such an approach leads to greater treatment gains than nonspecific CBT interventions for pediatric anxiety.

Preliminary evidence suggests that treatment protocols aimed at training parents to manage their child's anxiety may be beneficial for children diagnosed with anxiety disorders [64]. In a multiple baseline design, six families of children with SAD participated in a parent-training intervention with the goal of training parents to implement CBT methods with their children. Five of the six children no longer met SAD criteria following the intervention [65]. These results suggest that parent-training-based interventions may be particularly useful in the treatment of children diagnosed with SAD.

Novel Behavioral Treatments

While standard CBT for SAD has some empirical support, the unique features of SAD (e.g., oppositionality) have led clinical researchers to investigate innovative behavioral interventions to treat this disorder.

Parent–Child Interaction Therapy

Parent–Child Interaction Therapy (PCIT) is an approach that has been effective in treating childhood disruptive disorders and has provided a solid foundation for a novel approach to the treatment of

separation anxiety. The overarching goal of PCIT is to improve child and family functioning through effective behavior management while fostering a warm and responsive parent–child relationship [66]. Standard PCIT includes two phases conducted during an average of 13, 1-hour sessions. The Child-Directed Interaction (CDI) phase focuses on behavioral management skills whereas the Parent-Directed Interaction (PDI) phase promotes clear and effective communication methods. Parents are coached during these phases by a therapist using a one-way mirror and a "bug-in-the-ear" [67]. A pilot study of three children (6–8 years old) was conducted to test the application of standard PCIT methodology to the treatment of children with SAD [68]. All three cases were considered "recovered" meaning that none of these cases met criteria for SAD following six to seven treatment sessions [68]. However, a slightly larger pilot study (10 participants, ages 4–8) found that while some improvement in SAD severity was reported, nonclinical levels were not achieved [69].

As a result of the potential utility of standard PCIT in the treatment of SAD, the Center for Anxiety and Related Disorders at Boston University developed an adaptation of PCIT to address SAD concerns more specifically [70]. The Bravery-Directed Integration (BDI) phase was developed and added to the existing CDI and PDI phases. The BDI phase provides psychoeducation to parents as well as instruction on effective separation exposure practice in order to decrease avoidance. In an RCT of the modified PCIT for SAD, 34 children were randomized to either modified PCIT or wait-list control. Significant improvements from pre- to post-intervention in SAD severity were reported, along with improvements in academics, sibling behavior, and parenting stress [70]. Upon further investigation, the modified PCIT protocol may prove to be an effective treatment approach to address the specific needs of families of children with SAD.

Summer Camp

In emphasizing the importance of disseminating and implementing cognitive-behavioral interventions for youth with anxiety disorders, camp-based CBT has been highlighted for its accessibility and efficiency in treating this population [71]. Summer treatment programs for externalizing disorders have been supported by empirical studies [72, 73], and presently similar intensive protocols are being evaluated for internalizing disorders. Among these protocols is Camp CARD (Center for Anxiety and Related Disorders), a 1-week intensive group cognitive-behavioral intervention for children with SAD [74]. The treatment's authors propose that the camp utilize creative and novel techniques in a social context in order to implement traditional, research-supported CBT components within a developmental model. Psychoeducation, somatic anxiety management, cognitive restructuring, problem solving, exposure, relapse prevention, and a parent component serve as the foundation of the treatment approach. Differential reinforcement and shaping of behavior during in vivo separation exposures occurs throughout the 7-day intervention, as parental involvement is faded. A pilot study of the Camp CARD program was recently conducted with five girls with a principal diagnosis of SAD. Clinically meaningful reductions in SAD severity were noted for all participants; three participants no longer met criteria for a diagnosis of SAD immediately after the intervention, and no child met SAD criteria at the 2-month follow-up [74]. Improvements in parent- and child-reported separation anxiety as well as fear and avoidance were also reported. This preliminary evidence suggests that this intensive camp-based protocol has promise in the treatment of SAD; further research is needed to examine its efficacy and effectiveness with larger samples and community-based programs.

Psychopharmacological Treatment

Several pharmacological agents are also empirically supported for the treatment of anxiety disorders in youth, including SAD. One study by Walkup and colleagues [75] examined youth ages 6–17 with

SAD, generalized anxiety disorder, or social phobia. Children treated with fluvoxamine [a selective serotonin reuptake inhibitor (SSRI)] had fewer anxiety symptoms and better overall functioning at the end of 8 weeks than the placebo group. Overall, 76 % of those treated were much improved or very much improved by the end of the 8 weeks. However, results were not broken down by disorder, such that the specific effects on SAD in particular are not known. Other SSRI studies [76–78] had similar positive results for treatment of anxiety in youth, though SAD was not examined separately.

While SSRIs are most often studied and prescribed currently, earlier studies investigated tricyclic antidepressants (TCAs). Gittelman-Klein and Klein [79] conducted a small RCT for children who were exhibiting school refusal behavior, which the authors attributed primarily to separation anxiety concerns. Children who were prescribed imipramine were significantly more likely to return to school and had better overall functioning after 6 weeks than those who had been prescribed the placebo. However, later studies [80–82] failed to find TCAs superior to placebo when treating school refusal/SAD. It should be noted that in these early studies, as with the more recent SSRI studies, SAD was not evaluated independently. In these studies, school phobia or school refusal was seen as a proxy for SAD, and in the SSRI studies, the samples are comprised of youth with a variety of anxiety disorders including, but not limited to, SAD. Future research should examine the specificity of psychopharmacological treatment for SAD.

Melissa's Story: Treatment and Outcome

After the Disney World incident, Melissa's parents decided to bring her to a psychologist for help. Melissa met with a psychologist who specialized in CBT. Melissa first learned about recognizing her emotions and distinguishing physiological, emotional, and cognitive responses to anxiety. She was taught skills to manage her anxiety, such as relaxation and arguing back with her anxious thoughts (e.g., when thinking, "Mom is late—she must have gotten into an accident," she can remind herself that her mother has never been in a serious accident and people run late for many, non-tragic, reasons). Finally, she engaged in a set of gradual in vivo exposure exercises both with her therapist and on her own for homework. In session, Melissa started with easy exposures, such as having her mother leave the clinic to get a cup of coffee, and worked up to more challenging ones, like walking alone to a bookstore two blocks away and meeting her mother there. Her homework took a similar path, from easy exercises like having her mother leave her bedroom while she was still awake and resisting the urge to go to her parents' room in the middle of the night, to having her mother purposefully pick her up late from school, and finally to sleeping over at her best friend's house. The course of treatment took about 14 weeks, and Melissa and her parents reported that she was no longer fearful of bad things happening to her parents and was able to successfully calm herself down on the few occasions that she did become nervous.

Summary

SAD is a common disorder of childhood characterized by the fear that bad things will happen to the child and/or his/her parents, which often manifests itself in difficulty being away from parents or from home. While it seems clear that SAD in childhood is a risk factor for psychopathology later in life, little is known about what other specific variables may contribute to what that later psychopathology may be. Additional prospective studies of youth with SAD are needed in order to understand why SAD is a risk factor and how to use this information to prevent adult psychopathology in these children. Overall, very little research has been conducted on the assessment and treatment of SAD

specifically, nor have specific SAD results been examined within the context of larger anxiety studies. Future intervention studies would do well to examine treatments designed specifically for SAD or, in larger heterogeneous anxiety samples, to recruit a subject pool large enough to look at results for those with SAD independently. The development of additional SAD-specific assessment tools would also be valuable; there is only one, relatively new, questionnaire measure currently available that is specifically aimed at measuring symptoms of SAD. This is unusual, in that other anxiety disorders (e.g., social phobia, generalized anxiety disorder, and obsessive-compulsive disorder) have multiple questionnaire measures available both for the pediatric and adult populations. Such measures would assist in screening youth for SAD but could also be useful for measuring treatment effects. Given the relatively high prevalence of this disorder, and its role as a predictor of later psychopathology, improved understanding of SAD is needed.

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