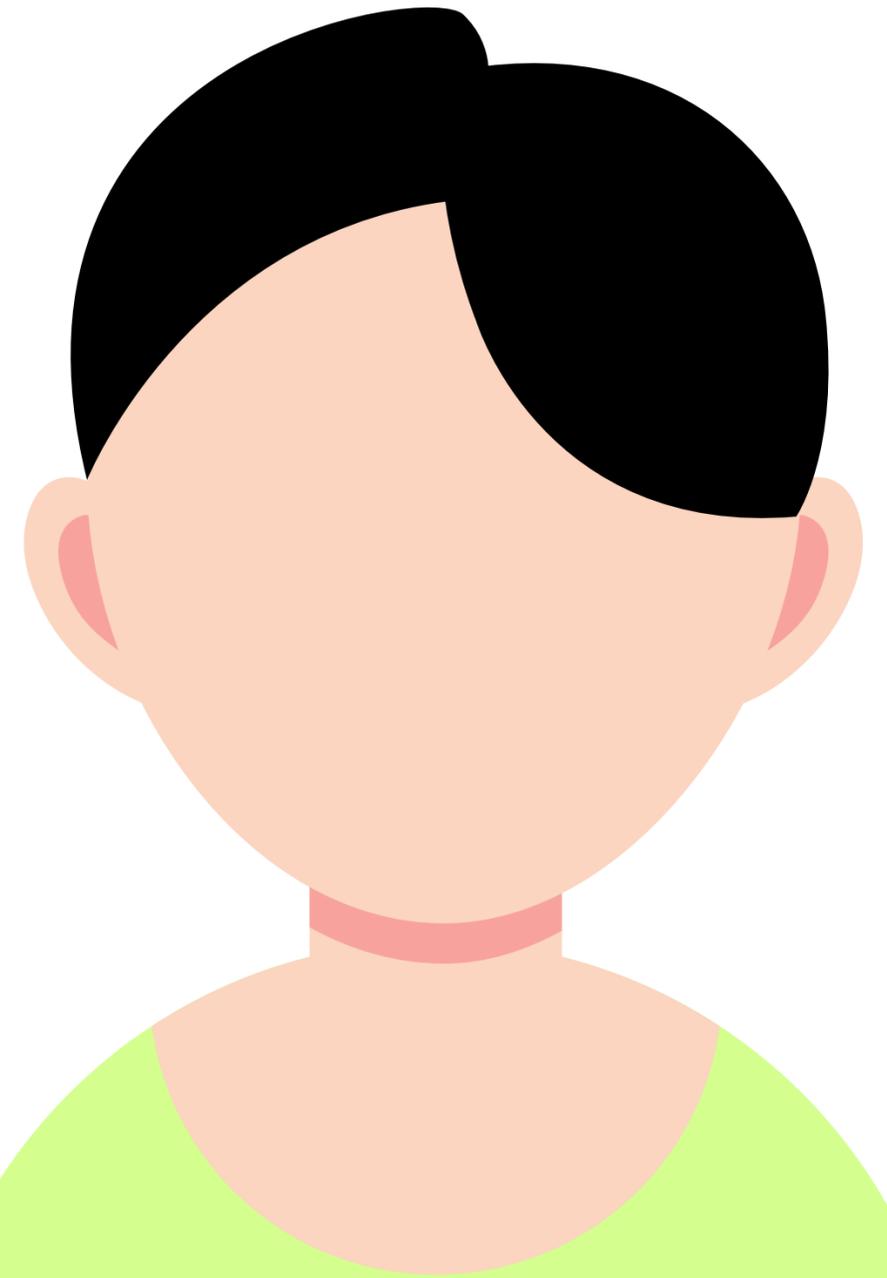


ADHD IN ADULTS: EXPLORING CURRENT CONSIDERATIONS FOR DIAGNOSIS AND TREATMENT

TLPCA

June 14, 2025

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LEARNING CONTENT

1

Diagnostic Criteria

2

Trends in the United States

3

Comorbidities / Etiology

4

Gender and Cultural Considerations

5

Effective Treatments

6

Emerging Research

NEURODEVELOPMENTAL DISORDERS

Intellectual Developmental Disorders

Communication Disorders

Autism Spectrum Disorder

ADHD

Specific Learning Disorder

Motor Disorder

(American Psychiatric Association [APA], 2022)

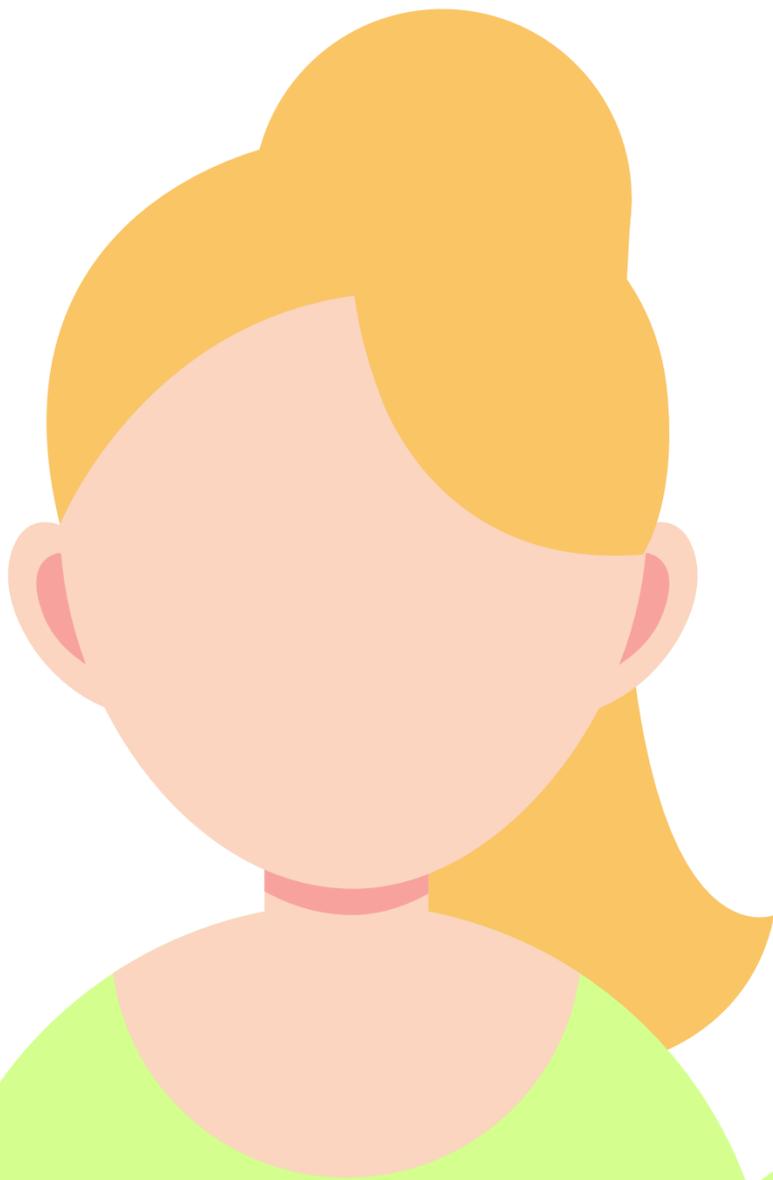


WHAT IS ADHD

Attention-Deficit/Hyperactivity Disorder
(ADHD)

“Persistent pattern of inattention and/or
hyperactivity-impulsivity that interferes with
functioning or development”

(APA, 2022, p. 68)



MORE DETAILS TO NOTE

Symptoms present before age 12

Codes: F90.2 (Combined), F90.0 (Predominately
inattentive), F90.1 (Predominately
hyperactive/impulsive)

Partial Remission

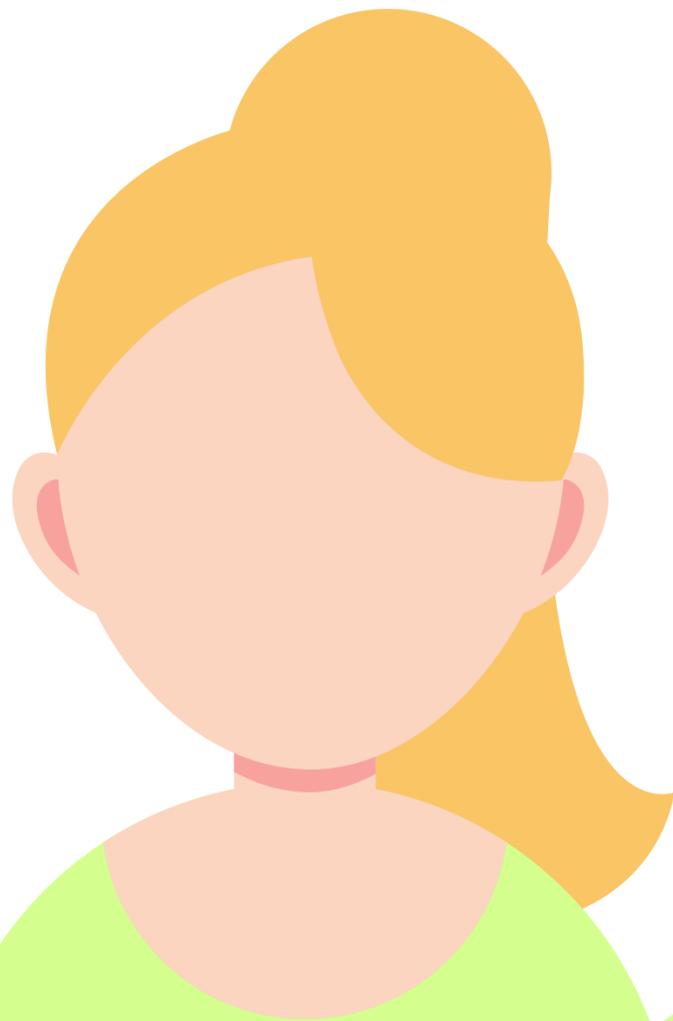
Mild, Moderate, or Severe



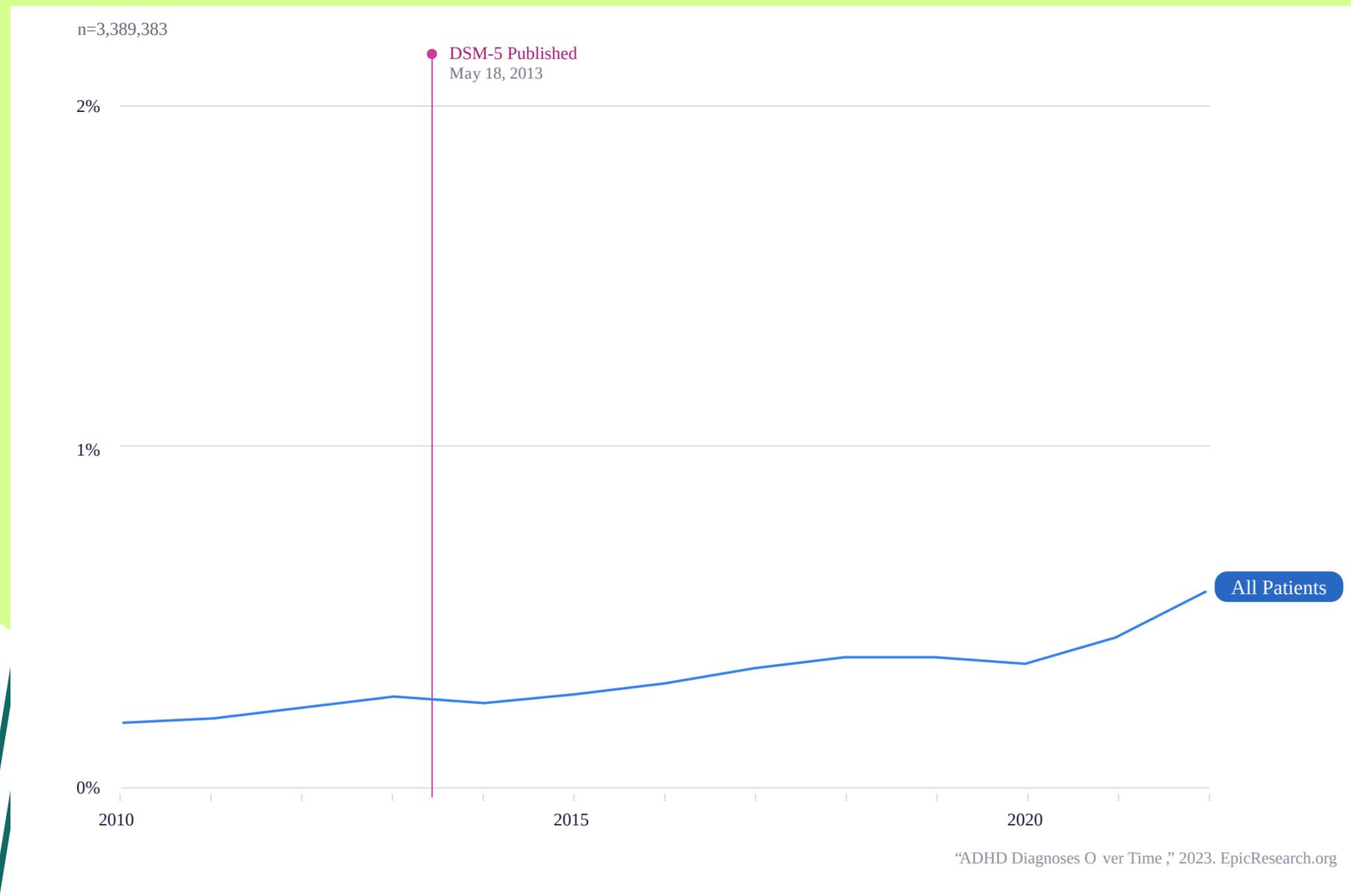
(APA, 2022, p. 69)

ADULT ONSET?

- Not possible per DSM criteria
- ADHD traditionally viewed as disorder of childhood and adolescence
- Diagnoses in childhood are increasing:
 - Over 11% of children have been diagnosed in US → an addition 1 million children compared to 2016 (CDC.gov, 2024)
- Diagnoses in adulthood have exploded:
 - Current prevalence in adults increased from ~4% in 2005 (Kessler et al., 2006), to over 6% in 2023
 - Half of recent diagnoses given during adulthood (Staley et al., 2023)



RISE IN ADHD DIAGNOSES

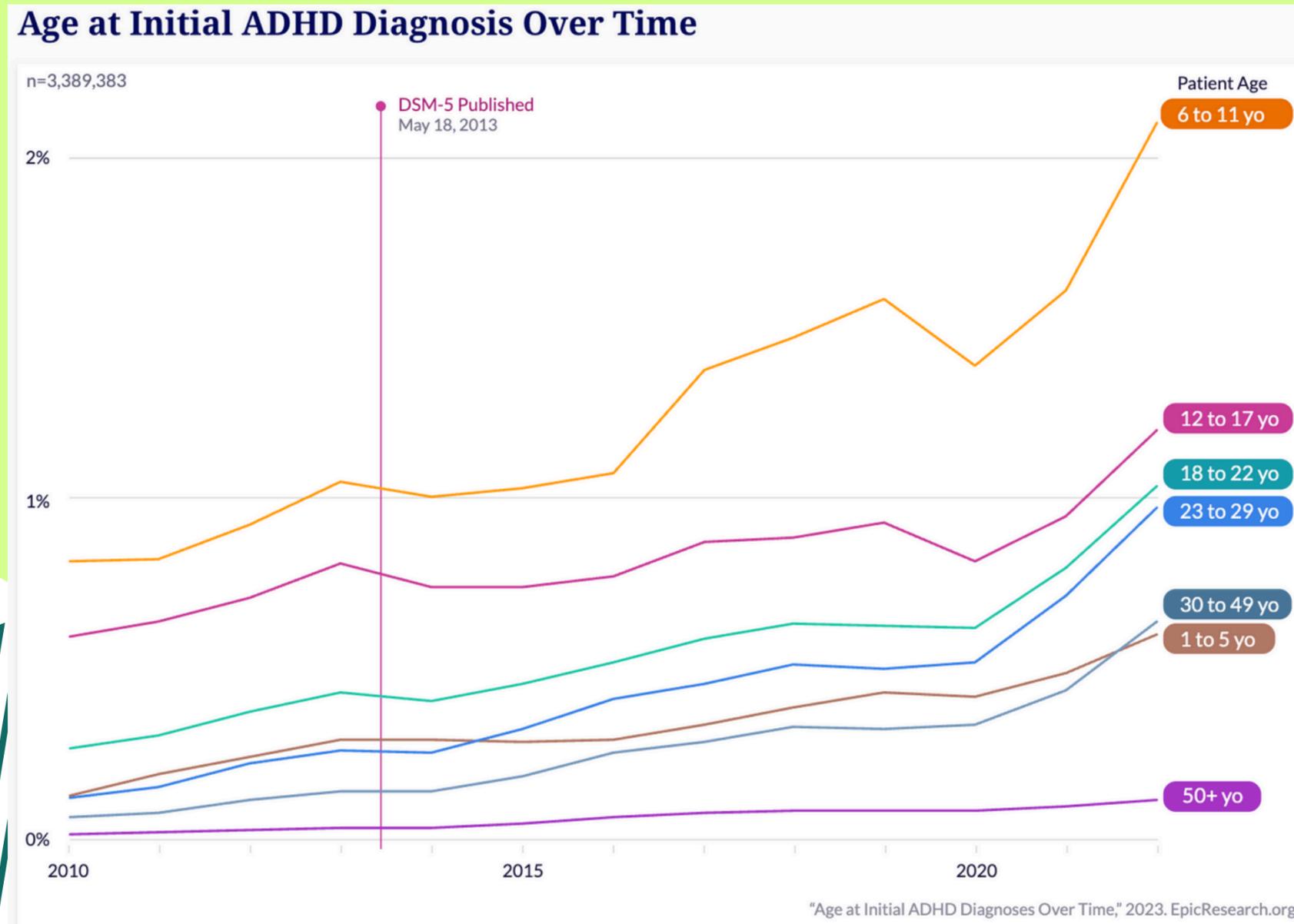


(Russel et al., 2024)

- Rate of increase in initial diagnoses roughly tripled between 2010 and 2022
 - largest increase seen from 2022-present
- Proportion of patients prescribed stimulant medications has remained fairly constant
 - suggests that rise in stimulant use due to increases in new diagnoses (rather than increased use in those already diagnosed)

(Russel et al., 2024)

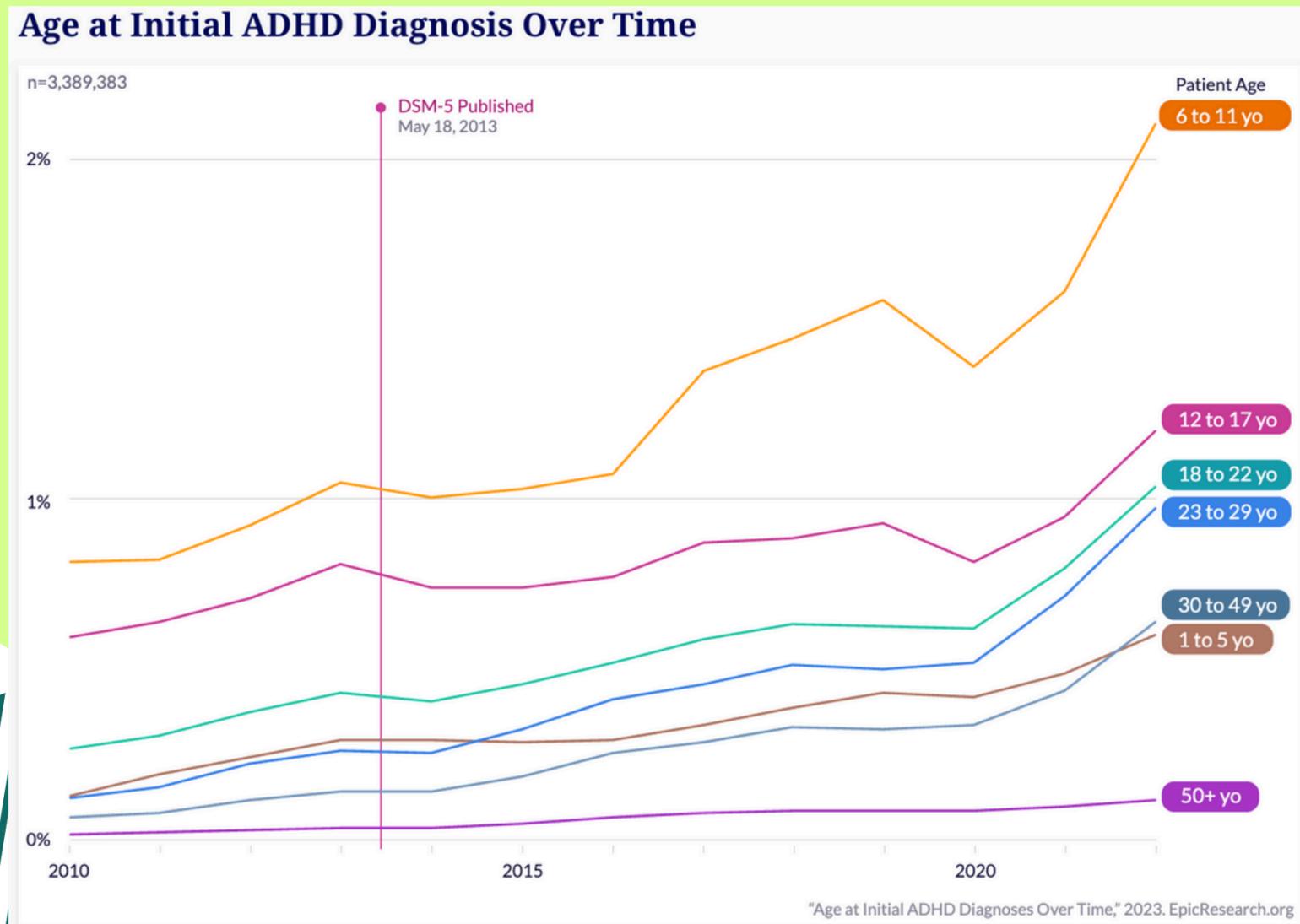
RISE IN ADHD DIAGNOSES



- Pandemic lead to an explosion of diagnoses among most age groups
 - largest increase in new diagnoses were adult females (ages 23-49)
- Gender gap rapidly decreasing:
 - in 2010, males were 133% more likely to be diagnosed
 - by 2022, this had dropped to 28% more likely
(Russel et al., 2024)

(Russel et al., 2024)

RISE IN ADHD DIAGNOSES



(Russel et al., 2024)

- Since 2020, stimulant prescriptions have jumped over 30% in Americans ages 20-39 (Chai et al., 2024)
- 1 in 4 Americans now suspect that they have undiagnosed ADHD (Wexner Medical Center, 2024)
- Rising public awareness of possible under- and over-diagnoses
 - ADHD is often overlooked and undertreated
 - Screening tools may vastly over-diagnose condition (Chamberlain et al., 2021)

ETIOLOGY OF ADHD

The cause of ADHD is still unknown, but it has been shown to run in families. The heritability of ADHD is **74%**, but there is **NO** single gene for ADHD. The most common belief is that ADHD likely results from a combination of factors (APA, 2022), (National Institute of Mental Health, 2024).



GENETICS

Abnormal neural development in the embryo stage can lead to ADHD. Those differences in brain development and function are especially noticeable in children's brains, in the frontal, cingulate, and temporal regions (Núñez-Jaramillo et al., 2021).



ENVIRONMENTAL CORRELATES



Pre & Perinatal risk factors: premature birth, low birth weight, prenatal exposure to smoking, perinatal hypoxia, prenatal nutritional deficits, prenatal infections such as encephalitis, alcohol exposure, and pesticide exposure.

In utero or early childhood: exposure to heavy metals, such as lead, mercury, manganese, and cadmium (APA, 2022), (Núñez-Jaramillo et al., 2021).

DIFFERENTIAL DIAGNOSES

- **OPPOSITIONAL DEFIANT DISORDER (ODD)**
- **INTERMITTENT EXPLOSIVE DISORDER**
- **SPECIFIC LEARNING DISORDER**
- **AUTISM SPECTRUM DISORDER**
- **REACTIVE ATTACHMENT DISORDER (RAD)**
- **ANXIETY DISORDERS**
- **PTSD**
- **DEPRESSIVE DISORDERS**
- **INTELLECTUAL DEVELOPMENT DISORDER**
- **BIPOLAR DISORDER**
- **DISRUPTIVE MOOD REGULATION DISORDER**
- **SUBSTANCE USE DISORDERS**
- **PERSONALITY DISORDERS**
- **PSYCHOTIC DISORDERS**
- **NEUROCOGNITIVE DISORDERS**
- **TOURETTE'S DISORDER**

(APA, 2022)

COMORBIDITY IN ADULTS

- Particularly higher rates of ODD, Autism, personality, and substance use disorders.
- Anxiety disorders, major depressive disorder, OCD, and intermittent explosive disorder occur in a minority of individuals with ADHD.
- Comorbid sleep disorders in ADHD are common, 25–50% report various sleep difficulties.
- Elevated rates of various medical conditions, especially allergy and autoimmune disorders, as well as epilepsy. (APA, 2022).

GENDER DIFFERENCES IN ADHD

For the purpose of this presentation, we will refer to gender rather than biological sex due to the social differences of ADHD perception between men and women.



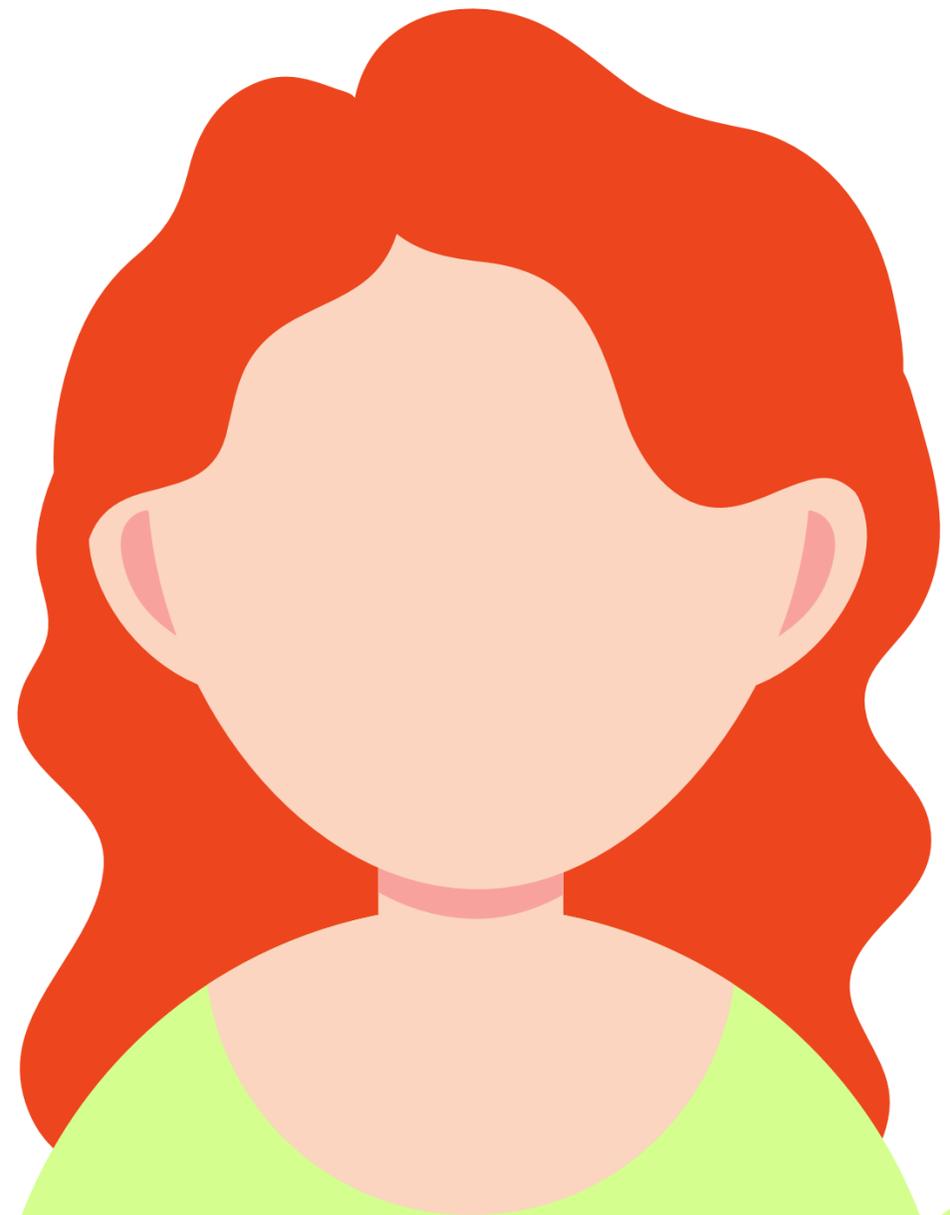
GENDER DIFFERENCES IN ADHD

Men and women differ in presentation of ADHD, with men showing more externalizing symptoms like hyperactivity, while women often show internalizing symptoms such as inattentiveness. This difference is believed to contribute to delayed diagnosis for women (Berkeley Psychiatrists, 2024).



COMORBIDITIES AND GENDER

Women are more likely to experience internalizing conditions along with ADHD like depression, anxiety, and eating disorders. Men are more likely to experience comorbidities like schizophrenia and substance use disorder. Other conditions like personality disorders and bipolar disorder co-occur with ADHD for some, but this is not specific to gender (Solberg et al., 2018)



COMMON SYMPTOMS IN MEN AND WOMEN

WOMEN

- Feelings of despair, inadequacy and overwhelm
- Lacking motivation
- Being impatient
- Fatigue and insomnia
- Easily losing focus and daydreaming
- Eating disorders
- Hypersexuality
- Prone to body-focused, repetitive behaviors such as skin picking, hair pulling, leg bouncing, nail biting
- Social anxiety
- Sensory sensitivities
- Worsening of ADHD symptoms in response to changing estrogen levels
- Perfectionism
- Losing focus while others are talking
- Disorganization and losing track of time

MEN

- Hyperactivity
- Disruptive behavior
- Misplacing things
- Interrupting others who are speaking
- Aggressive behavior
- High-risk behavior (e.g., substance misuse, unhealthy sexual behavior, excessive spending)
- Angry outbursts
- Insensitivity to other's emotions

(The ADHD Centre, 2024)

An illustration on the left side of the slide features three stylized human figures, each enclosed in a white circular frame. The top figure is a woman with dark skin and curly hair. The middle figure is a man with light skin and short blonde hair. The bottom figure is a woman with light skin and long red hair. All three figures are wearing a light green top. The background of the slide is a vibrant lime green, decorated with abstract patterns of diagonal lines and overlapping circles in various shades of green and white.

CULTURAL VARIATION IN SYMPTOM PRESENTATION

- Differences often present in behaviors related to:
 - Directness with conversation
 - Degree of emotional expression
 - Verbal and nonverbal communication norms
 - Engagement with authority figures (e.g., eye contact)

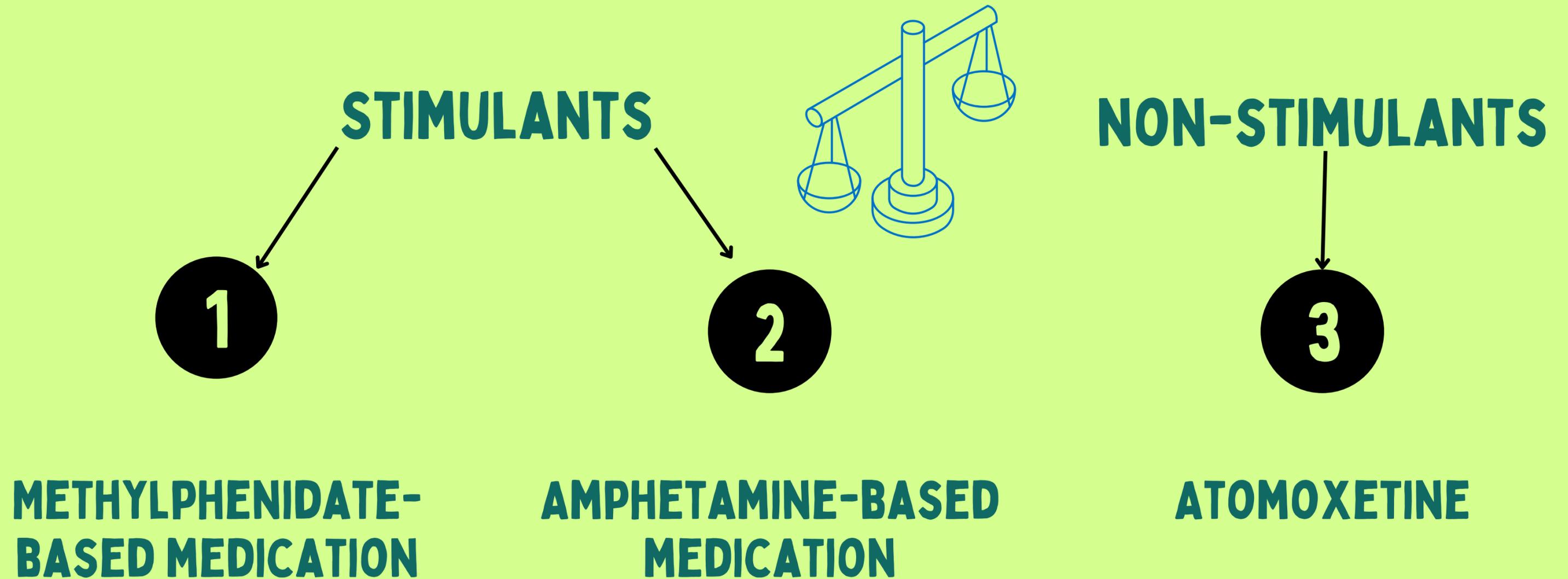
(Ghoshal, 2022)



CULTURAL CONSIDERATIONS

- Certain cultural groups are believed to accommodate ADHD symptoms more or less, largely based on social customs and parenting styles.
- In a study comparing Hispanic, Spanish, African American, and European American young adults, reported ADHD levels were lowest in the European American group
 - This subgroup may practice more authoritative parenting (firm expectations and high warmth)
 - The other cultural groups may endorse more authoritarian parenting (strict and low warmth) (Gómez-Benito et al., 2019)

EFFECTIVE TREATMENTS

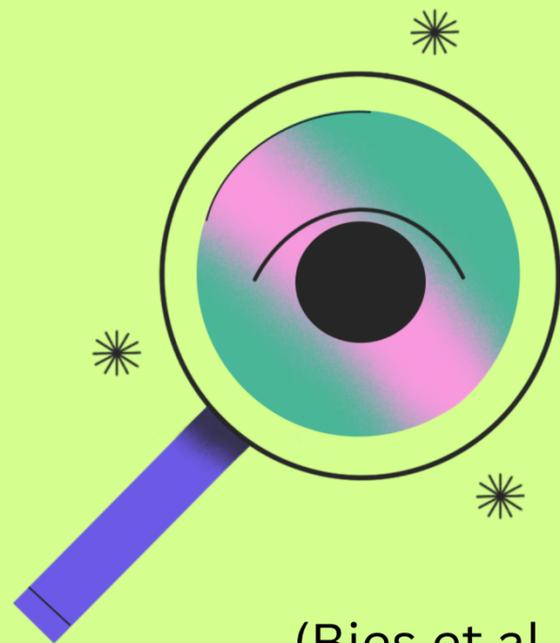


(Attention Deficit Disorder Association, 2024; Bies et al., 2023)

(Castells et al., 2018)

STIMULANT SIDE EFFECTS

Mild to moderate with short-term use



(Bies et al., 2023; Lakhan & Kirchgessner, 2012; Mick et al., 2013)

1

DECREASED APPETITE

2

IRRITABILITY & INSOMNIA

3

ABDOMINAL PAIN

4

HEADACHES & DIZZINESS

5

NAUSEA & CONSTIPATION

6

CHANGES IN ANXIETY AND DEPRESSION

7

NAUSEA & CONSTIPATION

8

**INCREASED HEART RATE & SYSTOLIC BLOOD
PRESSURE**

ADDITIONS AND ALTERNATIVES TO MEDICATION

PSYCHOLOGICAL INTERVENTIONS

**COGNITIVE BEHAVIORAL
THERAPY (CBT)**

MINDFULNESS TRAINING

NEUROFEEDBACK

PSYCHOEDUCATION



(Fullen et al., 2020)

LIFESTYLE CHANGES

**CLEAR STRUCTURED
DAILY ROUTINES**

BREAK UP LARGE TASKS

**REMINDERS, ALARMS,
CALENDERS**

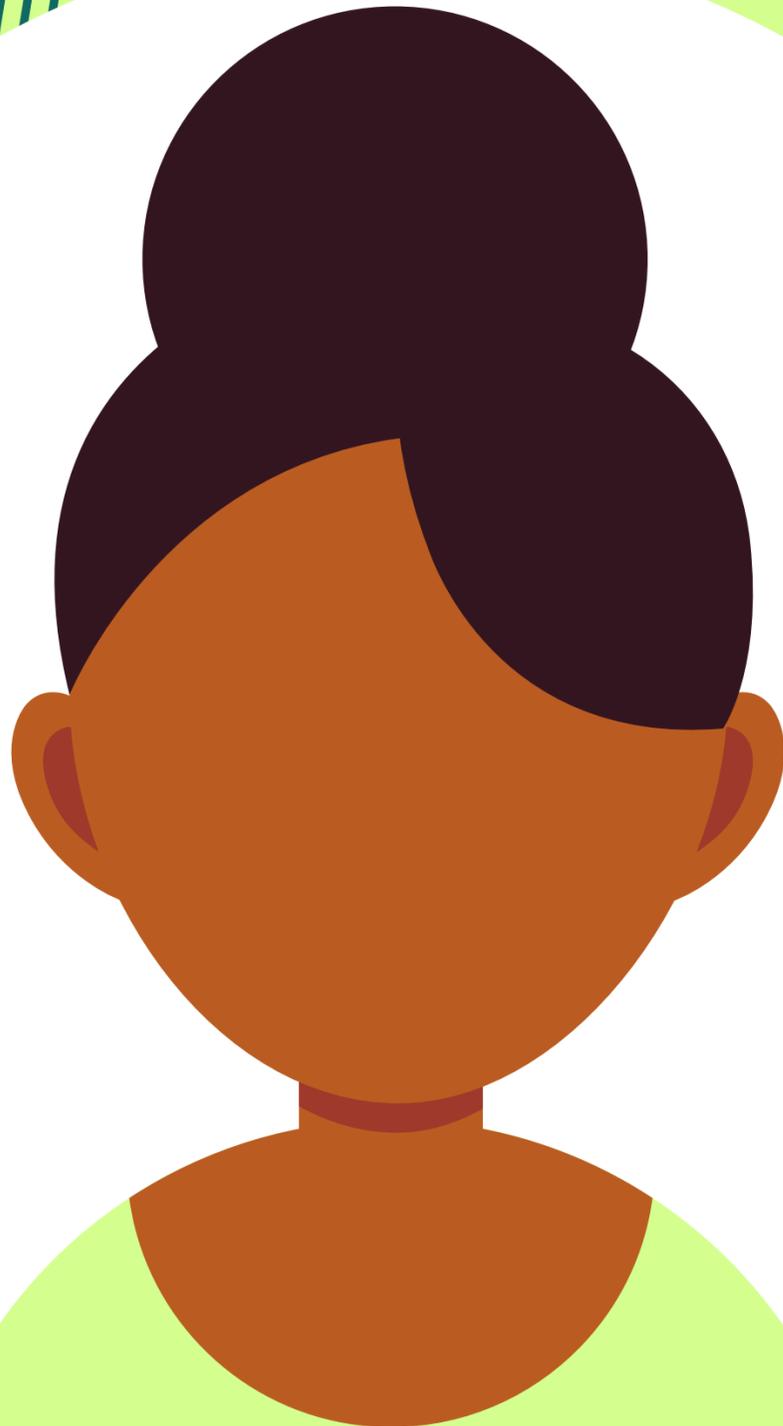
EXERCISE

CONCERNS FOR FUTURE STUDY & RESEARCH

- 1 Stimulant use on college campuses
- 2 Future treatments
- 3 Influence of screen time on ADHD

STIMULANT USAGE

“The use rates of prescription stimulants is higher in the US compared to any other country, accounting for 83.1% of global medication consumption”
(Fairman et al., 2022, p. 767).



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STIMULANT USAGE ON COLLEGE CAMPUSES

- A 2022 study indicated that approximately 8% of college students were prescribed stimulants for ADHD in the past year (Fairman et al., 2022)

STIMULANT ABUSE CONCERNS

- More & more students are using stimulants for enhanced study sessions, big exams, and to improve overall productivity
- out of 900 college-age students:
 - 9.8% of students used prescription stimulants not prescribed to them in the past 30 days
- out of 8,039 undergrad students:
 - 11.2% of students used non-prescribed stimulants in the past 6 months

(Fairman et al., 2022)

- Ritalin grew rapidly as a treatment for ADHD
 - doubled in 1993 – over 2 million children perscribed
 - long-term effectiveness was not studied
- Swanson and researchers developed a multisite randomized controlled trial comparing stimulant treatment and nonpharmaceutical approaches
 - 14 months versus 36 months

(Tough, 2025)

STIMULANT EFFECTIVENESS CONCERNS

GUT-BRAIN AXIS

- Relationship between the gut biome and behavior/emotions
 - communicate via the gut-brain axis
 - gut microbiota influence brain function & vice versa
- Gut bacteria produce serotonin & gamma-aminobutyric acid (GABA), which help regulate emotions

(Jensen, 2024)



GUT-BRAIN AXIS

- Abnormalities in gut microbiome can affect:
 - mood, anxiety, & stress levels
- Imbalances caused by:
 - diet, stress, antibiotic use during pregnancy
- Longitudinal studies link long lasting abnormalities & imbalances to ADHD & other disorders
- Restoring a healthy gut can improve emotional regulation and attention
(Jensen, 2024)

GENE-ENVIRONMENT INTERACTIONS

- ADHD is highly heritable, but environmental influences are a factor too – whether the illness or disease manifests
- Studies reveal the severity and persistence of ADHD may be linked to parent-child interactions & supervision
 - certain interventions (warmth during difficult behaviors) can alleviate ADHD symptom severity & persistence
 - factors affecting a child's outcome:
 - parental rejection, household disorganization, & overall life stress

(Jensen, 2024)



SOCIAL MEDIA & SCREEN TIME

(Wallace et al., 2023)

Social Media

- “presents people with brief, superficial and stimulating parcels of content, without much need to exert cognitive control and allowing for constant attentional switching” (Wallace et al., 2023, p.30)

ADHD Risk

- difficulty in finishing tasks, sustaining attention for longer periods of time, prefer immediate versus delayed rewards, and impulsive attitude

Vulnerabilities – social media, TV, & videogaming

- neurocognitive risk to ADHD symptoms – impulsivity
- neuropsychological consequences on cognition and temperament during adolescence

Clinical Insight

- Explore client’s usage to evaluate impact and exacerbation
- Symptom relief from monitoring and lessening screen time & social media usage

**THANK YOU
FOR
LISTENING**



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