Diagnostic Simplification in the DSM-V and the Under-recognition of Autism in Women

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Unification of the pervasive developmental disorders did not remove the gender-specific criteria for autism, because such criteria never existed. Under-recognition of women is better explained by phenotype, male-normed instruments and school gatekeeping than by a shorter manual. Girls who diverge from the classic male picture remain easier to miss. The research documents recognition gaps; they say almost nothing about care after the label of autism is given or withheld.

Research Questions

1. Did unification from PDD to ASD reduce gender-specific must-meet criteria?
2. Is the DSM-V-TR algorithm less sensitive than DSM-IV-TR, and was any drop linked to underdiagnosis of females?
3. What sits between recognition and care?

Design

The paper is a structured narrative review with thematic synthesis. Sources included DSM-IV-TR (2000), DSM-V-TR (2022), and 20 peer-reviewed papers. The themes were taken from the manuals and papers themselves.

Theme 1- What the Manuals Say

Key takeaway: No sex specific algorithm was deleted between the DSM-IV-TR and DSM-V-TR was deleted because none existed.

DSM-IV-TR: Between the five pervasive developmental disorders in the DSM-IV the sex-related text is brief, and rates are four to five times higher in males for Autistic Disorder. Females are more likely to show more severe intellectual impairment, and Rett's Syndrome is reported only in females. There is no mention of masking, subtler social presentation, or under-recognition of girls without intellectual disability (APA, 2000).

DSM-V-TR: Contains only one autism spectrum disorder diagnosis organized into three levels of severity. All three social communication sub criteria are required for a diagnosis, and two of four restricted and repetitive items. The gender-related text is longer, not shorter, describing later average age at diagnosis in females, masking, more social interests, and an explicit statement of concern about under-recognition of women and girls (APA, 2022).

Diagnostic tools like the DSMs matter because they gatekeep who receives a recognized label, who enters research samples, and whose experiences become visible in clinical practice.

There is the same threshold for both sexes. The chapter expanded on how those criteria may be met. It did not add or remove a female pathway (First et al., 2022).

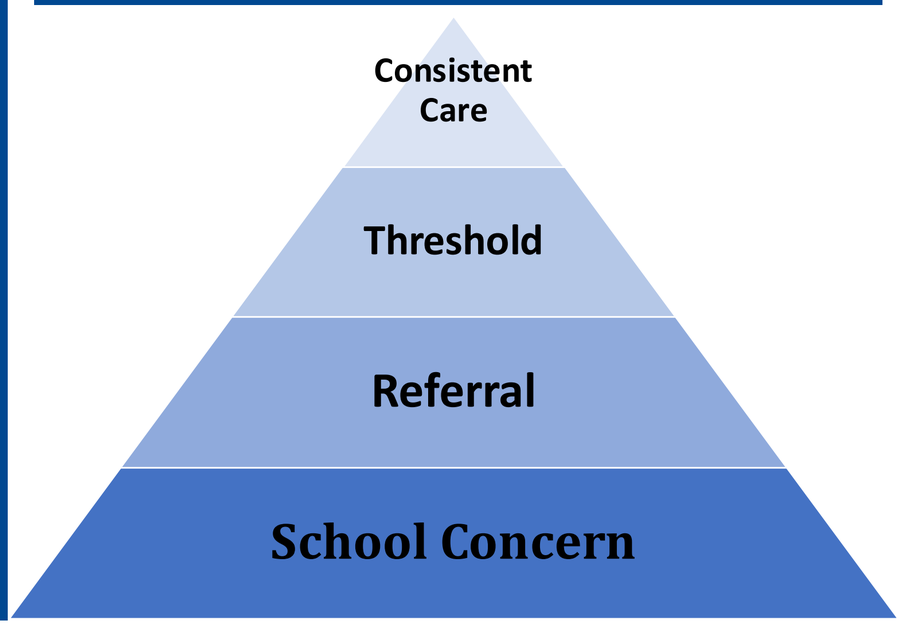
Theme 2- Sensitivity vs Field Rates

Key Takeaway: Remapping studies and real-world counts move in opposite directions.

On Paper: Kulage et al. (2020): pooled decrease of 20.8% for ASD and 46.1% for former PDD-NOS. Maenner et al. (2014): 81.2% of DSM-IV surveillance cases still met DSM-V; similar capture for boys and girls. Mazurek et al. (2017): 93% agreement in a referred sample, but females were 18% of dual-positive cases and 40% of DSM-IV-only cases.

Real-World Counts in the Field: Identification of autism kept rising after 2013, often faster for females (Russell et al., 2022; Grosvenor et al., 2024). Shaw et al. (2025) also showed that the boy-girl ratio of autistic children went down from 4.2 to 4.3 in 2018.

How to Evaluate Both Findings: A fixed algorithm applied to old diagnoses in remapping studies can lose cases while services, awareness, and recording keep finding more people with ASD, including more girls.



Theme 3- Phenotype, Instruments, and Gatekeeping

Key Takeaway: The male majority in diagnoses may be influenced by how females with autism are perceived.

Loomes et al. (2017): overall male-to-female odds are 4.20; 3.32 in higher-quality work, 3.25 in population screening, and 4.56 in clinical-diagnosis studies. They show that girls who meet criteria are at elevated risk of never receiving a clinical label.

Hiller et al. (2014): They showed that already-diagnosed girls more often integrate verbal and nonverbal behavior, sustain conversation and start friendships they cannot keep than boys. Teachers also report fewer concerns.

Van Wijngaarden- Cremers et al. (2014): Showed more repetitive behavior in boys from age six and that intellectually able females were under-counted.

Edwards et al. (2024): Showed a small male excess in autism-associated stereotypes and restricted preferences, and that interests differ in content.

Whitlock et al. (2020): Demonstrated that primary educators shown vignettes were less sensitive to a female autistic phenotype than boys.

Cruz et al. (2025) and Beggiato et al. (2017): Found more compensation and masking in females. Also, other diagnostic tools like the ADOS and ADI-R still lack sex-based explanations in presentation differences.

The persuasive claim is not that DSM-V deleted girls, it is that presentations that diverge from the familiar male-autistic prototype remain harder to recognize by caregivers before a specialist clinic, meaning fewer females are referred for diagnosis.

Conclusions and the Care Gap

Gender-specific must-meet criteria were not reduced between the DSM's IV and V; Gender discussion was lengthened in DSM-V-TR. Under-recognition tracks phenotype, male-normed tools and school concern more than manual wording. Remapping studies show real case loss, especially among former PDD-NOS cases. Field rates, however, only increased. Importantly, if remapping removes the label from impaired former PDD-NOS cases, access to services that still use diagnosis as a key may fall. About 29% might receive Social Communication Disorder instead (Kulage et al., 2020). In one referred sample, females were over-represented in that residual group (Mazurek et al., 2017).

Limitations: Comparison of the 2013 DSM-V with the 2022 text revision on gender wording is not possible here, because only the latter was available. Few studies have been shown to measure treatment hours for females, education-plan change, or service retention. A girl identified at 16 rather than at 6 has already lost years of adapted school support. A woman diagnosed in adulthood often arrives with a trail of other labels.

American Psychiatric Association. (2000). DSM-IV-TR.
American Psychiatric Association. (2022). DSM-5-TR.
First, M. B., et al. (2022). DSM-5-TR: Overview of what's new. World Psychiatry, 21(2), 218–219.
Grosvenor, L. P., et al. (2024). Autism diagnosis among US children and adults, 2011–2022. JAMA Network Open, 7(10), e2442218.
Hiller, R. M., Young, R. L., & Weber, N. (2014). Sex differences in ASD based on DSM-5 criteria. Journal of Abnormal Child Psychology, 42(8), 1381–1393.
Kulage, K. M., Smaldone, A. M., & Cohn, E. G. (2014). How will DSM-5 affect autism diagnosis? JADD, 4 1918–1932.
Kulage, K. M., et al. (2020). How has DSM-5 affected autism diagnosis? A 5-year follow-up. JADD, 50, 2102–2127.
Lai, M.-C., et al. (2015). Sex/gender differences and autism. JAACAP, 54(1), 11–24.
Loomes, R., Hull, L., & Mandy, W. P. L. (2017). What is the male-to-female ratio in ASD? JAACAP, 56(6), 466–474.
Maenner, M. J., et al. (2014). Potential impact of DSM-5 criteria on ASD prevalence estimates. JAMA Psychiatry, 71(3), 292–300.
Mazurek, M. O., et al. (2017). Concordance of DSM-IV and DSM-5 criteria for ASD. JADD, 47, 2783–2794.
Russell, G., et al. (2022). Time trends in autism diagnosis over 20 years. JCPP, 63(6), 674–682.
Shaw, K. A., et al. (2025). Prevalence and early identification of ASD, ADDM Network, 2022. MMWR Surveillance Summaries, 74(2).
Volkmar, F. R., & McPartland, J. C. (2014). From Kanner to DSM-5. Annual Review of Clinical Psychology, 10, 193–212.
Whitlock, A., et al. (2020). Recognition of girls on the autism spectrum by primary school educators. Autism Research, 13, 1358–1372.
Zeidan, J., et al. (2022). Global prevalence of autism: A systematic review update. Autism Research, 15, 778–790.

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