

Anxiety Disorders of Childhood and Adolescence

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1. BACKGROUND, EPIDEMIOLOGY AND RELEVANCE

Anxiety symptoms are ubiquitous in youth. Clinicians need to be familiar with the normal developmental course of anxieties in youth and their consequent mastery by children in order to differentiate normative versus pathological anxiety. Anxiety symptoms do not necessarily constitute an anxiety disorder.

Fear and anxiety are common experiences across childhood and adolescence. The clinician evaluating childhood anxiety disorders faces the task of differentiating the normal, transient and developmentally appropriate expressions of anxiety from pathological anxiety. Adept assessment and management of anxiety symptoms through reassurance, anticipatory guidance and psychoeducation of parents may forestall the development of full blown anxiety syndromes. Anxiety disorders are among the most common psychiatric disorders in children and adolescents affecting from 7-15% of individuals under 18 years of age. Anxiety disorders are not rare and often mimic or are comorbid with other childhood disorders. Symptoms such as school refusal, tantrums, or irritability may be less reflective of oppositional behavior than an underlying social phobia or generalized anxiety disorder. Given the uniqueness of each child and the complex interplay among the internal and external variables that drive anxiety, a multimodal approach to diagnosis and treatment is warranted.

Anxiety disorders are a heterogeneous group of disorders that vary in their etiology, treatment, and prognosis. Given these differences, we will discuss each condition individually to help the primary care clinician in parsing out the necessary details of each disorder.

Separation Anxiety Disorder

The estimated prevalence of SAD is 4-5%, making it one of the most common childhood psychiatric disorders. The following are characteristics of the disorder

- higher rate of SAD for girls than boys
- it can be diagnosed up until age 18
- primarily a disorder of prepubertal children
- average age of onset of 7.5
- earliest of all anxiety disorders to be diagnosed in children

Separation anxiety is typically a disorder of middle childhood (ages 7-9), although it has also been described in adolescents. If the disorder develops acutely, a precipitating stressor can often be identified. Common precipitating factors include a move, change of school, loss of a loved one, illness in the family or prolonged absence from school. Separation anxiety waxes and wanes, with exacerbations in times of stress. While some children recover fully after a single episode, others may experience a more protracted and chronic course.

Comorbidities with separation anxiety are common. As many as 60% of the children diagnosed with separation anxiety have at least one comorbid anxiety disorder, and 30% have two with the most likely being generalized anxiety disorder and specific phobias. Separation anxiety is also closely associated with depression; one third of the children diagnosed with SAD have comorbid depression.

School Refusal

School refusal is not an anxiety disorder diagnosis, per se, but it bears mentioning as it often presents in relation to other psychiatric diagnoses. School refusal is defined as difficulty attending school, associated with emotional distress, especially anxiety and depression. It is distinguished from truancy and conduct disorder because the child is home from

school with the parent’s knowledge, and the child does not have any associated antisocial behaviors, such as lying, stealing or destructiveness.

1-2% of all school aged children and 5% of all clinic-referred children become school refusers. Boys and girls are equally affected.

Generalized Anxiety Disorder

Some amount of anxiety is typical of normal. The majority of children, at one time or another experiences fears, worries and scary dreams. This leaves the distinction between pathological and developmentally appropriate anxiety to be made by the clinician (See Table 1.).

TABLE 1-1	Normal Developmental Fears
Birth–6 months	Loud noises, loss of physical support, rapid position changes, rapidly approaching unfamiliar objects
7–12 months	Strangers, looming objects, sudden confrontation by unexpected objects or unfamiliar people
1–5 years	Strangers, storms, animals, the dark, separation from parents, objects, machines, loud noises, the toilet, monsters, ghosts, insects, bodily harm
6–12 years	Supernatural beings, bodily injury, disease (AIDS, cancer), burglars, staying alone, failure, criticism, punishment
12–18 years	Tests and exams in school, school performance, bodily injury, appearance, peer scrutiny, athletic performance

Pathological worries of children with GAD tend to encompass more domains of concerns (such as health of family members, school performance, social relationships), be associated with greater distress, cause stronger daily interference, are more difficult to control.

Current understanding of the epidemiology of GAD in children and adolescents continues to rely heavily on data collected using the older diagnostic entity Overanxious Disorder—OAD. Using the older criteria, youth prevalence rates for GAD are estimated to be from 2.7% to 5.7%. The mean age of onset of GAD/OAD is reported to be 8.8 years. Comorbidities with GAD other anxiety disorders are high.

Specific Phobia

Specific phobia is a relatively common anxiety disorder for children. Prevalence is estimated to be at 3-4% and is somewhat higher for girls than for boys. It peaks in prevalence between 10 and 13 years of age. Some fears are common to normal development and are listed below. Normally, these fears decrease with age. Normal fears are distinguished from true phobias by their intensity and degree of impairment.

Age Group	Common Fear/ Normal
preschoolers	strangers, the dark, animals and imaginary creatures
elementary children	animals, the dark, threats to safety and thunder/lightening
adolescents	may be agoraphobic or have fears with sexual or failure themes

Social Phobia (Social Anxiety Disorder)

SP has the distinction of being the most common adult anxiety disorder, and is the third most common psychiatric disorder overall, with a lifetime prevalence of nearly 15%. Only depression and alcohol abuse occur more frequently. In children and adolescents, prevalence is frequently cited to be 1%, with the caveat that it is generally under-diagnosed in childhood and adolescence. Reasons for this include widespread failure of both parents and school personnel to identify the disorder, partially because they may not understand it is anything other than “shyness”.

Panic Disorder

Panic attacks are discrete, intense periods of fear and discomfort with cognitive and somatic symptoms that escalate in a crescendo fashion. Attacks may last minutes to, rarely, several hours. The attacks may be unexpected or “out of the blue.” or they may be situationally predisposed (more likely but not always occurring in a specific context), or situationally bound (almost always occurring in a specific situation). Panic attacks, but not necessarily the disorder itself, may occur in association with Specific Phobias, PTSD, Social Phobia or SP, but by definition, in panic disorder at least some of the panic attacks are unexpected. The following are a list of symptoms common to panic attacks. Panic attacks develop abruptly and reach a peak within ten minutes. To diagnose a panic attack one needs to experience at least four of the following symptoms:

- palpitations, pounding heart, or accelerated heart rate
- sweating
- trembling or shaking
- sensations of shortness of breath or smothering
- feeling of choking
- chest pain or discomfort
- nausea or abdominal distress
- feeling dizzy, unsteady, lightheaded, or faint
- derealization (feelings of unreality) or depersonalization (being detached from oneself)
- fear of losing control or going crazy
- fear of dying
- paresthesias (numbness or tingling sensations)
- chills or hot flashes

Panic disorder (PD) is diagnosed when the attacks are recurrent, and at least one of the attacks is followed by a month or more period of worried anticipation for additional attacks and/or concern for negative consequences of an attack, to the point where it may change behavior. Agoraphobia (fear and avoidance of situation in which a panic attack may occur or in which escape may be difficult) may or may not complicate the disorder.

Many adolescents report having had a panic attack, however, much fewer meet the criteria for panic Disorder. Prevalence of PD is reported to be between 0.5% and 5%, with greater representation in pediatric psychiatric clinic populations, e.g., up to 10% of referrals.

Obsessive-Compulsive Disorder

The essential features of obsessive-compulsive disorder (OCD) include the recurrence of obsessions and/or compulsions severe enough to be time consuming (i.e., more than one hour per day), cause marked impairment or significant distress. Obsessions as defined by (1), (2), (3), and (4):

- (1) recurrent and persistent thoughts, impulses, or images that are experienced at some time during the disturbance, as intrusive and inappropriate and that cause marked anxiety or distress
- (2) the thoughts, impulses, or images are not simply excessive worries about real-life problems
- (3) the person attempts to ignore or suppress such thoughts, impulses, or images, or to neutralize them with some other thought or action
- (4) the person recognizes that the obsessional thoughts, impulses, or images are a product of his or her own mind (not imposed from without as in thought insertion)

Children may or may not recognize that the obsessions or compulsions are unreasonable or excessive, and this criterion is not necessary in order to make a pediatric diagnosis. The following is the DSM-IV definition of a compulsion.

Compulsions as defined by (1) and (2):

- (1) repetitive behaviors (e.g., hand washing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigidly
- (2) the behaviors or mental acts are aimed at preventing or reducing distress or preventing some dreaded event or situation; however, these behaviors or mental acts either are not connected in a realistic way with what they are designed to neutralize, or prevent, or are clearly excessive obsessions that are recurrent and persistent thoughts, urges, impulses or images that are experienced

Around 2% of children meet criteria for OCD. Cases of clinically significant OCD need to be distinguished from the sub-clinical obsessions and compulsions experienced by large numbers of children and adolescents in the course of normal development. The mean age of onset is 10.3 years.

Like adults, children with OCD tend to present with both obsessions and compulsions, although independent presentations of compulsions and (less likely) obsessions are possible. Symptoms tend to follow adult patterns: at some time during the course of the illness, washing rituals affecting more than 85% of children with OCD, repeating rituals 51% and checking rituals 46%. Ordering, arranging, counting, collecting, ensuring symmetry and a preoccupation with having said or done the right thing are all common.

Childhood onset OCD is a chronic and debilitating illness. Studies indicate that the majority of children with OCD will require long-term medication treatment and that many if not most will continue to have symptoms into adulthood.

Selective Mutism

Selective mutism is characterized by the consistent failure to speak in specific social situations in which there is the expectancy for speech, despite speaking in other situations, such as the home. The failure to speak is not due to a lack of knowledge or comfort with social communication or a specific language (such as might occur for immigrants), and is debilitating to the individual. It is not diagnosed when better accounted for by embarrassment related to speech or language abilities, or by another psychiatric disorder.

Prevalence estimates of selective mutism range from 0.03% to 2%. The age of onset is usually between 3 and 6 years. The disorder is more common in girls than boys, with a ratio of about 3:1. Symptoms may be present several years before a referral is made, which typically occurs through the school in the early school age years.

In general, there is increasing evidence for a high association of selective mutism with anxiety disorders. In evaluating these patients the primary care clinician needs to screen for other anxiety disorders. The majority of children with selective mutism appear to outgrow their disorder although it is not uncommon for the disorder to persist for several years in elementary school.

2. ASSESSMENT AND DIAGNOSIS

Separation Anxiety

Diagnosis

Children suffering from SAD often come to the clinician's attention when problems with school attendance develop. Presentation may range from great reluctance to refusal and temper tantrums if parents insist on taking the child to school. Once separation takes place, these children may worry incessantly about the misfortunes that might befall their loved ones. Nightmares with prominent themes of separation are sometimes reported. Fears of being lost and never reunited with their families often beset these children. Typically the "storm" is resolved once the child is returned to home. Somatic complaints such as morning stomach aches, headaches, nausea and vomiting, are more often seen in younger children, while older ones may also complain of palpitations and feeling faint.

A detailed history is the most helpful diagnostic resource. As is true for most of the internalizing disorders (i.e., anxiety, depression), accounts from the child are usually more telling than parents and teachers report. Descriptions of the events preceding the separation, response to parents' departure, ensuing behavior (usually in school) and the consequences of separation are helpful in understanding the pattern of distress and precipitants. Gathering a comprehensive family history of psychiatric disorders is important, given the notable family patterns involving SAD. Anxiety rating scales such

as the Screen for Child Anxiety Related Emotional Disorders (SCARED) or the Multidimensional Anxiety Scale for Children (MASC) may be used diagnostically and as measures of treatment outcome. General psychiatric symptom rating scales, such as the Connors Parent and Teacher Questionnaires may assist in the diagnosis of comorbid disorders, which are common for these children. Routinely available laboratory studies do not increase the accuracy of the diagnosis.

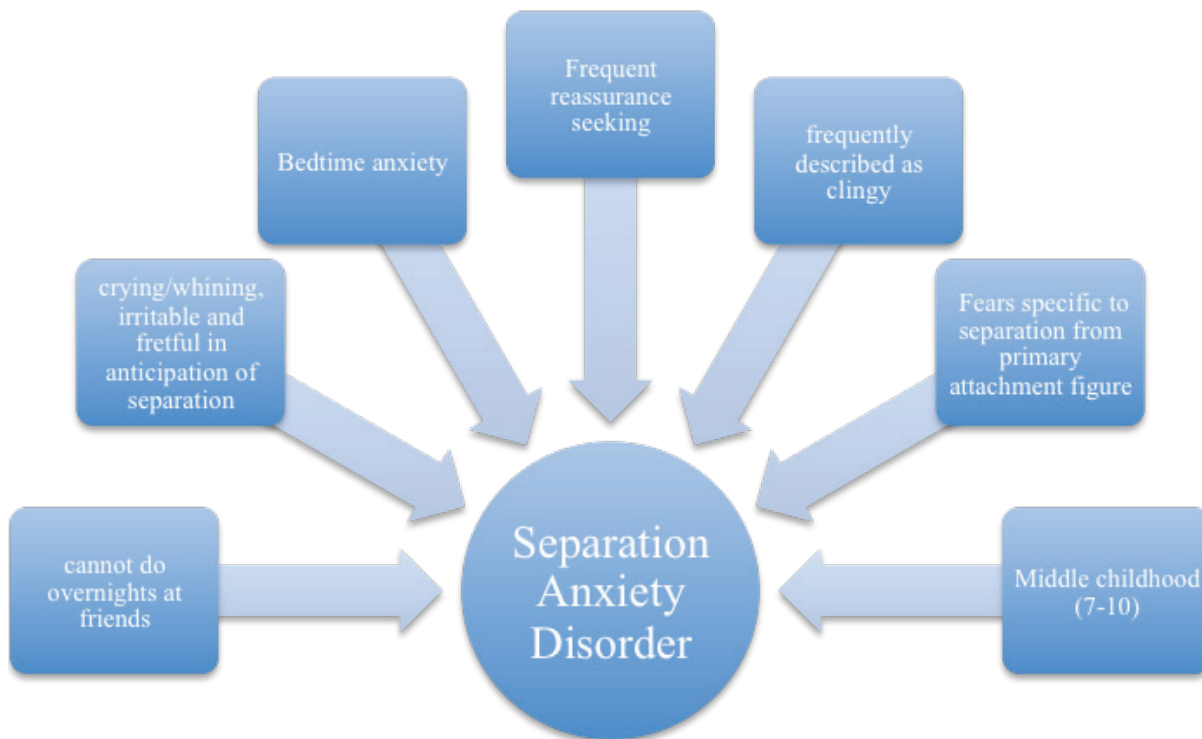
Differential Diagnosis

The clinician must differentiate separation anxiety from developmentally appropriate fears accompanying separation from loved ones. These developmentally normal separation fears occur earlier in childhood, have milder presentations, and tend to be transient and self-limiting. Functional impairment is not a typical feature of fears accompanying normal development.

Delineation of SAD from other disorders sharing "school refusal" as a symptom is sometimes a challenging task. After conduct disorder and oppositional defiant disorder (i.e., truancy) have been ruled out, one should carefully evaluate evidence for other anxiety disorders. School refusal may be based in a specific phobia (e.g., test taking and, or fear of humiliation), in situationally bound panic disorder or in social phobia, as well as SAD.

Relative comfort in social settings will differentiate separation anxiety from social phobia. Well-defined and usually singular phobic objects characterize specific phobias. Distress can occur even in the presence of an attachment figure.

Several additional points bear emphasizing. First, children with SAD commonly have parents with an anxiety or depressive disorder. Careful assessment and, if necessary, treatment of the parent may be called for. This may entail simple psychoeducation of the parents regarding their inadvertent support of the child's anxiety versus frank treatment for an anxiety disorder in the parent. Second, a complete evaluation is important as over half of children with SAD have a second comorbid anxiety diagnosis which can unnecessarily complicate treatment if it is missed.



School Refusal

Diagnosis

Because of the variability in the clinical presentations of school refusal, evaluations prior to treatment should engage multiple informants. The child and the family should undergo clinical interviews. Members of the school, daycare and the family doctor are all potentially important sources of collateral information, though this may not be practical in a busy Primary Care Clinician's office. Patterns of family dynamics need to be explored for potential weaknesses, e.g., inadequate parental oversight, conflicting parental tactics. A thorough medical exam should be undertaken to rule out any organic cause for the child's somatic complaints, if these are part of the presentation. Once the primary diagnosis is made, search should continue for associated comorbid disorders, as comorbidities are common.

Differential Diagnosis

Because school refusal is not a diagnostic entity, the goal of a clinical evaluation will be to identify the primary disorder, of which the school refusal is a symptom (See Table 1).

Table 1	Differential DIAGNOSIS OF SCHOOL REFUSAL
Conduct/Oppositional Defiant	(Truancy) in addition to school refusal. "Hangs out" with friends when not in school, often complicated by substance abuse or antisocial behavior.
Separation Anxiety Disorder	Fears separation from parent or attachment figure. Spends "Out of school time" in presence of parent.
Generalized Anxiety Disorder	Anxiety in multiple domains, not limited to school setting, fretful, overly conscientious/fearful.
Specific Phobia	Exhibits anxiety toward teacher, other student, activity, test taking or other specific object or circumstance.
Social Phobia	Social setting, per se, is the primary fear. May fear scrutiny in test taking, being observed in bathroom etc.
Panic Disorder	May have situationally bound or predisposed panic attacks. Some panic attacks have occurred out of school or unexpectedly, anticipatory anxiety, agoraphobia.
Posttraumatic Stress Disorder	Multiple symptoms in addition to school refusal: irritability, depression, re-experiencing, all related to a specified trauma.
Obsessive-Compulsive Disorder	Presence of obsessive thoughts/compulsive rituals that may be a source of embarrassment or result in phobic avoidance.

Generalized Anxiety Disorder

Diagnosis

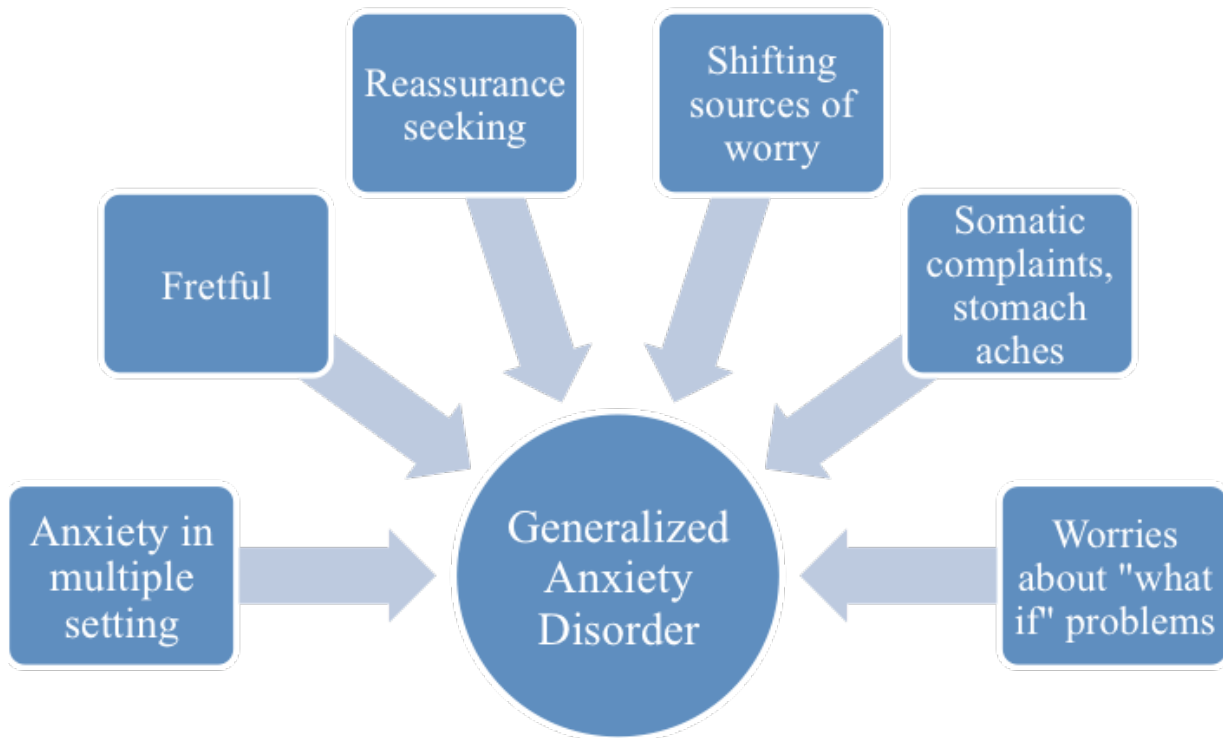
The differential diagnosis of GAD can be complicated, as it frequently involves symptom overlap with other anxiety disorders. Children and adolescents with GAD tend to worry excessively about their performance and competence, even in the absence of external scrutiny. Ruminating about past mistakes and worrying about future adversities (i.e., "what if concerns) may cause a decline in academic function and precipitate a referral. Parents will often report children's apprehension about "adult issues:" illness, old age, death, financial matters, wars and natural disasters. Children with GAD are often seen as perfectionistic and self-cautious, frequently seeking reassurance. Because they "cannot stop worrying" these youths often appear de-concentrated, restless, fragile, tense and irritable. Somatic complaints such as stomachaches and headaches are often reported by youngsters suffering from GAD and can precipitate frequent visits to pediatricians.

Several anxiety scales are available for use. These include: the Revised Children’s Manifest Anxiety Scale (RCMAS), the Multidimensional Anxiety Scale for Children (MASC) and the Child Behavior Checklist (CBCL). These scales have potential value both in identifying anxiety disorders as well as monitoring treatment progress.

Differential Diagnosis

GAD can be differentiated from separation anxiety by its pervasive nature and presence across different contexts (e.g. school, home and peer relations). Panic disorder is more “phasic” in comparison to the more “tonic” GAD. The content of anxiety in panic disorder is usually focused on future panic attacks. In specific phobia, fears center on the phobic object. Obsessive thoughts can be distinguished from GAD by their intrusive nature and concomitant compulsive rituals used to alleviate anxiety. In Post-Traumatic Stress Disorder (PTSD), anxiety is usually related to a past traumatic event or reexperiencing of the event. Prevalence of depressed mood, anhedonia and vegetative signs set depressive episodes apart from GAD, in spite of significant symptom overlap.

Finally, medical conditions often present with symptoms that may mimic GAD. Caution is warranted not to overlook hyperthyroidism, diabetes mellitus, and the more rare syndromes such as pheochromocytoma or systemic lupus erythematosus. Excessive stimulant use, alcohol withdrawal or drug dependence can also mimic GAD. The recreational use of steroids, primarily by adolescent boys, bears monitoring as this practice has been associated with anxiety.



Specific Phobia

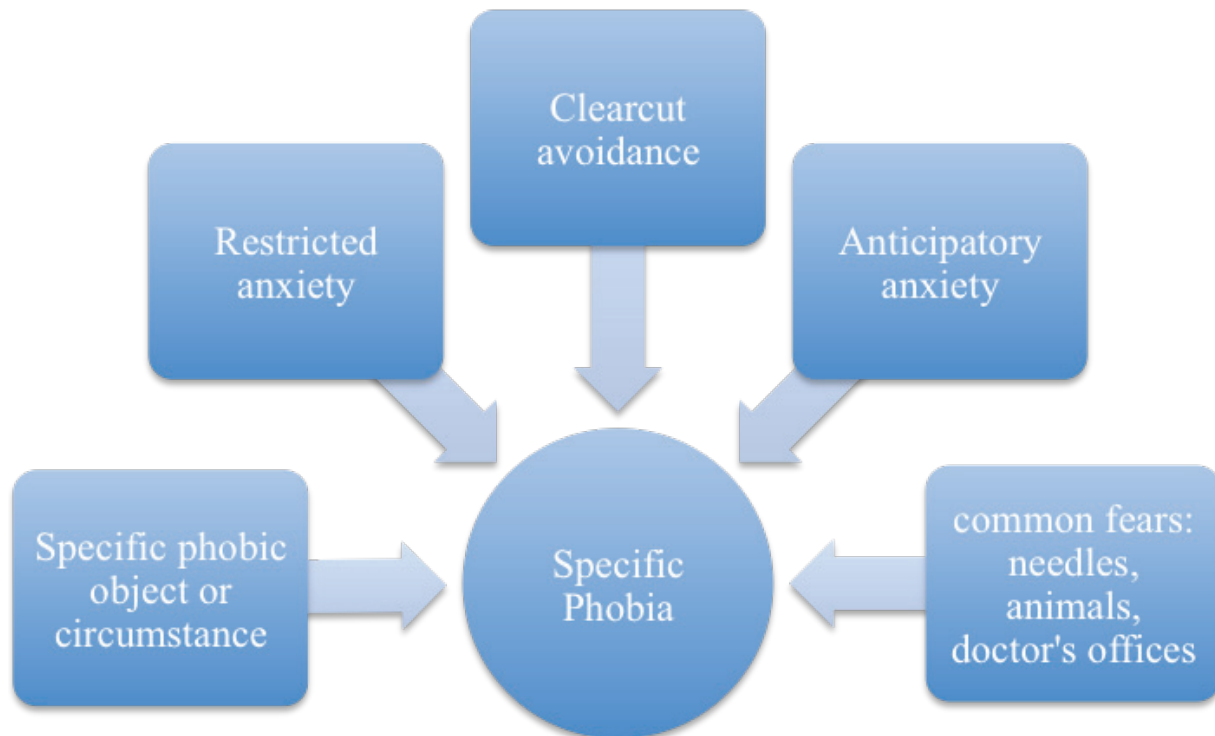
Diagnosis

Children usually present with excessive fear related to some well-circumscribed situation or object. Often parents will complain that the child is preoccupied with the object, causing the fear or the attempts to avoid it to interfere with family life. The child's play, relationship with peers and family members as well as school performance can be negatively influenced by avoidance of a feared situation or even by incapacitating anticipatory anxiety.

Differential Diagnosis

The initial task is to differentiate developmentally appropriate fears from a specific phobia. Specific phobia is not diagnosed if the child's anxiety is better accounted for by another disorder. See the table below for differentiating features.

GAD	Fears and worries tend not to be confined to a specific object or situation
Panic Disorder	Fears in panic disorder are related to anticipation of re-experience of an attack
Social Phobia	Fears are confined to social situations, especially if one's performance is subject to scrutiny
OCD	Fear of contamination, asymmetry, or unfinished action (Checking)
Separation anxiety disorder	Fear of separation from loved ones in



Social Phobia (Social Anxiety Disorder)

Diagnosis

Children with Social Phobia typically do not spontaneously report nor seek treatment for their disorder. The following symptoms should alert the clinician to Social Phobia:

- school refusal
- test anxiety
- shyness
- poor peer relationships
- problems in social situations
- difficulty using public restrooms
- trouble eating in front of other people

To date, there are no laboratory tests or physiological probes that have been demonstrated to be pathognomonic for SP. The Social Phobia and Anxiety Inventory for Children (SPAI-C) and the Social Phobia and Anxiety Inventory (SPAI) are empirically derived inventories meant to be used with children ages 8-14 years of age and over 14 years of age, respectively for diagnostic assessment and clinical monitoring of treatment.

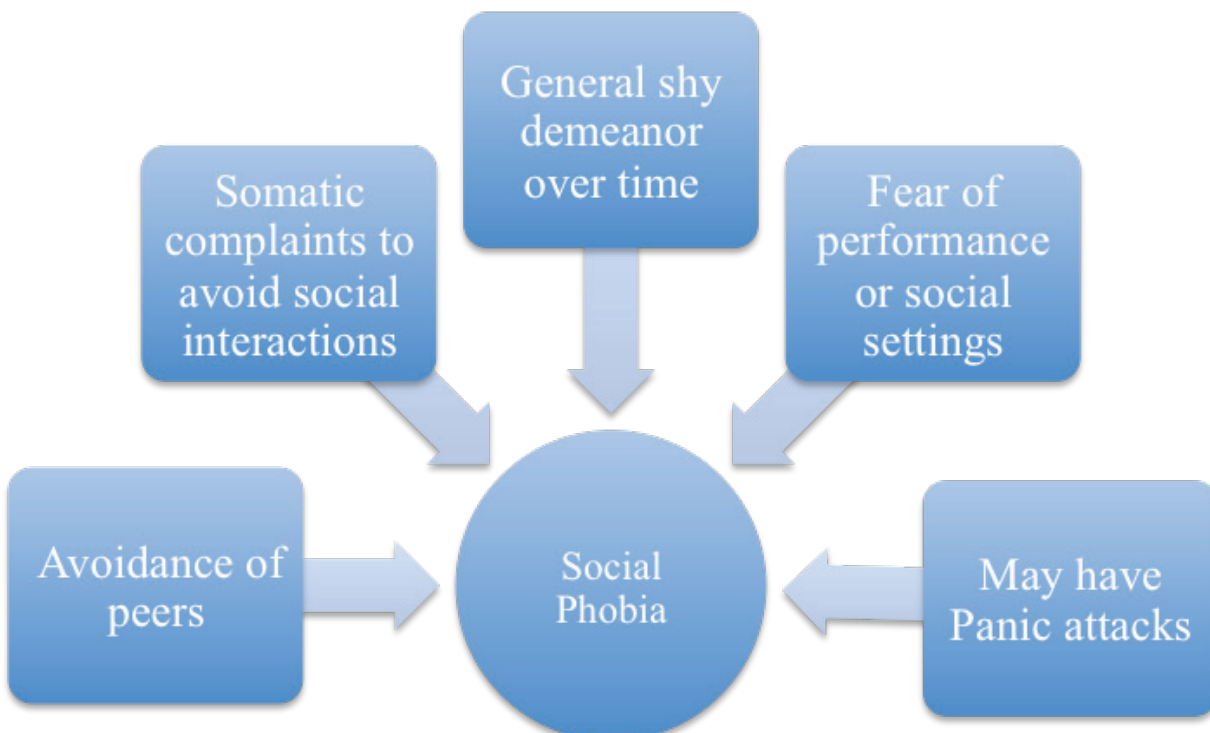
Differential Diagnosis

The following should be considered in the differential diagnosis:

- panic disorder with agoraphobia
- separation anxiety disorder
- generalized anxiety disorder
- specific phobia

Classically, SP is characterized by the avoidance of social situations in the absence of panic attacks. Although social avoidance may occur in panic disorder with agoraphobia, it is the specific fear of having a panic attack or being seen while having a panic attack that discriminates the two disorders. Fears in individuals with agoraphobia may or may not include the fear of scrutiny by others. Also, unlike SP, agoraphobic individuals may be reassured in social situations by the presence of a companion.

In separation anxiety disorder, the primary fear is one of separation from the primary caretaker. These individuals are usually comfortable in social settings in the home, whereas socially phobic individuals are distressed in social situations, even in the home.



Panic Disorder

Diagnosis

A somewhat intricate relationship between PD, other anxiety disorders and depression calls for a thorough clinical assessment. A detailed history should be obtained from the patient, family members, teachers and other professionals acquainted with the child, as with the child. Discerning whether the child can predict the onset of the attack is important for differential diagnosis. Pediatric and neurological exams can be helpful in some instances to elucidate the origin of somatic complaints or unusual sensations. Anxiety symptom scales may provide useful diagnostic information and later assist in evaluating treatment progress.

Differential Diagnosis

It is essential to differentiate PD from medical conditions such as hyperthyroidism, hyperparathyroidism, pheochromocytoma, diabetes, asthma, seizures, vestibular dysfunction or cardiac problems. Intoxication with stimulants or withdrawal from sedatives can produce symptoms that mimic panic attacks.

The following table helps to differentiate Panic Disorder from other anxiety disorders.

Separation Anxiety Disorder	Fear and panic occurring only when a child is separated from an attachment figure.
Social Phobia	Discomfort is experienced only in situations when one is subjected to scrutiny.
Specific Phobia	Fear and anxiety are an expected response to confrontation of the phobic object.
OCD	Obsessions and compulsive rituals are present.
PTSD	Recollection of past trauma usually precedes emotional and autonomic distress.

