

CORRESPONDENCE

Research Letter

The Incidence of AD(H)D-Spectrum Disorders in Adults

An Analysis of Nationwide Claims Data of the Statutory Health Insurance System in Germany, 2015–2024

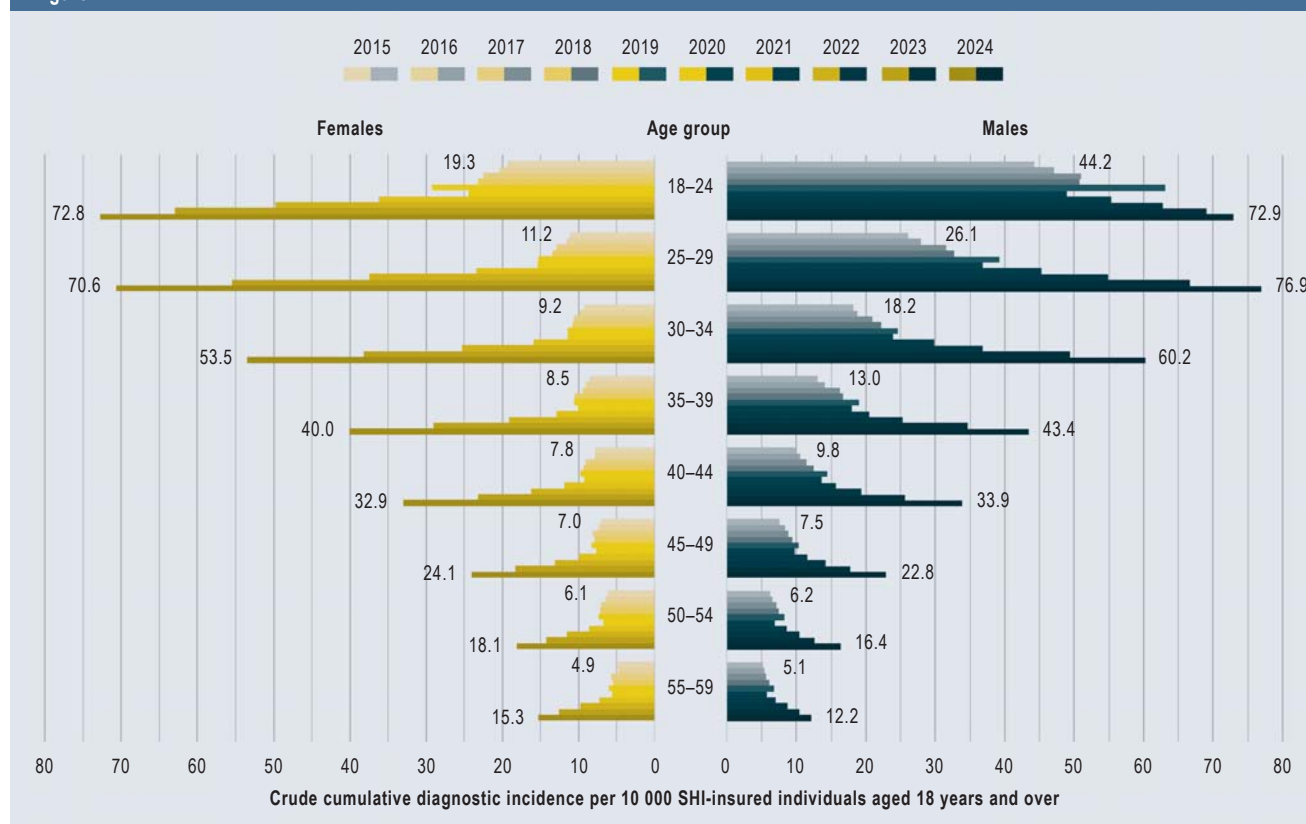
Typically, attention deficit and hyperactivity disorders (AD[H]D) are first diagnosed in childhood. Initial diagnoses made in adulthood are often delayed diagnoses (1, 2). In very rare cases, these are true first-time AD(H)D diagnoses—that is to say, new diagnoses following symptom onset rather than symptoms of other disorders misinterpreted as AD(H)D (3, 4). For Germany, there are currently no nationwide data covering all statutory health insurances (SHI) on the incidence trends of diagnosed AD(H)D-spectrum disorders in adulthood.

Methods

The methodology (definition of risk populations, combined rolling M2Q/M1Q+ medical service case definition) has already been published elsewhere (5). The study was based on nationwide outpatient claims data from physicians and psychotherapists in private practice accredited for the treatment of statutory health insurees in Germany (2013–2024). The study population consisted of individuals insured

under statutory health insurance aged 18 years and who had used medical services in the study year as well as in at least the two preceding years and were thus defined as being observable over a sufficiently long period. Insured persons who, after 2 diagnosis-free years, had at least one diagnosis documented as confirmed (ICD-10-GM: F90, F98.8, or F98.80) were considered to be cases of first-time diagnosis in a given study year. For the recording of cases in the 2015–2018 period, the diagnostic codes F90 (hyperkinetic disorders) and F98.8 (other specified behavioral and emotional disorders with onset usually occurring in childhood and adolescence) were used; for the 2019–2024 period, the diagnostic codes F90 and F98.80 (attention disorders without hyperactivity, onset in childhood/adolescence) were used. Since the diagnostic code F98.80 was only introduced into the ICD-10-GM in 2019, it can be

Figure



Age- and sex-specific cumulative diagnostic incidence of AD(H)D-spectrum disorders in the 2015–2024 study period (only age groups up to 59 years are shown). To validate the diagnosis, it either had to be documented again in the three patient-specific quarters following the index quarter (M2Q rolling), or—if the diagnosis had been documented only once—a defined medical service of the Uniform Value Scale (*Einheitlicher Bewertungsmaßstab*) had to be billed in the diagnosis or subsequent quarter (M1Q + medical service) (see also [5]). Due to limited data availability, the results for 2024 should be regarded as preliminary, since not all newly diagnosed cases could be fully validated as yet.

assumed that attention disorders were predominantly coded under F98.8 prior to that. The administrative cumulative incidence (diagnostic incidence) per 10 000 SHI-insured individuals aged 18 years and over was calculated.

Results

Between 50.7 million (2015) and 53.2 million (2024) SHI-insured adults were at risk of a newly diagnosed AD(H)D-spectrum disorder. The cumulative incidence of AD(H)D-spectrum disorder diagnoses rose by a total of 199% between 2015 and 2024 (8.6 versus 25.7 per 10 000). The average annual increase was 14% but did not follow a linear pattern. With the introduction of the F98.80 diagnostic code in 2019, a marked 15% increase in incidence was observed (2018: 10.1; 2019: 11.6/10 000). After a brief decline in the following year (2020: 10.2/10 000), the incidence increased disproportionately in the last 4 years (2021–2024) (12.7; 16.4; 21.0 and 25.7/10 000). The diagnostic incidence was higher among men than among women over the entire study period (2015: 11.1 versus 6.7; 2024: 26.9 versus 24.8/10 000). The trend patterns were largely comparable between the two sexes. Up to 2019, the difference between the two sexes increased, but narrowed considerably in more recent years (relative risk, 2015: 1.65, 2019: 1.83, 2024: 1.08). Young adults (<40 years) had the highest age group-specific diagnostic incidence (*Figure*). Among men aged under 40 years, the diagnostic incidence in 2024 was between 65% (18–24 years) and 234% (35–39 years) higher than in 2015; among women of the same age, it was between 277% (18–24 years) and 533% (25–29 years). With increasing age, the diagnostic incidence rates converged.

Discussion

This study presents, for the first time, incidence trends for diagnosed AD(H)D-spectrum disorders among adult SHI-insured individuals in Germany over a 10-year period, calculated according to a standardized approach. Overall, the diagnostic incidence rose almost continuously. It was consistently higher among men. From 2020 onwards, there was a disproportionate rise in incidence, which was more pronounced among women. Across both sexes, younger age groups had a considerably higher incidence of diagnosed AD(H)D-spectrum disorders. One can assume that, in many cases, symptom onset occurred at a much earlier point in time (1) and that the majority of these cases were delayed diagnoses. In view of the selected study design, it is not possible to make a direct distinction. The recent sharp rise in incidence may be due to increased social awareness of AD(H)D, the introduction of the F98.80 code, and the impact of the COVID-19 pandemic on mental health (4). This may also explain the marked increase among young women. The brief decline in incidence in 2020 is possibly explained by the pandemic—both by reduced use of healthcare services and by restrictions in personal areas of life, which could have pre-

vented individuals from meeting the initial diagnostic criteria (2), requiring functional impairments in at least two areas of life. Post-pandemic, these diagnostic criteria can again be met more naturally, as people once more engage in multiple areas of everyday life. Given the considerable psychological burden and impact on daily functioning and quality of life associated with AD(H)D-spectrum disorders (2), the increase in their diagnosis—and the resulting initiation of treatment—should be regarded positively.

These results essentially reflect the known sex differences (2). With regard to the age distribution, the present findings for young adults are plausibly consistent with the existing evidence: An international meta-analysis of first-time diagnoses of mental health disorders showed that 18.8% of first-time AD(H)D diagnoses are still made between the ages of 18 and 25 years (1).

Methodological limitations have been described in detail elsewhere (5). This study recorded first-time diagnoses after a 2-year diagnosis-free period in order to map trends despite a limited period of data availability. However, misclassification of prevalent cases cannot be ruled out, not only among older adults but also among 18- to 24-year-olds, for whom a first-time diagnosis made in childhood or adolescence may have been documented again during the transition to adulthood and the resulting shift to adult medical care. That said, the most pronounced increases in diagnosis were not seen in this age group. Since a first-time diagnosis is generally followed by psychotherapeutic or pharmacological treatment, we estimate that the proportion of potentially misclassified cases is stable over time. Due to their impact on quality of life, AD(H)D-spectrum disorders should also be considered in adults presenting with corresponding symptoms.

Acknowledgments

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Ethics approval

In Germany, the use of outpatient and psychotherapeutic claims data from the statutory health insurance system for scientific research is regulated by Book V of the German Social Code (*Sozialgesetzbuch V*). Ethics approval was not required, as this study used only routinely collected, anonymized data.

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Conflict of interest statement

The authors declare that no conflict of interest exists.

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