



Incidence trends of mental, developmental, and behavioral disorders among 0- to 17-year-olds in outpatients care — developments between 2014 and 2021

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Abstract

Background

Children's and adolescents' mental health has received increased attention in the past three years, particularly in the context of the SARS-CoV-2 pandemic, both in terms of the risk of infection as well as the containment measures. Prevalence data on mental disorders overall and on specific disorders are known from the population-representative surveys of the Robert Koch Institute. Recently, administrative incidence data for selected diagnoses from 2019 to 2021 were published by DAK-Gesundheit, a statutory health insurance (SHI) fund. Incidence data on a broader spectrum of specific mental, developmental or behavioral disorders and longer time series are missing so far. The aim of the present study was to determine these longer-term trends in the incidence of various diagnoses of mental, developmental or behavioral disorders and thus provide a data basis for the development of mental health in children and adolescents.

Methods

The analyses were based on the claims data of SHI-accredited physicians and psychotherapists according to § 295 SGB V (1st quarter 2012 to 3rd quarter 2022). The study population consists of SHI-insured children and adolescents aged 0 to 17 years who were preobservable for at least two years. All persons in the study population for whom no diagnosis from the examined ICD-10 subchapters was documented in the pre-observation period formed the annual risk population for the incidence calculations. Incidence trends from 2014 to 2021 were determined for a total of 45 diagnoses or diagnosis groups. Children and adolescents were counted as incident if a corresponding diagnosis marked as "assured" was coded after two diagnosis-free years of observation, and only if this diagnosis was either confirmed again in the three subsequent patient-specific quarters or if a corresponding medical service was billed in the quarter in which the diagnosis was made or in the first subsequent quarter. Finally, the annual crude cumulative incidence per 10,000 children and adolescents was calculated. In addition to the observed incidence, expected incidence values were calculated for 2020 and 2021 based on the pre-pandemic period 2014 to 2019.

Results

The range of incidence values within the investigated diagnostic spectrum was very wide. The lowest diagnostic incidence was found for pica syndrome, the highest for developmental disorders of speech and language (2021: 0.4 vs. 558.7/10,000). Except for developmental and behavioral disorders, higher

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incidences were observed in girls. The report focused on six disorders: tobacco-related mental and behavioral disorders (F17), with an absolute relative decrease of 50% between 2014 and 2021 to a most recent cumulative incidence of 5.5/10,000 in 2021, depressive disorders (F32–F33, +21%, 2021: 72.0/10.000), anxiety disorders (F41, –0.5%, 2021: 72.3), anorexia (F50.0/F50.1, +27%, 2021: 7.1), abnormal habits and impulse control disorders (F63, +54%, 2021: 11.5), emotional and behavioral disorders (F90–F94, –8%, 2021: 432.2). For all of these six diagnoses or diagnosis groups, different age-group- and partly also gender-specific incidence trends were found. The regional distributions in 2021 also showed considerable differences.

Conclusion

To our knowledge, this study is the first to present systematically calculated incidence trends for a comprehensive spectrum of mental, developmental, and behavioral disorders for approximately 84% of the pediatric population in Germany over an eight-year period. In summary, the trend directions differ depending on the diagnosis group. For some mental or behavioral disorders, directional changes in the incidence trend or a dynamization of already existing trends were particularly evident in 2020 and 2021, the first two years of the SARS-CoV-2 pandemic. Age- and sex-specific results indicate a disproportionate increase in newly diagnosed depression and eating disorders, especially among adolescent girls. In the case of behavioral disorders, which occur more frequently in boys, predominantly declining or also relatively constant temporal developments were observed. For some behavioral disorders, an intensified trend development was observed in 2020, while for others unexpected declines in incidence were observed. In the last year of the study, however, the incidence of most behavioral disorders was characterized by slight re-increases.

Keywords

Adolescents, adjustment disorder, affective disorders, alcohol, anorexia, anxiety disorder, behavioral disorders, bipolar disorders, bulimia, cannabis, children, claims data, cluttering, conduct disorder, depression, developmental disorders, eating disorders, encopresis, enuresis, hyperactivity disorder, incidence, mania, mental disorders, pain disorder, pathological gambling, personality disorder, phobic disorders, pica syndrome, selective mutism, sleep disorder, somatic symptom disorder, stereotypic movement disorder, stress reaction, stuttering, tic disorder, tobacco, trend

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