

## Original Article

# Trends in annual and lifetime prevalence of child and adolescent mental health service use in the UK between 1991 and 2023: Welsh healthcare register linkage study

Kirstie O'Hare, Prathiba Chitsabesan, Tamsin J. Ford, Louise Gallagher, Ann John, Fiona McNicholas, Helen Minnis, Anita Thapar and Ian Kelleher

## Background

The prevalence of mental ill health is increasing in young people worldwide, with rising referrals to child and adolescent mental health services (CAMHS). The numbers and proportions of the youth population who present to CAMHS, however, including how those figures are changing over time, are unclear. Understanding trends in mental health service contacts for young people over time is crucial mental health surveillance data.

## Aims

Our aim was to calculate both the lifetime and annual prevalence of CAMHS contact in Wales for young people up to age 18 years.

## Method

Using linked Welsh administrative healthcare records, we calculated the annual prevalence of CAMHS contacts between 2004 and 2023. We also calculated the lifetime prevalence of CAMHS contacts for sequential annual birth cohorts born between 1991 and 2005 and followed to age 18 (between 2009 and 2023).

## Results

In 2004, 0.8% ( $n = 4665$ ) of the total child and adolescent population were in contact with CAMHS. By 2022, this had risen

nearly five-fold to 3.9% ( $n = 19870$ ) of the total child and adolescent population. Among the 1991 birth cohort who turned 18 in 2009, 5.8% had contact with CAMHS at some stage in childhood or adolescence. For individuals born in 2005 who turned 18 in 2023, this figure had risen to 20.2%.

## Conclusions

The number of the young people in contact with CAMHS has increased dramatically over the past 15 years, from 1 in 17 young people who turned 18 in 2009 to 1 in 5 young people who turned 18 in 2023.

## Keywords

Youth mental health; service utilisation; child and adolescent psychiatry; linked healthcare records; time trends.

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A large body of evidence points to declining mental health in children and young people aged under 18 years over the past two decades.<sup>1–3</sup> Recent findings indicate that among young people there is a rising incidence of mental disorders,<sup>4</sup> increasing rates of self-harm with a decreasing age at onset,<sup>5</sup> as well as a growing trend of probable mental health problems found in repeated cross-sectional surveys.<sup>2,3,6,7</sup> The latest Mental Health of Children and Young People survey in England reports that 1 in 5 children and adolescents had a probable mental disorder,<sup>1</sup> and globally prevalence estimates of any mental health condition typically range from 15 to 25%.<sup>8–10</sup> This has been referred to as a youth mental health crisis, which is recognised as one of the greatest challenges of our time.<sup>11</sup> An increase in mental health problems in the general population would be expected to lead to an increase in presentations to child and adolescent mental health services (CAMHS), and indeed research has shown increasing CAMHS referrals over time.<sup>1</sup>

CAMHS are the specialist services tasked with assessing, diagnosing and treating moderate to severe mental health disorders in young people aged up to 18 years. Despite population research suggesting an increase in youth mental health problems, there has been a lack of research to systematically assess the numbers and proportions of children who attend CAMHS, including how this may be changing over time. This is essential data for mental health surveillance, public health planning and evaluating policy and service effectiveness.

Using linked Welsh administrative healthcare records, we calculated the annual (point) prevalence of having at least one CAMHS contact for each year from 2004 to 2023. We also created a series of sequential birth cohorts of children born between 1991 and 2005 who we followed to age 18 (i.e. between 2009 and 2023) and used this to calculate the total proportion of the youth population who had contact with CAMHS at some stage in their childhood or adolescence, and to track how this has changed over time.

## Method

## Participants

This study is reported according to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines.<sup>12</sup> Participants were identified from linked data hosted in the Secure Anonymised Information Linkage (SAIL) databank,<sup>13–17</sup> which contains anonymised, routinely collected data from a variety of Welsh health, social care, and administrative data-sets. The SAIL databank contains information for the whole population of Wales, except for Welsh general practice (GP) data, which contains information for ~80% of GP practices in Wales, covering ~83% of the population. SAIL's Information Governance Review Panel (IGRP) granted approval to conduct this research (IGRP Number 1635). Individuals were included in analyses if they were born between 1991 and 2018 (inclusive), and were registered with a

Welsh GP between the ages of 5–17 years (inclusive), with no longer than a 6-months gap in registration, as identified in the Welsh Demographic Service Dataset (WDS).

### Child and adolescent mental health service contacts

The SAIL databank enables linked longitudinal health and social care data across Wales, enabling unique opportunities for population research. Child and adolescent mental health services in Wales are publicly-funded, specialist in-patient and hospital- or community-based out-patient mental health services for youth aged up to 18 years which are free at the point of access. In Wales, CAMHS does not include mental health services offered by private practitioners, primary care providers or school-based counselling/ nursing services. CAMHS contacts from the inception of each data-set through to the end of the study period (November 2023) were identified from three data-sets from the SAIL databank: the Patient Episode Database for Wales, containing records of all hospital admissions in Wales (available 1995–study end), the Outpatient Database for Wales, containing records of all hospital out-patient appointments in Wales (available 2004–study end) and the Welsh Longitudinal General Practice Dataset, containing electronic health records from ~80% of GP practices in Wales, covering ~83% of the population (available 2000–study end, with start dates for GP records varying for each GP practice, depending on when coded electronic records were implemented).<sup>18</sup> In-patient CAMHS contact was defined as either a hospital admission beginning before age 18 years to a psychiatric ward (defined by a specialty code associated with the admission, see Supplementary Table 1 available at <https://doi.org/10.1192/bj.2025.10480>), or to any other acute medical ward (e.g. paediatrics, general medicine) when the associated code in the primary (first) diagnostic position was of a mental disorder (any ICD-10 F code). The latter were included given that young people presenting with mental health concerns are commonly admitted to medical rather than psychiatric wards.<sup>19</sup> Out-patient CAMHS contacts were defined as appointments seen under a psychiatry specialty that occurred when the individual was <18 years old (see psychiatry specialty codes in Supplementary Table 1). CAMHS contacts in GP records were identified using Read codes denoting specialist mental health service contact for events that occurred <18 years old (Supplementary Table 1), adapted from Joseph et al<sup>20</sup> and reviewed by a consultant child and adolescent psychiatrist (I.K.) on the study team. These contacts recorded in GP records reflect contact with specialist services that have been recorded by the GP (rather than contact with the GP themselves). CAMHS services in Wales increased their age eligibility from 16 to 18 years in 2011/12. However, to maintain consistency across cohorts, we have examined psychiatry contacts for individuals aged under 18 across all study years. Notably, the later start dates of the out-patient and GP data-sets (2000–2004) mean childhood CAMHS contacts are likely to be under-ascertained for earlier birth cohorts; however, complete adolescent CAMHS data are available for all cohorts (see Supplementary Figs. 1 and 2 for more information on data-set coverage).

### Analysis

We calculated the annual prevalence of CAMHS use from January 2004 to November 2023, and the lifetime prevalence of CAMHS use for sequential birth cohorts born from 1991 to 2005. Annual prevalence was calculated as the proportion of the total population aged under 18 years who had a record of at least one CAMHS contact in each calendar year. Lifetime prevalence was calculated as the proportion of all individuals born in each calendar year who had contact with CAMHS at least once at any point in their life until they reached 18 years. We also calculated both lifetime and

annual prevalence stratified by age bracket (childhood (0–12 years inclusive) or adolescence (13–17 years inclusive)) and sex (male or female). Linear regression was performed on both annual and lifetime prevalence of CAMHS contact, with year as the predictor variable, and an *F*-test applied to test the hypothesis of a significant slope. The proportions of males versus females, and children versus adolescents with CAMHS contact in each year/birth cohort were compared using *Z*-tests.

Structured Query Language (SQL) Db2 version 11.5 for Windows (IBM, New York, NY, USA; see <https://www.ibm.com/docs/en/db2>) was used to interrogate data in the SAIL databank, and analyses were conducted using R version 4.3.1 for Windows (R Core Team, Vienna, Austria; see <https://www.r-project.org/>; R: The R Project for Statistical Computing).

## Results

### Annual prevalence

The proportion of the population who had at least one CAMHS contact in each calendar year ranged from 0.77% in 2004 when  $n = 4665$  had a CAMHS contact, through to 3.88% in 2022 when  $n = 19\,870$  had a CAMHS contact (Table 1). The annual prevalence of CAMHS contact consistently increased every year ( $\beta = 0.157$ ,  $p < 0.001$ , Supplementary Table 2), with the exception of 2020 (the beginning of the COVID-19 pandemic) when there was a small drop in annual prevalence. In 2023, the numbers in contact with CAMHS were also slightly lower due to data only being available for 11 months of the year. The proportion of the total female population under 18 years old in contact with CAMHS was significantly higher compared with males in each calendar year (Supplementary Table 3): the annual prevalence of CAMHS contact peaked at 4.42% for females and at 3.37% for males, both in 2022 (Table 1). There was also a significantly higher proportion of adolescents in contact with CAMHS compared with children in each calendar year (Supplementary Table 3): 7.60% of the adolescent population had a CAMHS contact in 2022 compared with 1.95% of the child population (Fig. 1).

There was a higher proportion of the male child population in contact with CAMHS in each year (range: 0.70% (2004)–2.33% (2022)) compared with the female child population (range: 0.30% (2004)–1.55% (2022); Supplementary Table 4 and Fig. 2). Conversely, a higher proportion of the female adolescent population (range: 1.46% (2004)–9.94% (2022)) had a CAMHS contact in each calendar year compared with the male adolescent population (range: 1.30% (2004)–6.24% (2018); Supplementary Table 5 and Fig. 1).

### Lifetime prevalence

The proportion of the population that had at least one CAMHS contact ever in their lifetime ranged from 5.80% for individuals born in 1991 through to 20.18% for individuals born in 2005 (the oldest cohort with complete data available up to 18 years; Table 1 and Fig. 1).

The proportion of the population who had contact with CAMHS consistently increased with each successive year of birth ( $\beta = 1.090$ ,  $p < 0.001$ , Supplementary Table 2). Overall, a significantly higher proportion of females compared with males had a CAMHS contact at any point in their lifetime, for every birth cohort with the exception of 1993 when there was not a significant difference between sexes (Supplementary Table 6). The lifetime prevalence of CAMHS contact for females ranged from 6.36% (1991 birth cohort) to 22.13% (2005 birth cohort), and for males ranged from 5.27% (1991 birth cohort) to 18.32% (2005 birth cohort; Table 2 and Fig. 2).

**Table 1** Proportion of young people (aged under 18 years) in contact with CAMHS per year (annual point prevalence of CAMHS contact)

Year	Total <i>n</i> aged <18 years	<i>n</i> Attended CAMHS	% Attended CAMHS	Total <i>n</i> females (<18 years)	<i>n</i> Females attended CAMHS	% Females attended CAMHS	Total <i>n</i> males (<18 years)	<i>n</i> Males attended CAMHS	% Males attended CAMHS
2004	609 275	4665	0.77	297 122	1926	0.65	312 145	2740	0.88
2005	605 302	5613	0.93	295 141	2387	0.81	310 153	3227	1.04
2006	603 224	6279	1.04	294 073	2599	0.88	309 142	3681	1.19
2007	603 152	6640	1.10	294 098	2723	0.93	309 044	3918	1.27
2008	601 719	7277	1.21	293 274	3019	1.03	308 434	4259	1.38
2009	601 251	8103	1.35	293 073	3419	1.17	308 167	4685	1.52
2010	602 027	8170	1.36	293 420	3341	1.14	308 596	4829	1.56
2011	603 432	10 374	1.72	294 200	4118	1.40	309 221	6256	2.02
2012	606 294	11 824	1.95	295 496	4795	1.62	310 788	7030	2.26
2013	608 126	13 204	2.17	296 272	5743	1.94	311 844	7461	2.39
2014	608 542	14 698	2.42	296 458	6343	2.14	312 074	8356	2.68
2015	609 510	15 254	2.50	297 038	6641	2.24	312 463	8614	2.76
2016	610 936	16 208	2.65	297 802	7052	2.37	313 127	9157	2.92
2017	613 063	17 524	2.86	298 882	7867	2.63	314 175	9657	3.07
2018	615 907	18 258	2.96	300 538	8540	2.84	315 365	9719	3.08
2019	603 468	17 932	2.97	294 495	8492	2.88	308 970	9440	3.06
2020	573 686	14 800	2.58	280 029	7393	2.64	293 654	7408	2.52
2021	542 893	18 558	3.42	264 941	10 026	3.78	277 949	8532	3.07
2022	511 531	19 870	3.88	249 728	11 048	4.42	261 801	8820	3.37
2023 <sup>a</sup>	479 870	17 082	3.56	234 276	9631	4.11	245 592	7450	3.03

CAMHS, child and adolescent mental health services.

a. Data available until November 2023.

The proportion of the population who had a contact with CAMHS at any point in childhood (i.e. from age 0 to 12 years) ranged from 1.28% in the 1991 birth cohort through to 8.38% in a 2005 birth cohort (Supplementary Table 4). A significantly higher proportion of the population had a CAMHS contact at any point in their adolescence than in childhood (Supplementary Table 6): this ranged from 5.03% for the 1991 birth cohort through to 16.04% for the 2005 birth cohort (Supplementary Table 7).

## Discussion

Using healthcare register record linkage in Wales, we assessed both the annual and lifetime prevalence of CAMHS contact among children and adolescents. Over a 12-month period in 2004, 0.8% of the total child and adolescent population had contact with CAMHS, compared with the 12-month period in 2022, where this had risen nearly five-fold to 3.9%. In raw numbers, this reflects an increase from 4665 to 19 870 young people accessing CAMHS per year. In terms of lifetime prevalence (up to age 18 years) of CAMHS contact, among the birth cohort born in 1991 who turned 18 in 2009, 5.8% had attended CAMHS at some stage in childhood or adolescence. For individuals born in 2005 who turned 18 in 2023, however, this figure had risen to 20.2%.

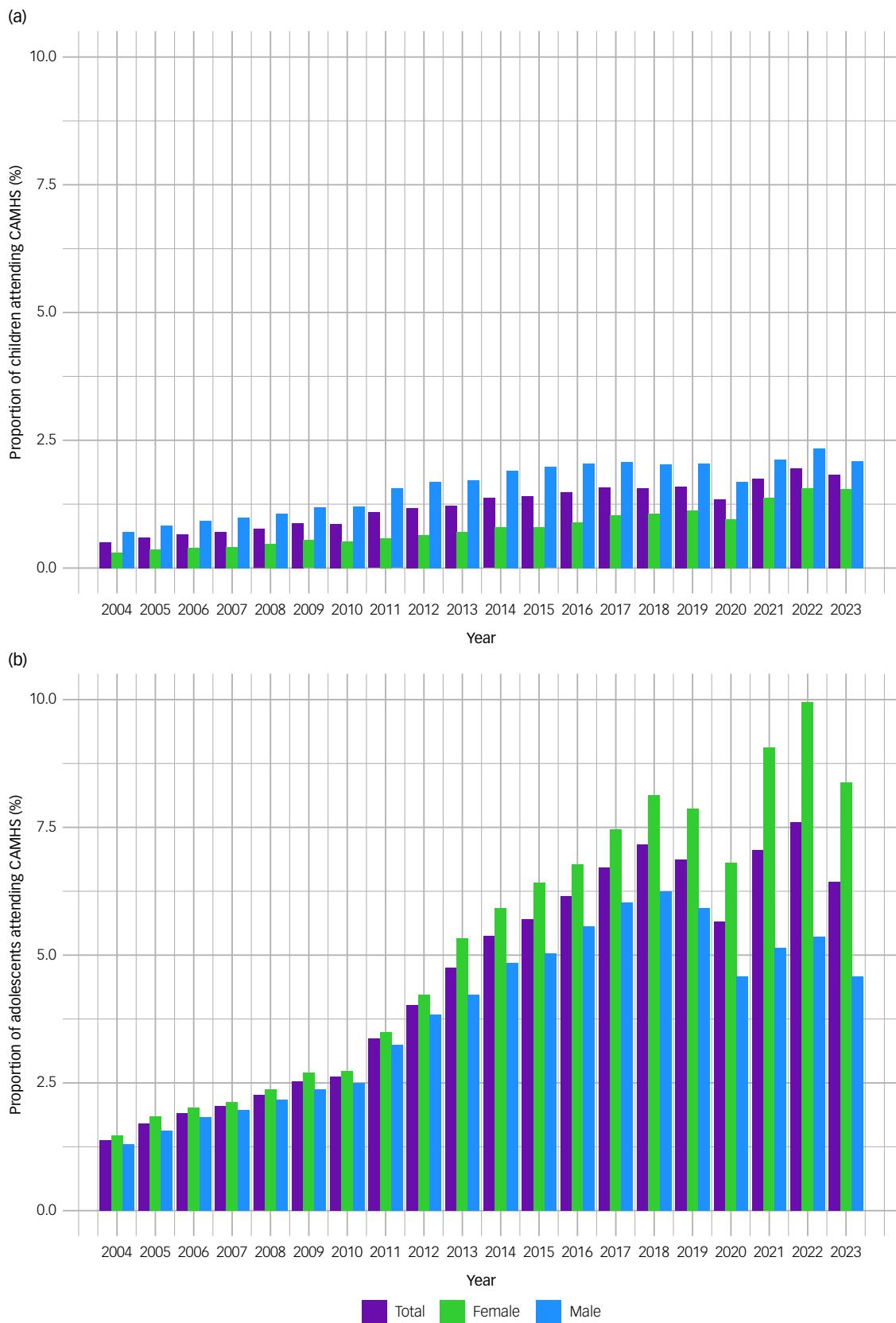
Reliable information on the prevalence of service use is important because there is a distinction between the epidemiological burden of mental disorders in the population and the proportion of the population seeking specialist mental health services. For instance, national survey data from England suggest that only a minority of young people in the general population who would meet criteria for a mental disorder were in contact with CAMHS.<sup>21</sup>

Of note, our data only reflect individuals who attended CAMHS and not the high numbers on waiting lists for services,<sup>22</sup> meaning the true demand for CAMHS is likely to be significantly higher even than the 20% figure in the most recent birth cohort. Research in England suggests that less than half of referrals to CAMHS are accepted.<sup>23</sup> Further, the data reported here only indicate that an individual had at least one contact with CAMHS and they do not necessarily imply that an intervention or treatment was received.

Notably, while our findings pertain specifically to Wales they are likely to be generalisable across the UK given the similar structure of CAMHS provision in all four nations. In fact, the prevalence of CAMHS attendance may be even higher in Scotland, England and Northern Ireland due to their greater service capacity relative to Wales.<sup>24</sup>

Rates of CAMHS contacts were significantly higher for adolescents in comparison with children, with as many as 7.6% of adolescents having had one or more CAMHS contact in 2022 (the most recent year for which we have full data). This high rate of adolescent CAMHS attendance likely, in part, reflects the level of risk associated with the types of disorders that are more prevalent in adolescents in comparison with children (e.g. self-harm, eating disorders), increasing the likelihood that these type of referrals are accepted. The data also showed a growing disparity in terms of the numbers of adolescent girls versus boys attending CAMHS. There were only minor differences in the proportions of boys versus girls attending in the early 2000s. In 2022, however, 10% of all adolescent girls had one or more CAMHS contact, compared with 5.4% of boys. The high and increasing prevalence of CAMHS use among adolescent girls, in particular, is consistent with findings that this group has had a rising prevalence of mental health problems (particularly in internalising and eating disorders) over the past three decades.<sup>2,3,6,7</sup> On the other hand, the proportion of adolescent boys attending CAMHS peaked in 2018 at 6.2% and has not exceeded this figure since, highlighting important sex differences.

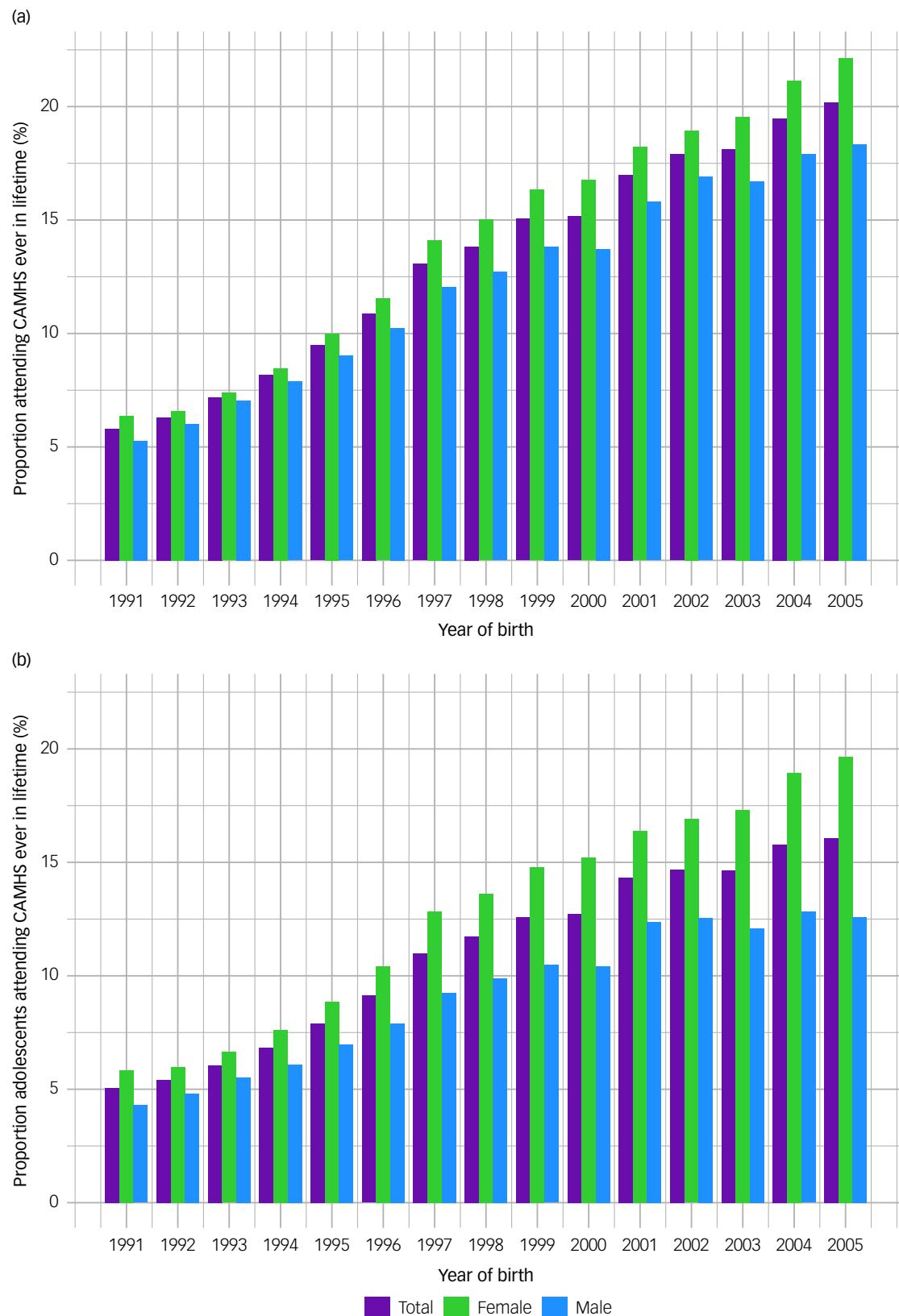
The reasons underlying the increasing prevalence of CAMHS contact are complex and multifaceted, reflecting both factors driving an increasing prevalence of mental disorders in young people and factors that specifically promote mental health service demand. Many researchers have suggested that the COVID-19 pandemic has contributed to an exacerbation of mental health help-seeking among children and adolescents.<sup>25,26</sup> Our findings, however, spanning nearly two decades, place year-on-year increases in a wider context and do not support the idea that the trajectory of increasing presentations to CAMHS can be directly attributed to the pandemic (other than being associated with a *decreased* number of attendances in 2020). While this does not mean that there were not pandemic-related mental health impacts on some young



**Fig. 1** Proportion of young people (aged <18 years) in contact with child and adolescent mental health services (CAMHS) per year (annual prevalence), stratified by age group and sex. 2023 data available until November. (a) Children. (b) Adolescent.

people, our findings indicate that the increasing trend of CAMHS presentations predates COVID-19, demonstrating the problems inherent in analysing changes over a limited number of years rather

than taking into account trends over a longer period of time. Notably, the COVID-19 pandemic is just one of a number of global intensifying crises, such as climate change, war and increasing



**Fig. 2** Proportion of population (stratified by birth year) in contact with child and adolescent mental health services (CAMHS) ever in their lifetime (<18 years). (a) Any CAMHS contact. (b) Adolescent CAMHS contact.

economic hardship, all of which may also be contributing to trends in youth mental health.

In terms of factors that have specifically contributed to the rise in mental health service demand, it has been proposed that

increased awareness around mental health problems, resulting in earlier detection and better identification of mental illness, has led to increased service demand.<sup>27</sup> Mental health awareness efforts may have reduced stigma surrounding mental illness, reducing

Table 2 Proportion of young people in contact with CAMHS at any point prior to age 18 years, stratified by birth year (lifetime prevalence of CAMHS contact)									
Year of birth	Total n born in year	n Attended CAMHS	% Attended CAMHS	Total n females born in year	n Females attended CAMHS	% Females attended CAMHS	Total n males born in year	n Males attended CAMHS	% Males attended CAMHS
1991	36 608	2124	5.80	17 861	1136	6.36	18 747	988	5.27
1992	36 334	2280	6.28	17 741	1167	6.58	18 593	1113	5.99
1993	35 388	2544	7.19	17 259	1272	7.37	18 129	1272	7.02
1994	34 270	2797	8.16	16 885	1429	8.46	17 384	1368	7.87
1995	33 396	3167	9.48	16 320	1628	9.98	17 076	1539	9.01
1996	34 535	3756	10.88	16 746	1933	11.54	17 789	1823	10.25
1997	33 731	4405	13.06	16 430	2320	14.12	17 300	2084	12.05
1998	32 802	4538	13.83	16 057	2410	15.01	16 743	2127	12.70
1999	31 578	4754	15.05	15 383	2514	16.34	16 194	2240	13.83
2000	30 895	4688	15.17	14 853	2488	16.75	16 040	2199	13.71
2001	30 965	5257	16.98	15 081	2746	18.21	15 883	2511	15.81
2002	29 782	5327	17.89	14 466	2738	18.93	15 316	2589	16.90
2003	30 793	5575	18.10	15 088	2950	19.55	15 705	2625	16.71
2004	31 362	6107	19.47	15 213	3218	21.15	16 148	2889	17.89
2005	31 661	6389	20.18	15 452	3420	22.13	16 209	2969	18.32

CAMHS, child and adolescent mental health services.

Individuals with missing sex information (n = 16) included in total but not sex-stratified results.

barriers to help-seeking.<sup>28</sup> Another factor may be the impact of efforts to improve the accessibility of CAMHS, such as the increasing availability of telehealth services.<sup>29</sup> However, population research has indicated that the prevalence of mental health symptoms are increasing in the adolescent population,<sup>3,6,7</sup> along with the severity of these symptoms,<sup>30</sup> suggesting that the observed rise is unlikely to be solely due to improved identification. Further, some researchers have argued that increased mental health awareness may not only be increasing help-seeking behaviour, but could also inadvertently contribute directly to rising mental health problems in teenagers.<sup>31</sup>

Our data show a gradual year-on-year increase in adolescent presentations to CAMHS from 2004 to 2010. There was a sharp increase, however, in 2011, with this larger increase in attendances being maintained in 2012, 2013 and 2014. Between 2015 and 2018, attendances continued to grow but with smaller increases in numbers. This was followed by a drop in attendances in 2019 and a further (likely COVID-19 related) drop in attendances in 2020. Attendances increased again in 2022.

One potential contributor to increasing adolescent CAMHS contacts is the impact of austerity and increased income inequality in the UK.<sup>32,33</sup> There is evidence that the incidence of mental disorders rose in several European countries following the 2008 financial crisis.<sup>34,35</sup> Austerity measures in the UK have resulted in reduced funding to health, education and social services in Wales.<sup>36</sup> These cuts have likely exacerbated existing inequalities, potentially contributing to negative impacts on young people's mental health.<sup>37</sup> Our data, however, show that the increasing prevalence of CAMHS attendance pre-dated the 2008 financial crisis, though the trajectory increased more rapidly from 2011. While financial crises are known to have harmful effects on the health of the entire population, the current mental health crisis seems to be disproportionately affecting adolescents,<sup>11</sup> suggesting there are also likely to be unique, developmentally specific drivers of the rise in presentations for mental ill-health in this age group.

Another consideration might be the proliferation of smartphone use among teenagers, leading to increasing time being spent online, as well as the proliferation of social media engagement – notably, Instagram launched in 2010. The majority of the evidence on the impact of social media exposure on young people's mental health, however, comes from cross-sectional studies, making it difficult to infer causality,<sup>38</sup> and it is likely that relationships are bidirectional.<sup>39</sup> Nonetheless, that the increasing pattern of CAMHS attendance seems to disproportionately affect adolescent girls aligns

with recent findings indicating age- and sex-specific windows of sensitivity to the effects of social media use.<sup>40</sup> It is feasible that there may be sensitive periods during adolescence where young people are particularly vulnerable to the impact of social media on mental health. Another possibility is that the rise in mental health problems is a result of increasing fragmentation of interpersonal and societal connectedness.<sup>41</sup> Supporting this, research suggests that young people in more socially connected societies appear to have better mental health.<sup>42</sup>

It is also notable that, while online activity has increased for adolescents, physical activity has decreased, with girls having lower physical activity levels than boys.<sup>43</sup> Decreased physical activity may also play a contributory role in declining mental health, though the evidence on the relationship between exercise and mental disorders in adolescents is of low certainty.<sup>44</sup>

The dramatic change, over a relatively short period of time, in the population who had contact with CAMHS raises a number of important clinical questions. To what extent can the CAMHS interventional evidence base, generated from studies that were often conducted decades ago, be applied to current clinical cohorts? That is to say, if the target population has exponentially increased without evidence to support their "equivalence" to the original target population, at what stage does an intervention change from being evidence-based to being experimental?

Re-evaluating the effectiveness of CAMHS interventions is particularly important in the context of a number of studies demonstrating that outcomes for CAMHS cohorts are often poor, both in the short-term<sup>23</sup> and long-term.<sup>45</sup> Sayal et al<sup>23</sup> for example, followed young people attending CAMHS for 12 months and found persistently high levels of self- and parent-reported mental health symptoms, functional impairment and self-harm. Healy et al<sup>45</sup> followed former CAMHS patients to approximately age 30 and found that these individuals went on to take up more than half of all adult mental health service outpatient appointments and more than half of all adult psychiatric in-patient bed days. What's more, approximately half of severe mental illnesses diagnosed in the population by age 30 occurred in individuals who had attended CAMHS, including 50% of schizophrenia diagnoses, 48% of bipolar disorder diagnoses, 49% of recurrent depression diagnoses and 54% of borderline personality disorder diagnoses.

The rapid changes in numbers in contact with CAMHS highlights the need for real-time access to service use data, as well as the need for a greatly increased research capacity to keep pace with

the rapidly increasing service use. Currently, mental health service data in the UK are spread across different data custodians and the processes to access these data are complex and time intensive.<sup>46</sup> Data are not routinely collected on the type and severity of difficulties experienced by young people attending CAMHS, nor are data on whether young people who attended CAMHS accessed or benefited from treatment. Further, there is a lack of research infrastructure to carry out this work, including, but not limited to, a paucity of clinical academics working within CAMHS.<sup>47</sup>

Strengths of the study include the use of whole population data captured in prospective administrative data which is free of selection and recall bias. A limitation of the data is that we were only able to include individuals who were enrolled with a GP (representing ~83% of the Welsh population), and only included those who had continuous GP registration between ages 5 and 18 years. This is likely to disproportionately exclude specific populations, such as refugee populations and those with high residential mobility, both of whom are at increased risk of developing mental health problems.<sup>48,49</sup> Second, complete information on CAMHS contacts was not available until 2004, meaning that complete information on CAMHS use in childhood may not have been available for the older birth cohorts. However, we did have complete adolescent CAMHS contact data for all cohorts and since adolescent contacts comprise ~70% of all CAMHS attendances, the missing childhood data likely has minimal impact on our lifetime prevalence estimates (evidenced by similar rate increases for any CAMHS contact (3.48-fold) versus adolescent-only contact (3.18-fold)). Private mental health service contact was not captured in the available data. These limitations, however, mean we are likely to have underestimated, rather than overestimated, the prevalence of CAMHS contact. CAMHS contact that occurred in earlier years, however, may have been more likely to be underestimated and this may account for some of the differences identified. Further, data for the 2023 year was incomplete (available from January to November only), which prevents direct comparison of the 2023 data with the other complete calendar years. Lastly, we were not able to assess the duration or frequency of CAMHS contact nor the specific diagnoses or treatment offered. The data only reflect whether an individual ever had contact with CAMHS, which limits our understanding of the actual impact on resources, as we cannot assess the depth or nature of service utilisation in relation to increased contact. Lastly, we acknowledge that there are concerns around the accuracy of medical coding; however, our prevalence estimates align with previous cross-sectional surveys of CAMHS attendance,<sup>50</sup> suggesting contact with CAMHS has been reasonably accurately coded in our data-sets.

In conclusion, there has been a dramatic increase in the number of young people attending child and adolescent mental health services in Wales over the last two decades. For the earliest-born (1991) cohort, 1 in 17 attended CAMHS in their lifetime but this has now increased to 1 in 5 young people for those born in 2005. The rapid change in numbers in contact with CAMHS raises serious concerns for the state of child mental health in the UK. Failure to treat mental health conditions can lead to poor long-term health, education and social outcomes, highlighting the urgent need to scale-up evidence-based mental health support for young people. The results also raise important questions about the evidence base for existing CAMHS interventions, which are often based on trials conducted decades ago, potentially with very different populations. There is a need to prioritise more intensive research activity within CAMHS to improve our understanding of the factors driving these increases in presentations but also, in the context of a rapidly changing target population, to evaluate the effectiveness of existing CAMHS interventions and to develop new, evidence-based interventions that are fit for purpose.

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## Supplementary material

The supplementary material is available online at <https://doi.org/10.1192/bj.2025.10480>

## Data availability

Access to SAIL data is available on application to the SAIL Databank via their usage governance process ([www.saildatabank.com](http://www.saildatabank.com)). The analytical code and research materials used in this study are not publicly available due to restrictions on exporting materials from the SAIL trusted research environment.

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## Author contributions

K.O. performed the statistical analysis and drafted the manuscript. P.C., T.J.F., L.G., A.J., F.M., H.M. and A.T. critically reviewed and revised the manuscript. I.K. supervised the design and coordination of the study, supervised analysis and acquired funding. All authors read and approved the final manuscript.

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## Declaration of interest

None.

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