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Separation Anxiety

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Continuing Education Activity

Separation anxiety disorder (SAD) refers to an exaggeration of otherwise developmentally normal anxiety manifested by excessive concern, worry, and even dread of the real or anticipated separation from an attachment figure. This activity outlines the diagnostic criteria, available assessment tools, and evidence-based treatments of SAD, including psychotherapy and psychopharmacological intervention, and highlights the role of the interprofessional team, including pediatricians, primary care physicians, and specialty providers in evaluating and managing patients with this condition.

Objectives:

- Outline the etiology of separation anxiety disorder.
- Explain the evaluation of a patient for separation anxiety.
- Summarize the management of separation anxiety.

Earn continuing education credits (CME/CE) on this topic.

Introduction

Separation anxiety disorder (SAD) is one of the most common childhood anxiety disorders.[1][2][3] SAD refers to an exaggeration of otherwise developmentally normal anxiety manifested by excessive concern, worry, and even dread of the real or anticipated separation from an attachment figure.[4][5] Although separation anxiety is a developmentally appropriate phenomenon, the disorder manifests with inappropriate intensity or the inappropriateness of age and context. Although The Diagnostic and Statistical Manual of Mental Disorders, Edition 4 (DSM-IV) had limited the diagnosis of SAD to children and adolescents, the diagnosis has been extended to include SAD first diagnosed in adulthood in the 5th edition (DSM-V).[3]

SAD has serious implications for quality of life and functioning across several areas of life, including work, social interactions, and close relationships. SAD has been described as a gateway anxiety disorder that can lead to a variety of poor mental and physical health outcomes[6], including excessive worry, sleep issues, excessive distress in social settings, poor academic performance, and somatic complaints.[1] Despite its prevalence, SAD is often underdiagnosed and undertreated.[1]

One of the marked differences in children diagnosed with separation anxiety compared to adults is the type of attachment figures involved. In the case of children, the attachment figures are usually adults, such as parents. Adults, in contrast, experience anxiety when experiencing real or anticipated separation from children, spouses, or romantic partners.[7]

Etiology

In the case of CSAD, separation anxiety disorders appear to run in families with increased rates of SAD in the 1st and 2nd-degree relatives of children diagnosed with CSAD. This effect also extends to immediate family evidenced by increased school refusal in siblings or children of patients with SAD. Parental anxiety (general, separation, or specific phobia) was correlated with higher levels of separation anxiety in their children, especially among mothers and daughters. Twin studies have shown a relatively strong genetic component for separation anxiety compared to environmental or attachment figure modeling.[7]

Developmentally appropriate separation anxiety normally manifests between the ages of 6-12 months of age after creating a secure attachment with a caregiver, usually the mother.[1] Attachment figures are normally a parent if a child. Likewise, an adult diagnosed with SAD will likely treat their child or partner as attachment figures. While children may develop attachments to a great number of individuals, most children are more optimally attached to a few individuals (usually parents or caregivers).[6] Normative separation anxiety peaks by the age of 3 years and eventually extinguishes as a child develops a greater sense of autonomy, cognitive ability, and an understanding that a separated attachment figure will return.[1][6][8][6]

The dual components of genetic predisposition and environmental factors both influence the normal development and pathological augmentation of separation anxiety in children.[8] Several studies have shown environmental factors may play a role in influencing the development of psychopathology in children,[8] including:

- Childhood parental loss (by separation, divorce, or death)[6]
- Extended parental absences (e.g., military deployment, incarceration, or immigration for work)
- Diagnosis of an anxiety disorder in a parent (especially panic disorder)[1]
- Parental alcoholism (14% of children of alcoholic parents develop SAD)[1]
- Parental conflict
- Low parental warmth[8]
- Parenting styles that discourage autonomy (e.g., reinforcing avoidance behaviors by removing the child from anxiety-provoking situations)[8]
- Parent co-sleeping with child (demonstrative increased risk of developing childhood anxiety or depressive symptoms)[1]
- Foster care
- Adoption
- Relocation due to occupation
- Maternal smoking
- Maternal alcohol consumption
- Low birth weight
- Female sex (increased prevalence in girls compared to boys in CSAD)[1][9]

Both environmental and genetic factors likely converge in parental interactions as a child's rearing environment is influenced by their parents' or caregivers' heritable behavioral characteristics, traumatic events, parenting style, relationships with others, and mental health issues, including anxiety and mood disorders.[1][6] Additionally, there may be a bidirectional relationship between the development of anxiety symptoms and somatic symptoms, including functional recurrent abdominal pain, asthma, and headaches (which have been correlated to the presence of anxiety or depressive disorders in a large number of pediatric patients).[3][4]

Epidemiology

Researchers estimate that childhood separation anxiety disorder (CSAD) is prevalent in approximately 1-4% of the general pediatric population, 7.6% of pediatric patients seen in the clinic, and approximately half of referrals for pediatric mental health treatment of anxiety disorders.[6][8][1] The average age of onset is approximately 6-7 years, making it of the earliest anxiety disorders to present in children.[1][6][10] SAD typically manifests in childhood and can persist into adulthood.

Due to criteria set forth in the DSM-IV, SAD was classified as a disorder diagnosed only in childhood, meaning that adults with the disorder by necessity were diagnosed in childhood or adolescence.[7] This raised concern for the underdiagnosis and treatment of adult separation anxiety disorder (ASAD) with recent research showing that onset in adulthood is prevalent, leading to subsequent changes that now exist under the DSM-5.

The lifetime prevalence of adult separation anxiety is 6.6% of the general U.S. population, with 77.5% reporting initial onset in adulthood.[7] The average age of onset in CSAD and ASAD is 23.1 (+/- 11.5 years) and 8.3 (+/- 8.1 years). Evidence shows that CSAD typically presents in early to middle childhood, whereas ASAD more frequently presents in late teens or early adulthood. Fortunately, most individuals diagnosed with ASAD seek treatment, with 75% of patients having received or currently receiving treatment according to research.[7]

There are distinct differences in the onset of SAD between men and women. CSAD occurs more commonly in girls (odds ratio [OR] = 2.2), while males are more likely to experience adult-onset SAD.[7]

Global Prevalence

There appear to be great cultural differences in the prevalence of SAD, with the effect being seen more strongly in collectivistic cultures than individualist cultures. Research investigating SAD occurs more often in Western societies and therefore, may not provide a full understanding of cultural influence.[7] For instance, researchers have suggested that collectivistic societies may not see separation anxiety as outside the bounds of cultural norms, whereas more individualistic societies that focus on independence may result in the higher prevalence of SAD. It is of interest to note that there is a distinct correlation of increased childhood anxiety with higher separation anxiety and less maternal differentiation of self. This points to the interplay of differentiation of self, autonomy, and interdependence in parent-child interactions.[7]

Research suggests that there may be cultural differences in issues of parental separation. For example, recent studies find that over 60 million Chinese children are separated from their parents for greater than three months at a time due to migration of adults from rural settings to industrial environments to search for improved wages. Over 2 million of these children reportedly live alone, and 80% of their parents report feeling inadequate for being separated from their offspring.[6]

Pathophysiology

Like other anxiety disorders, SAD relies on distortions of thought referred to as cognitive biases.[7] These cognitive biases can manifest in several altered cognitive processes, including attention, judgment, and memory, resulting in the increased negative interpretation of ambiguous stimuli following a trigger. Increased threat interpretations of ambiguous stimuli result in a greater attentional bias toward, and avoidance of, real or anticipated negative emotions or situations. Interestingly, research suggests that these threat interpretations are greater in the presence of depression with anxiety symptoms compared to either alone. Despite our current understanding of anxiety disorders, exact cognitive processes in SAD requires further research to understand the broad diversity of thought processes and behaviors in both children and adults, as well as provide further insight into improving treatment efficacy.[7]

Research of animal models of anxiety suggests that nearly all mammals exhibit anxious behavior in animals separated from parents.[6] Separation anxiety is hypothesized to have evolutionary advantages as early mammals developed increasingly prolonged parent-offspring interactions as progressively more complex cognitive and behavioral capacity evolved.[6]

There appears to be a common physiological link between adult panic disorder and CSAD in which there appears to be exaggerated emotional lability and respiratory reactivity to CO.^{[3][6][11]} These findings suggest possible shared neural circuitry and further investigations. Interestingly, early life adversities in humans are associated with increased visceral pain. Research indicates a high association of chronic pain syndromes and anxiety syndromes (odds ratio = OR 2.5-3.2) compared to chronic pain and depression (odds ratio = OR 2.1). In addition to the association of anxiety and mood disorders with chronic pain (approximately 20% of adults), life stressors seem to lead to both psychiatric and physiological complications later in life.^[6]

History and Physical

Clinicians should obtain a thorough history of presenting symptoms and perform a complete physical exam, especially in the context of somatic complaints without a known cause such as headaches, stomachaches, chest pain, or other symptoms.^[1] Understanding recent psychosocial stressors and the onset, duration, and impact of anxiety symptoms on family functioning will be instrumental in establishing a correct diagnosis.^[4] Given the environmental and genetic factors that influence the development of SAD, clinicians should obtain a thorough family and birth history, which are important for identifying contributing risk factors.^{[1][4]}

The clinical signs and symptoms of SAD vary widely among children and adults and may be influenced by differences in activities or environments. Regardless of the presentation, the symptoms must be sufficiently severe to impair normal everyday activity to be considered SAD.^[1] Typical behaviors include^[12]:

- Distress or anxiety in anticipation of caregiver or attachment figure leaving
- Excessive worry about something bad happening to the attachment figure (e.g., untimely death or being unable to return)
- Fear of being kidnapped or becoming lost
- Fear of being away from the caregiver such as going to school or sleeping away from the attachment figure
- Fear of being left home alone
- Avoidance of being alone
- Refusal to go to school
- Bedwetting
- Nightmares
- Poor concentration
- Poor academic performance
- Poor social interactions or isolation
- Irritability (a commonly misinterpreted symptom that is associated with anxiety disorders and present in up to 90% of generalized anxiety disorder patients)^[9]

A significant proportion of children and adults diagnosed with SAD will have comorbid somatic symptoms exacerbated by anticipation or real separation from attachment figures, including^{[1][3][4]}:

- Headaches
- Asthma
- Stomach discomfort
- Nausea

- Vomiting
- Chest pain
- Tachycardia
- Shortness of breath
- Dizziness

Evaluation

According to the DSM-V, a child, adolescent, or adult must exhibit a minimum of 3 of 8 symptoms that significantly impair social, academic, or occupational aspects of functioning lasting longer than four weeks[1] that cannot be better explained by other causes. These symptoms include[13]:

1. A pattern of significant distress with real or anticipated separation from home or important attachment figures
2. Persistent and excessive concern about losing attachment figures or harm befalling them
3. Persistent and excessive concern about experiencing an unfortunate event that results in separation from an attachment figure
4. Persistent reluctance or refusal to leave home or go to school work, or other places due to fear of separation
5. Persistent and excessive reluctance about or fear of being alone or without attachment figure
6. Persistent concern or reluctance of sleeping away from home or while attachment figure is not near
7. Repeated nightmares that center on the theme of separation
8. Recurrent somatic complaints in the setting of real or anticipated separation from attachment figures

Recent research suggests that several symptoms are associated with increased severity of separation anxiety:[1]

1. Overt distress related to separation
2. Reluctance to sleep separated from a major attachment figure
3. Fear of being alone or without an attachment figure

The Separation Anxiety Avoidance Inventory (SAAI) is the only diagnostic tool specifically designed to aid in the specific diagnosis of SAD.[1] It has a child and parent version both of which have good inter-rater and test-retest reliability.[1] A litany of other screens and assessments for anxiety disorders is helpful in identifying the presence of anxiety disorders and include the following assessments[1][8]:

- Screen for Child Anxiety Related Emotional Disorders (SCARED)
 - One of the most used screens of anxiety disorders[2][4]
- Screen for Child Anxiety Related Emotional Disorders-Revised (SCARED-R)
- Preschool Age Psychiatric Assessment (PAPA)
- Multidimensional Anxiety Scale for Children (MASC)
- Separation Anxiety Assessment Scale, Parent and Child Versions (SAAS-C/P)
- Spence Children's Anxiety Scale (SCAS)
- Fear and Avoidance Hierarchy (FAH)

- Fear Survey Schedule for Children-Revised (FSSC-R)
- Revised Child Manifest Anxiety Scale (RCMAS)
- State-Trait Anxiety Inventory for Children (STAIC)
- Social Phobia and Anxiety Inventory for Children (SPAI-C)
- Dyadic Parent-Child Interaction Coding System II (DPCIS II)

The common drawback of each of these screens is that they have limited ability to be administered for young children under the age of 6-7 largely due to underdeveloped cognitive and linguistic ability.[1]

No biomarkers currently exist to objectively establish a diagnosis of separation anxiety disorder. Several routes of investigation have been undertaken with varying levels of viability as biomarkers, including reduction of 18 kDa translocator protein density (TPSO), peripheral-type benzodiazepine receptor binding, and carbon dioxide hypersensitivity.[7][11]

Clinicians should recognize that SAD has periods of exacerbation and remission which must be distinguished from self-limiting manifestations of separation anxiety that are developmentally appropriate and do not warrant a diagnosis. [4][6] This fact can further complicate the diagnosis of SAD.[1]

Treatment / Management

Appropriate management and treatment of SAD are often dependent on the severity of symptoms. In the case of mild symptoms, patient and parent education, support, and encouragement may be sufficient to help the patient resume normal activities.[4] In the case of moderate or severe symptoms, psychotherapeutic or psychopharmacological intervention may be required. Regardless of treatment, the clinician should assess the patient with validated screening measures (e.g., SCARED) in subsequent visits to assess for interval changes in symptoms.[4]

Multiple randomized clinical trials (RCTs) have revealed that cognitive behavior therapy (CBT) and selective serotonin reuptake inhibitors (SSRIs) are effective in treating CSAD and ASAD (Level 1).[1][4] CBT is considered the first-line treatment of SAD, given its efficacy and very few adverse effects associated with treatment (Level 1). If CBT is not sufficient to reduce symptoms, combination therapy with second-line psychopharmacological intervention may be initiated (Level 1). Several RCTs showed that combined CBT and administration of an SSRI are the most effective improving anxiety symptoms (Level 1).[1][14]

SSRIs are normally prescribed for at least six months' past initial response before being gradually discontinued. Pharmacological treatment is limited due to a paucity of FDA approved medications for children younger than six years resulting in clinicians providing CBT alone.[1][8] Limited evidence exists regarding serotonin-norepinephrine reuptake inhibitors (SNRIs) or antidepressants such as tricyclic antidepressants, and they are therefore not prescribed. [5] Benzodiazepines are an available treatment option in adults but are generally not appropriate for treating children. [15]

CBT can be implemented in a variety of settings, including art therapy, CBT workbooks, online CBT programs, and "summer camp" CBT courses (Level 1).[1][8] Each of these modalities has been shown efficacy in reducing anxiety symptoms.[1][16][1]

Differential Diagnosis

The correct identification of the anxiety-inducing stressor is necessary to make an accurate diagnosis. In the case of separation anxiety disorder, the primary stressor is the child being away from his or her parents. Compare this to anxiety induced by potential embarrassment in social situations, fear of panic attacks, and ubiquitous dread or worry associated with social anxiety disorder, generalized anxiety disorder, and panic disorder, respectively.[4]

Anxiety Symptoms

Anxiety may manifest similarly to other disorders. Intrusive or unwanted thoughts, images, or urges associated with distress in OCD may be mistaken for anxiety. OCD had been classified as an anxiety disorder but has since been placed in its own category in the DSM-5. Additionally, hypervigilance, flashbacks, and emotional dysregulation typical of PTSD may be misconstrued for symptoms of anxiety. Like OCD, PTSD had been recategorized from an anxiety disorder to trauma and stress-related disorder. In the case of panic disorder, the source of the anxiety is key. Anxiety centered on separation from parents or attachment figures can result in severe anxiety and panic attacks but does not constitute panic disorder due to lack of dread with anticipation of another panic attack. The same distinction must be made with panic-like symptoms associated with perceived difficulty of escape in the case of agoraphobia. Typical bereavement can also present with anxiety, but it is largely centered on yearning for the deceased or preoccupation with the circumstances of the death instead of separation from attachment figures. Although a diagnosis of SAD can be made, it is important to note that many children and adults diagnosed with SAD may present with comorbid mood disorders, attention deficits disorders, and other anxiety disorders that may require further evaluation.[1][17]

Difficulty with Concentration and Decision Making

Anxiety disorders can often present with difficulty in focusing, concentrating, or making decisions. These symptoms similarly present in a variety of psychiatric disorders, including depression, ADHD, and learning disorders). In the case of bipolar and depressive disorders, difficulty in engagement is associated with low motivation and dysphoria, though individuals diagnosed with an anxiety disorder may develop these mood disorders while experiencing or anticipating the experience of anxiety. A careful assessment should be made to rule out these differential diagnoses.

Behavioral Issues

Patients with anxiety disorders often present with behavioral changes such as changes in sleep, restricted eating, irritability, and behavioral outbursts.[9] Differential diagnoses may include:

- Depression
- Somatic preoccupation
- Substance abuse
- OCD
- Eating disorders (e.g. anorexia nervosa, anorexia bulimia, etc.)
- Conduct Disorder
- Oppositional Defiant Disorder

Personality Disorders

Clinicians must be careful to discern anxiety symptoms from personality disorders such as dependent or borderline personality disorders. In the case of patients with a dependent personality disorder, an indiscriminate tendency to maladaptively rely on others differs from the concern about separation from and safety of attachment figures. One of the hallmark characteristics of borderline personality disorder is the prevalent fear of abandonment by loved ones similar to SAD. However, the added components of problems with identity, impulsivity, splitting, and volatile interpersonal relationships separate SAD from this personality disorder.

Somatic Complaints

Because many children with the suspected SAD present with idiopathic somatic complaints such as headaches, abdominal discomfort, chest pain, and other symptoms, a wide variety of medical differential diagnoses should be kept in mind including:[1]

- Appendicitis

- Inflammatory bowel disease
- Migraines
- Cardiac arrhythmias
- Respiratory issues (e.g., asthma)
- Thyroid disease
- Substance use

Toxicity and Side Effect Management

Pharmacological therapy is effective and associated with mostly mild adverse effects that seldom lead to pharmacological discontinuation.[5] Adverse effects of SSRIs can include the following:[1]

- Insomnia
- Vomiting
- Changes in appetite
- Fatigue
- Increased suicidal ideation (black box warning)
- Other uncommon complications such as Serotonin syndrome

CBT has virtually no risk to patients or their families during treatment.

Prognosis

SAD is associated with an increased risk of developing other anxiety and mood disorders, including panic disorder, agoraphobia, and OCD.[6] Recent research suggests that there may be a significant risk of developing depression or substance use disorders.[4][6][18]

SAD can cause significant distress in pediatric patients and their parents or caregivers, which can often lead to further complications in adulthood. Given the increased risk of developing comorbid mental disorders, it is of utmost importance to identify patients who are exhibiting high separation anxiety for early intervention to prevent significant impairment and development of SAD and comorbid mental health issues.[3][6]

Complications

Several studies have shown that, aside from significant impairment in multiple aspects of life, including work, relationships, and leisure activities, significant comorbidity can develop. Specifically, patients diagnosed with ASAD are more likely to be unmarried or divorced. ASAD is also associated with greater unemployment, lower education, and disability compared to healthy populations.[7] Additionally, over half of patients diagnosed with CSAD or ASAD develop comorbid mental disorders including specific phobia (OR = 4.3), PTSD (OR = 4.2), panic disorder (OR = 3.9), GAD (OR = 3.7), social anxiety disorder (OR = 3.6), agoraphobia (OR = 2.9), and OCD (OR = 2.4). Other comorbid disorders that may develop include body dysmorphic disorder, OCD, many of the symptoms of SAD can overlap with personality disorders, including dependent personality disorder and may be difficult to discern between the two.[7]

Patient Behavior

Children and adults diagnosed with SAD often experience symptoms that become detrimental to activities across a range of settings, including at home, school, employment, and interpersonal relationships. Detrimental effects may

include:[2][18]

- Social withdrawal
- Apathy
- Sadness
- Difficulty concentrating on work, play, and school
- School refusal
- Poor academic achievement
- Increased use of medical services

Future Functioning

Evidence suggests that patients diagnosed with SAD are at an increased risk of developing the following disorders:[4][18]

- Panic disorder (up to 75% of adults with anxiety disorders had SAD as a child and is a significant risk factor for developing adult panic disorder)[1]
- Agoraphobia
- Social phobias
- OCD
- Bipolar disorder
- Pain disorders
- Depressive disorders
- Alcohol dependence

Family Consequences

Having a diagnosis of SAD can cause strain on familial relationships, including parents of children diagnosed with SAD or children and partners of diagnosed adults. Such strains may include:[1][8]

- Frustration from reluctance to be separated
- Disproportionate attention is given to one child at the expense of siblings
- Partner resentment for excess attention provided to the child
- Lower parenting self-efficacy
- Increased anxiety in parents of children with significant symptoms[3]

Consultations

If a child is not responding to CBT and SSRIs, or the clinical diagnosis is ambiguous, a referral to a psychiatrist would be appropriate. Pediatricians often assume primary responsibilities for pharmacological treatment of the patient following consultation with a psychiatrist or other behavioral health specialist. The referral process may be gradual due to patient or parent reluctance to pursue care from psychiatric providers.[4] As many caregivers experience increased strain and anxiety themselves, the clinician may also screen for symptoms of mental disorders such as anxiety and depression. When appropriate, referrals for caregivers to receive treatment may be warranted.[1]

Deterrence and Patient Education

Parental education is essential for ensuring the successful treatment of children diagnosed with SAD. Parents benefit from learning the proper way of interacting with their children. Some parents may also benefit from managing their own anxiety or mental health issues that contribute to their child's psychopathology. Parents and caregivers should be educated regarding the expected treatment duration, length of effect onset, and adverse effects of psychopharmacological treatment, especially the risk of increased suicidal ideation following initiation of SSRIs.[1] Finally, parents should be heavily involved in CBT and be educated regarding the principles of positive and negative reinforcement patterns so that behavioral improvement can continue at home.

Pearls and Other Issues

Here are some important facts regarding separation anxiety disorder:

- SAD is one of the most common childhood anxiety disorders and is often inadequately diagnosed and treated.
- Separation anxiety disorder (SAD) is an anxiety disorder that stems from excessive concern, worry, and even dread with real or anticipated separation of an individual from an attachment figure.
- SAD is influenced by both genetic and environmental factors, including a family history of mental health issues, parenting disruptions, parental loss, and birth complications.
- Researchers estimate that CSAD is prevalent in approximately 1% to 4% of the general pediatric population, and ASAD is present in 6.6% of the general U.S. population.
- The clinical signs and symptoms of SAD vary widely among children and adults and manifest as separation-avoidance behaviors or somatic complaints with no known cause.
- The diagnosis of SAD is based on DSM-5 criteria (3 out of 8 symptoms) and can be assessed using the SAAI tool for both children and adults.
- First-line treatment is CBT, while second-line treatment includes augmentation with SSRIs – combined therapy is the most effective treatment.
- Differential diagnosis is broad and includes other anxiety disorders, mood disorders, behavioral pathologies, personality disorders, and medical causes of somatic complaints.
- If left untreated, patients diagnosed with SAD are at increased risk of developing other anxiety disorders, depressive disorders, poor academic performance, social isolation, and poor mental and physical health outcomes.

Enhancing Healthcare Team Outcomes

Pediatric providers are the most likely primary care providers to diagnose and initiate treatment for children with SAD. This is in part due to multiple studies showing that patients with anxiety disorders tend to have more frequent medical visits and increased rates of healthcare utilization, especially for comorbid medical conditionals or somatic complaints. Due to the somatic complaints that patients with SAD may experience, especially children, anxious patients may be overrepresented in specialty clinics, including cardiology, gastroenterology, and pulmonology. Several studies have suggested that nearly 1 in 4 adult patients and nearly half of non-acute pediatric patients who present for the emergency department (ED) meet the criteria for an anxiety disorder.

Barriers to appropriate diagnosis and treatment of patients with SAD include time constraints, unfamiliarity with diagnosing and managing anxiety disorders, concerns of stigmatizing patients, and reluctance in speaking with parents or adult patients about possible mental illness. In order to overcome these barriers, there have been increased efforts in developing collaborative care models for training pediatricians to identify and refer children with anxiety disorders to psychiatric professionals in-clinic or by telehealth means.[4]

Pediatric, family, internal, and emergency medicine clinicians should obtain a complete history, perform a physical exam to rule out medical causes of symptoms. They may also utilize a screening tool such as SCARED[2][4] to rule in anxiety disorders while using a diagnostic tool such as the SAAI[1] to help determine a diagnosis of SAD.

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