

MANAGEMENT OF ANXIETY DISORDERS IN CHILDREN

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- Clinical Assistant Professor psychiatry, Rutgers New Jersey Medical School, Newark, NJ
- Co-Director NJMS medical students NPB (Neuro-Psych-Biostat) Course
- Child & adolescent psychiatry **fellowship at Harvard Medical School-Boston Children's Hospital.**
- Infant-Parent Mental Health fellowship at Umass, Boston.
- Zero to Three Fellows 2020-2022
- Received **>10 regional, national, and international awards** for academic excellence, teaching, leadership from American Psychiatry Association, American Academy of Child & Adolescent Psychiatry, Association of Directors of Psychiatry Residency Training, and Nishtar Alumni of North America.
- **Presented many workshop and posters** at regional and national conferences, and published articles and co-authored book chapters in field of psychiatry
- **Actively involved in teaching** medical students, residents, social workers, pediatricians, other healthcare staff, as well as families.

Objectives

- How to interview children and adolescent who doesn't want to participate in evaluation
- How to ask questions about Anxiety by using developmentally appropriate language
- How to differentiate and manage various childhood anxiety disorder (psychopharmacology and non-pharmacological options)
- How to identify and treat co-morbid psychiatric disorders

Clinical Scenario

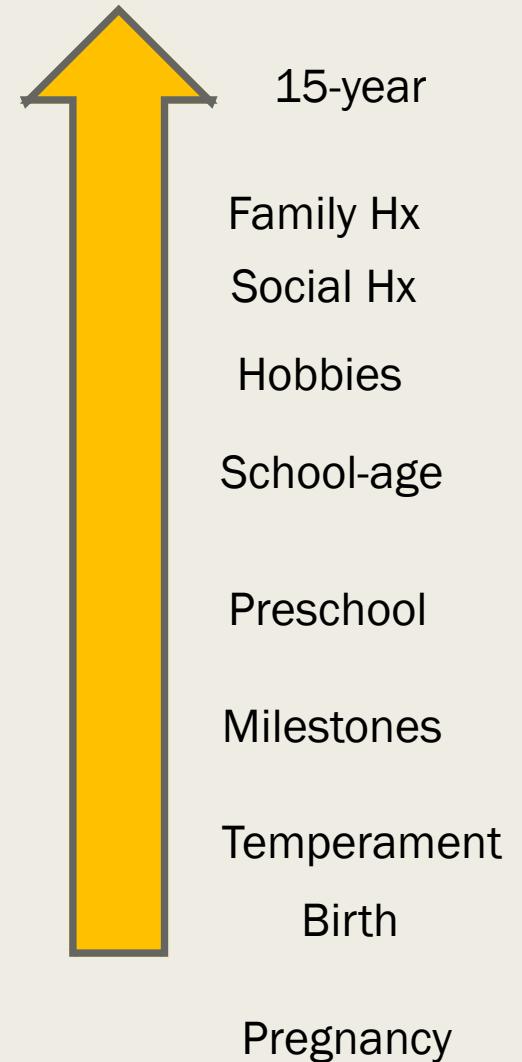
15-year-old girl, with vague h/o depression, and anxiety who was brought to emergency department by her mother due to worsening anxiety symptoms.

- Frequent feeling of edginess or restlessness
- Occasional feeling of shortness of breath, dizziness, shaking, palpitation, and fear of passing out
- Easily gets angry at times whenever parents try to set limits
- Spends 4-6 hours daily playing video games
- Oppositional behavior towards authority figures (parents and teachers)
- Easily getting tired, fatigued, and impaired concentration in class
- Problem paying attention, seems restless at times”, insomnia (problem falling asleep)
- Urine toxicology positive for cannabis (Marijuana)

Differential Diagnosis

1. Generalized Anxiety Disorder
2. ADHD (Attention Deficit Hyperactive Disorder)
3. ODD (Oppositional Defiant Disorder)
4. Panic disorder

Current Presentation: Tip of Iceberg



Criteria for Diagnosing GAD

The presence of excessive anxiety and worry about a variety of topics, events, or activities. Worry occurs more often than not for at least six months and is clearly excessive.

1. The worry is experienced as very challenging to control. The worry in both adults and children may easily shift from one topic to another.
2. The anxiety and worry are accompanied by at least three of the following physical or cognitive symptoms (In children, only one of these symptoms is necessary for a diagnosis of GAD):
 - Edginess or restlessness
 - Tiring easily; more fatigued than usual
 - Impaired concentration or feeling as though the mind goes blank
 - Irritability (which may or may not be observable to others)
 - Increased muscle aches or soreness
 - Difficulty sleeping (due to trouble falling asleep or staying asleep, restlessness at night, or unsatisfying sleep)

19 year old boy, an engineering student, came to your outpatient clinic for being unable to fall asleep.

On further evaluation, he reported problem paying, attention, unable to complete his tasks, being more angry, irritable, getting into arguments with his parents. He reported feeling sad, and down, and times doesn't want to get out of bed, doesn't want to meet his friends, doesn't want to eat.

On further questioning, he endorsed hearing voices at times telling him negative things about himself. He also believes that he gets anxious about everthing. He worried about something bad going to happen to him or to his family, or his parents might get corona virus because they are old.

He reported having anxiety attacks at times with palpitation, sweating, shaking, and feeling like he is about to die. He never saw a psychiatrist or a therapist and never tried any medications. His parents strongly believe that children and teenager should not be put on "human made chemicals."

A 9-year-old boy who was brought to the clinic by his mother due to not being able to make friends.

On evaluation, the child appears shy, unable to make any eye contact, talks in a soft voice, provides only yes or no answers to most questions. The mother reported that child gets good grades in school.

Mother also reported that child doesn't like to be alone and always seems worried when his parents are away.

On MSE, he seems fidgety, restless, and bored.

Lab work including CBC, TSH, CMP were normal.

Separation anxiety disorder

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

- Recurrent excessive distress when anticipating or experiencing separation from home or from major attachment figures.
- Persistent and excessive worry about losing major attachment figures or about possible harm to them, such as illness, injury, disasters or death.
- 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.
- Persistent reluctance or refusal to go out, be away from home, go to school, go to work, or elsewhere because of fear of separation.
- Persistent and excessive fear or reluctance about being alone or without major attachment figures at home or In other settings.

- Persistent reluctance or refusal to sleep away from home or to go to sleep without being near a major attachment figure.
 - Repeated nightmares involving the theme of separation.
 - Repeated complaints of physical symptoms (eg. headaches, stomach aches, 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.

13-year-old girl who was referred to the clinic by her teacher. As per the teacher report, The child gets anxious, nervous, starts shaking, sweating whenever she has to perform In front of other people. She was sent to the school nurse manytimes due to palpitation, Shortness of breath, dizziness, and fear that she might die if she peforms on the stage.

Depsite her anxiety, she perfroms well in school, and does't seem to be depressed.

Social Anxiety Disorder:

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, meeting unfamiliar people), being observed (e.g., eating or drinking), and performing in front of others (e.g., giving a speech).

In children, the anxiety must occur in peer settings and not just during interactions with adults. 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)

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 failing to speak in social situations.

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

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

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.

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.

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.

If the fear is restricted to speaking or performing in public.

Panic Disorder:

- The individual experiences recurrent unexpected panic attacks, which are abrupt feelings of intense fear or discomfort that reach great heights within minutes, during a time in which at least **four** of the following symptoms occur:
 - Palpitation, sweating, shaking, sob, choking, chest pain/discomfort, nausea/abdominal pain, dizziness, chills or hot flashes, numbness or tingling, derealization, fear of losing control.
 - One or more of the attacks were followed by a month (or longer) of one or both of the following:
 - Persistent worry about having more panic attacks and/or their consequences (e.g., having a heart attack)
 - A significant abnormal change in behavior in response to the attacks, such as ones intended to avoid unfamiliar situations.
 - The disturbance cannot be attributed to the physiological effects of a substance, such as a drug or medication, or another medical condition.
 - The disturbance cannot be better explained by another mental disorder, such as social anxiety or specific phobia, which may involve panic attacks.

Agoraphobia

All of the below features must be present in order to make a proper diagnosis of agoraphobia:

Marked and disproportionate fear when confronted with at least two different situations, such as open spaces, public transport or crowded areas

An immediate anxiety response such as a panic attack when exposed to the phobic stimulus

Recognition of the fear as disproportionate

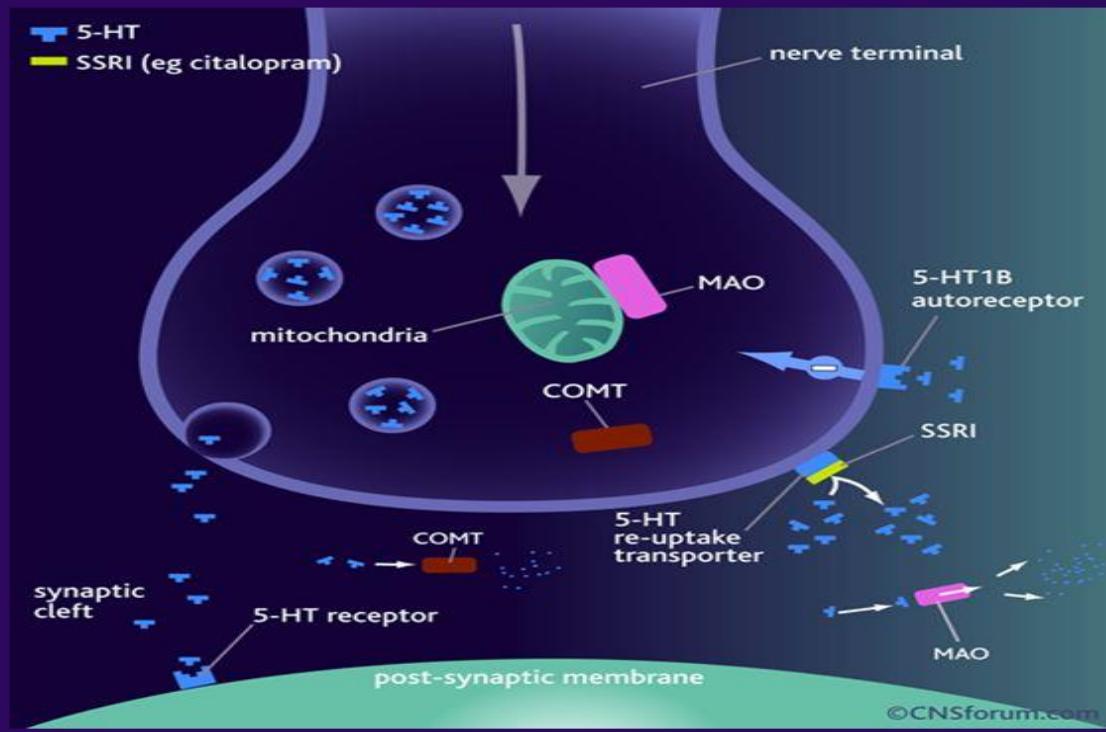
Avoidance behaviors, distress or anticipatory anxiety that significantly disrupts normal routine, relationships, occupational or social activities

Symptoms recorded for at least six months across all age groups

No other underlying condition that may explain the symptoms

SSRI mechanism of action

Mechanism of Action of SSRIs



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SSRI

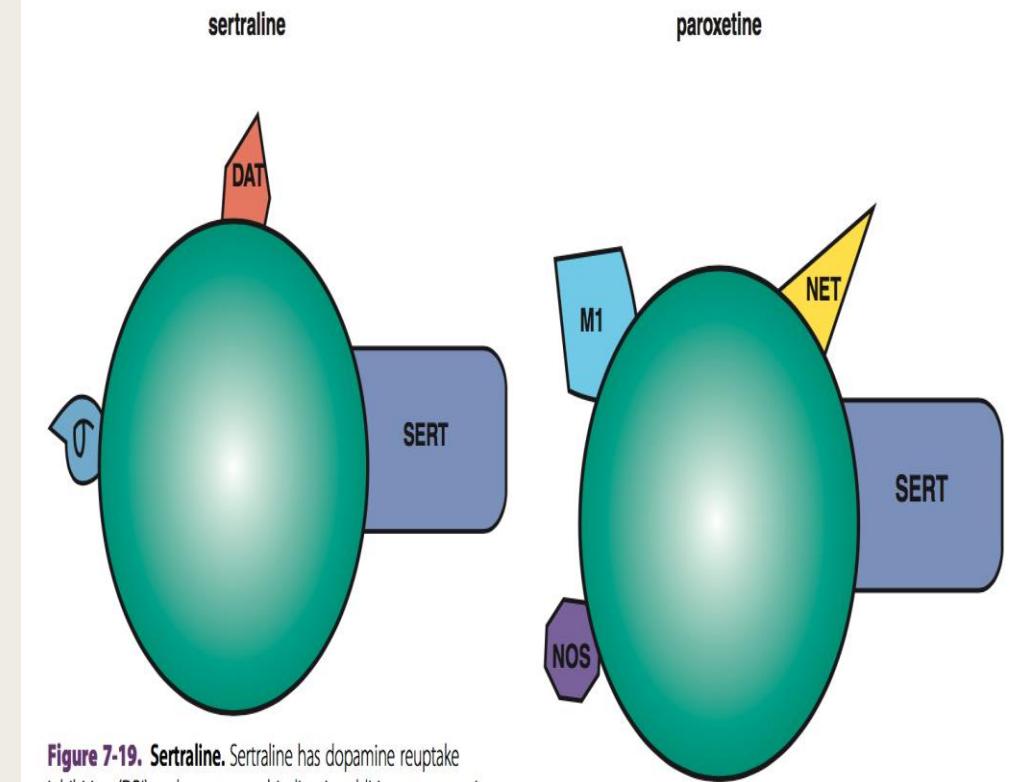
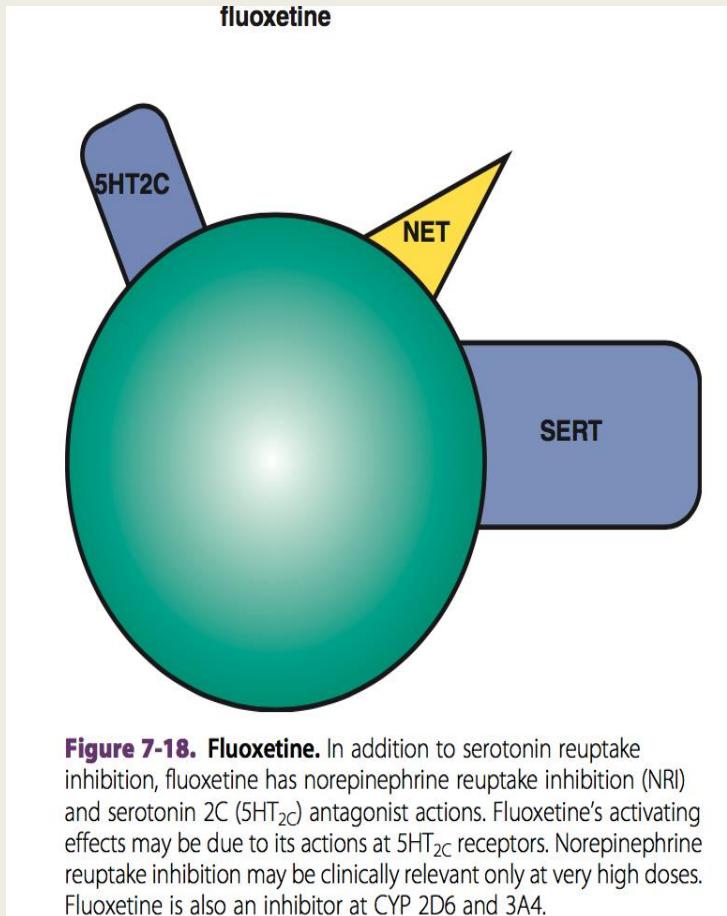


Figure 7-19. Sertraline. Sertraline has dopamine reuptake inhibition (DRI) and σ_1 receptor binding in addition to serotonin reuptake inhibition (SRI). The clinical relevance of sertraline's DRI is unknown, although it may improve energy, motivation, and concentration. Its σ properties may contribute to anxiolytic actions and may also be helpful in patients with psychotic depression.

high-impact DAT inhibition is the property of

Figure 7-20. Paroxetine. In addition to serotonin reuptake inhibition (SRI), paroxetine has mild anticholinergic actions (M₁), which can be calming or possibly sedating, weak norepinephrine reuptake inhibition (NRI), which may contribute to further antidepressant actions, and inhibition of the enzyme nitric oxide synthetase (NOS), which may contribute to sexual dysfunction. Paroxetine is also a potent inhibitor of CYP 2D6.

Serotonin and norepinephrine reuptake inhibitors

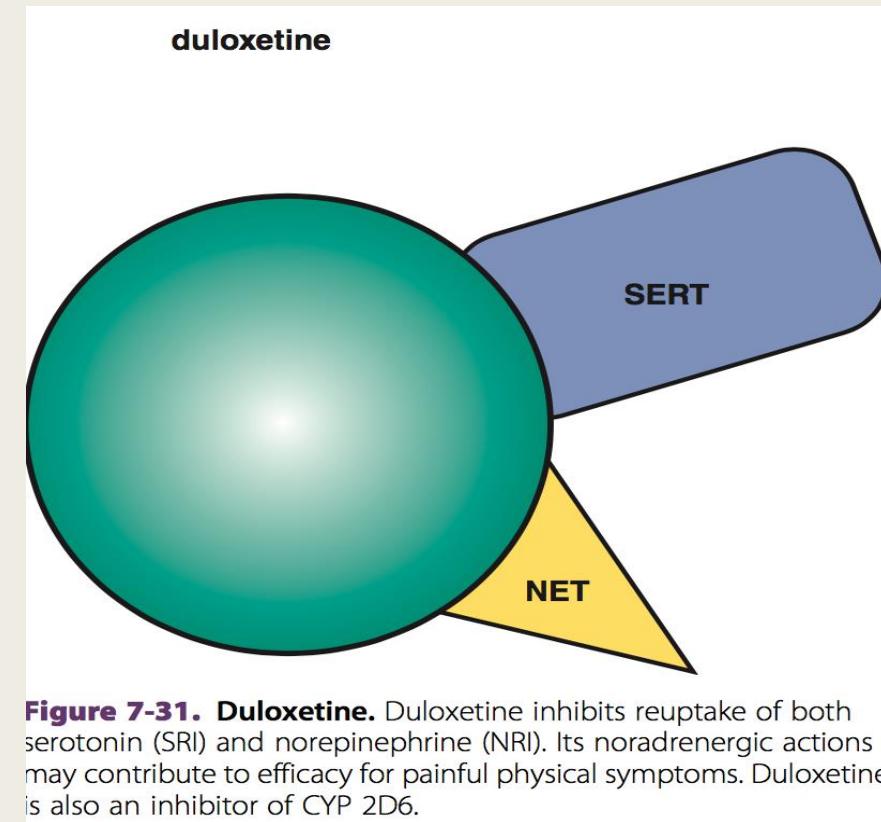
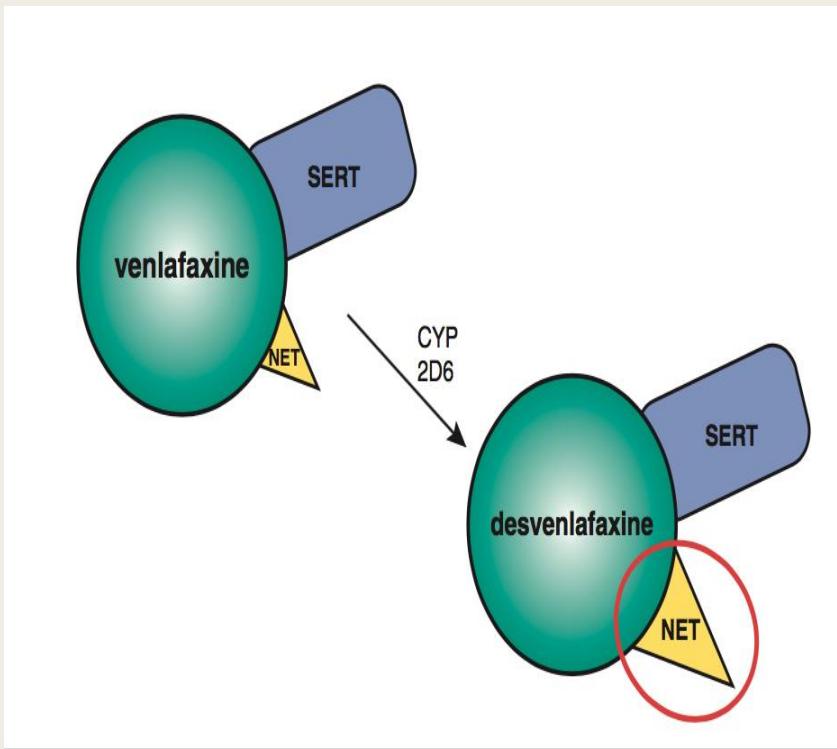
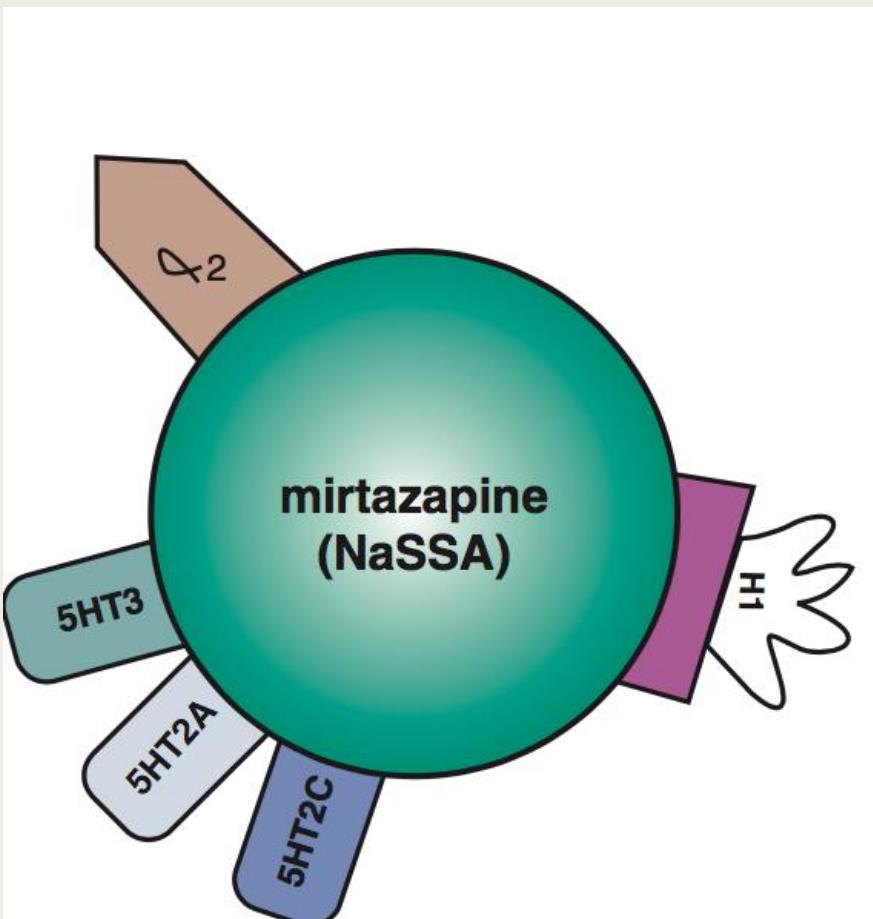
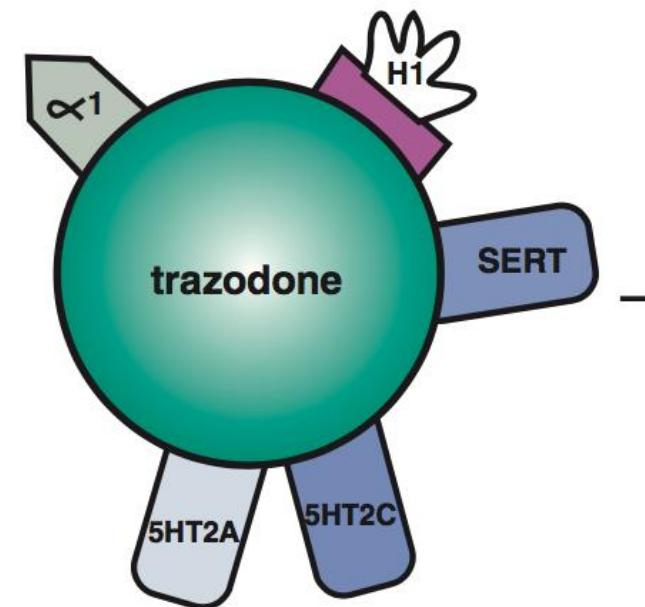


Figure 7-31. Duloxetine. Duloxetine inhibits reuptake of both serotonin (SRI) and norepinephrine (NRI). Its noradrenergic actions may contribute to efficacy for painful physical symptoms. Duloxetine is also an inhibitor of CYP 2D6.

Mirtazapine and Trazodone



Trazodone as an Antidepressant:
Serotonin Antagonist/Reuptake Inhibitor (SARI)



antidepressant dose (150-600mg)

ADHD & Anxiety

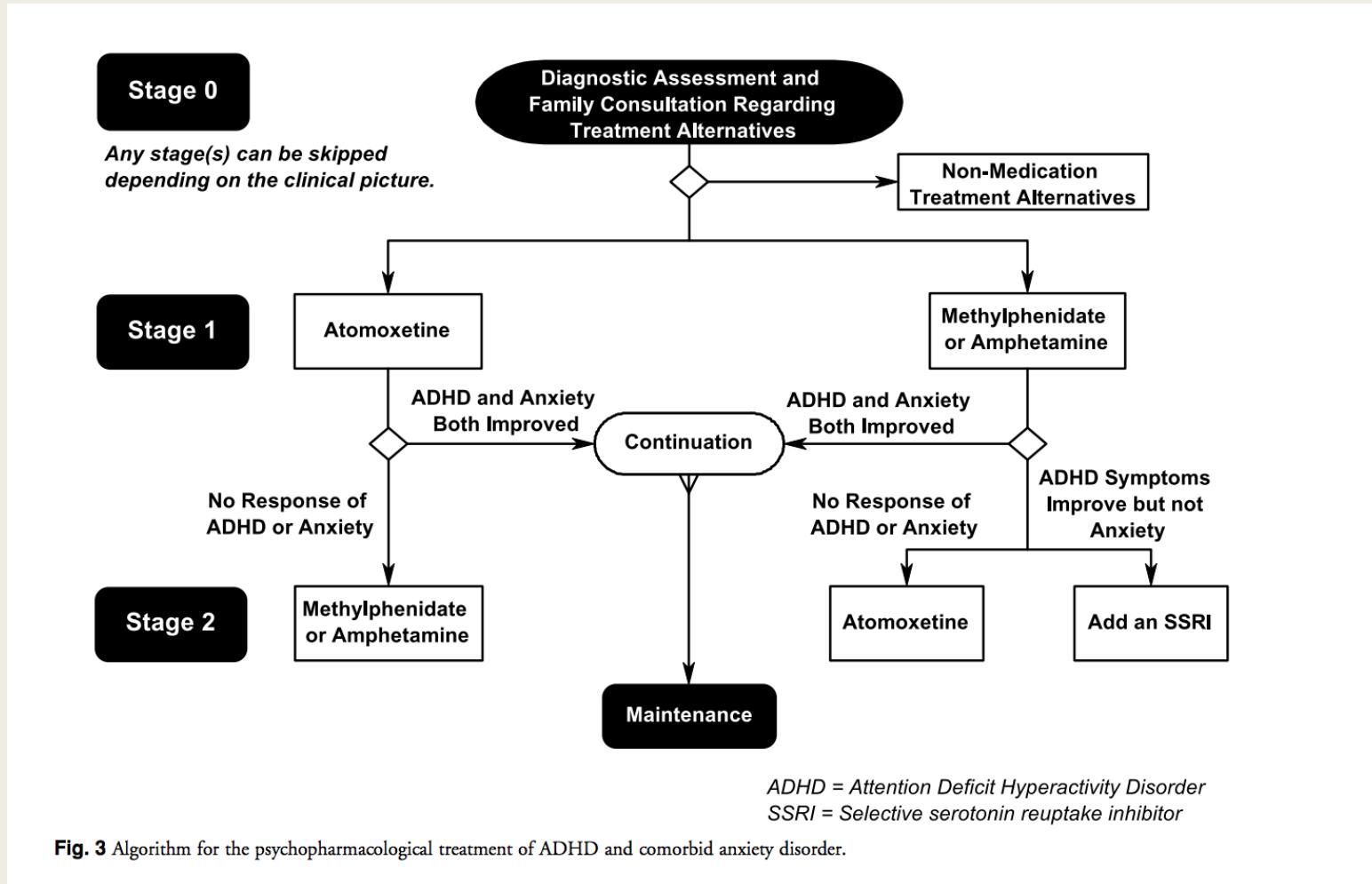


Fig. 3 Algorithm for the psychopharmacological treatment of ADHD and comorbid anxiety disorder.

4P Factor Model	Biopsychosocial Approach		
	Biological	Psychological	Social
Predisposing	Genetic vulnerability, toxic exposure in utero, birth complications, traumatic brain injury	Attachment style, personality traits, isolation, insecurities, fear of abandonment since childhood	Domestic violence, poverty and adversity, unstable home life, divorce
Precipitating	Iatrogenic reaction, poor sleep, substance use/misuse	Recent loss, stress, reexperience abandonment/fears	School stressors, loss of significant relationship, loss of home
Perpetuating	Poor response to medication, chronic illness/pain	Personality traits, coping mechanism, beliefs of self, others and the world	Role of stigma to access treatment, poor finance, ongoing transition
Protective	Adequate diet, sleep, good genes, physical exercise, resilience, intelligence	Insightful and cognitive behaviour strategies, coping skills, psychologically minded	Community, family and faith support, financial or disability support, GP support

"Seriously good. . . . A book for parents bewildered by their impossibly spirited children, for teachers [and] psychologists wanting insight into individual differences."

—Psychology Today

The Orchid and the Dandelion

Why Sensitive Children
Face Challenges and
How All Can Thrive



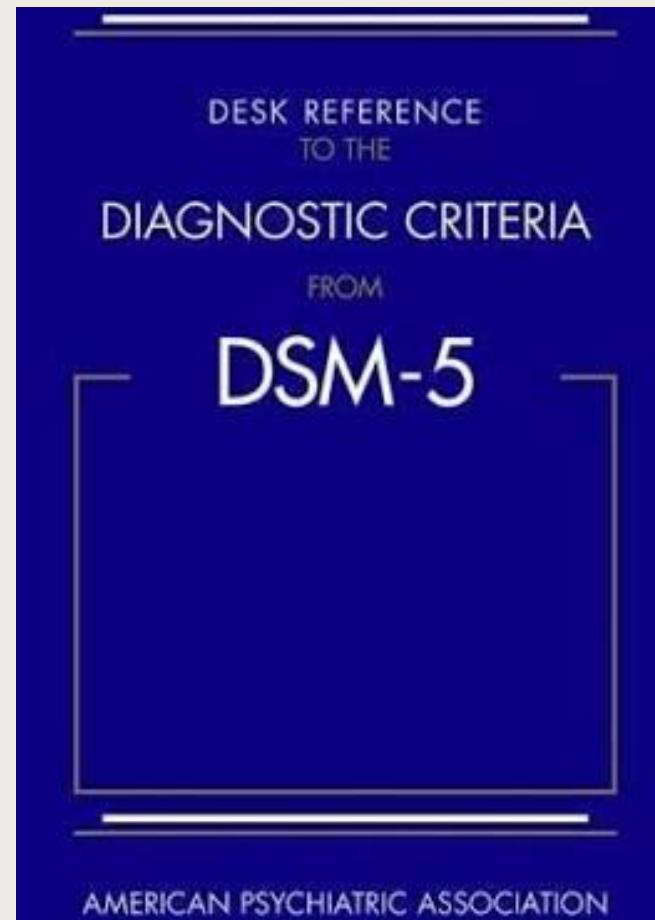
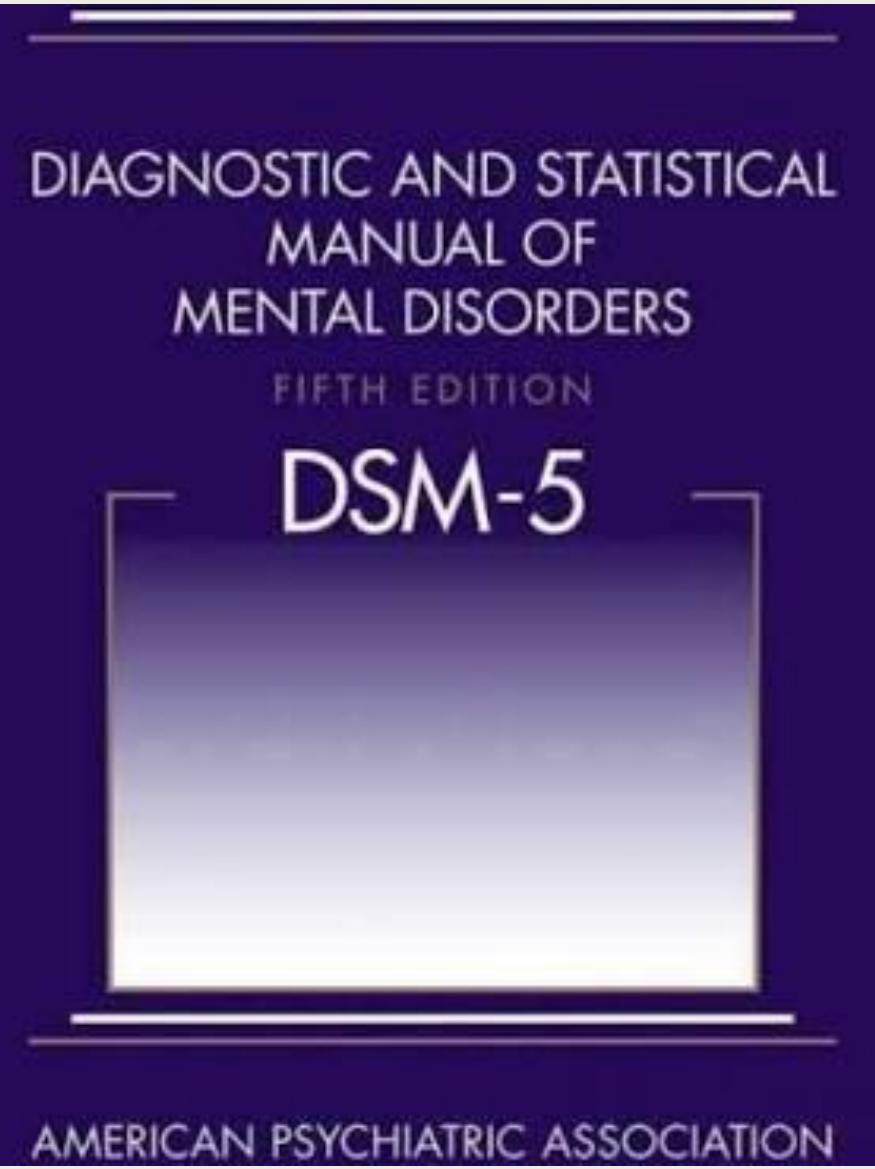
W. Thomas
Boyce, MD

Dandelion Kids



Orchid Kids





PTSD (Physical/Sexual/Emotional Abuse or Neglect)

Table 1
Glucocorticoid effect on brain from toxic stress

Brain Area	Function	Neuronal Impact of Excess Glucocorticoid in Toxic Stress	Behavioral Consequence from Toxic Stress
Amygdala	Brain "alarm" Responsible for emotional memory Generates aggressive or impulsive behaviors to protect the body	Amygdala hypertrophy	Aggressive behavior with minimal threat Impulsivity that can mimic ADHD
Hippocampus	Brain "search engine" Allows brain to access information from other brain centers Role in learning and memory	Limits neuronal formation (normally, neuron formation in hippocampus occurs throughout lifespan)	Protective effect of some amnesia about prior trauma Limits learning Negatively impacts educational achievement
Prefrontal cortex	Suppresses impulses and emotion generated by limbic system Executive function: Impulse control, working memory, and cognitive flexibility	Slows synaptic connectivity	Limited ability to suppress aggression Limits ability to think through consequences of actions Can look like ADHD, aggression or oppositional defiant disorder

Abbreviation: ADHD, attention deficit hyperactivity disorder.