

Gender Gap in ADHD Treatment: Analysis of Pediatric Methylphenidate Prescriptions

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ADHD

Gender differences

Methylphenidate prescriptions

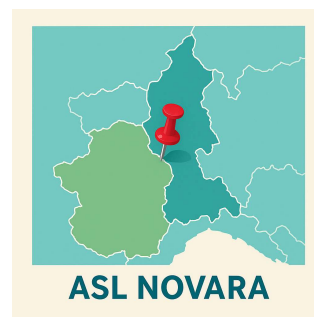
Keywords

Background and importance

ADHD shows gender differences in symptomatology and diagnostic pathways: males predominantly exhibit hyperactive/impulsive symptoms, whereas females often present inattentive or internalising forms, which are frequently **underdiagnosed**. Literature reports a **male-to-female (M:F) ratio of approximately 3:1** amongst treated paediatric patients.

Aim and objectives

Aim of the study is to analyse methylphenidate prescriptions in a Local Health Authority (LHA) in Northern Italy, with a focus on **gender differences** in patients <18 years old, and to compare local data with international reports.



Material and methods

01 Study Design

A retrospective analysis of territorial methylphenidate prescriptions in patients <18 years old was conducted for the period **January 2023 – May 2025**.

02 Evaluation Parameters

The following were evaluated: **prevalence, gender distribution, and consumption indicators** (total DDDs, DDD/1000 inhabitants/day, average DDD per patient).

Results

During the observation period, **59 patients <18 years were treated: 56 males(M) and 3 females(F)**, resulting in an **M:F ratio of 19:1**, markedly higher than literature reports (3:1). Overall paediatric DDDs remained stable (2710 in 2023, 3260 in 2024, 2245 in the first five months of 2025), corresponding to an average consumption of approximately **0.05 DDD/1000 inhabitants/day**. Nearly all consumption was attributable to males (0.09–0.10 DDD/1000 inhabitants/day), with much lower values in **females (<0.01)**, confirming a **pronounced gender gap**.

19:1

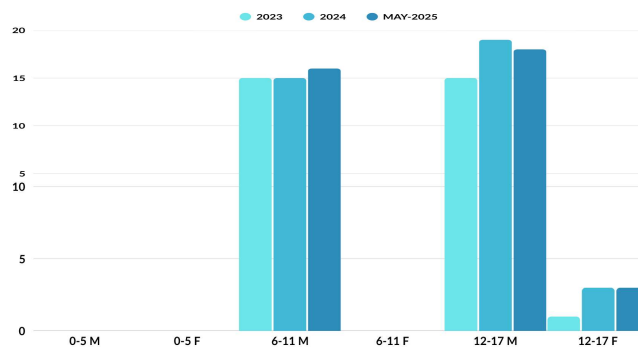
Male to Female Ratio
 Markedly higher than literature reports (3:1)

90

Annual DDDs per patient
 Suggesting predominantly intermittent use

0,05

DDD/1000 inhabitants/day
 Average consumption in paediatric population



Annual DDDs per patient (<18 years) averaged 90, suggesting predominantly intermittent use. Age stratification showed **no treatments under 6 years**; in the 6–11 year group, **29 M and 0 F** were treated, while in the 12–17 year group, **34 M and 3 F** were treated, indicating a particularly pronounced **gender imbalance in early diagnosis**. This pattern aligns with literature and, according to local child neuropsychiatrists, reflects **phenotypic sex differences** leading to **lower clinical recognition of ADHD in females**, and consequently, often delayed diagnosis.

Conclusion and relevance

The marked gender imbalance observed raises concerns about potential **underdiagnosis and undertreatment** of females with ADHD.

The analysis highlights the need to:

- Raise awareness among pediatricians and child neuropsychiatrists regarding **gender-specific clinical presentations**;
- Develop more **equitable diagnostic and therapeutic pathways**;
- Use prescription data not only to monitor **appropriateness** but also to assess **equity in access to care**.

References

- Salari.Global prevalence of ADHD in children and adolescents-2024 Young.Females with ADHD: identification and treatment guidance-2020

