

ABSTRACT

- Scholars and national mental health organizations have suggested that girls are likely to be misdiagnosed or not diagnosed, subsequently receiving diagnoses and treatment later in life than their male peers.
- A lack of identification and effective treatment increases the likelihood of girls experiencing academic or occupational challenges, peer struggles, low self-esteem and suicidality and self-injurious behavior.
- Increasing the awareness of educators and families regarding symptomology of girls with ADHD could lead to increased identification and earlier intervention which may have implications for improving treatment efficacy and girls' mental health overall.

GENDER DIFFERENCES IN PRESENTATION

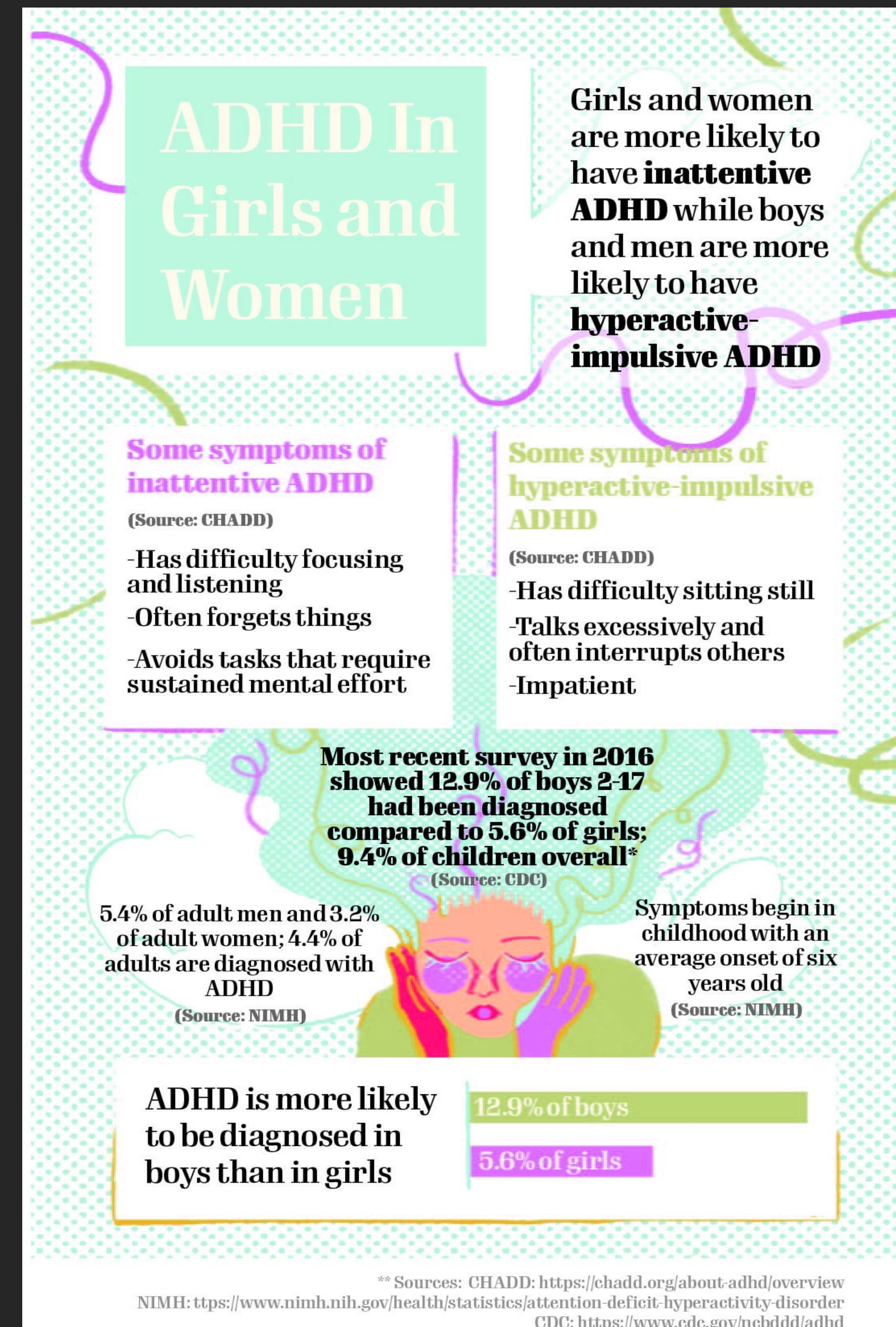
- Research has continually suggested that symptom differences exist when comparing presentations of boys and girls with ADHD.
- For example, in clinical populations, **girls are more likely to present as inattentive** when compared to their male counterparts, who tend to exhibit behavior consistent with more disruptions and hyperactivity. This discrepancy is present in non-clinical populations as well.
- **Language differences** in how males and females experience emotions and sensations such as anxiety and restlessness may also vary by gender and bias our diagnostic criteria.
- **Social norms** may also impact expression of symptoms, such that girls are more likely to experience internalizing symptoms while boys are more likely to exhibit externalizing behavior, as certain behavior is considered more socially acceptable based on traditional gender roles.
- Overall, **girls with ADHD are less impulsive** than boys with ADHD. Further, girls with ADHD and anxiety are even less impulsive, suggesting that when comorbid, anxiety may mitigate some impulsivity associated with ADHD, particularly in females.
- **Neuropsychological differences** appear to exist between girls and boys with ADHD, such that girls with ADHD present with greater deficits in perceptual reasoning than their male peers.

DIFFERENCES IN AGE OF DIAGNOSIS AND MISDIAGNOSES

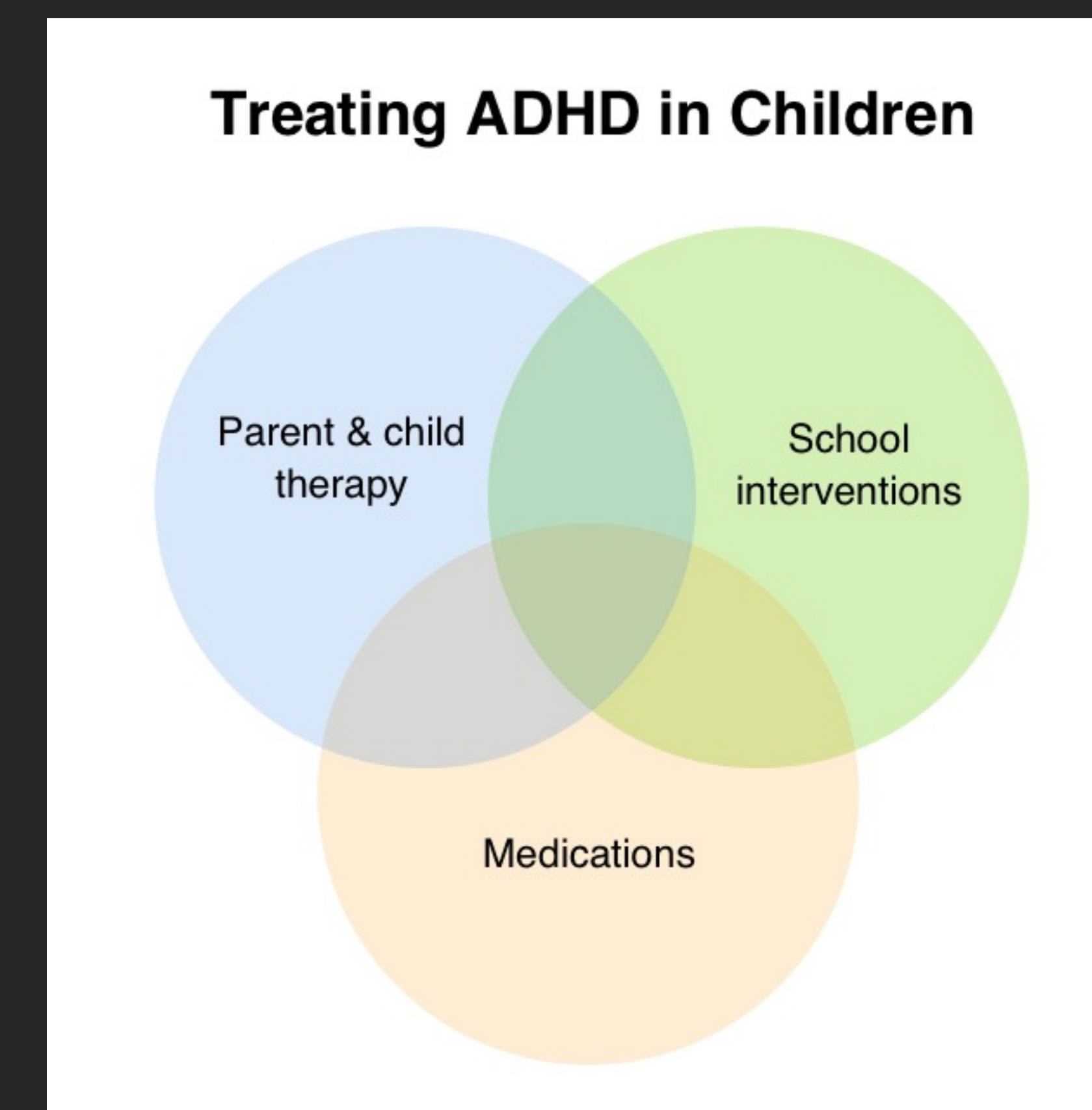
- Recent research has suggested there may not be a discrepancy in prevalence of ADHD across genders, but rather a discrepancy in diagnosis.
- Symptoms of ADHD in females are thought to be less impairing and less noticeable when compared with their male peers' symptoms.
- Self-report measures, which are typically used in schools to screen for and aid diagnosis, often mask the severity of internalizing symptoms experienced, as both males and females with ADHD tend to self-report more positively than external reports.
- Due to this, teachers and parents refer girls at lower rates for intervention, leading to later age of diagnoses than their male counterparts. When referred, girls tend to receive treatment for emotional concerns before ADHD is properly recognized or addressed.

The Missing Girls: Gender Differences in Presentation and Age of Diagnosis in Childhood ADHD

Arielle Misrok, B.A. and Jennifer M. Cooper, Ph.D.
Ferkau Graduate School of Psychology, Yeshiva University
Contact Information: amisrok@gmail.com



Misconceptions regarding the higher prevalence of ADHD in boys in conjunction with gender differences in symptom presentation contribute to the **under identification, misdiagnosis, and lack of intervention services for girls with ADHD.**



Girls with undiagnosed ADHD are at a higher risk for peer struggles, academic and occupational challenges, low self-esteem, risky sexual behavior, self-injurious behavior, and suicidality.

DIFFERENCES IN AGE OF DIAGNOSIS AND MISDIAGNOSES (CONT'D)

- Because of high levels of comorbidity with other mental health challenges, it can be difficult for providers, parents, and teachers to determine which symptoms are primary, indicating that many children have the potential to be misdiagnosed.
- Girls experience more overt comorbidities such as conduct disorder and oppositional defiant disorder at half the rate as their male peers.
- Their symptoms are likely to instead be interpreted as anxiety, depression, or social withdrawal.
- Compared with boys, even when referred, girls are more likely to receive and be treated for alternative diagnoses prior to arriving at ADHD.

CONSEQUENCES AND IMPLICATIONS

- Effective intervention is particularly critical for brain development and socialization in children with ADHD.
- Recommended intervention varies by age: for children younger than six years old, behavior therapy or parent management training are recommended as first-line approaches. For older children, pharmacologic medications such as stimulants are recommended and are particularly effective in combination with behavior therapy.
- Stimulant medication is correlated with a lower risk for internalizing and externalizing disorders in both boys and girls, and when utilized in the absence of other treatment, has been found to be more effective in treating symptoms of ADHD in children than adults.
- When left undiagnosed, girls with ADHD are at higher risk to experience academic and occupational challenges, peer struggles, low self-esteem, suicidality, engagement in self-injurious behavior, and risky sexual behavior.
- There is a need for increased training for school mental health providers, educators, and primary care providers in identifying common symptoms of ADHD in girls early and effectively.
- Further, increased communication between school, parents, and outside health providers is essential to coordinate successful care for children with ADHD, regardless of gender.

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