IN THE NAME OF GOD

Dr Farshid Shahriari

Assistant Professor of Department of Psychiatry

ardabil University of Medical Sciences

Subspecialty in Child and Adolescent Psychiatry

(Board Certificated)

INTRODUCTION

- Anxiety disorders are the most common psychiatric disorders in childhood and are associated with poor quality of life.

- Developmentally appropriate worries fade with time and do not interfere with functioning, making them distinguishable from anxiety disorders.

- Many childhood anxieties are developmentally appropriate, For instance, an increase in separation anxiety distress and stranger anxiety are developmentally appropriate around age 8 months, with symptoms usually resolved by age 2 years.

- Preschoolers are often afraid of the dark and monsters.

- Youngsters in elementary school to be afraid during storms.

The tripartite view of anxiety

individuals' anxious responses consist of three components

- behavioral or motoric
- cognitive or subjective
- physiologic

Epidemiology

- The prevalence of anxiety disorders has varied with the age group of the children surveyed and the diagnostic instruments used.
- Lifetime prevalence of any anxiety disorder in children and adolescents ranges from 10 percent to 27 percent
- Preschool Age Psychiatric Assessment (PAPA) found that 9.5 percent of preschoolers met criteria for any anxiety disorder, with 6.5 percent exhibiting generalized anxiety disorder, 2.4 percent meeting criteria for separation anxiety disorder, and 2.2 percent meeting criteria for social phobia.

ETIOLOGY

Biopsychosocial Factors

- parental overprotection
- insecure parent- child attachment
- maternal depression and anxiety
- temperamental trait of shyness and withdrawal in unfamiliar situations

External life stresses :

- death of a relative
- a child's illness
- a change in a child's environment
- a move to a new neighborhood or school

is frequently noted in the histories of children with separation anxiety disorder

Neurophysiological correlations are found with behavioral inhibition (extreme shyness);

- a higher resting heart rate and an acceleration of heart rate with tasks requiring cognitive concentration.
- elevated salivary cortisol levels
- elevated urinary catecholamine levels, and
- greater papillary dilation during cognitive tasks.

Neuroimaging studies of adolescents with anxiety show an increased activation of the amygdala compared to non-anxious adolescents when presented with anxiety-provoking stimuli.

Social Learning Factors

- Some parents appear to teach their children to be anxious by overprotecting them from expected dangers or by exaggerating the dangers. For example, a parent who cringes in a room during a lightning storm teaches a child to do the same. A parent who is afraid of mice or insects conveys the affect of fright to a child.

- Conversely, a parent who becomes angry with a child when the child expresses fear of a given situation, for example, when exposed to animals, may promote a phobic concern in the child by exposing the child to the intensity of the anger expressed by the parent.

Genetic Factors

Two heritable characteristics:

- behavioral inhibition (the tendency toward fear and withdrawal in new situations) and
- physiological hyperarousal

have both been found to impart significant risk factors for future development of an anxiety disorder.

DSM-5

- SAD and selective mutism have been re-classified as anxiety disorders (rather than in a section for 'disorders usually first diagnosed in infancy, childhood or adolescence')

- OCD, PTSD and ASD are, respectively, grouped under obsessive-compulsive and related disorders, and trauma-related and stressor-related disorders.

Specific Phobia DSM-5

A. Marked fear or anxiety about a specific object or situation (e.g., flying, heights, animals, receiving an injection, seeing blood). Note: In children, the fear or anxiety may be expressed by crying, tantrums, freezing, or clinging.

B. The phobic object or situation almost always provokes immediate fear or anxiety.

C. The phobic object or situation is actively avoided or endured with intense fear or anxiety.

D. The fear or anxiety is out of proportion to the actual danger posed by the specific object or situation and to the socio-cultural context.

E. The fear, anxiety, or avoidance is persistent, typically lasting for 6 months or more.

Specific Phobia

- Phobias involve excessive, specific, persistent fear of a stimulus as well as significant avoidance or distress.

- Phobic reactions are disproportionate to the demands of the situation, impervious to reasoning, and often occur outside the normal developmental period of a fear (e.g., fears of monsters in an older child).

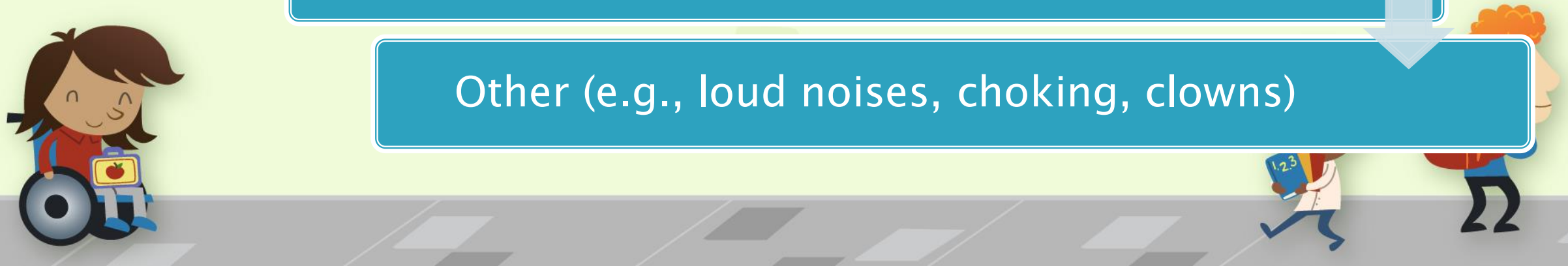
Specific Phobia

- SP is an excessive fear of a specific object or situation. Exposure to the object or situation consistently results in immediate excessive and irrational fear that may manifest as hiding, clinging, freezing, crying, screaming, vasovagal fainting (especially in blood and needle phobias), or autonomic arousal.

- Symptoms must last for 6 months and cause significant avoidant behavior and/or distress, as well as functional impairment.

Phobias are divided into five categories:

- Animals
- Natural environment (e.g., water, heights, darkness)
- Blood-injection-injury (including other medical procedures)
- Situational (e.g., flying, driving, bridges)
- Other (e.g., loud noises, choking, clowns)



Age of onset

- Fears and phobias are common in young children.
- Referral rates tend to increase in mid-to-late childhood and early adolescence.
- The peak age for referral of children diagnosed with specific phobia is 10-13 years, with the average age of symptom onset at approximately 8 years.

Age of onset

- The mean age of onset of specific phobia depends on the type of phobia that develops.
- Animal, blood, and storms and water-specific phobias typically develop in early childhood.
- Height specific phobia develops in teenagers.
- Situational specific phobias (eg, claustrophobia) typically develop during the late teenage years and early third decade of life.

DSM-5 Criteria: SepAD

A. Developmentally inappropriate and excessive anxiety concerning separation from those to whom the individual is attached, as evidenced by at least three of the following:

(1) **recurrent excessive distress** when anticipating or experiencing separation from home or major attachment figures.
(2) **persistent and excessive worry about losing major attachment figures or about possible harm to them, such as illness, injury, disasters, or death.**
(3) persistent and excessive worry about experiencing an untoward event (e.g., getting lost, being kidnapped, having an accident, becoming ill) that causes separation from a major attachment figure.
(4) persistent reluctance or refusal to go out, away from home, to school, to work, or elsewhere because of fear of separation.
(5) persistent and excessive fear of or reluctance about being alone or without major attachment figures at home or without significant adults in other settings
(6) persistent reluctance or refusal to go to sleep away from home or to go to sleep without being near a major attachment figure.
(7) repeated **nightmares** involving the theme of separation.
(8) repeated complaints of **physical symptoms** (e.g., headaches, stomachaches, nausea, vomiting) when separation from major attachment figures occurs or is anticipated

B. The fear, anxiety, or avoidance is persistent, lasting at least **4 weeks in children** and adolescents and typically 6 months or more in adults.

C. The disturbance causes **clinically significant distress or impairment in social, academic, occupational, or other important areas of functioning.**

D. The disturbance is not better explained by another mental disorder, such as refusing to leave home because of excessive resistance to change in autism spectrum disorder; delusions or hallucinations concerning separation in psychotic disorders; refusal to go outside without a trusted companion in agoraphobia; worries about ill health or other harm befalling significant others in generalized anxiety disorder; or concerns about having an illness in illness anxiety disorder.

SAD frequently presents after:

- Parental loss
- A significant illness in the family or child
- Death of a pet
- Other stressful events

Risk factors

- Early traumatic separation from the attachment figure such as sudden hospitalization; death or divorce
- Family history of anxiety disorders or depression
- Over-protective, or depressed parent
- Temperament

Normal separation anxiety

- Normative separation anxiety peaks between 9 months and 18 months and diminishes by about 2½ years of age.
- Separation anxiety or stranger anxiety most likely evolved as a human response that has survival value.
- The expression of transient separation anxiety is also normal in young children entering school for the first time.

Manifestations

- Refusal to sleep alone or be away from home.
- Nightmares about separation.
- Somatic symptoms such as headaches, stomachaches, muscle cramps, or dizziness. If somatic symptoms occur only when children are separated from attachment figures or when faced with separation (e.g., no somatic symptoms on weekends when there is no school).
- Seeing shadows of monsters when left alone
- Cling to their parents, follow them from room to room, and/or insist parental presence at all times (e.g., bathing).

DSM-5 Criteria: Social Anxiety Disorder

A. Marked fear or anxiety about one or more social situations in which the individual is exposed to possible scrutiny by others. Examples include social interactions (e.g., having a conversation), being observed (e.g., eating or drinking), or performing in front of others (e.g., giving a speech).
   - Note: In children, the anxiety must occur in peer settings and not just during interactions with adults.

B. The individual fears that he or she will act in a way or show anxiety symptoms that will be negatively evaluated (i.e.., will be humiliating or embarrassing; will lead to rejection or offend others).

C. The social situations almost always provoke fear or anxiety.
   - Note: in children, the fear or anxiety may be expressed by crying, tantrums, freezing, clinging, shrinking, or failure to speak in social situations.

D. The social situations are avoided or endured with marked fear or anxiety.

E. The fear or anxiety is out of proportion to the actual threat posed by the social situation and to the sociocultural context.

F. The fear, anxiety, or avoidance is persistent, typically lasting 6 months or more.

G. The fear, anxiety, or avoidance cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

H. The fear, anxiety, or avoidance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition.

I. The fear, anxiety, or avoidance is not better explained by the symptoms of another mental disorder, such as panic disorder, body dysmorphic disorder, or autism spectrum disorder.

J. If another medical condition (e.g., Parkinson's disease, obesity, disfigurement from burns or injury) is present, the fear, anxiety, or avoidance is clearly unrelated or is excessive.

- Specify if: Performance Only

Social Phobia

- SoP is also known as Social Anxiety Disorder. It is an excessive and impairing fear of being negatively evaluated by others.
- SoP must be accompanied by either avoidance of social situations or severe discomfort while enduring social situations.
- In children, the anxiety cannot be limited to discomfort in social situations with adults.

- symptoms need to be present for 6 months
- Impairment helps distinguish between normative shyness and SoP.

Examples of impairment include :

- limited romantic relationships
- School refusal
- Not participating in extracurricular activities
- Significant child distress
- Adolescents may abuse drugs prior to and/or during social situations in attempts to self-medicate.
- Family life also is often disrupted as the child's avoidance and impairment often constrains families' engagement in fun activities.

Differential diagnosis

- Avoidant personality disorder which is sometimes conceptualized as a severe variant of SoP .

- Autism spectrum disorder is on the differential for SoP .however, children with SoP often have friends their own age and demonstrate improved social skills in established relationships. In many cases of autism spectrum disorder, a comorbid diagnosis of SoP is warranted.

Selective Mutism

- SM is refusal to speak in particular settings. Children may speak at home but not school or in front of unfamiliar people. They may communicate by nodding, writing, making sounds in lieu of speaking.

- Many children with SM rely on friends and parents to speak for them in social settings. Impairments due to SM include reduced class participation, academic underachievement, and isolation from peers.

- Symptom must persist for 1 month and cannot be limited to the first month of school.

Selective Mutism

- Children with SM are often shy and usually have comorbid social phobia.however, some enjoy participating in social activities that do not require speaking.

- Communication and developmental disorders are frequently comorbid with SM, and children with SM, communication, and developmental disorders all present with a lack of speech.

- What distinguishes children with SM from children with communication and developmental disorders is that the former have an ability to speak in certain social contexts but not in others.

Diagnosis of Generalized Anxiety Disorder

DSM-5 criteria

- The presence of excessive anxiety and worry occurs more often than not for at least 6 months and is clearly excessive.
- The worry is experienced as very challenging to control.
- The anxiety and worry is associated with at least 3 of the following physical or cognitive symptoms (*In children, only 1 symptom is necessary for a diagnosis of GAD.*):

1. Edginess or restlessness.
2. Tiring easily; more fatigued than usual.
3. Impaired concentration or feeling as though the mind goes blank.
4. Irritability (which may or may not be observable to others).
5. Increased muscle aches or soreness.
6. Difficulty sleeping (due to trouble falling asleep or staying asleep, restlessness at night, or unsatisfying sleep).

- Hard to carry out day-to-day activities and responsibilities. They may cause problems in relationships, at work, or in other important areas.
- These symptoms are unrelated to any other medical conditions and cannot be explained by the effect of substances including a prescription medication, alcohol or recreational drugs.
- These symptoms are not better explained by a different mental disorder.

Generalized Anxiety Disorder

- GAD is characterized by impairing worry about multiple situations for at least 6 months.

- Children with GAD express worry about potentially negative occurrences on most days, and the focus of the worry may shift from topic to topic. The anxiety in GAD is often difficult to control and interferes with completing tasks or enjoying activities, which helps to distinguish pathologic from normal anxiety.

- Anxieties in GAD often involve everyday matters like completing assignments, being on time, getting good grades, and performance in sports.

- Worry about anticipated changes and dangerous situations like storms, home invasion, or a family member getting sick is also common.

- The worries can sometimes be fantastical (e.g., monsters in the basement) or extreme (e.g., terrorist attacks).

- Children with GAD may seek reassurance about their performance or safety frequently.
- GAD may also present as perfectionism, indecision for fear of making a poor choice, and a tendency to magnify minor mistakes.
- Somatic symptoms also often manifest including headaches and stomachaches.

DIFFERENTIAL DIAGNOSIS

- For children who resist school, it is important to distinguish whether fear of separation, general worry about performance, or more specific fears of humiliation in front of peers or the teacher are driving the resistance.

- School refusal is a frequent symptom in separation anxiety disorder, but is not pathognomonic of it. Children with other diagnoses, such as specic phobias, or social anxiety disorder, or fear of failure in school because of learning disorder, may also lead to school refusal.

COURSE AND PROGNOSIS

- age of onset
- duration of the symptoms
- Development of comorbid anxiety and depressive disorders

- predictors of future remission included younger age of initiation of treatment, lower severity of anxiety, absence of a comorbid depressive or anxiety disorder, and the absence of social anxiety disorder as the primary anxiety disorder being treated.

- Studies have shown a significant overlap between separation anxiety disorder and depressive disorders.

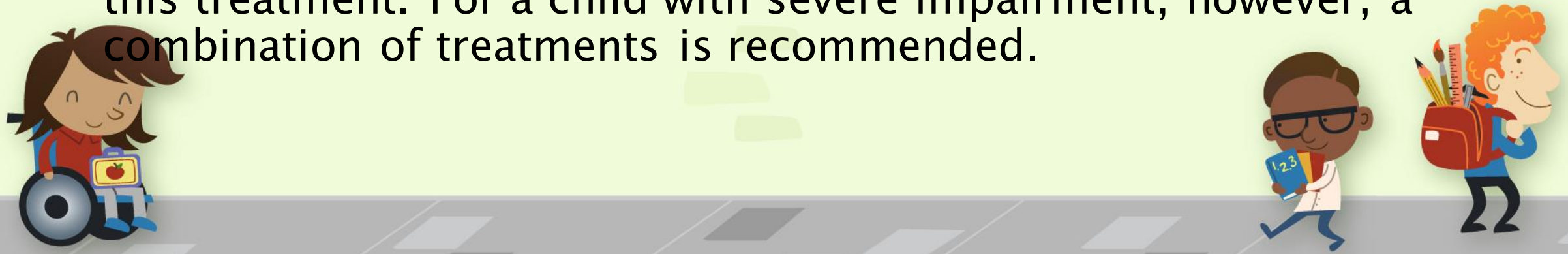
- In cases with multiple comorbidities, the prognosis is more guarded.

Treatment

- A multimodal comprehensive treatment approach usually includes psychotherapy, most often CBT, family education, family psychosocial intervention, and pharmacological interventions, such as SSRIs.

- The best evidence-based treatments for childhood anxiety disorders include CBT and SSRIs.

- A trial of CBT may be applied first, if available, when a child is able to function suciently to engage in daily activities while obtaining this treatment. For a child with severe impairment, however, a combination of treatments is recommended.



CBT is a first-line treatment for pediatric anxiety

CBT for anxiety usually includes:

Psychoeducation about anxiety

Relaxation techniques

Graded exposure to feared stimuli

Identification of thoughts (e.g., negative self-talk) that influence feelings

Problem-solving skills

Reward systems

- Given the high comorbidity of the anxiety disorders, it is common to target the most impairing anxiety disorder first.

- Treatment of anxiety disorders affecting sleep should also be prioritized.

- SSRIs, including fluvoxamine (Luvox), fluoxetine (Prozac), sertraline (Zoloft), and paroxetine (Paxil) are efficacious in the treatment of childhood anxiety.
- SSRIs are the first choice of medication in the treatment of anxiety disorders in children and adolescents.
- Tricyclic drugs are not currently recommended due to their potentially serious cardiac adverse effects.
- β -Adrenergic receptor antagonists, such as propranolol (Inderal), and buspirone (BuSpar) have been used clinically in children with anxiety disorders, but currently no data support their efficacy.
- Diphenhydramine (Benadryl) may be used in the short term to control sleep disturbances in children with anxiety disorders.

	Age (Years)											
	5	6	7	8	9	10	11	12	13	14	15–17	Adult
Selective Serotonin Reuptake Inhibitors												
Citalopram	NONE											D
Escitalopram	NONE							D				D, G
Fluoxetine	NONE		O	O, D								O, D, N
Fluvoxamine	NONE			O								O
Paroxetine	NONE											O, D, P, G, S, N
Sertraline	NONE	O										O, D, P, S, N
Serotonin Norepinephrine Reuptake Inhibitors												
Venlafaxine	NONE											D, G, S, N
Duloxetine	NONE	G										D, G
Desvenlafaxine	NONE											D
Atypical Antidepressants												
Bupropion	NONE											D
Mirtazapine	NONE											D
Vilazodone	NONE											D
Vortioxetine	NONE											D
Trazodone	NONE											D
Tricyclic Antidepressants												
Clomipramine	NONE					O						O
Desipramine	NONE											D
Nortriptyline	NONE											D

Abbreviations: O, obsessive-compulsive disorder; D, major depressive disorder; P, posttraumatic stress disorder; G, generalized anxiety disorder; S, social anxiety disorder; N, panic disorder.

	Pediatric		Adult		
	Starting Dose (mg/day)	Typical Dose Range (mg/day)	Starting Dose (mg/day)	Typical Dose Range (mg/day)	Half-Life
Selective Serotonin Reuptake Inhibitors					
Citalopram	10	20–40	20	40	20 hrs
Escitalopram	5	10–40	10	20–40	27–32 hrs
Fluoxetine	10–20	20–80	20	20–80	4–6 days
Fluvoxamine	25–50	5–0	100–300	100–300	16 hrs
Paroxetine	10	20–60	10–20	40–60	21 hrs
Sertraline	25–50	100–200	50	150–250	26 hrs
Serotonin Norepinephrine Reuptake Inhibitors					
Venlaflaxine	37.5	150–225	37.5–75	75–375	10 hrs
Atypical Antidepressants					
Bupropion	100	150–300	100–150	150–300	21 hrs
Mirtazapine	7.5	15–45	15	15–45	20–40

- Fluoxetine should be titrated slowly (weekly or even at 2-week intervals)

- Sertraline might start with a 12.5 to 25 mg dose, with similar weekly titration to a range between 50 and 150 mg in children.

- Citalopram in children less than 12 years of age, should be started as 10 mg/day, with titrating up by 5 mg/day every 2 weeks to a max of 40 mg/day; in children over 12 years of age, citalopram should be started at 20 mg/day, with titrating up by 10 mg/day every 2 weeks to a maximum of 40 mg/d. In both cases, dosages above 40 mg/day increase the risk of QT prolongation so should be avoided.
- Escitalopram is not recommended in younger children. In the treatment of adolescents, the recommended dose is 10 mg once daily, with the possibility of increasing to a maximum dose of 20 mg after 3 weeks of treatment.

- Atomoxetine, which selectively inhibits norepinephrine reuptake, improved anxiety and ADHD symptoms in children with both disorders.

- alprazolam (Xanax), a benzodiazepine, may help to control anxiety symptoms in separation anxiety disorder.

- Clonazepam (Klonopin) has been studied in open trials and may be useful in controlling symptoms of panic and other anxiety symptoms.