



Psychiatric Case Formulation

Assessing Pediatric Mental Health in the Medical Home

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A 7 Year-old Boy with Hyperactive Behavior

Steven is a 7 year old boy brought to the primary care clinic by his mother due to hyperactive behavior

- Described as always being on the move, “can’t calm down”
- Easily reactive, will go into long “rages”
- Especially irritable and aggressive with siblings
- Poor sleep since he was a baby
- Behaviors noted both at home and school
- Mother wonders if he has ADHD and if he can be started on a medication

ADHD?

DSM-V Criteria for ADHD

A persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development:

Inattention: Six or more symptoms of inattention for children up to age 16, or five or more for adolescents 17 and older and adults; symptoms of inattention have been present for at least 6 months, and they are inappropriate for developmental level:

- Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or with other activities.
- Often has trouble holding attention on tasks or play activities.
- Often does not seem to listen when spoken to directly.
- Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g., loses focus, side-tracked).
- Often has trouble organizing tasks and activities.
- Often avoids, dislikes, or is reluctant to do tasks that require mental effort over a long period of time (such as schoolwork or homework).
- Often loses things necessary for tasks and activities (e.g. school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses, mobile telephones).
- Is often easily distracted
- Is often forgetful in daily activities.

Hyperactivity and Impulsivity: Six or more symptoms of hyperactivity-impulsivity for children up to age 16, or five or more for adolescents 17 and older and adults; symptoms of hyperactivity-impulsivity have been present for at least 6 months to an extent that is disruptive and inappropriate for the person's developmental level:

- Often fidgets with or taps hands or feet, or squirms in seat.
- Often leaves seat in situations when remaining seated is expected.
- Often runs about or climbs in situations where it is not appropriate (adolescents or adults may be limited to feeling restless).
- Often unable to play or take part in leisure activities quietly.
- Is often "on the go" acting as if "driven by a motor".
- Often talks excessively.
- Often blurts out an answer before a question has been completed.
- Often has trouble waiting his/her turn.
- Often interrupts or intrudes on others (e.g., butts into conversations or games)

In addition, the following conditions must be met:

- Several inattentive or hyperactive-impulsive symptoms were present before age 12 years.
- Several symptoms are present in two or more setting, (such as at home, school or work; with friends or relatives; in other activities).
- There is clear evidence that the symptoms interfere with, or reduce the quality of, social, school, or work functioning.
- The symptoms are not better explained by another mental disorder (such as a mood disorder, anxiety disorder, dissociative disorder, or a personality disorder). The symptoms do not happen only during the course of schizophrenia or another psychotic disorder.



.... Or not? And what else?

- Diagnostically, this boy may meet criteria for ADHD
- Approaching his symptoms from the framework of a formulation allows you to consider multiple coexisting diagnoses as well as factors that don't fit into a diagnostic category...
- Allowing a more nuanced approach to treatment

Case Formulation

- “a distillation of a child’s and family’s complicated, nuanced experiences into a manageable, meaningful synopsis” (Winters et al, 2007)
- presents both a **framework** for understanding a patient’s presentation and a **roadmap** for guiding treatment.

Diagnosis vs Formulation

- **Diagnosis**
 - not theoretical
 - draws on disease concept – problem focused
 - may not take non-biomedical factors into account
- **Formulation:**
 - more theoretical, dimensional
 - symptoms viewed as being on continuum from normal to abnormal
 - Incorporates non-diagnostic elements into a nuanced understanding of a patient
 - “Biopsychosocial” model

Biopsychosocial Model

Assumption that brain development and the mind's functioning are influenced by:

- **Biology:** Genetics (predisposition), Insults (illness, injury, toxin / medication)
- **Psychology:** Attachment / relationships, personality combined with internal and external challenges, intellectual ability, flexibility and emotion regulation
- **Social:** interactive experience with individuals, institutions, society and culture.

The Components of the Biopsychosocial Model

Biological	Psychological	Social
<p>Family history</p> <ul style="list-style-type: none">• Genetics• Physical development• Constitution• Intelligence• Temperament• Medical comorbidities	<p>Emotional development including attachment</p> <ul style="list-style-type: none">• Personality structure• Self-esteem• Insight• Defenses• Patterns of behavior• Patterns of cognition• Responses to stressors• Coping strategies	<p>Family constellation</p> <ul style="list-style-type: none">• Peer relationships• School• Neighborhood• Ethnic influences• Socioeconomic issues• Culture(s)• Religion(s)

Biopsychosocial Evaluation

- History (can be obtained over multiple appts)
- Information sources – patient, parents, teachers, caregivers
- Use of scales and detailed developmental / psychiatric history form
- Exam
- Further evaluation (medical, neuropsych, etc)

A 7 Year-old Boy with Hyperactive Behavior

- **Additional history:**
 - Tends to be a “worrier” and to “fixate” on things
 - Doesn’t have a lot of friends; is a “loner”
 - Extremely picky, won’t eat meats or vegetables, hates beans
 - Loves video games – plays 4+ hours daily, including until right before bedtime.
 - Patient can’t go to sleep without melatonin and has nightmares almost nightly.
 - Mom reports that he “flips out” if there are loud noises or if she yells at him or the siblings

Additional History

- Family structure:
 - Lives with mom and three younger brothers.
 - Dad is in prison for domestic violence against mother.
 - Maternal uncle and his daughter live in the home
- Family history:
 - Father and paternal grandfather with substance abuse
 - Brother with autism
 - Mother with depression
 - Grandmother with thyroid disease

Social/Developmental history

- Pregnancy: no in-utero exposures, mom physically and emotionally abused by patient's dad.
- Uncomplicated full-term vaginal birth.
- Fussy, colicky as a baby
- Mom depressed postpartum
- Due to concerns for neglect / abuse, at 6 mo patient placed in foster care for several months
- Met developmental milestones on time
- Now in 2nd grade at local PS; struggles with reading
- Mom works full-time in service industry
- Kids in aftercare
- Loves to draw, play with Legos, run around outside

Exam

- Steven is a very thin boy with dark circles under his eyes who makes infrequent eye contact, is constantly moving, and seems easily distracted.
- Speech normal volume, rate, cadence; has lisp
- Mood “fine,” affect anxious, constricted
- Thought process seems mostly linear, age-appropriate; denies suicidal thoughts, hallucinations
- You ask him about flashbacks or nightmares and he looks uncomfortable and doesn’t answer.
- Mom says “he never wants to talk about his dad.”

Diagnosis

- Anxiety
- Reactive attachment disorder
- Post traumatic stress disorder
- ADHD
- Disruptive Mood Dysregulation Disorder
- Oppositional defiant disorder
- Depression
- Sleep disorder

Formulation

Biological	Psychological	Social
Family hx autism, depression, addiction, thyroid disease	Attachment disruption in first year	Mom under stress
Maternal stress during and after pregnancy	Tends to be anxious, reactive in response to chaotic / stressful environments	Chaotic home
Poor sleep Poor nutrition		Financial stress
“Fussy” / irritable since birth; also creative and energetic		Strained relationship with father
? Learning disorder		Positive relationship with mother and uncle
		Struggles with reading, likes school

Formulation

Steven is a 7 year old boy with no prior psychiatric care, who lives at home with his mother and three younger siblings; his father is in prison. He is in 2nd grade at Parkland Elementary School. He presents to clinic with concern for worsening hyperactivity, irritability and dysregulation particularly when in a chaotic environment. There is a genetic predisposition to mood disorders as well as substance abuse.

Steven has been exposed to violence from an early age, and is likely to have attachment disorder related to his mother's postpartum depression and removal from the home at 6 months of age. He continues to live in a stressful and chaotic environment, where he easily becomes overwhelmed and reactive; this reactivity is likely related to early trauma. His mother is overwhelmed with caring for several children while maintaining a full-time job and therefore Steven is often allowed to spend long stretches of time playing violent video games, often until fairly late at night. In addition, Steven's mother has a history of her own trauma; when Steven becomes upset or dysregulated, his mother also becomes upset and is not able to engage with him to help him learn how to self-regulate and calm down.

Steven's presentation has features of reactive attachment disorder, PTSD and ADHD, as well as a possible underlying mood disorder. He has poor sleep, which has been ongoing since a young age, and is likely influenced by temperament as well as poor sleep hygiene at home as well as nightmares, possibly related to PTSD. Steven will benefit from additional assessment of specific diagnoses and pharmacologic treatment. In addition, he should see a therapist specializing in working with children with attachment disorders and a history of trauma, to help him identify triggers for arousal and to learn better strategies for self-regulation. Steven's mother would also likely benefit from her own treatment, both for her individual trauma as well as to better cope with and respond to her children's distress.

Finally the family could benefit from additional support in the home; mother has not accessed DD services for her son with autism and there may be additional mental health services that can be utilized for additional support as well.

Using a formulation to guide treatment planning

- Can be used to guide multidimensional treatment plan:
 - Additional history that needs to be obtained
 - Further medical or other evaluations
 - School interventions
 - Medications
 - Other therapeutic / environmental interventions:
 - Parent education / support
 - Referral to additional services
 - Child, parent, and family therapy
 - In-home support

References

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