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Scottish Government
Riaghaltas na h-Alba

The Scottish Health Survey

2022 edition | Main Report

An accredited Official Statistics Publication for Scotland

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Scottish Centre for Social Research

An Accredited Official Statistics Publication for Scotland

These statistics are accredited official statistics**.** The Office for Statistics Regulation has independently reviewed and accredited these statistics as complying with the standards of trustworthiness, quality, and value in the Code of Practice for Statistics.

The United Kingdom Statistics Authority designated the Scottish Health Survey as Accredited Official Statistics in January 2010, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Accredited Official Statistics.

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Stephen Rule and Victoria Wilson.

Foreword from Chief Medical Officer

This report presents the findings of the 2022 Scottish Health Survey. These survey results present the picture of health and wellbeing in Scotland as we emerged from the COVID-19 pandemic.

The survey provides us with immensely valuable information on cardiovascular disease, respiratory conditions, other health conditions, mental wellbeing, dental health and health related risk factors including smoking, alcohol consumption, physical activity and obesity. In 2022, questions on chronic pain were included for the first time providing the first national level results.

As the protections necessitated by the pandemic were eased, the 2022 survey returned to the usual approach of interviewing within the home for most of the year. This means that we can be confident that the 2022 results can be compared with the pre-pandemic years. As an alternative approach of telephone interviewing was necessary for the 2021 survey, this variation in survey methods should be borne in mind when interpreting changes between 2021 and 2022.

Key findings from the 2022 survey include a continuing decrease in levels of mental wellbeing, increased prevalence of vaping and higher levels of long-covid. We see levels of hazardous/harmful drinking continuing to steadily decline and the proportion of non-drinkers increasing.

The survey was commissioned by the Scottish Government and produced by a collaboration between the Scottish Centre for Social Research, the Office for National Statistics (ONS), the Social and Public Health Sciences Unit (MRC/CSO SPHSU) at the University of Glasgow, the Centre for Population Health Sciences at the University of Edinburgh and the Public Health Nutrition Research Group at the University of Aberdeen.

I welcome this valuable report and thank the consortium led by the Scottish Centre for Social Research for conducting the survey and preparing this report and for their cooperation and support in continuing to develop the survey. Most importantly, I would like to thank the 6,158 people who gave their time to participate. The information they have provided is invaluable in developing, evaluating and monitoring population health policy in Scotland.

Professor Sir Gregor Smith

Chief Medical Officer for Scotland

Introduction

Policy context

As a study of public health, the Scottish Health Survey (SHeS) plays an important role in assessing health outcomes, health risks and the extent of health inequalities in Scotland and how these have changed over time. While positive changes have been recorded, Scotland continues to record a significantly lower life expectancy compared to other countries in the UK and Western Europe, as well as continued disparity in health outcomes between those living in the most and least deprived areas[1]. Improving the health and wellbeing of Scotland's population continues to be a key challenge at both the local and national level.

In 2018, the Scottish Government launched six inter-related public health priorities designed to improve the health of the population and reduce health inequalities in Scotland over the next decade[2]. In the same year, a revised National Performance Framework (NPF)[3] was also launched containing eleven National Outcomes that link with several of the United Nation's Sustainable Development Goals[4], including several health outcomes. Underpinning the outcome focused exclusively on health - 'we are healthy and active' - are several National Indicators. SHeS is used to monitor progress towards indicators relating to mental wellbeing, healthy weight, health risk behaviours, physical activity, child wellbeing and happiness, and food insecurity.

The impact of the COVID-19 pandemic is likely to be felt for some time, with both physical health and mental and emotional wellbeing being affected. The Scottish Government's mental wellbeing transition and recovery plan[5] and Long Covid-19 service paper[6] are among the approaches and initiatives published to tackle this impact.

Chronic pain (persistent pain lasting for longer than 12 weeks) is projected to increase amongst the Scottish population and can place considerable strain on health services and the lives of those affected. Supporting the Scottish Government's initiatives and policies in this area are a framework for the delivery of pain management services[7], as well as guidelines for the management and prescription approach for those living with chronic pain[8,6].

The Scottish Health Survey (SHeS) Series

SHeS has been carried out annually since 2008 and prior to this was carried out in 1995[9], 1998[10], and 2003[11]. Due to disruption to the survey at the onset of the pandemic, the survey data collected in 2020 was published as experimental statistics and was not comparable with the time series[12]. This data has not been included in the survey trends.

Commissioned by the Scottish Government Health Directorates, the SHeS series aims to provide regular information on aspects of the public's health and factors related to health which cannot be obtained from other sources. The SHeS series was designed to:

- estimate the prevalence of particular health conditions in Scotland

- estimate the prevalence of certain risk factors associated with these health conditions and to document the pattern of related health behaviours
- look at differences between regions and subgroups of the population in the extent of their having these particular health conditions or risk factors, and to make comparisons with other official statistics for Scotland and England
- monitor trends in the population's health over time
- make a major contribution to monitoring progress towards health targets

Each survey in the SHeS series has a set of core questions and measurements (height and weight and, if applicable, blood pressure, waist circumference, and saliva samples), plus modules of questions on specific health conditions and health risk factors that vary from year to year. Each year the main sample has been augmented by an additional boosted sample for children.

The 2018 to 2022 surveys were undertaken by the Scottish Centre for Social Research, with the Office of National Statistics (ONS) sharing fieldwork. Survey contributors have included the MRC/CSO Social and Public Health Sciences Unit (MRC/CSO SPHSU) based in Glasgow, The Centre for Population Health Sciences at the University of Edinburgh, and The Public Health Nutrition Research Group at Aberdeen University.

The 2022 Survey

For the first two months of the 2022 survey (March and April 2022), the methodology remained the same as the final few months of 2021 whereby interviewers were able to visit households on the doorstep to encourage response to a telephone interview (known as a knock-to-nudge approach). However, from May 2022, interviews (with the exception of the child boost) were undertaken using a primarily in-home face-to-face approach with a telephone contingency for respondents who were not willing to have an interviewer in-home. As a result of building the bio interviewer panel back up after the pandemic, bio measures were reintroduced part way through fieldwork.

For the child boost sample, up to July 2022 potential respondents were initially contacted by letter and asked to opt-in to an interview conducted over the phone. August 2022 was a transition month in order to introduce linkage of the sample with the Community Health Index (CHI) to identify households with children. From September 2022, this linked sample was worked face-to-face in-home, significantly improving the sample efficiency and response.

Further details on the fieldwork approach can be found in Chapter 1 of the Scottish Health Survey 2022 - volume 2: technical report.

The SHeS series now has trend data going back over two decades and providing time series data remains an important function of the survey. The impact of Covid-19 restrictions means that caution should be applied when comparing the 2022 results with the 2021 survey data, which were collected via a telephone approach. Further details on the fieldwork approach in 2021 can be found in Chapter 1 of the Scottish Health Survey 2021- volume 2: technical report, while information on the differences between the 2021 survey data and

previous years can be found in Chapter 2 of the Scottish Health Survey 2021-volume 2: technical report.

Topics

Cardiovascular disease (CVD) and related risk factors remains the principal focus of the survey. The main components of CVD are ischaemic heart disease (IHD) (or coronary heart disease) and stroke, both of which remain clinical priorities for the NHS in Scotland[13,14], particularly in light of the impact of the pandemic. CVD is one of the leading causes of death in Scotland. In 2022, this included 11% of deaths which are caused by IHD, with a further 6% caused by cerebrovascular disease (including stroke)[15]. The incidence rate of cerebrovascular disease has fallen by 8% over the last decade[16], however, stroke remains one of the biggest causes of death in Scotland[17]. In addition, while the coronary heart disease mortality rate has decreased by 18% in the last ten years, the rate of decline has slowed in the last five years[18] and despite improvements, there remains concern about continuing inequalities in relation to morbidity and mortality linked to these conditions[19].

Many of the key behavioural risk factors for CVD are in themselves of particular interest to health policy makers, public health professionals and the NHS; poor diet, obesity, lack of physical activity, smoking, and levels of alcohol consumption are all the subject of specific strategies targeted at improving Scotland's health. SHeS includes detailed measures of all these factors which are reported on separately in Chapters 6-9. The other five chapters focus on health conditions and experiences which have the potential to influence health outcomes in later life - Mental Wellbeing (Chapter 1), General Health, Cardiovascular Disease and Caring (Chapter 2), Respiratory Conditions including long-Covid (Chapter 3), Dental Health (Chapter 4) and for the first time, Chronic pain (Chapter 5).

Sample

The Scottish Health Survey is designed to yield a representative sample of the general population living in private households in Scotland every year.

The current survey design also means that estimates at NHS Health Board level are available, usually by combining four consecutive years of data. Due to disruption of the survey in 2020 and comparability issues with the results collected from the short telephone survey conducted that year, NHS board results have been produced using data from the 2018, 2019, 2021 and 2022 surveys combined. These have been published within the survey dashboard at the same time as this report.

Those living in institutions, who are likely to be older and, on average, in poorer health than those in private households, were outwith the scope of the survey. This should be borne in mind when interpreting the survey findings.

A total of 29,106 addresses was drawn from the Postcode Address File (PAF) in 2022. Of these, 17,417 were child boost addresses, 16,266 of which were issued as opt-in until July 2022. The rest of the child boost addresses were issued following linkage with the Community Health Index (CHI) database to increase the likelihood of identifying households with children present. A total of 8,689 addresses in the core sample (main (core) sample version A, main (core) sample version B) were issued for the whole of the 2022 fieldwork period. The first two months of the core sample were worked on a knock-to-nudge basis, with interviews undertaken by telephone. Face-to-face in-home interviewing for the core sample resumed from May 2022.

Fieldwork

There were two phases of fieldwork for SHeS 2022 for the core sample and also two phases for the child boost Sample. During phase 1 for the core sample, potential participants were contacted by letter and recruited to participate by interviewers knocking on their door, in what is termed a 'knock-to-nudge' methodology. Interviews were conducted by telephone. This phase covered the months of March and April 2022 and included similar content to earlier survey years, as well as interviews with or on behalf of children.

Between March and July 2022, participants from the child boost sample continued to be invited to opt in via letter. Fieldwork for the child boost sample was suspended in August 2022 to allow the transition to use of sample linked to the Community Health Index (CHI) database. This was undertaken following approval from the NHS Scotland Public Benefit and Privacy Panel for Health and Social Care. The transition to the use of the CHI database was undertaken to increase the efficiency of the sample.

Each sampled address was sent an advance letter that introduced the survey and to let the resident know that an interviewer would be calling to seek permission to interview. A number of versions of the advance letter were used in 2022: one for the core version A addresses, one for core version B addresses (with the biological module), and two for child boost addresses (one for opt in and one for in-home interviews). There was a version of each of these letters for each organisation conducting interviews (ScotCen Social Research and ONS), with the exception of child boost cases which were worked by ScotCen only. A copy of the survey leaflet was included with every advance letter. The survey leaflet introduced the survey, described its purpose in more detail and included some summary findings from previous surveys.

For copies of the advance letters and survey leaflets, see the documents listed in Appendix A.

For the main sample, all adults aged 16 and over in responding households were eligible for interview. To ease respondent burden, for child interviews for both the main and the child boost samples a maximum of two children were interviewed at each household. If a household contained more than two children, then two were randomly selected for interview.

Data collection involved a main computer assisted personal (CAPI) or telephone (CATI) interview, and online or paper self-completion questionnaire.

No height and weight measurements or biological measures could be taken for interviews conducted by telephone. For these interviews, participants were therefore asked to estimate their own height and weight during the interview. The bio interviewer panel was also not at full strength at the outset of fieldwork but increased in size over the course of 2022. These issues meant that only a proportion of the core version B sample completed a biological module. These addresses were only assigned to trained bio interviewers. No biological measurements could be taken by a non-bio trained interviewer. Otherwise, the key differences between the core version A and version B interviews were a slightly longer telephone interview for version A to cover the rotating modules (those not asked every year) and a slightly longer self-completion for version B to cover the depression, anxiety, self-harm and attempted suicide questions which are only included for the bio sample.

Survey response

In 2022, across all sample types, interviews were held in 3,602 households with 4,394 adults (aged 16 and over), and 1,764 children (aged 0-15). The number of participating households and adults in 2022 is presented separately for the opt-in and knock-to-nudge samples in the tables below. Further details on survey response in 2022 are presented in Chapter 2 of the Scottish Health Survey 2022 - volume 2: technical report.

When considering the household response rate, households classed as "responding" were those where at least one eligible person opted-in/consented to interview and was interviewed.

It should be noted that whilst 2022 response rates are improved upon those seen in 2021, they remained lower than typical pre-pandemic rates.

Main adult sample

Knock-to-nudge sample (Mar/Apr)	
Participating households	591
Eligible households responding	41%
Adult interviews	888
Child interviews (core only)	158
In-home sample	
Participating households	2343
Eligible households responding	37%
Adult interviews	3506
Child interviews (core only)	557

Child boost sample

Opt-in sample (Mar-Jul)	
Addresses assumed eligible	3159
Households opting-in	283
Households participating	232
Assumed eligible households responding	7%
Child interviews	361
CHI-screened/in-home sample	
Participating households	436
Eligible households responding	47%
Child interviews (child boost sample only)	688

Ethical Approval

Ethical approval for the 2022 survey was obtained from the REC for Wales committee (reference number 17/WA/0371).

Data analysis

Weighting

Since addresses and individuals did not all have equal chances of selection, the data had to be weighted for analysis. SHeS comprises of a general population (main sample) and a boost sample of children screened from additional addresses. Therefore, slightly different weighting strategies were required for the adult sample (aged 16 or older) and the child main and boost samples (aged 0-15). The address selection weights were calculated to compensate for unequal

probabilities of selection of addresses in different survey strata, within the opt-in and knock-to-nudge/in-home samples. Additional weights have been created for use on combined datasets. A detailed description of the weights is available in Chapter 2 of the Scottish Health Survey 2022- volume 2: technical report.

Weighted and unweighted data and bases in report tables

All data in the report are weighted. For each table in the report both weighted and unweighted bases are presented. Unweighted bases indicate the number of participants involved. Weighted bases indicate the relative sizes of sample elements after weighting has been applied.

Standard analysis variables

As in all previous SHeS reports, data for men, women, boys, and girls are presented separately where possible. Many of the measures are also reported for the whole adult or child population. Survey variables are tabulated by age groups and in some cases by Scottish Index of Multiple Deprivation (SIMD) or other variables such as smoking status.

Statistical information

SHeS 2022 used a partially clustered, stratified multi-stage sample design. In addition, weights were applied when obtaining survey estimates. One of the effects of using the complex design and weighting is that standard errors for survey estimates are generally higher than the standard errors that would be derived from an unweighted simple random sample of the same size. The calculations of standard errors shown in tables, and comments on statistical significance throughout the report, have taken the clustering, stratification and weighting into account. Full details of the sample design and weighting are given in Chapter 2 of the Scottish Health Survey 2022 - volume 2: technical report.

Presentation of trend data

In this report, trends based on the fourteen surveys from 2003 onwards are presented for all adults aged 16 and over. Prior to this the survey eligibility criteria were set at a maximum age of 64 in 1995 and then a maximum age of 74 in 1998. Unless specified otherwise, trends for children are based on the 2-15 years age group from 1998 onwards, and 0-15 years from 2003 onwards.

Presentation of results

Commentary in the report highlights differences that are statistically significant at the 95% confidence level. Statistical significance is not intended to imply substantive importance. A summary of findings is presented at the beginning of each chapter. Each chapter then includes a brief overview of the relevant policy area. These overviews should be considered alongside the higher-level policies noted above and related policy initiatives covered in other chapters. A description of the methods and key definitions are detailed in Chapter 2 of the Scottish Health

Survey 2022- volume 2: technical report. A link to the tables showing the results discussed in the text is included at the end of each chapter.

Availability of further data and analysis

As with surveys from previous years, a copy of the SHeS 2022 data will be deposited at the UK Data Archive along with copies of the combined datasets for 2021/2022, 2018/2022 and 2018/2019/2021/2022. In addition, a detailed set of web tables for 2022, providing analysis by age, area deprivation, equivalised income and long-term condition for a large range of measures is available on the Scottish Government website[20].

Key indicators for local areas are available in the Scottish Health Survey Dashboard published on the Scottish Government website alongside this report.

Further breakdowns are also available for smoking, long-term conditions, general health, and caring indicators from the Scottish Survey Core Questions, which asks harmonised questions across the three major Scottish Government household surveys, available from the Scottish Government website.

Comparability with other UK statistics

Guidance on the comparability of statistics across the UK is included in the introductory section of individual chapters.

Content of this report

This volume contains chapters with substantive results from SHeS 2022, and is one of two volumes based on the survey, published as a set as 'The Scottish Health Survey 2022':

Volume 1: Main Report

1. Mental Wellbeing
2. General Health, CVD and Caring
3. Respiratory Conditions
4. Dental Health
5. Chronic Pain
6. Alcohol
7. Smoking
8. Diet and Obesity
9. Physical Activity

Volume 2: Technical Report

Volume 2 includes a detailed description of the survey methods including: survey design and response; sampling and weighting procedures.

Both volumes along with a summary report of the key findings from the 2022 report are available on the Scottish Health Survey pages of the Scottish Government website.

References and notes

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Notes to Tables

1 The following conventions have been used in tables:

n/a	no data collected
-	no observations (zero value)
0	non-zero values of less than 0.5% and thus rounded to zero
[ ]	small sample bases (unweighted base is between 30 and less than 50)
*	very small sample bases (unweighted base is less than 30)

2 Because of rounding, row or column percentages may not add exactly to 100%.

3 A percentage may be quoted in the text for a single category that aggregates two or more of the percentages shown in a table. The percentage for the single category may, because of rounding, differ by one percentage point from the sum of the percentages in the table.

4 Values for means, medians, percentiles and standard errors are shown to an appropriate number of decimal places. Standard errors may sometimes be abbreviated to SE for space reasons.

5 'Missing values' occur for several reasons, including refusal or inability to answer a particular question; refusal to co-operate in an entire section of the survey (such as a self-completion questionnaire); and cases where the question is not applicable to the participant. In general, missing values have been omitted from all tables and analyses.

6 The population sub-group to whom each table refers is stated at the upper left corner of the table.

7 Both weighted and unweighted sample bases are shown at the foot of each table. The weighted numbers reflect the relative size of each group in the population, not numbers of interviews conducted, which are shown by the unweighted bases.

8 The term 'significant' refers to statistical significance (at the 95% level) and is not intended to imply substantive importance.

9 Within the report figures have generally been produced using data rounded to the nearest whole number. There are a small number of figures which show data to the nearest decimal place to aid interpretation.

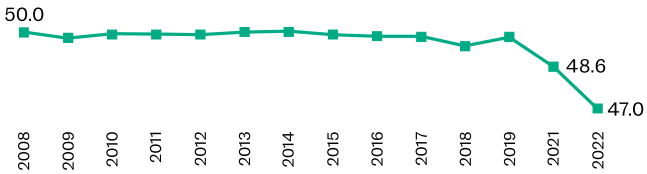
Chapter 1

Mental Health and Wellbeing

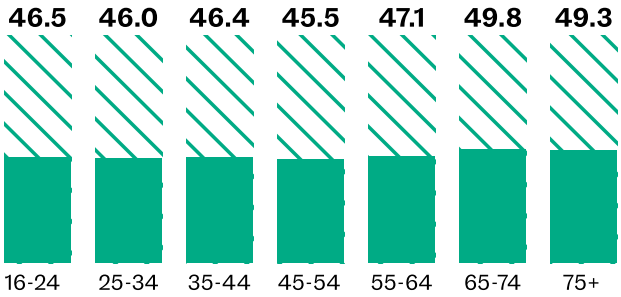
CHAPTER 1

Mental Health and Wellbeing

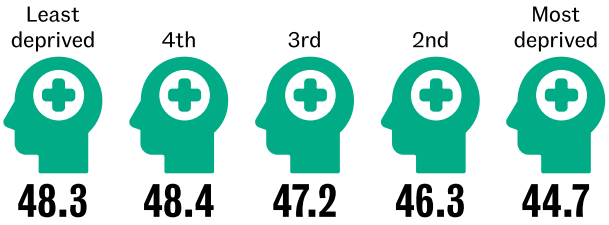
Average levels of mental wellbeing (measured by mean WEMWBS scores[1]) decreased between 2021 and 2022 and were outside of the range previously observed between 2008 and 2019 (49.4-50.0)[1].



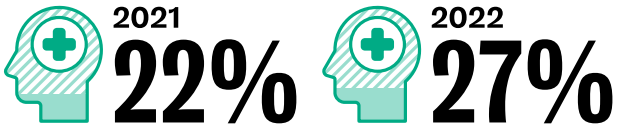
In 2022, older adults reported higher WEMWBS scores compared to younger adults.



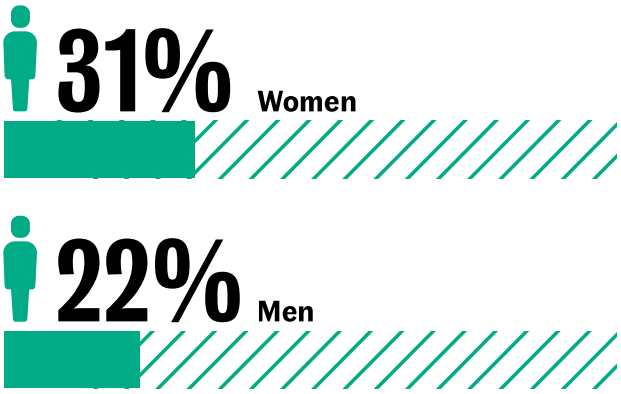
In 2022, WEMWBS scores decreased as levels of deprivation increased.



In 2022, 27% of adults had a GHQ-12[2] score of 4 or more (indicative of a possible psychiatric disorder), an increase from 2021 and higher than previous scores in the time series (14%-19% between 2003 and 2019).

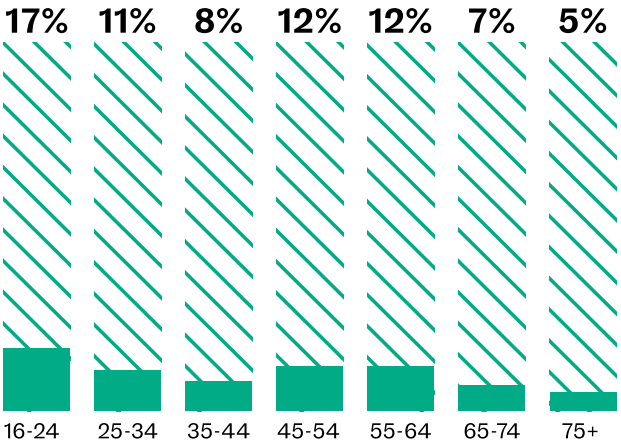


In 2022, GHQ-12 scores of 4 or more were significantly higher for women than for men.



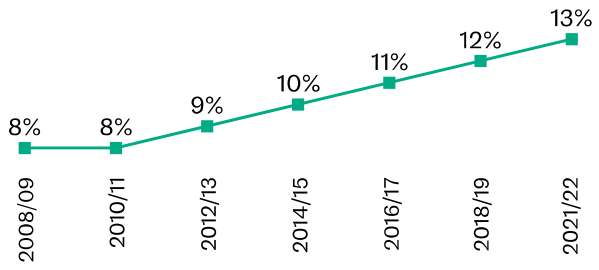
The proportion of adults feeling lonely 'most' or 'all of the time' increased between 2021 and 2022

Overall, older adults were less likely to report feeling lonely 'most' or 'all of the time' compared with younger adults.

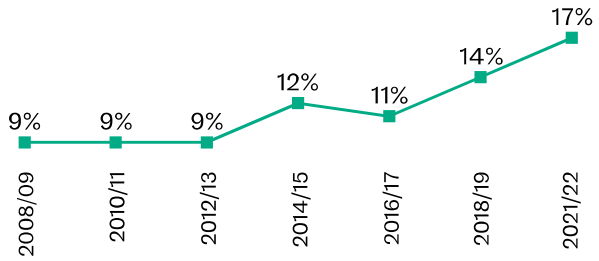


1. WEMWBS scores range from 14 to 70. Higher scores indicate greater wellbeing.
2. GHQ-12 scores range from 0 to 12. Scores of 4 or more are indicative of a possible psychiatric disorder.

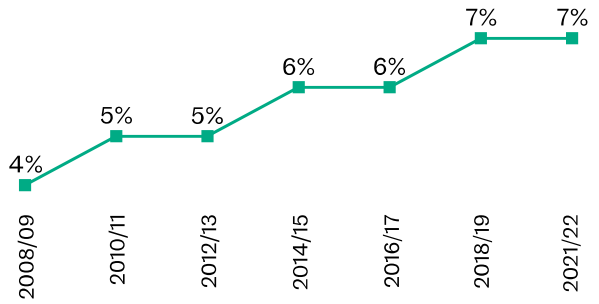
There has been a gradual but overall significant increase in the proportion of adults reporting two or more symptoms of depression, rising from:



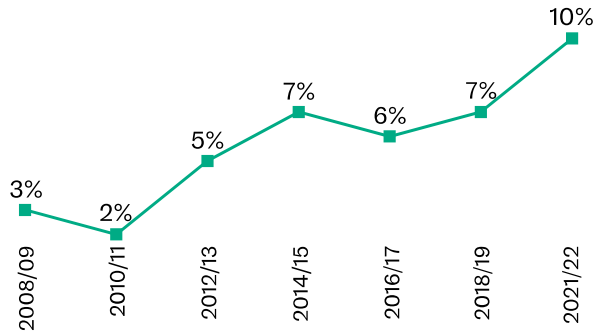
The proportion of adults that reported having two or more symptoms of anxiety was 17% in 2021/2022. This had increased from 9% between 2008/2009 and 2012/2013, and 11 - 14% between 2014/2015 and 2018/2019.



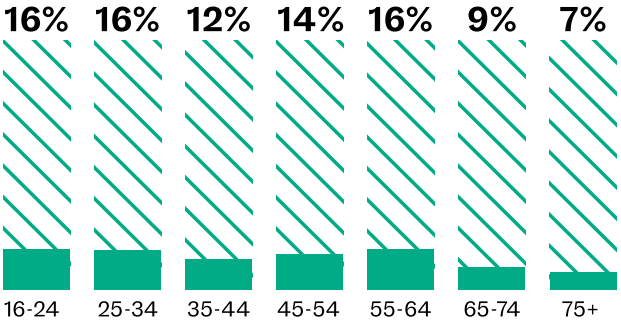
The proportion of adults reporting that they had ever attempted suicide has risen from 4% in 2008/2009 to 7% in 2018/2019 combined and 2021/2022 combined.



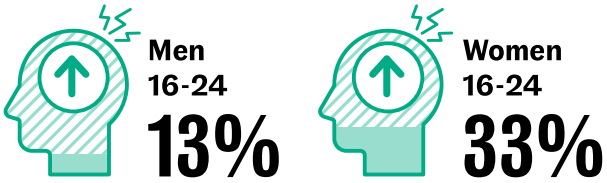
The proportion of adults reporting that they have ever self-harmed increased from 2-3% in 2008/2009 to 10% in 2021/2022.



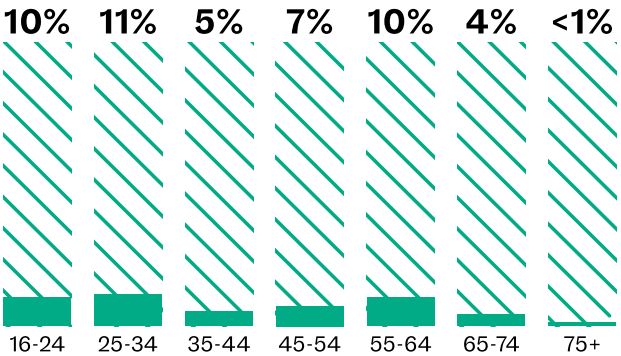
The prevalence of adults reporting two or more symptoms of depression tended to decrease with age, although not linearly. Lowest levels were recorded among those aged 75 and over, and highest among those aged 16-34 or 55-64.



Prevalence of two or more symptoms of anxiety was highest among those aged 16-34 (25 - 26%) and lowest was among those aged 65-74 (7%). Differences by sex were greatest amongst the 16-24 age group, at 13% of men and 33% of women.



In 2021/2022, age was a significant factor in whether someone had ever attempted suicide. The highest prevalence was among those aged 16-34 and those aged 55-64.



In 2022, 30% of children lived with a parent with a GHQ12 score of 4 or above (indicative of a possible psychiatric disorder).

1 Mental Health and Wellbeing

Erin Deakin

1.1 Introduction

Mental health is defined by the World Health Organisation as a state of well-being in which every individual realises their own potential, can cope with the stresses of life, can work productively, and is able to make a contribution to their community[1]. Positive mental health helps individuals to connect with others, cope with stress, emotions and decision making, make healthy choices and to thrive. Therefore, eradicating any stigma associated with seeking help and ensuring the promotion of mental wellbeing for all, not just those experiencing difficulties, have been identified as key areas of focus for mental health reform[2]. Mental disorders often co-exist with physical illnesses[3] and are impacted by the same inequalities that have been observed for physical health. Those with severe mental disorders have a life expectancy 15-20 years shorter than the general population[4].

Around one in three people are estimated to be affected by mental health problems in Scotland in any one year[5], with levels of loneliness, anxiety and economic concerns having increased during the COVID-19 pandemic[6]. It is also evidenced that mental ill health in adolescence increases the risk of subsequent mental ill health later in life[7], with impacts of COVID-19 pandemic reported to include a deterioration in mental wellbeing and increased loneliness among children and young people[8]. Globally, around 5% of adults are estimated to experience depression and it is more prevalent among women than men[9]. Around 703,000 people die due to suicide every year globally and rates remain consistently higher for men than for women[10].

Poor mental health, including mental disorder, has a considerable impact on individuals, their families and society in general[11] and is clearly associated with both poverty and social exclusion[12]. Loneliness is a significant public health problem[13] which can contribute to the onset and continuation of poor mental health[14]. Some population groups at increased risk include those with poor mental and/or physical health, those living in poverty, those with disabilities, those from LGBTI or minority ethnic communities and carers. The risk of loneliness is also greater for those with mental health problems than for those with physical health problems and particularly high for those who experience anxiety, depression or stress[15,16].

1.1.1 Policy background

The impact of the COVID-19 pandemic was felt widely at both societal and individual levels, impacting on mental health in both the short and longer term. The **Mental Health – Scotland's Transition and Recovery Plan**[17] sets out the mental health needs resulting from the pandemic and how the Scottish Government is addressing these.

The plan's commitments focus on areas or groups of people whose mental health was most likely to be affected, focusing on promoting positive mental health at the population level, signposting to help and

support, rapid and accessible support for those in distress and treatment for those living with mental illness.

The Scottish Government's **Mental Health Strategy 2017-2027** sets out a number of actions in place or planned to improve areas including prevention and early intervention, access to treatment and physical wellbeing for those experiencing mental health issues. The Strategy is thus to focus on promoting positive mental health and preventative services, with the same level of commitment as with physical health[18].

In June 2023, the Scottish Government published **Scotland's Mental Health and Wellbeing: Strategy**[19], which had been informed by public consultation. It builds on the Transition and Recovery Plan and sets out priorities for the coming years.

1.1.2 Reporting on mental wellbeing in the Scottish Health Survey

This chapter updates trends in mental wellbeing for adults using the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS). Trends in mental health are also updated for adults including the General Health Questionnaire 12 (GHQ-12) and CIS-R anxiety and depression scores, as well as data on attempted suicide, self-harm, loneliness and children living with a parent with a possible psychiatric disorder. Figures are also reported by age, sex and area deprivation.

The Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) data for children, reported in both 2019 and 2021, has not been presented in this report. This is because it requires several years of data and will be presented once data has been collected for both 2022 and 2023.

The area deprivation data are presented in Scottish Index of Multiple Deprivation (SIMD) quintiles. To ensure that the comparisons presented are not confounded by the different age profiles of the quintiles, the data have been age-standardised. For a detailed description of both SIMD and age-standardisation as well as definitions of other terminology used in this chapter and for further details on the data collection methods for mental health and wellbeing and loneliness, please refer to Chapter 2, of the Scottish Health Survey 2022 volume 2 technical report.

Supplementary tables on mental wellbeing are also published on the Scottish Government website: Scottish Health Survey.

1.2 Mental Health & Wellbeing

1.2.1 Adult WEMWBS mean score, 2008 to 2022, by sex

In 2022, the mean WEMWBS score for all adults was 47.0, a decrease from the mean of 48.6 recorded in 2021 and outside the range observed prior to 2021 (49.4– 50.0).

Across the time series, men have generally recorded higher mean WEMWBS scores, although the differences have not always been

significant. In 2022, no significant difference was recorded between men (47.7) and women (46.5). However, scores for both men and women have decreased since 2019, with the 2022 scores representing significant decreases from those recorded for 2021 (49.0 and 48.3 respectively).

Figure 1A
Adult WEMWBS mean score, 2008 to 2022, by sex

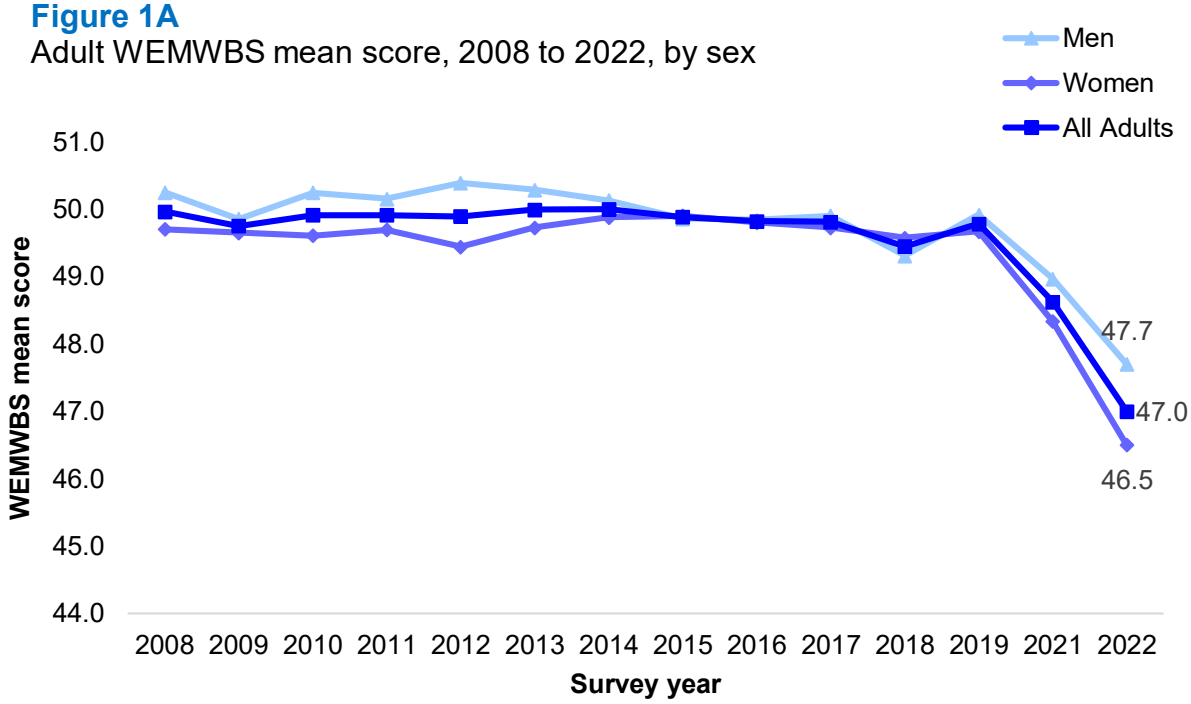


Figure 1A, Table 1.1

1.2.2 Adult WEMWBS mean score, 2022, by age and sex

Consistent with previous survey years, higher mental wellbeing scores were reported in older adults compared to younger adults. In 2022, adults aged 65-74 reported a mean WEMWBS score of 49.8 and those aged 75 or older, a mean score of 49.3. In comparison, the mean scores for those aged 16-64 were in the range 45.5-47.1.

Figure 1B
Adult WEMWBS mean score, 2022, by age and sex

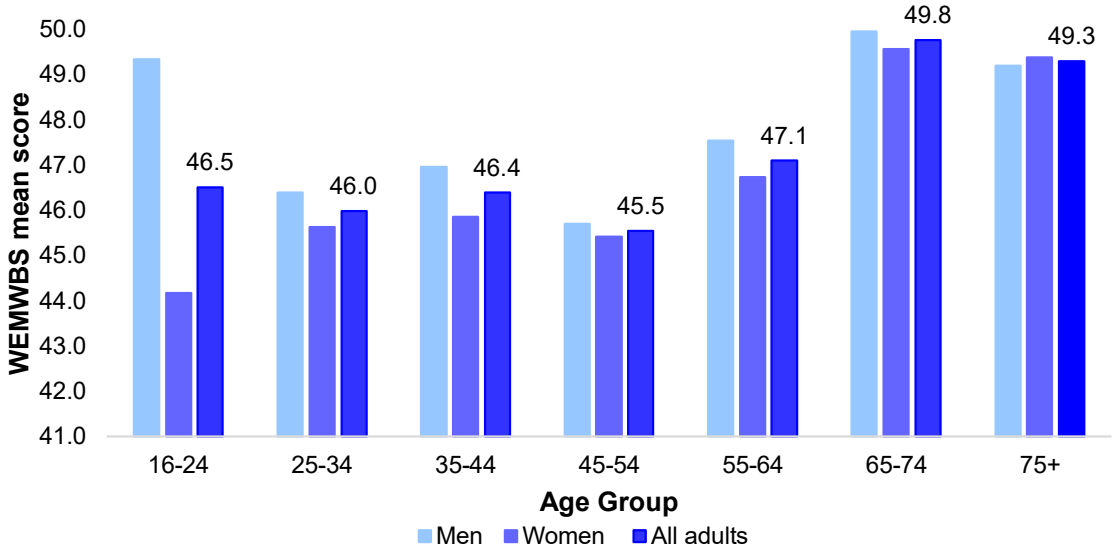


Figure 1B, Table 1.2

1.2.3 Adult WEMWBS mean score (age-standardised), 2022, by area deprivation and sex

Age-standardised adult WEMWBS mean scores continued to show significant variation by area deprivation in 2022. WEMWBS mean scores decreased as deprivation increased, from mean scores of 48.3 and 48.4 in the two least deprived quintiles, to a mean score of 44.7 in the most deprived areas.

No significant differences were recorded by SIMD between men and women in 2022.

Figure 1C
Adult WEMWBS mean score (age-standardised), 2022, by area deprivation and sex

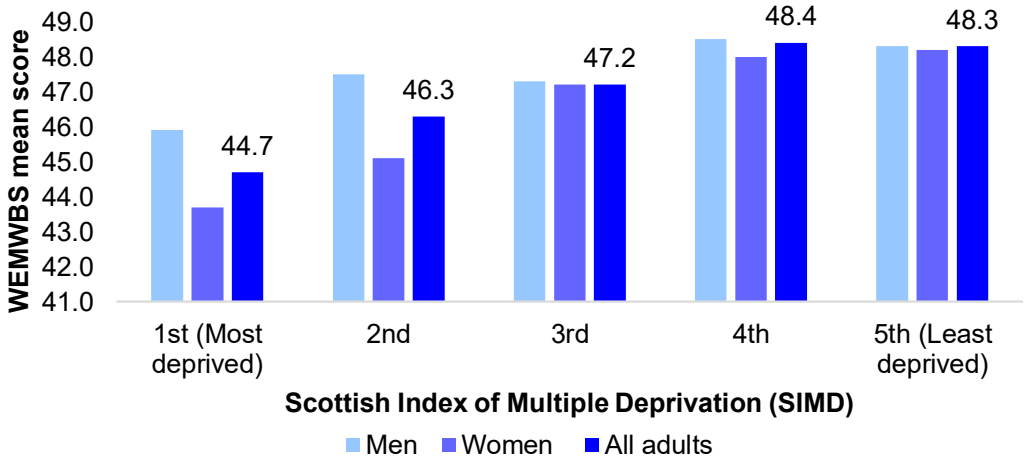


Figure 1C

Adult WEMWBS mean score (age-standardised), 2022, by area deprivation and sex

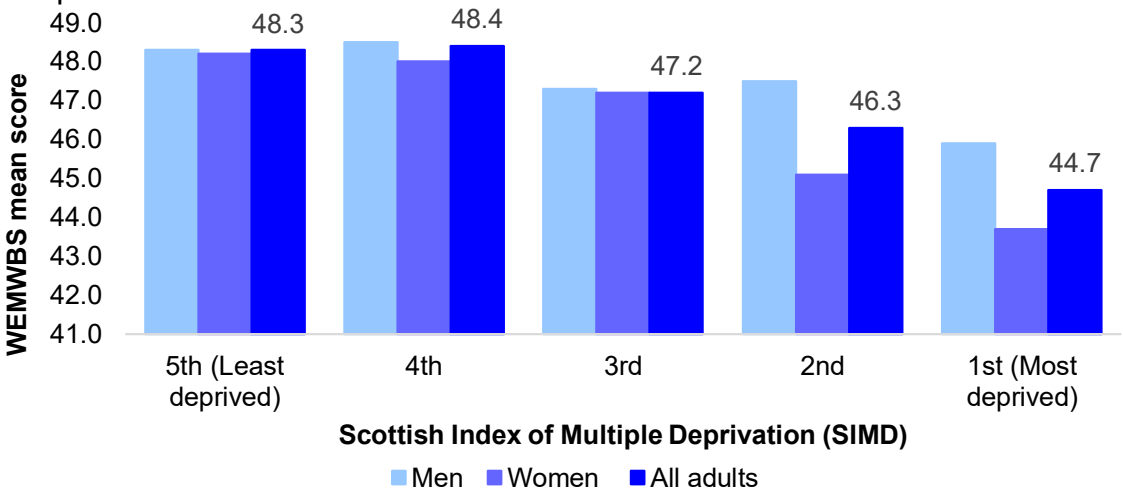


Figure 1C, Table 1.3

1.2.4 GHQ-12 score, 2003 to 2022, by sex

A GHQ-12 score of four or more is indicative of a possible psychiatric disorder. In 2022, the proportion of adults with a GHQ-12 score of 4 or more was 27%, a significant increase on the proportion recorded in 2021 (22%) and on the proportions recorded in previous years which ranged from 14%-19%.

In 2022, the proportion of adults with a GHQ-12 score of zero was the lowest in the time series (45%) and a significant decrease compared with 2021 (52%). Across the timeseries, the proportion of adults with a score between one and three has remained in the range 21%-28%, with the 2022 proportion (28%) at the upper end of this range.

As in previous years, the proportion of adults with a GHQ-12 score of four or more was significantly higher for women (31%) compared to men (23%) in 2022, with these proportions the largest recorded for both men and women. **Table 1.4**

1.2.5 Adult loneliness, 2022, by age and sex

In 2022, 11% of adults reported having felt lonely 'most' or 'all of the time' in the week prior to being interviewed. Additionally, 32% of adults reported having felt lonely 'some of the time'. The proportion of adults reporting feeling lonely 'almost none of the time' or 'not at all' was 58%.

Overall, older adults were less likely to report feeling lonely 'most' or 'all of the time' (7% of those aged 65-7 and 5% of those aged 75 or older) compared with younger adults (17% of those aged 16-24).

No significant variation was recorded in 2022 by sex in the proportions who reported being lonely 'all/most of the time'. However, women were

more likely than men to report feeling lonely 'some of the time' (35%, compared with 28% of men).

Figure 1D
Adult loneliness, 2022, by age

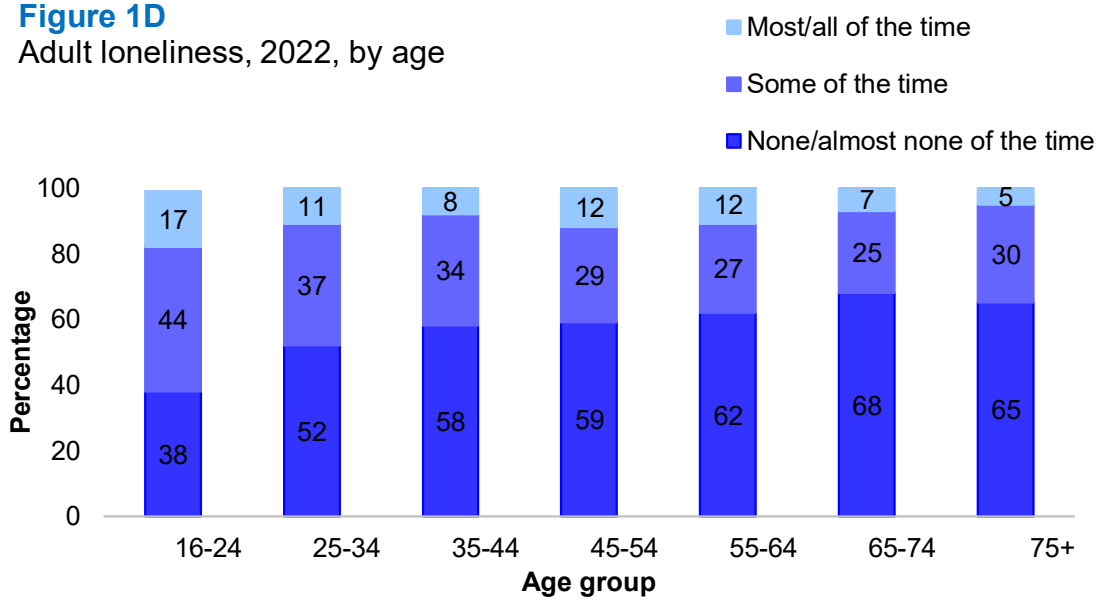


Figure 1D, Table 1.5

1.2.6 CIS-R anxiety and depression scores, attempted suicide and self-harm, 2008/2009 combined to 2021/2022 combined, by sex

To increase the sample size available, the analysis of anxiety and depression scores, attempted suicide and self-harm, by sex, made use of sets of two-years of combined data from 2008/2009 to 2021/2022, excluding 2020 due to a lack of comparable data.

Depression

Across the time series, there has been a gradual but overall significant increase in the proportion of adults reporting two or more symptoms of depression, rising from 8% in 2010/2011 to 13% in 2021/2022.

Among men, the proportion that reported two or more symptoms of depression has risen from 7% in 2010/2011 combined to 13% in 2021/2022 combined.

The prevalence of two or more symptoms of depression has varied among women over the time series, although this has been more consistent in recent years (in the range 10% - 13% since 2014/2015) with the 2021/2022 proportion at the upper end of this range.

Figure 1E
Two or more symptoms of depression, 2008/2009 (combined) to 2021/2022 (combined), by sex

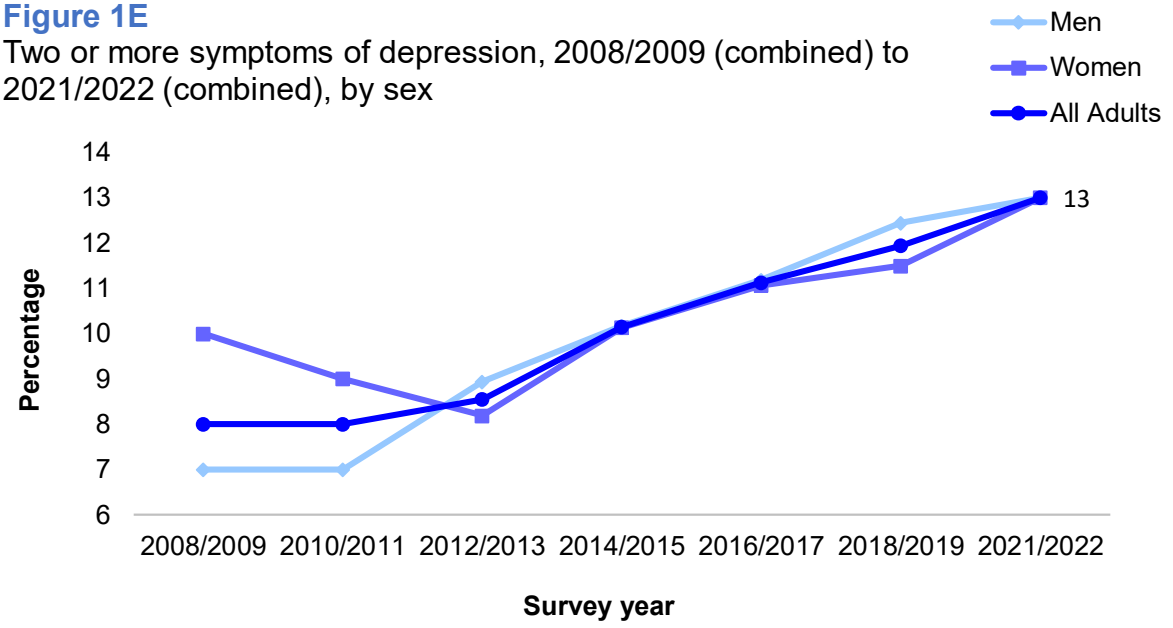


Figure 1E, Table 1.6

Anxiety

The proportion of adults that reported having two or more symptoms of anxiety has increased overall throughout the time series, with the highest percentage (17%) being reported in 2021/2022. In comparison to earlier years, 9% recorded two or more symptoms of anxiety between 2008/2009 and 2012/2013, while 11-14% reported two or more symptoms between 2014/2015 and 2018/2019.

Among men, the prevalence of reporting two or more symptoms of anxiety has generally increased over the time series, from 7% in 2008/2009 to 13% in 2018/2019 and 12% in 2021/2022.

Across the time series there has also been an overall increase in the prevalence of women reporting two or more symptoms of anxiety, rising from 10 - 11% in 2008/2009 and 2010/2011 to its highest proportion of 20% in 2021/2022.

Over the time series (2008/2009 to 2021/2022), consistently higher proportions of women recorded two or more symptoms of anxiety, with the difference varying from two to eight percentage points higher than the proportions among men. The difference by sex in 2021/2022 was the highest across the time series (eight percentage points).

Figure 1F

Two or more symptoms of anxiety, 2008/2009 (combined) to 2021/2022 (combined), by sex

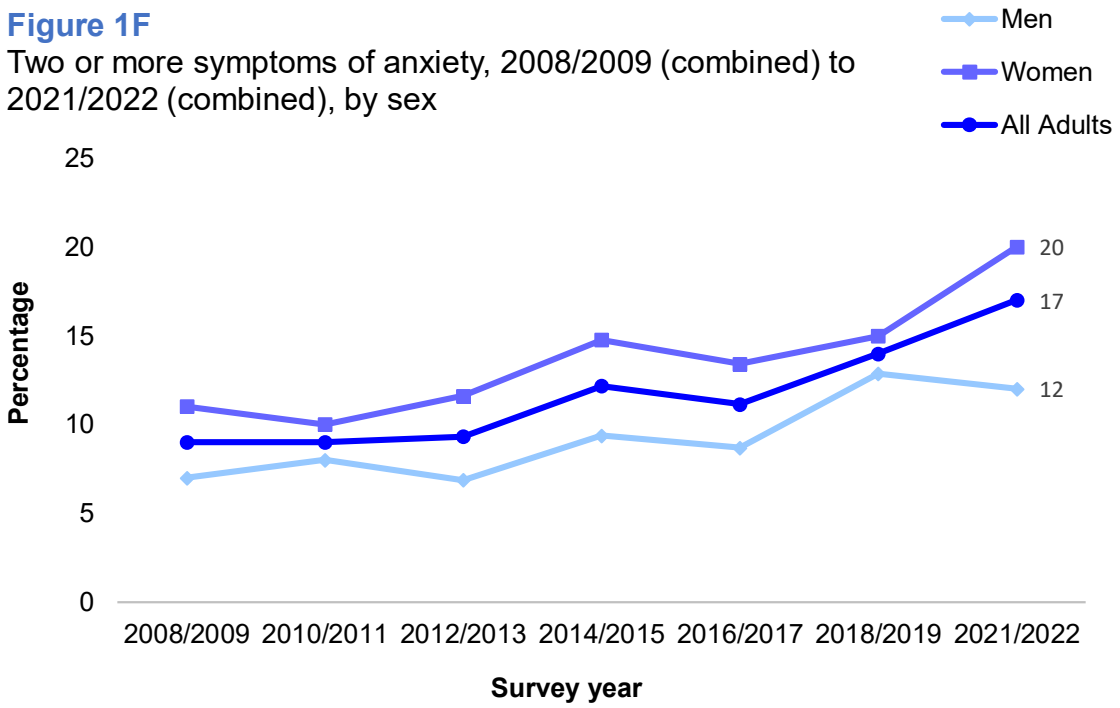


Figure 1F, Table 1.6

Attempted suicide

Across the time series, the proportion of adults reporting that they had ever attempted suicide has risen from 4% in 2008/2009 to 7% in 2018/2019 and 2021/2022.

Women have been consistently more likely to report ever having attempted suicide compared with men over the time series (two to three percentage points difference) although there was no significant difference between men and women in 2021/2022.

Figure 1G

Prevalence of ever having attempted suicide, 2008/2009 (combined) to 2021/2022 (combined), by sex

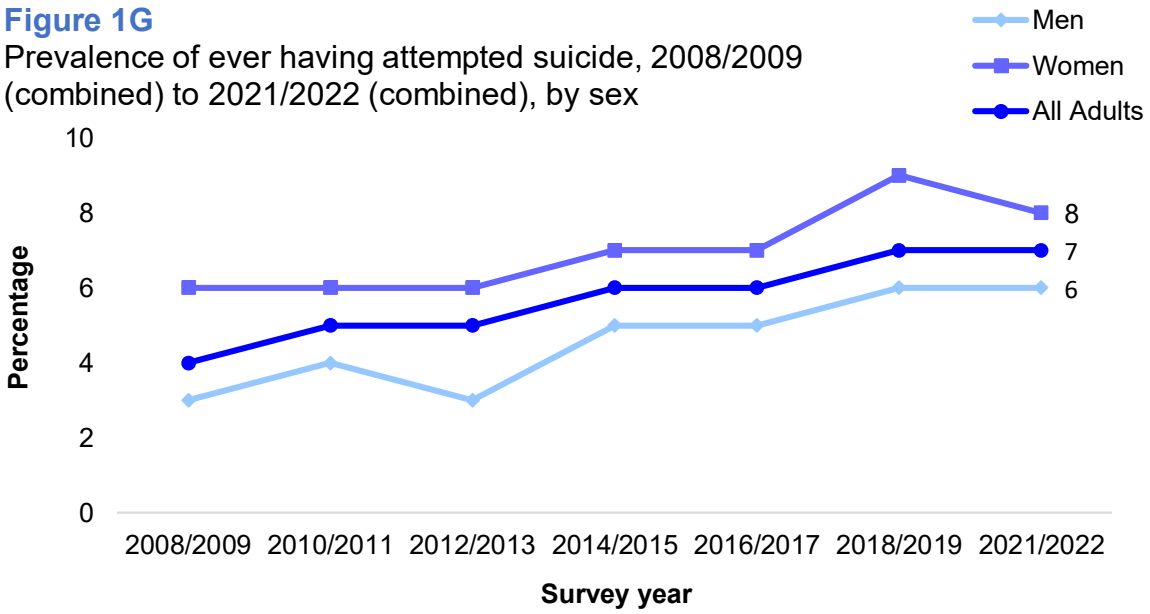


Figure 1G, Table 1.6

Self-harm

The proportion of adults reporting that they have ever self-harmed has generally increased across the time series. In 2021/2022, 10% of adults reported having self-harmed, the highest proportion recorded in the series to date. Equivalent levels in 2008/2009 and 2010/2011 ranged from 2-3%. It should be noted that in 2012/2013 the mode of data collection changed from nurse administered to self-completion questionnaire.

Similar patterns of overall increase were recorded by sex with the prevalence of self-harm for both men and women the highest in the time series in 2021/2022 at 8% and 11% respectively. When comparing sexes across the years, women have been more likely than men to report ever having self-harmed, however there was no statistically significant difference recorded in 2021/2022.

Figure 1H
Prevalence of ever having self-harmed, 2008/2009 (combined) to 2021/2022, by sex

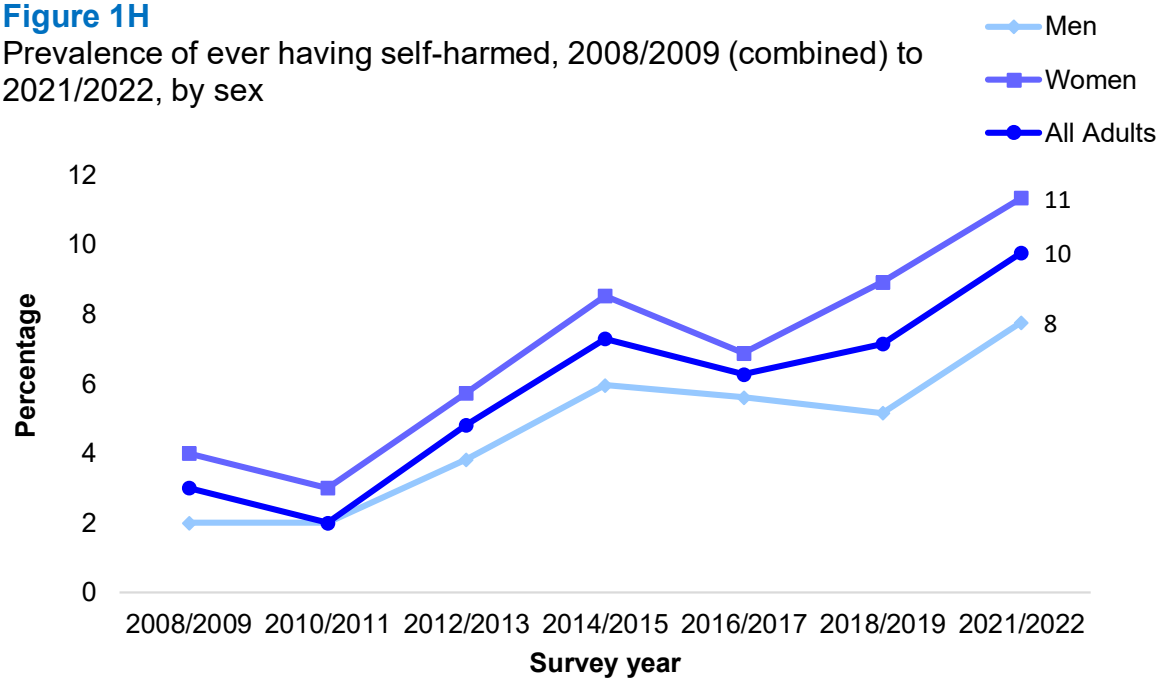


Figure 1H, Table 1.6

1.2.7 CIS-R anxiety and depression scores, attempted suicide and self-harm, 2021/2022 combined, by age and sex

Overall, the prevalence of adults reporting two or more symptoms of depression tended to decrease with age, although a linear decrease was not recorded. In 2021/2022, the lowest levels were recorded among those aged 75 and over (7%), while the highest prevalence was among young people aged 16-34 (16%) and those between the ages of 55 and 64 (16%).

Prevalence of two or more symptoms of anxiety displayed similar patterns, with a general decrease being observed with age in 2021/2022. Those aged 16-34 (25 - 26%) recorded the highest

proportion with two or more anxiety symptoms while the lowest was among those aged 65 and over (7%). When comparing sexes, women were significantly more likely to report two or more symptoms of anxiety compared to men for several age groups. The largest variation was recorded among those aged 16-24, where 13% of men and 33% of women in this age group reported having experienced two or more symptoms of anxiety.

In 2021/2022, age was a significant factor in whether someone had ever attempted suicide. While a general decrease in prevalence as age increased was observed, this was again not a linear pattern. The highest prevalence was among those aged 16-34 (10 - 11%) and those aged 55-64 (10%) with the lowest recorded among those aged 75 and over who were the least likely to report having done so (<1%). A similar pattern by age was observed for both men and women.

Age was also significant with regards to the proportion of adults who reported ever having self-harmed, with a general decrease in prevalence as age increased. In 2021/2022, 29% of those aged 16-24 and 19% of those aged 25-34 reported having self-harmed, compared with <1% of those aged 75 and over. **Table 1.7**

1.2.8 Children living with a parent with GHQ12 score of 4+, 2022, by age and sex

In 2022, 30% of children lived with a parent with a GHQ12 score of 4 or above (indicative of a possible psychiatric disorder). No significant variations were recorded by age, with this proportion in the range 27-33% or by sex (32% among boys compared with 28% among girls).

There were some significant variations between sexes for certain age groups. Boys aged 0-3 were more likely to be living with a parent who has a GHQ12 score of four or above (30%) compared to girls the same age (23%). Boys aged 12–15 were also more likely to be living with a parent who has a score of four or above (40%) compared to girls (27%). **Table 1.8**

Table List

Table 1.1 Adult WEMWBS mean score, 2008 to 2022, by sex
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Table 1.8 Children living with a parent with GHQ12 score of 4+, 2022, by age and sex

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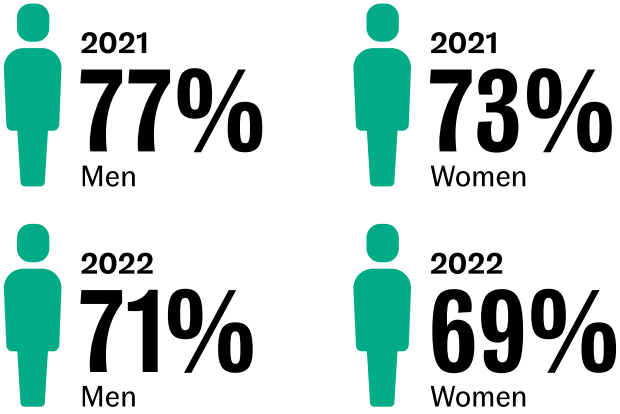
Chapter 2

General Health, Cardiovascular Conditions and Caring

CHAPTER 2

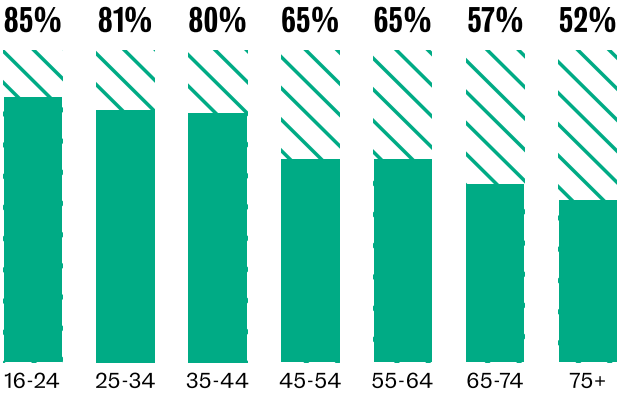
General Health

Between 2003 and 2021 the proportion of adults describing their health in general as 'very good' or 'good' ranged between 71% and 77%. In 2022 this dropped to 70%. Patterns have been similar for men and women, declining for both groups from 2021 to 2022.

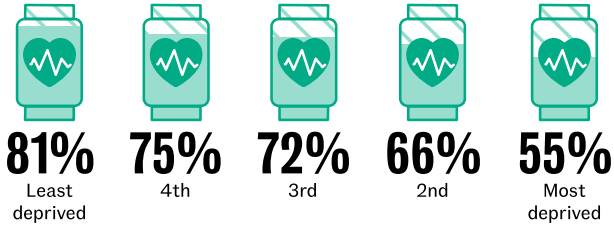


Most children continued to be described as having 'very good' or 'good' general health. This remains to be the case for both boys and girls.

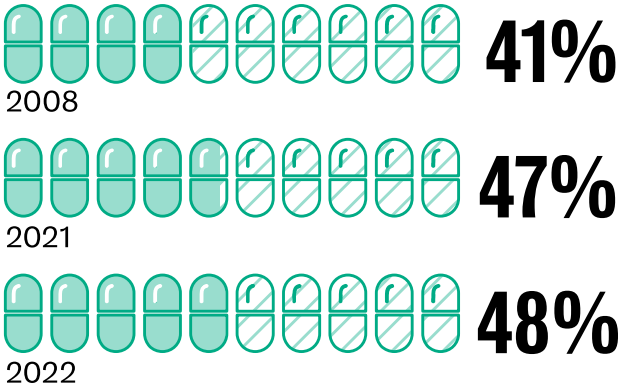
There was a linear relationship between self-assessed general health and age: in 2022, 85% of adults aged 16-24 described their health as 'good' or 'very good' and the equivalent figure for those aged 75 or above was 52%. This pattern was similar for men and women.



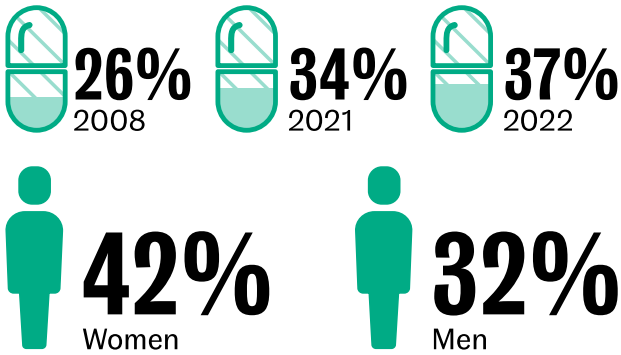
In 2022, the proportion of adults who self-assessed their general health as 'good' or 'very good' decreased with increased area deprivation, from 81% for those living in the least deprived quintile (SIMD quintile 5) to 55% in the most deprived quintile (SIMD quintile 1).



Since 2008 there has been an increase in the proportion of adults reporting living with a long-term health condition, although minimal change since 2021.

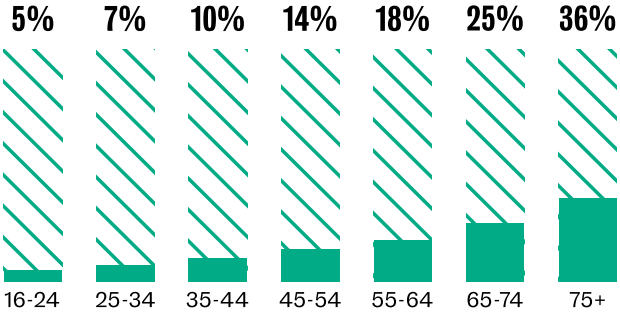


Prevalence of limiting long-term conditions increased from 26% in 2008, to 34% in 2021, to 37% in 2022. Women (42%) were more likely than men (32%) to report a limiting long-term condition.



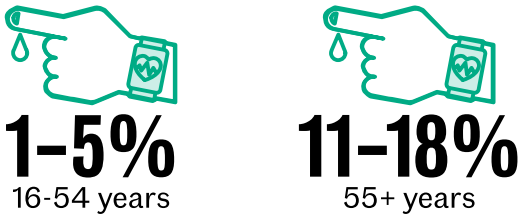
Since 2003, the level of adults with any cardiovascular disease (CVD) has remained at around one in six (14-16%; 16% in 2022).

In 2022, the proportion of adults having ever had any cardiovascular disease increased with age.



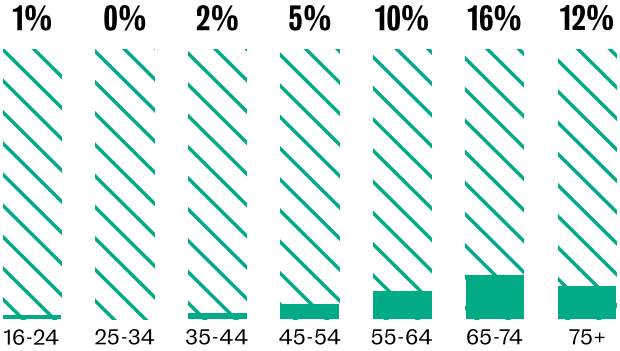
Prevalence of doctor-diagnosed diabetes among adults increased from 4% in 2003 to 7% in 2018 and has remained around this level (7% in 2022). Prevalence remained higher for men (8%) than for women (6%).

In 2022, prevalence of doctor-diagnosed diabetes increased from 1-5% of adults aged 16-54 to 11-18% of those aged 55 and above.



In 2022, 1% of adults reported having Type 1 diabetes, with no significant variation by age or sex.

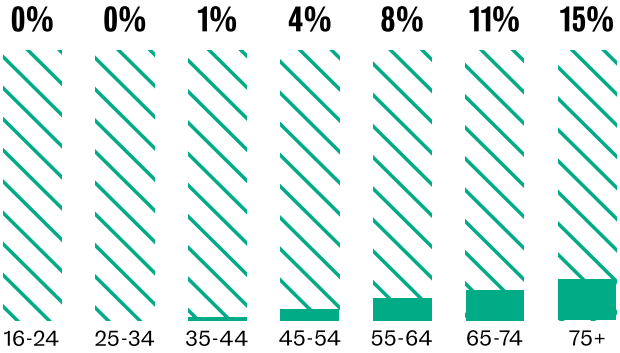
Prevalence of Type 2 diabetes (6% in 2022) increased with age from 1-5% of adults aged 16-54 to 10-16% of those aged 55 and above.



Doctor-diagnosed diabetes was more prevalent in areas of greatest deprivation than in than in areas of least deprivation.

In 2022, the proportion of adults with Ischemic Heart Disease (IHD) was 5%, similar to previous years, and similar for men and women (6% and 4% respectively).

In 2022, prevalence of IHD increased with age



IHD was more prevalent in the most deprived quintile than in the three least deprived quintiles.

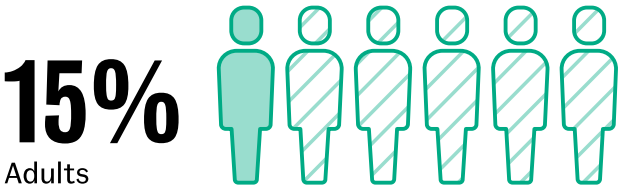
8% Most deprived

3% Least deprived

Stroke prevalence has remained at 2-3% since 2003 (3% in 2022).

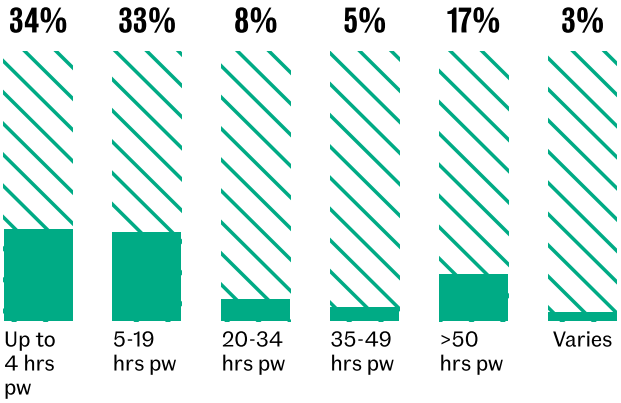
In 2022, prevalence of stroke was highest in the older age groups.

In 2021/2022, one in six adults (18% of women and 13% of men) reported providing regular help or unpaid care to someone else.



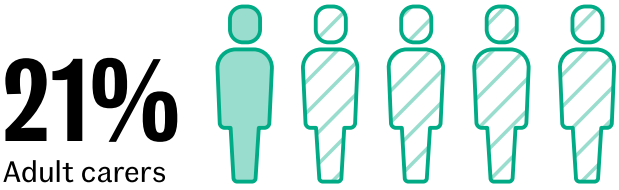
Adults aged 45-64 were twice as likely as others to report care-giving.

Approximately one-third of those providing care in 2021/2022 were doing so for up to four hours per week; 33% for between 5 and 19 hours per week and 17% for more than 50 hours per week.

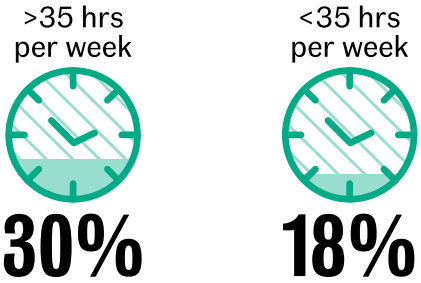


During the years 2018-2022 combined, around two-thirds of adults providing regular help or unpaid care reported that they did not receive any form of support in this role.

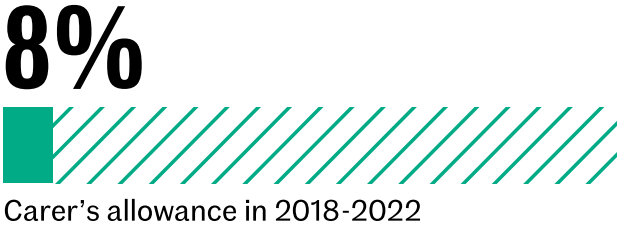
One in five adult carers reported receiving help from family, friends or neighbours.



This type of support was more common among those providing 35 or more hours of care per week than among those providing less than 35 hours of care per week.



One in twelve adult carers were receiving a carer's allowance in 2018-2022 combined.



Among adult carers, the mean WEMWBS[1] score broadly decreased as the hours of care being provided increased.

1. WEMWBS scores range from 14 to 70. Higher scores indicate greater wellbeing.

2 General Health, Cardiovascular Conditions and Caring

Josephine Wildman & Stephen Rule

2.1 Introduction

Population measures of self-reported health have been found to be good predictors of mortality, morbidity or use of health care[1]. These measures can reflect subjective lived experiences of diagnosed and undiagnosed (both physical and mental) illnesses which can be overlooked by more objective measurements[2].

The prevalence of long-term conditions has placed considerable strain on healthcare provision[3]. Further challenges are presented by continued inequalities in health outcomes, including decreasing life expectancy for those living in the most deprived areas in Scotland and an ageing population[4].

Cardiovascular disease (CVD) is a general term for conditions that affect the heart and blood vessels, whereby blood flow to the heart, brain, or body is restricted. Its main components are ischaemic heart disease (IHD) and stroke, both of which are well-established clinical priorities for the NHS in Scotland[5,6]. Since 2009, there has been a steady downward trend in incidence and deaths from IHD and stroke in Scotland[7]. However, IHD continues to be the leading cause of death in Scotland, and with stroke also remains one of the biggest killers as well as the leading cause of disability[8].

Diabetes, the most prevalent metabolic disorder, is a growing health challenge for Scotland. The prevalence of people registered with Type 1 diabetes has increased since 2013, reflecting better survival and the rising prevalence in children. The majority of registered people in Scotland (over four-fifths) have Type 2 diabetes. The prevalence of Type 2 diabetes has also grown, in part due to better detection and treatment but also due to demographic factors such as an ageing population and lifestyle factors such as diet and low levels of physical activity[9,10].

It is estimated that 3 in 5 people are likely to become a carer at some point in their lives[11]. The care they provide is of significant value, however, such a role can have a negative impact on the physical and mental health and wellbeing of carers, especially given the over-representation of carers in midlife and older age groups[12].

The National Carers Strategy recognises that “Caring can also put pressure on young people, especially where they undertake inappropriate caring responsibilities or spend long hours providing care. Without the right support, young carers are at risk of negative impacts on their educational attainment, relationships with their peer group and their mental health”[13].

Around half of those who provide unpaid care are living with a long-term condition themselves. Having caring responsibilities can also impact on finances, employment opportunities, social relationships and more. Understanding the prevalence of caring and the level of support received from

the perspective of carers themselves is vital in informing the delivery of support plans and initiatives for these individuals[14].

2.1.1 Policy background

The Scottish Government's strategic policies focus on promoting and improving general health and wellbeing, as well as supporting those living with long-term illnesses/conditions. The six **Public Health Priorities** for Scotland[15] are aimed at improving the health of people in Scotland and are supported by a number of strategies covering specific conditions such as **heart disease**[16]**, diabetes**[17] and **stroke**[18].

The Heart Disease Action Plan (2021) sets out the priorities and actions Scottish Government will take to minimise preventable heart disease and ensure equitable and timely access to diagnosis, treatment, and care for people with suspected heart disease in Scotland.

The **Progressive Stroke Pathway**[19], published in March 2022, sets out a vision for each stage of the stroke pathway, from diagnosis and acute care to the provision of person-centred rehabilitation. The recommendations in the Progressive Stroke Pathway were considered in the publication of Scottish Government's refreshed Stroke Improvement Plan, published on 14 June 2023[20].

In February 2021, the Scottish Government published the refresh of its **Diabetes Improvement Plan**[21] (DIP), which sets out aims and priorities to deliver safe and effective person-centred healthcare treatment and support. The Plan sets out priorities and commitments from 2021 to 2026 to improve the prevention, treatment and care for everyone in Scotland living with diabetes.

The Scottish Government's commitment to unpaid carers in Scotland is reflected in the **National Carers Strategy**[22]. It sets out a cross-government approach to carers issues, including through social care, social security policies and supporting carers in employment and education.

The **Carers (Scotland) Act 2016**[23] took effect in 2018. This extended the rights of carers to ensure that they receive better support whilst also maintaining/ improving their own health and enjoying a life beyond their caring role[24].

Embedding carers' rights to support under the Carers Act is a priority for the Scottish Government and partners. This is complemented by initiatives such as the **Short Breaks Fund**[25] **and** the **Carer Positive** scheme which recognises employers who provide a supportive working environment for carers[26].

2.1.2 Reporting on general health, CVD, diabetes and unpaid caring in the Scottish Health Survey

In this chapter, trends in self-assessed general health for adults and children are presented, as well as prevalence of self-reported long-term conditions in adults. Trends in self-reported CVD, diabetes and stroke prevalence in adults are presented as well as age group and deprivation breakdowns for 2022. Unpaid caring prevalence in adults and children are presented for 2022 along with data on carer support and mental wellbeing for adult carers, using the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS), for combined 2018 to 2022 data, as well as self-assessed general health among adult carers for 2021/2022 combined.

The area deprivation data are presented in Scottish Index of Multiple Deprivation (SIMD) quintiles. To ensure that the comparisons presented are not confounded by the different age profiles of the quintiles, the data have been age-standardised. For a detailed description of both SIMD and age-standardisation as well as definitions of other terminology used in this chapter and for further details on the data collection methods for general health, CVD and CPR training, please refer to Chapter 2 of the Scottish Health Survey 2022- volume 2: technical report.

Supplementary tables on general health, CVD and caring are also published on the Scottish Government website: Scottish Health Survey.

2.2 General Health, CVD and Caring

2.2.1 Self-assessed general health, adults and children, 2008 to 2022, by sex

Between 2008 and 2021 the proportion of adults describing their general health as ‘good’ or ‘very good’ ranged between 71-77%. In 2022 the prevalence decreased to 70%. The proportion of men and women self-reporting as being in ‘good’ or ‘very good’ health has been similar over the time-series and prevalence declined for both groups between 2021 and 2022 (77% of men and 73% of women in 2021, compared with 71% and 69%, respectively in 2022). The proportion of adults who self-assessed their general health as ‘bad’ or ‘very bad’ increased from 8% in 2021 to 10% in 2022, but the change was not statistically significant.

In 2022, the vast majority of children continued to report having ‘good’ or ‘very good’ general health (93%). This remains to be the case for both boys (93%) and girls (94%). Two percent of children were reported as being in ‘bad’ or ‘very bad’ general health in 2022, similar to previous years.

Figure 2A

Proportion of adults (aged 16 or over) with 'good' or 'very good' self reported general health, 2008 to 2022

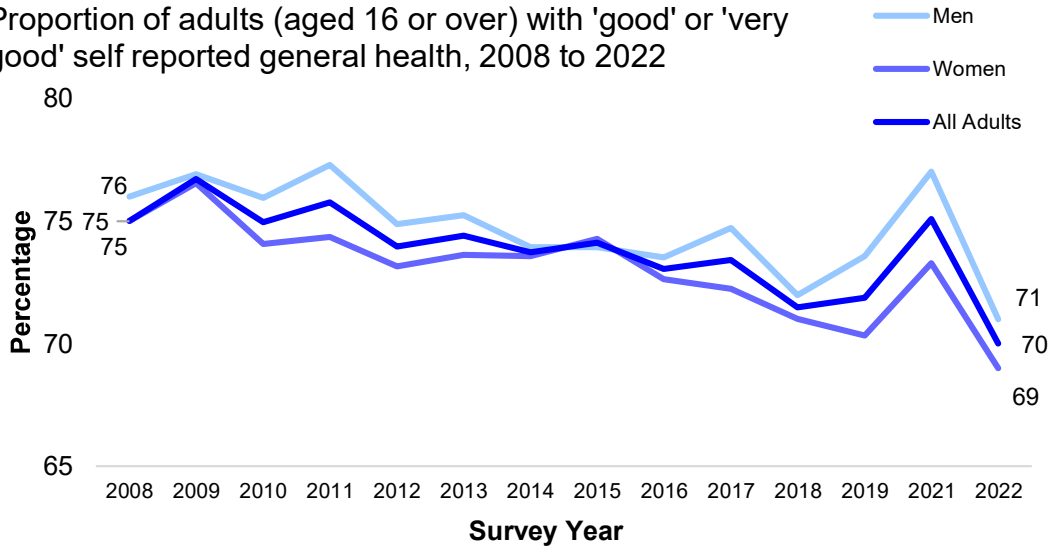


Figure 2A, Table 2.1

2.2.2 Adult self-assessed general health, 2022, by age and sex

The proportion of adults describing their general health as ‘good’ or ‘very good’ generally decreased as age increased. In 2022, 85% of adults aged 16-24 described their health as ‘good’ or ‘very good’. The equivalent figure for those aged 75 or above was 52%. This pattern was broadly similar for men and women.

In tandem, the proportion of adults who reported their general health to be ‘bad’ or ‘very bad’ generally increased with age, from 3-6% of those aged 16-44 to 13-16% of those aged 45 and above. Again, this pattern was observed for both men and women.

Figure 2B: Proportion of adults (aged 16 or over) with 'good' or 'very good' self reported general health, 2022, by age and sex

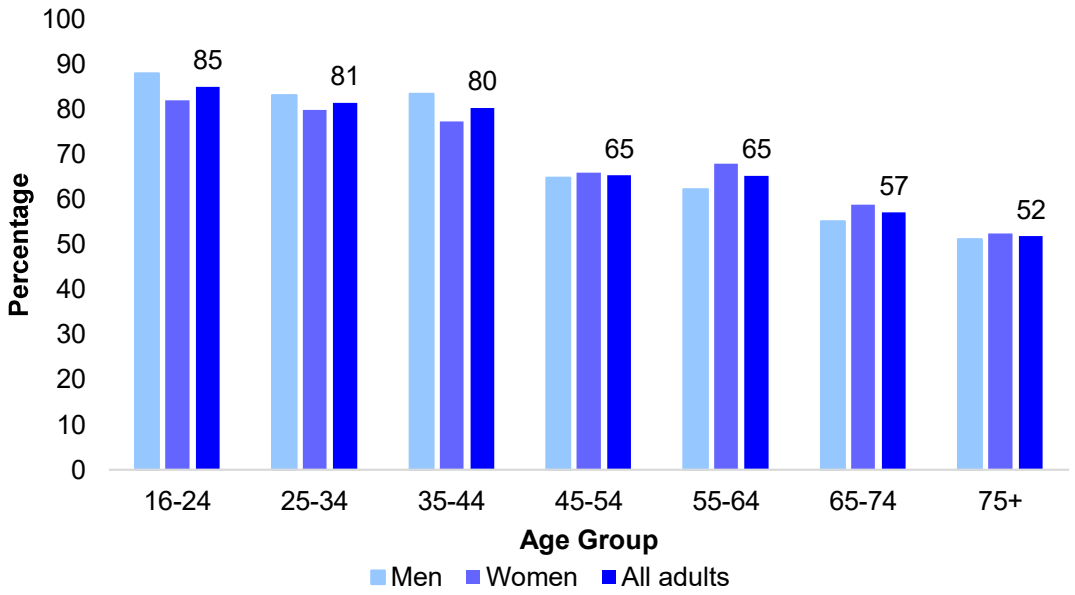


Figure 2B, Table 2.2

2.2.3 Adult self-assessed general health (age-standardised), 2022, by area deprivation and sex

In 2022, the proportion of adults who self-assessed their general health to be ‘good’ or ‘very good’ decreased with increased area deprivation, from 81% for those living in the least deprived quintile (SIMD quintile 5) to 55% in the most deprived quintile (SIMD quintile 1).

Those living in areas of greatest deprivation (SIMD quintile 1) were four times as likely as those living in the least deprived areas (SIMD quintile 5) to describe their health in general as ‘bad’ or ‘very bad’ (18%, compared with 4% in the most deprived quintile).

Patterns of self-assessed health by area deprivation were similar for men and women.

Figure 2C: Proportion of adults (aged 16 and over) with 'good' or 'very good' self reported general health (age-standardised), 2022, by area deprivation and sex

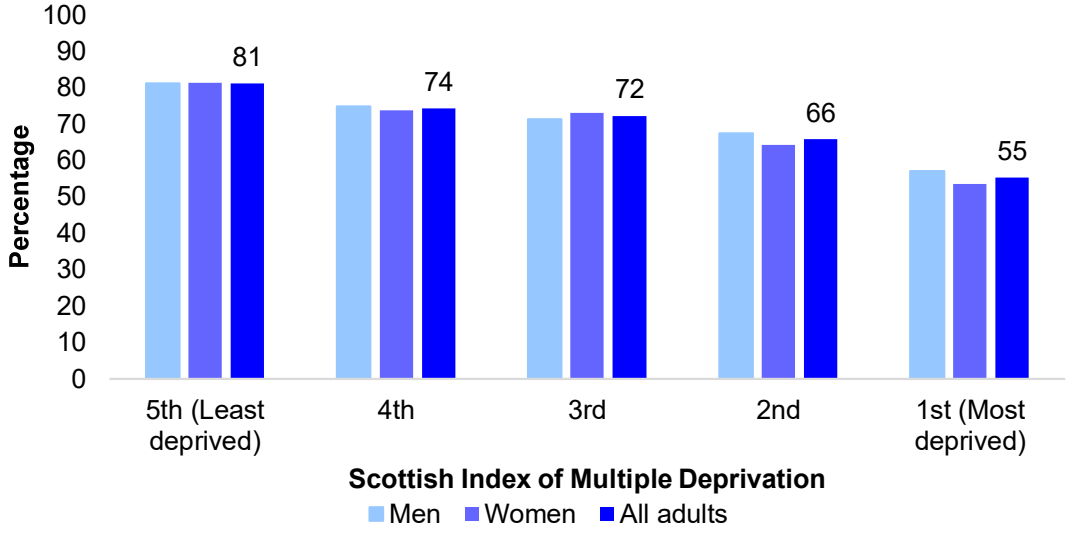


Figure 2C, Table 2.3

2.2.4 Prevalence of long-term conditions in adults, 2008 to 2022, by sex

Since 2008 there has been a gradual increase in the proportion of adults reporting living with a long-term health condition, although there was no significant change between 2021 and 2022 (41% in 2008, 47% in 2021 and 48% in 2022). The increase over time has been slightly more pronounced for women (42% in 2008 and 52% in 2022) than for men (38% in 2008 and 45% in 2022).

Prevalence of a limiting long-term condition increased from 26% in 2008 to 37% in 2022 – representing more than three-quarters of those reporting any long-term condition in 2022. Again, women were more likely than men to report having a limiting long-term condition (42% and 32% respectively).

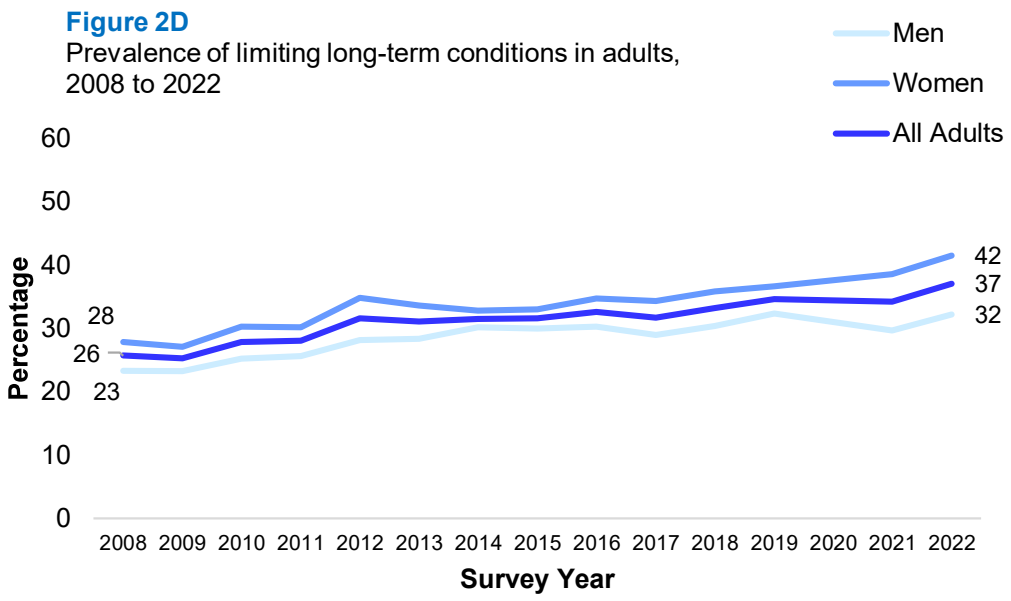


Figure 2D, Table 2.4

2.2.5 CVD and diabetes prevalence, 2003 to 2022, by sex

Since 2003, the proportion of adults reporting any cardiovascular disease (CVD) has remained between 14-16% (16% in 2022). Prevalence remained slightly higher for men (15-18%) than women (14-16%) throughout the time series with prevalence in 2022 at 17% for men and 14% for women.

Prevalence of doctor-diagnosed diabetes among adults increased from 4% in 2003 to 7% in 2019 and has remained around that level since (7% in 2022). In 2022, 8% of men and 6% of women reported that a doctor had diagnosed them as having diabetes.

The proportion of adults with any CVD or diabetes has remained stable over the last ten years (ranging from 19-21% between 2012 and 2022). The proportion of adults with any CVD or diabetes was 21% in 2022,the highest level in the time series. Prevalence remained slightly higher among men than women in 2022 (23% for men and 18% for women).

In 2022, the proportion of adults with Ischemic Heart Disease (IHD) was 5%, similar to recent years, and a decrease from 7% in 2003. Over the time series prevalence has been largely similar for men and women (6% for men and 4% for women in 2022).

Stroke prevalence in adults has remained between 2-3% since 2003. In 2022 the proportion reporting stroke was 3% for both men and women. A similar pattern was observed for prevalence of IHD or stroke which was 7% in 2022 (8% for men and 6% for women).

Figure 2E
CVD and diabetes prevalence, 2003 to 2022, by sex

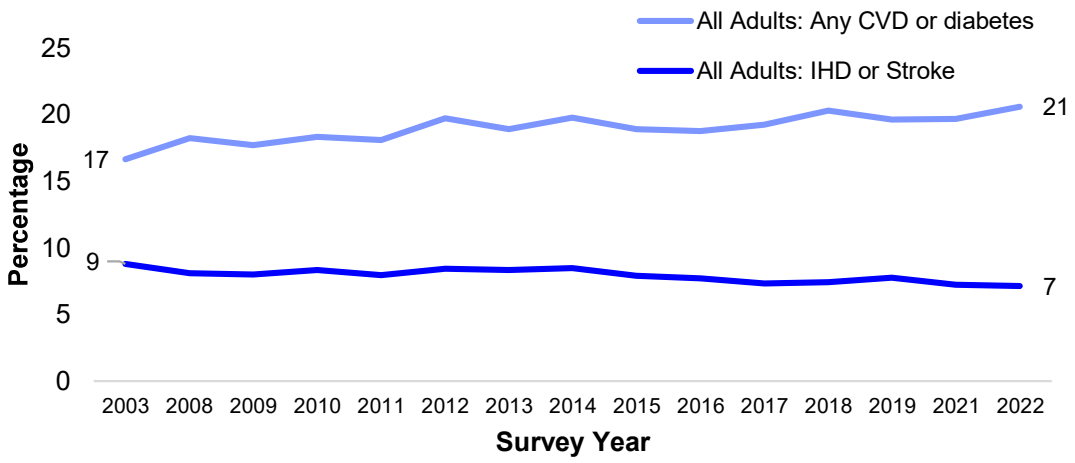


Figure 2E, Table 2.5

2.2.6 Any CVD, CVD or diabetes, IHD, stroke, IHD or stroke, by age and sex, 2022

Any CVD

In 2022 the proportion of adults reporting ever having had CVD increased with age, from 5% for adults aged 16-24 to 36% for those aged 75 and above.

Doctor-diagnosed diabetes

Prevalence of adults with doctor-diagnosed diabetes increased by age in 2022, with 1-5% of adults aged 16-54 having reported a doctor diagnosis of diabetes, compared with 11-18% of those aged 55 and above.

Diabetes Type 1

In 2022, 0-1% of adults reported having type 1 diabetes, with no significant variation by age or sex.

Diabetes Type 2

For all adults, the prevalence of type 2 diabetes was 6% in 2022. Prevalence increased with age, with 1-5% of adults aged 16-54 reporting type 2 diabetes, compared with 10-16% in adults aged 55 and above.

Any CVD or diabetes

Prevalence of any CVD or diabetes increased with age in 2022 from 7% of adults aged 16-24 to 43% of those aged 75 and above. Men aged 65 or over were significantly more likely than women of the same age to report any CVD or diabetes (42% of men aged 65-74 and 49% of men aged 75 and above, compared with 32% and 38%, respectively).

Ischaemic Heart Disease (IHD)

In 2022, the proportion of adults reporting doctor-diagnosed IHD, increased with age, from 0-1% among those aged 44 or under, rising to 15% of those aged 75 and above. The pattern observed by age was true for both men and women and the difference observed between men and women aged 75 and over was significant (20% of men, compared with 11% of women).

Stroke

Prevalence of adults reporting having ever had a stroke increased with age in 2022, from 0-2% among those under the age of 54 to 6-9% of adults aged 65 and above. Prevalence of reported stroke was the same for men and women.

IHD or stroke

In 2022 the proportion of adults who reported having ever had an IHD or stroke increased with age from 0-1% among those under the age of 45 to 6-20% of those aged 55 or above. This pattern was observed for both men and women. **Table 2.6**

2.2.7 CVD and diabetes prevalence (age-standardised), 2003 to 2022, by area deprivation and sex

Any CVD

There has been little variation in the prevalence of age-standardised CVD by area deprivation since 2003. In 2022, any CVD remained most prevalent among those living in the most deprived areas (SIMD quintile 1), with 20% of adults living in these areas reporting having any CVD, compared with 12% among those living in areas of least deprivation (SIMD quintile 5). The pattern by deprivation was similar for both men and women.

Doctor-diagnosed diabetes

As in previous years, age-standardised doctor-diagnosed diabetes was more prevalent in areas of greatest deprivation, compared with the areas of least deprivation. In 2022, 10% of adults in the most deprived quintile reported doctor-diagnosed diabetes, compared with 5-6% in the two least deprived quintiles. Patterns by area deprivation were similar for both men and women.

Ischaemic Heart Disease (IHD)

In 2022, the prevalence of IHD varied by area deprivation, in a similar way to that seen in previous years. IHD was more prevalent in the most deprived quintile (8% in SIMD quintile 1) than in the three least deprived quintiles (3-4% in SIMD quintiles 3-5). Similar patterns by area deprivation were observed for both men and women.

Stroke

In 2022, as in every year since 2003, the prevalence of stroke varied by area deprivation and was most prevalent in more deprived areas. Five percent of adults in the most deprived quintile reported ever having had a stroke, compared with 1% in SIMD quintile 5, with similar patterns for both men and women.

IHD or stroke

The pattern of prevalence of IHD or stroke across the SIMD quintiles has not changed since 2003 with prevalence remaining highest in more deprived areas. In 2022, one in ten (11%) of those in SIMD quintile 1 reported IHD or stroke, compared with 4% for those living in the least deprived quintile (SIMD quintile 5). This pattern was similar for both men and women. **Table 2.7**

2.2.8 Caring prevalence and hours spent each week providing help or unpaid care, 2021/2022 combined, by age and sex

In 2021/2022, one in six (15%) adults (18% of women and 13% of men) reported providing regular help or unpaid care to someone else. Adults aged 45-64 were twice as likely as those in other age groups to report care-giving (24%, compared to 11% of 16-44 year olds and 12% of those aged 65 and above). Across all age groups, women were more likely than men to report providing regular help or unpaid care for someone else. For example, 27% of women aged 45-64 reported care giving, compared with 20% of men of the same age.

Approximately one-third (34%) of those providing unpaid care in 2021/2022 were doing so for up to four hours per week. A similar proportion (33%) reported providing care for between 5 and 19 hours per week. One in six (17%) adults providing care, were doing so in excess of 50 hours per week. **Table 2.8**

2.2.9 Caring prevalence in adults (age-standardised), 2022, by area deprivation and sex

In 2022, caring prevalence for adults was higher for those living in the most deprived areas (18%) than those living in the least deprived areas (15%) although the difference was not significant. The pattern by deprivation was similar for men and women. **Table 2.9**

2.2.10 Support received by carers, 2018/2019/2021/2022 combined, by age, sex and hours spent caring

During the years 2018/2019/2021/2022 combined, around two-thirds (66% of adults and 68% of children) of those providing regular help or unpaid care reported that they did not receive any form of support in this role.

One in five (21%) adult carers reported receiving help from family, friends or neighbours. This type of support was more common among those providing 35 or more hours of care per week (30%) than among

those providing less than 35 hours of care per week (18%). Women caring 35 hours or more, were more likely than men caring for the same number of hours, to receive help from family, friends or neighbours (35% compared with 23% respectively).
One in twelve adult carers (8%) were receiving a carer's allowance in 2018/2019/2021/2022 combined.

Five percent of adult carers reported receiving practical support in the form of transport, equipment or adaptations in 2018/2019/2021/2022 combined. This type of support was more common (9%) among those providing more than 35 hours of care, than among those providing less than 35 hours of care (4%). Among the small proportion of girls and boys who provided care, almost one-quarter (23%) received help from family, friends or neighbours, and 6% had access to social activities and support (e.g. young carers' groups or day trips). Two-thirds (68%) did not receive any support in this role, but base sizes are small and these numbers should be seen only as indicative. **Table 2.11**

2.2.11 Adult WEMWBS mean scores, 2018/2019/2021/2022 combined, by age, sex and hours spent each week providing help or unpaid care

In 2018/2019/2021/202 combined adult carers mental wellbeing, based on mean WEMWBS scores, broadly decreased as the hours of care being provided increased. Adults providing care for up to 4 hours per week had a mean WEMWBS score of 49.5, compared to 46.0 of adults who provide care for 50 or more hours per week. Similarly, men providing up to 4 hours of care per week had a mean WEMWBS score of 49.8, compared with a mean score of 47.1 for men who provided care for 50 hours or more per week. Women who provided care for up to 4 hours per week had a mean WEMWBS score of 49.3, compared to 45.3 for those providing 50 hours or more per week. **Table 2.12**

2.2.12 Adult self-assessed general health of those providing care, 2021/2022 combined, by age and sex

Nearly seven in ten (69%) adult carers described their general health as 'good' or 'very good' in 2021/2022 combined. The proportion of adult carers assessing their general health in this way declined with age from 73% of those aged 16-44, to 69% of those aged 45-64, and to 64% of those aged 65 or older. A similar pattern was evident for both men and women. **Table 2.13**

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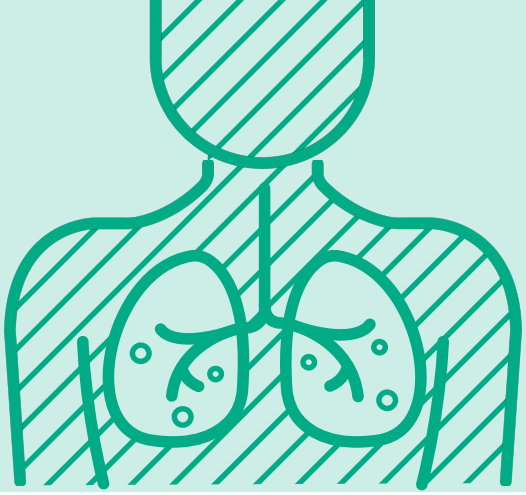
Chapter 3

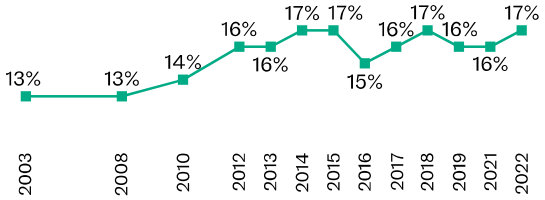
Respiratory

CHAPTER 3

Respiratory



Prevalence of doctor-diagnosed asthma has ranged from 13% to 17% since 2003, and has remained between 16% and 17% since 2017.



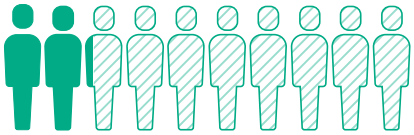
A higher prevalence of doctor-diagnosed asthma was recorded among children aged 8-15 compared with those aged 0-7:

6%
0–7 years

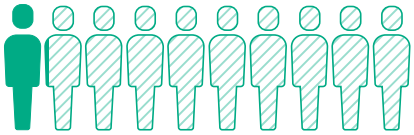
13%
8–15 years

Among those aged 25-34, just over a fifth of women reported having wheezed in the last 12 months, a higher proportion than among men in the same age group.

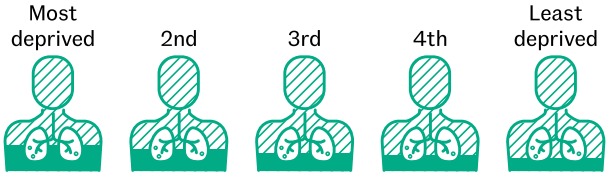
22%
Women: 25-34



11%
Men: 25-34



In 2022, the proportion of adults who reported having wheezed in the last 12 months decreased from



23% **20%** **16%** **14%** **12%**

Adults who smoked 20 or more cigarettes a day were more likely to report having wheezed in the past 12 months than non/occasional smokers.

40%
Smokers

12%
Non-smokers

Prevalence of doctor-diagnosed Chronic Obstructive Pulmonary Disease (COPD) increased with age, from:

<1% → **12–13%**

Of those aged 16-44 years → Of those aged >65 years

In 2022, prevalence of doctor-diagnosed COPD varied as follows:

2%
of adults who had never smoked or had smoked occasionally

7%
of adults who had smoked previously

11%
of current smokers (<20 cigarettes per day)

19%
current smokers of 20 or more cigarettes per day

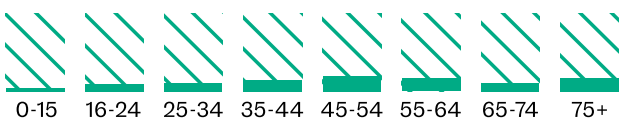
In 2018/19/21/22 combined, the most common forms of treatment received by all adults for a COPD were:

64%
Medication

53%
Regular check-ups

28%
Immunisations

In 2022, 13% of adults reported that they ever had long COVID, while prevalence among children was 4%. Those aged 45-54 were most likely to report having ever had long COVID (19%)



1. The wording of the question on long COVID changed in 2022, see main report for details.

3 Respiratory

Elena Maiolani

3.1 Introduction

Infectious respiratory disorders and long-term respiratory conditions, such as asthma and chronic obstructive pulmonary disease (COPD), are a considerable challenge for the individuals that live with them and for health services in Scotland, particularly in light of an ageing population and the ongoing impact of the Covid-19 pandemic on healthcare services[1]. These respiratory conditions are currently incurable, however, treatment can help to improve symptoms and quality of life[2].

The UK has one of the highest rates of asthma in the world[3], with an estimated £500 million spent by the NHS in Scotland each year on this and other respiratory diseases[4]. This long-term condition is characterised by variable and recurring symptoms of breathlessness, wheezing, coughing and chest tightness. The reasons for the high prevalence of asthma in the UK are not certain; however, risk factors include infections/viruses, hormones, environmental, lifestyle (inc. diet and obesity), occupational and genetic disposition[5,6,7].

COPD continues to be the third leading cause of mortality worldwide[8]. The ageing population, along with the additional complication of older COPD patients being more likely to have other long-term conditions, presents a further challenge in managing COPD in Scotland[9]. The associations of long-term conditions like COPD with deprivation, lifestyle risk factors and wider social health determinants persist in Scotland[10]. Smoking is the main cause of COPD with an estimated 8 in 10 of those with the condition in the UK having either smoked or continuing to smoke[11]. Exposure to smoke is associated with a higher risk for women compared to men[12].

Long COVID, or post-COVID-19 syndrome, refers to symptoms that develop during or after a COVID-19 infection that continue for 4 weeks or more and are not attributed to another condition/diagnosis. The overlapping long COVID symptoms that are sometimes experienced can affect body systems including the respiratory system[13]. Recent evidence suggests that a sizeable proportion of people who report to have long COVID have long-term rehabilitation and support needs[1].

3.1.1 Policy background

The **Respiratory care – action plan: 2021 to 2026**[14] sets out the vision for improvement in the prevention, diagnosis, care, treatment and support of people living with respiratory conditions in Scotland. This is supported by other key policy initiatives including the **Special Delivery Group within the Centre for Sustainable Delivery[15],** which aims to improve patient journeys through sustainable changes that facilitate person-centred care and the **Framework for supporting people through Recovery and Rehabilitation during and after the COVID-19 Pandemic**[16].

One of the Scottish Government's **National Performance Framework National Outcomes**[17] is for people in Scotland to 'live longer, healthier lives', which includes a National Performance Indicator to 'reduce premature mortality' (deaths from all causes in those aged under 75). Within the Scottish Government National Indicators, health risk behaviours linked to respiratory disease, including smoking, harmful drinking, low physical activity and obesity, are monitored against an outcome of reducing the percentage of adults exhibiting two or more of these behaviours[18].

In September 2021, the Scottish Government published **Scotland's Long COVID-19 Service**[19] paper. The paper sets out four key elements that underpin the approach to care and support for people with long COVID: supported self-management, primary and community-based support, rehabilitation support and secondary care investigation and support.

The Scottish Government has established a £10 million long COVID Support Fund to support NHS Boards and partners increase the capacity of existing services providing support to people with long COVID, develop these into more clearly defined pathways and to provide a more co-ordinated experience for those accessing support[20].

In addition, a long COVID Strategic Network has been established and brings together clinical experts, NHS Boards, third sector organisations and those with lived experience to guide, plan and design the ongoing care for people living with long COVID[21].

3.1.2 Reporting on respiratory conditions including COVID-19 in the Scottish Health Survey

This chapter updates trend data on self-reported doctor-diagnosed asthma respiratory symptoms (wheezing) for adults and children, as well as data for 2022 for adults by area deprivation and by smoking status. COPD prevalence, including by smoking status, is reported for 2022, as is combined 2018/2019/2021/2022 data for COPD treatment. Data on long COVID prevalence, symptoms and impact on daily life are also reported for 2022 for adults and children. The question in 2022 was amended so that respondents were not asked explicitly if they would describe themselves as having long COVID. Instead these respondents who had ever had COVID and who had experienced any of a range of symptoms that could not be explained by 'something else' for 4-12 weeks, or for 12 weeks or longer, were included in the totals who had long COVID.

The area deprivation data are presented in Scottish Index of Multiple Deprivation (SIMD) quintiles. To ensure that the comparisons presented are not confounded by the different age profiles of the quintiles, the data have been age-standardised, as is the data analysed by smoking status. For a detailed description of both SIMD and age-standardisation as well as definitions of other terminology used in this chapter and for details on the data collection methods for respiratory conditions and

long COVID, please refer to Chapter 2 of the Scottish Health Survey 2022 - volume 2: technical report.

Supplementary tables on respiratory conditions including COVID-19 are also published on the Scottish Government website: Scottish Health Survey.

3.2 Respiratory

3.2.1 Doctor-diagnosed asthma, wheezed in last 12 months, and ever wheezed, 2003 to 2022, by sex

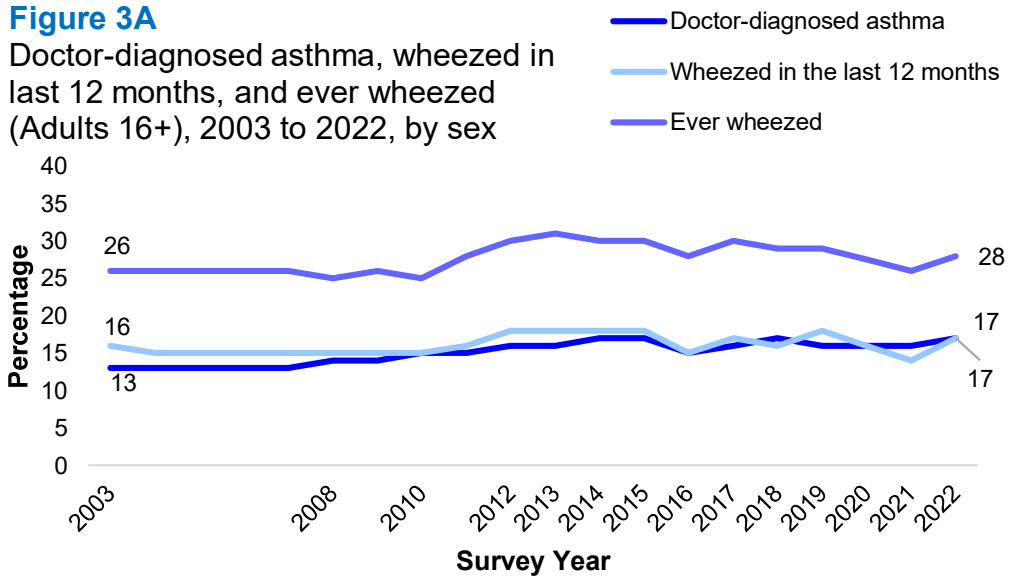
Adults

In 2022, 17% of adults reported having doctor-diagnosed asthma. Prevalence has ranged from 13% to 17% since 2003, and has remained between 16% and 17% since 2017.

The proportion of adults who had wheezed in the last 12 months was 17%, up from 14% in 2021, but within the range that has prevailed since 2003 (14-18%). Trends for females and males have been similar, with prevalence a few percentage points higher for females since 2019. In 2022, prevalence was 18% for females and 15% for males.

In 2022, the proportion of adults who had ever wheezed was 28% (females 30%; males 27%). This proportion has fluctuated between 25% and 31% since the start of the timeseries in 2003.

Figure 3A
Doctor-diagnosed asthma, wheezed in last 12 months, and ever wheezed (Adults 16+), 2003 to 2022, by sex



Children

For children aged under 16, 10% reported having doctor-diagnosed asthma in 2022. This figure is in line with those seen over the past seven years (8-10% since 2015), and is substantially lower than 2003 (16%).

In 2022, 13% of children reported having wheezed in the last 12 months. This was within the 10-14% range that has prevailed since 2003. About one-fifth (21%) of children in 2022 reported ever having wheezed (boys 22%; girls 19%), which was at the lower end of the range between 19-25% that has prevailed since 2003.

Figure 3A, Table 3.1

3.2.2 Doctor-diagnosed asthma, wheezed in last 12 months, and ever wheezed, 2022, by age and sex

Adults

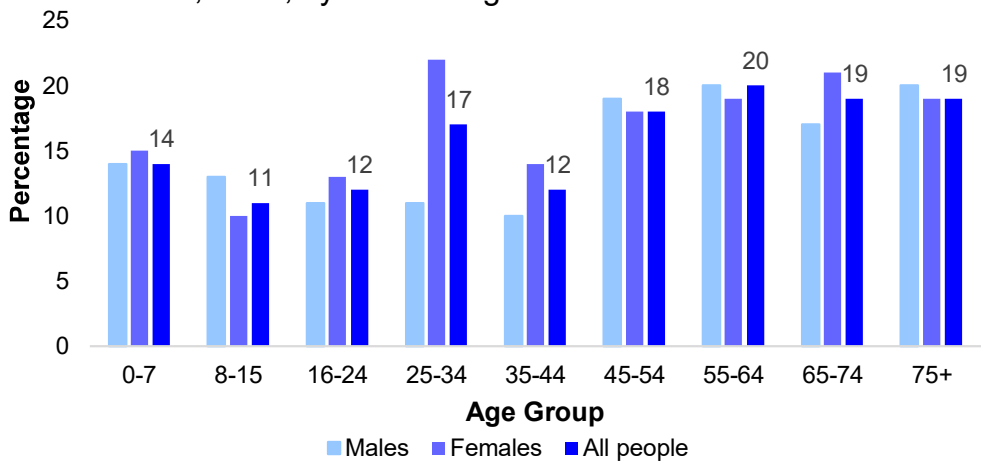
There was a significant difference in the prevalence of asthma diagnoses by sex with 19% of women having been diagnosed with asthma by a doctor compared with 14% of men.

There were no significant variations recorded by sex for ever wheezed or having wheezed in the last 12 months and no clear pattern was evident by age among all adults.

Significant variations were evident, however, among those aged 25-34 in 2022. Just over a fifth of women aged 25-34 reported having wheezed in the last 12 months (22%) compared with 11% of men within the same age group. This pattern was also reflected for doctor-diagnosed asthma, with women aged 25-34 significantly more likely than men aged 25-34 to have been diagnosed with asthma (29% compared to 13%).

Figure 3B

Prevalence of self-reported wheezing in the last 12 months, 2022, by sex and age



Children

In 2022, 10% of children aged 0-15 reported having doctor-diagnosed asthma. Slightly more (13%) had wheezed in the last 12 months, and 21% had wheezed at some point in their life. Boys were more likely than girls to have doctor-diagnosed asthma in 2022 (11% compared with

8%) however this difference was not significant. A significantly higher prevalence of doctor-diagnosed asthma was recorded among children aged 8-15 (13%) compared with those aged 0-7 (6%).

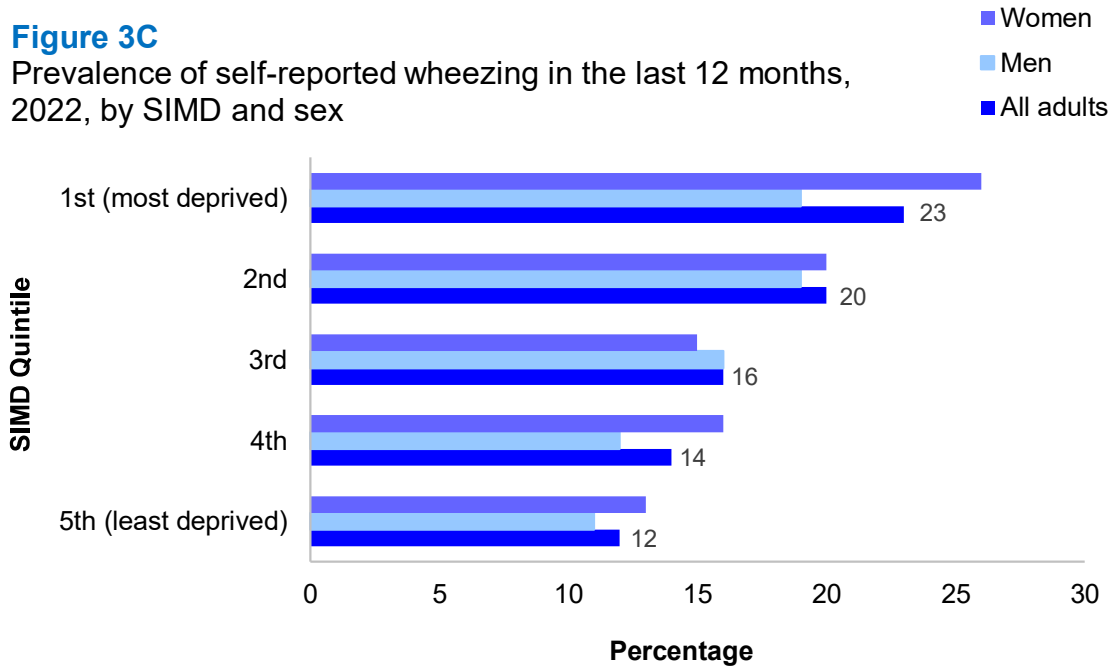
Figure 3B, Table 3.2

3.2.3 Doctor-diagnosed asthma, wheezed in last 12 months, and ever wheezed (age-standardised), 2022, by area deprivation and sex

The proportion of adults in 2022 who reported ever having wheezed varied by deprivation, with 36% of those living in the most deprived areas having ever wheezed compared with 23% of adults living in the least deprived areas.

A similar pattern was evident for having wheezed in the last 12 months which decreased from 23% of adults living in the most deprived areas to 12% of those living in the least deprived areas.

Figure 3C
Prevalence of self-reported wheezing in the last 12 months, 2022, by SIMD and sex



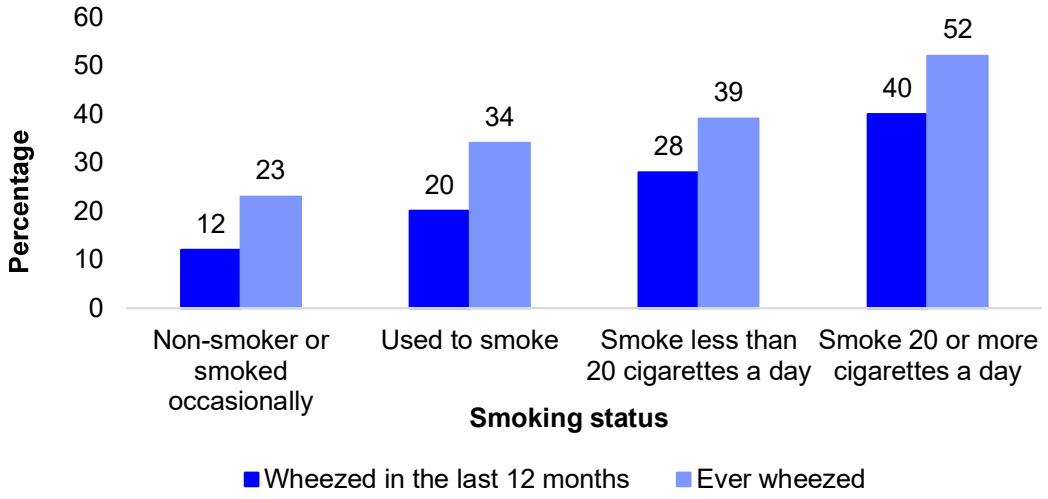
There were no significant variations in the prevalence of doctor-diagnosed asthma by area deprivation in 2022. The proportions of doctor-diagnosed asthma ranged between 15% and 19% in each of the deprivation quintiles. **Figure 3C, Table 3.3**

3.2.4 Doctor-diagnosed asthma, wheezed in last 12 months, and ever wheezed (age-standardised), 2022, by smoking status and sex

The proportion of adults who had ever wheezed was significantly higher among those who smoked 20 or more cigarettes a day than for those who smoked less than 20 cigarettes per day or not at all. More than half of adults smoking 20 or more cigarettes a day reported having ever wheezed (52%) compared with 23% of non- or occasional smokers. This pattern was also reflected in the proportion of adults who had

wheezed in the last 12 months, which was higher among those who smoked 20 or more cigarettes a day compared with non- or occasional smokers (40% and 12% respectively).

Figure 3D
Prevalence of self-reported wheezing in the last 12 months and self-reported wheezing ever (age-standardised), 2022, by smoking status.



The proportion of adults with doctor diagnosed asthma was higher for those who used to smoke than for non- and occasional smokers (21% compared to 15%), however the percentage point difference is outside of the threshold for statistical significance. **Figure 3D, Table 3.4**

3.2.5 Doctor-diagnosed COPD, 2022, by age and sex

The proportion of adults with doctor-diagnosed COPD was 5% in 2022. While there was no significant variation by sex, the prevalence of doctor-diagnosed COPD increased with age, from <1% among adults aged 16-34 to 12-13% among those aged 65 and over.

Figure 3E
Prevalence of doctor-diagnosed COPD, 2022, by sex and age

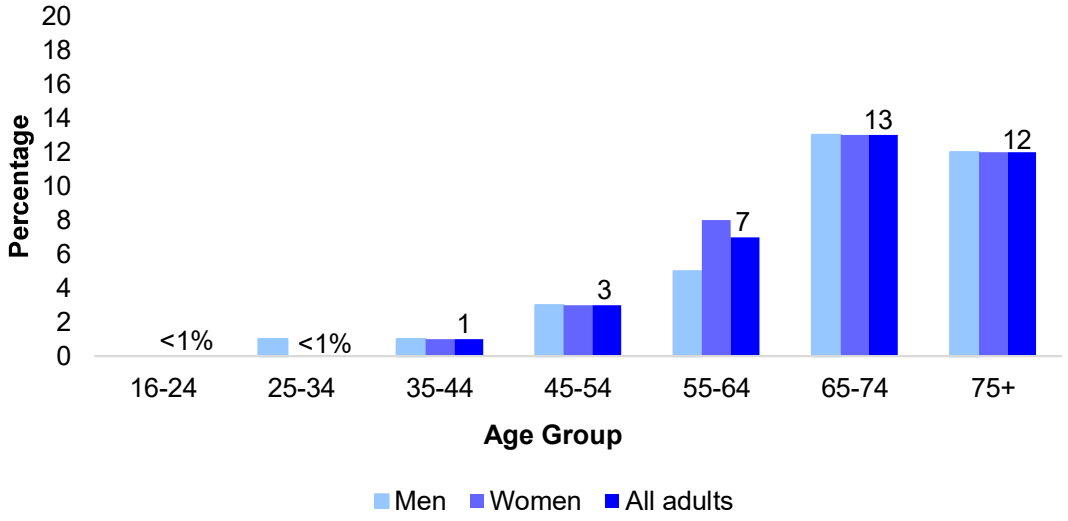


Figure 3E, Table 3.5

3.2.6 Doctor-diagnosed COPD (age-standardised), 2022, by smoking status and sex

Doctor-diagnosed COPD varied by smoking status. Whereas 2% of adults who had never smoked or had smoked occasionally, had been diagnosed with COPD, this increased to 7% of those who had smoked previously, to 11% of current smokers of less than 20 cigarettes per day, and to 19% of those who currently smoked more than 20 cigarettes per day. While women more likely than men to have been diagnosed with COPD, regardless of smoking status, these variations were not statistically significant.

Figure 3F
Doctor-diagnosed COPD (age-standardised), 2022, by smoking status and sex

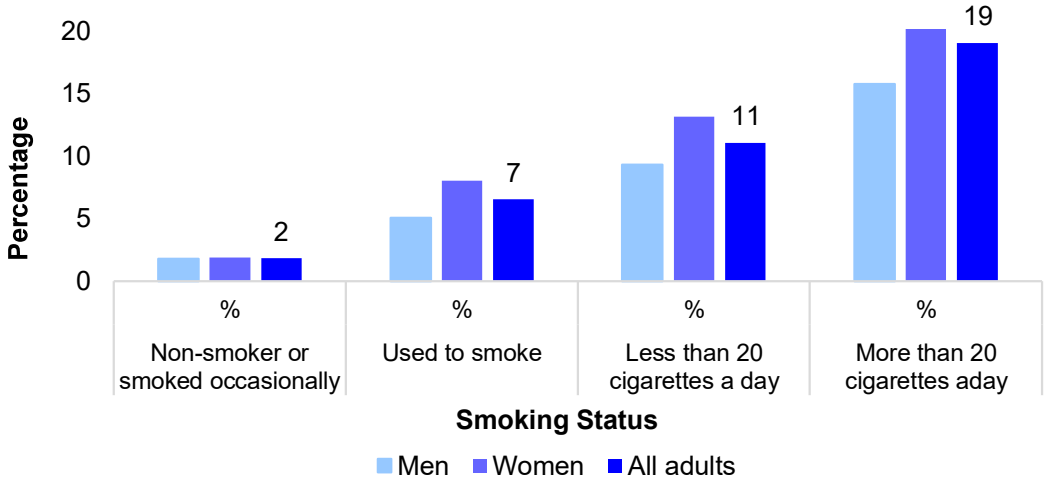


Figure 3F, Table 3.6

3.2.7 COPD treatment and type of treatment, 2018/2019/2021/2022 combined, by age and sex

Based on data from 2018/2019/2021/2022 combined, the most common forms of treatment received by people for COPD were medication (including tablets and the use of inhalers) (64%), regular check-ups with a GP, hospital or clinic (53%), and immunisations against flu/pneumococcus (28%). Less common types of treatment included advice or treatment to stop smoking (13%), and exercise or physical activity (7%).

Almost three-quarters (73%) of adults were currently receiving treatment for COPD, while 27% were not receiving any treatment. Patterns of treatment received varied by age and sex. Women in the 16-64 year age category were more likely (49%) than men (40%) to have regular check-ups. Conversely, men in this age group were more likely than women to be taking medication, including tablets and the use of inhalers (62% and 55% respectively).

Figure 3G
COPD treatment and type of treatment, 2018/2019/2021/2022 combined,by age and sex

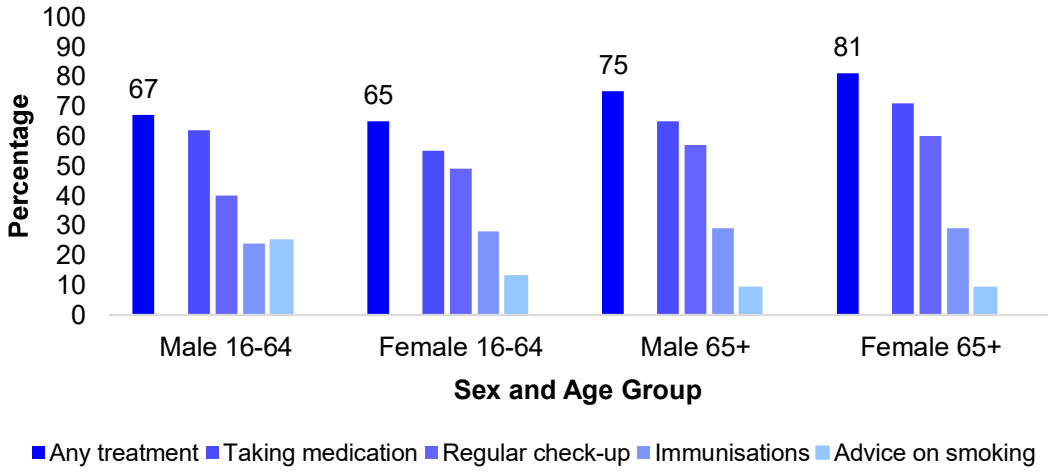
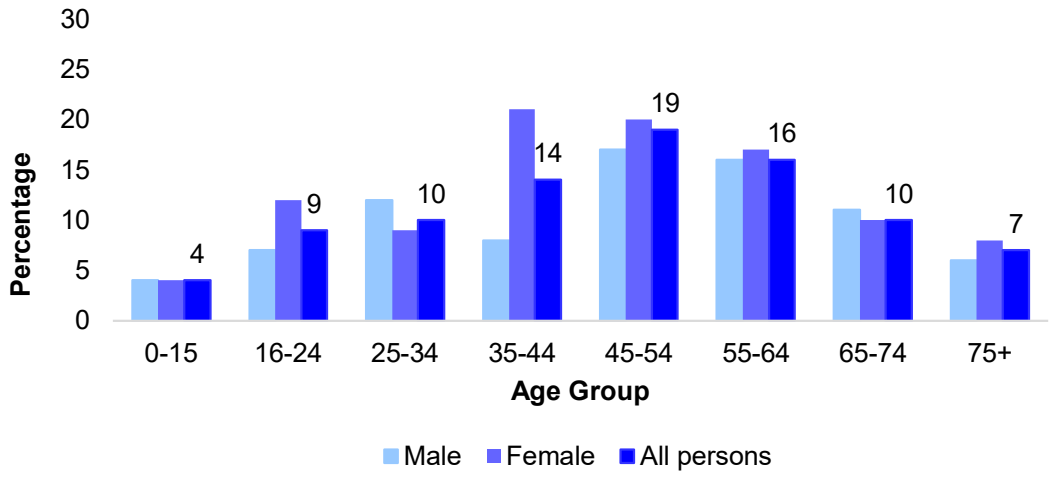


Figure 3G, Table 3.7

3.2.8 Whether has ever had self-reported long COVID and whether limiting ability to carry out day-to-day activities due to long COVID, 2022, by age and sex

In 2022, 13% of adults reported that they had ever had long COVID, while the prevalence among children was 4%. The largest proportion of adults that reported ever having long COVID was recorded among those aged 45-54 (19%) while the smallest proportion was recorded for those aged 75 or over (7%).

Figure 3H
Prevalence of ever having long COVID, 2022, by age and sex



A significant difference in ever having long COVID was recorded between men and women aged 35-44 in 2022. A higher proportion of women aged 35-44 reported ever having long COVID (21%, compared with 8% of men in the same age group).

Just over one in twenty adults reported that long COVID limited their ability to carry out day-to-day activities a lot (6%), and 5% reported that long COVID limited their activities a little. **Figure 3H, Table 3.8**

Table List

Table 3.1 Doctor-diagnosed asthma, wheezed in last 12 months, and ever wheezed, 2003 to 2022, by sex
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Table 3.3 Doctor-diagnosed asthma, wheezed in last 12 months, and ever wheezed (age-standardised), 2022, by area deprivation and sex
Table 3.4 Doctor-diagnosed asthma, wheezed in last 12 months, and ever wheezed (age-standardised), 2022, by smoking status and sex
Table 3.5 Doctor-diagnosed COPD, 2022, by age and sex
Table 3.6 Doctor-diagnosed COPD (age-standardised), 2022, by smoking status and sex
Table 3.7 COPD treatment and type of treatment, 2018/2019/2021/2022 combined, by age and sex
Table 3.8 Whether has self-reported long COVID and whether limiting ability to carry out day-to-day activities due to long COVID, 2022, by age and sex

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[5] See: https://www.asthmaandlung.org.uk/conditions/asthma/what-asthma

[6] See: https://www.asthmaandlung.org.uk/conditions/asthma/asthma-triggers

[7] See: https://www.asthmaandlung.org.uk/conditions/asthma/occupational-asthma

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[11] See: https://www.chss.org.uk/chest-information-and-support/common-chest-conditions/copd/

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[21] See: Strategic networks | National Services Scotland (nhs.scot)

Chapter 4

Dental Health

CHAPTER 4

Dental Health

In 2022, the majority of adults in Scotland had at least some natural teeth.

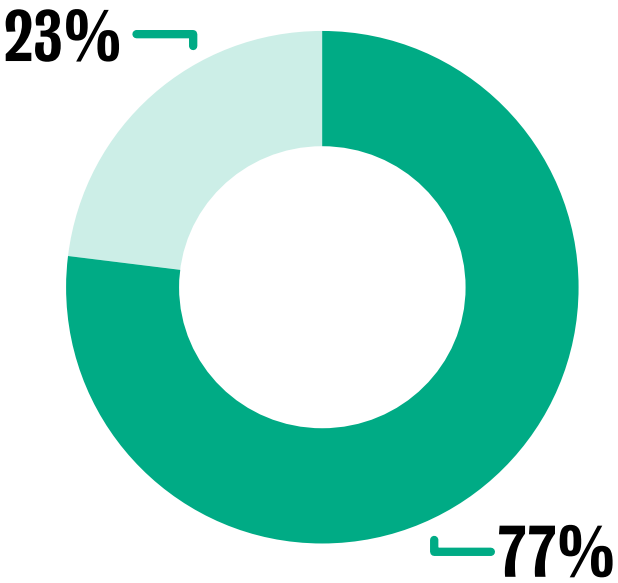
94%

Had some natural teeth

6%

Had no natural teeth.

- Just over three quarters of adults had 20 or more natural teeth.

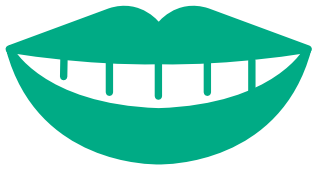


The two most common problems reported with mouth, teeth and dentures were difficulty in eating food.

6%

and/or difficulty smiling, laughing and showing teeth without embarrassment.

6%



Mental wellbeing

In 2022, adults who had any issues with their mouth, teeth or dentures reported lower mental wellbeing on average than those who had no such issues. With mean WEMWBS scores of:

41.9 among those who reported such dental issues

47.7 who did not report any issues

WEMWBS scores range from 14 to 70. Higher scores indicate greater wellbeing.

4 Dental Health

Olga Martini

4.1 Introduction

In most industrialised countries the vast majority of adults have tooth decay[1]. The most common types of oral disease are tooth decay and gum disease. As tooth decay is widespread and is largely preventable, it is considered a public health issue. It is now widely recognised that a healthy mouth has a significant impact on physical health as well as on other aspects of day-to-day life including engaging with others socially and as a result, may have wider socio-economic consequences[2]. Access to oral health provision was negatively impacted by the Covid-19 pandemic, including a disproportionate impact on groups already predisposed to poorer oral health such as deprived communities and those with chronic conditions/comorbidities[3].

Oral health can both affect and be affected by mental health. For example, mental health issues can lead to neglect of oral hygiene, avoidance of dental visits, overbrushing and/or issues caused by medication[4], while oral health issues can result in physical pain, social isolation/withdrawal and/or an overall reduction in quality of life that have the potential to impact on an individual's mental wellbeing[3].

Oral cancer is the oral condition of greatest concern due to its seriousness and increasing incidence[5], particularly in Scotland when compared with the rest of the UK. Head and neck cancer, including oral and oropharyngeal cancers, is the eighth most common cancer in the UK, accounting for around 3% of total cases of cancer[6]. Major risk factors for oral cancer include tobacco use, excessive alcohol consumption, physical inactivity, with incidence higher among men, older age groups and those who are socioeconomically disadvantaged[7].

4.1.1 Policy background

The NHS Recovery Plan 2021-2026 invests targeted funding to increase NHS capacity, deliver reform, and ensure everyone has the treatment they need at the right time, in the right place, and as quickly as possible in aid of recovery from the Covid-19 pandemic[8]. These commitments were founded on the general objectives set out in the 2018 **Oral Health Improvement Plan (OHIP)**[9], which recognised the link between oral health and other public health issues, such as poor diet, smoking, alcohol consumption, inequalities and an ageing population.

It also set out strategies to transition from restorative to more preventative dentistry, with recognition of the impact that poor oral health can have on overall quality of life, health behaviours and health status.

The **Oral Health Improvement Plan** aims to ensure that good habits are learned during childhood and maintained into adulthood. In anticipation of 25% growth in the number of people aged over 75 during the next ten years[10], and the larger numbers of adults retaining some or

all of their natural teeth, the OHIP also aims to provide a greater system of care for those in care homes and to people who receive care in their own homes[11].

As part of the commitment to improving people's health and wellbeing, the Scottish Government runs various oral health improvement programmes, including the Childsmile programme (since 2006)[12]. This supports a range of measures aimed at children both in dental practices and in schools, nurseries and the community. Since Childsmile's inception, the oral health of children in Scotland has improved markedly. For example, for P7 children, those showing no obvious signs of decay has increased from 53% to 80%[13].

4.1.2 Reporting on dental health in the Scottish Health Survey

This chapter updates data by age and sex on the number of natural teeth and on issues with mouth, teeth or dentures. Also reported are age-standardised mean WEMWBS scores by issues with mouth, teeth or dentures and sex. For a detailed description of age-standardisation as well as definitions of other terminology used in this chapter and further details on the data collection methods for dental health, please refer to Chapter 2 of the Scottish Health Survey 2022 - volume 2: technical report.

Supplementary tables on dental health are also published on the Scottish Government website: Scottish Health Survey.

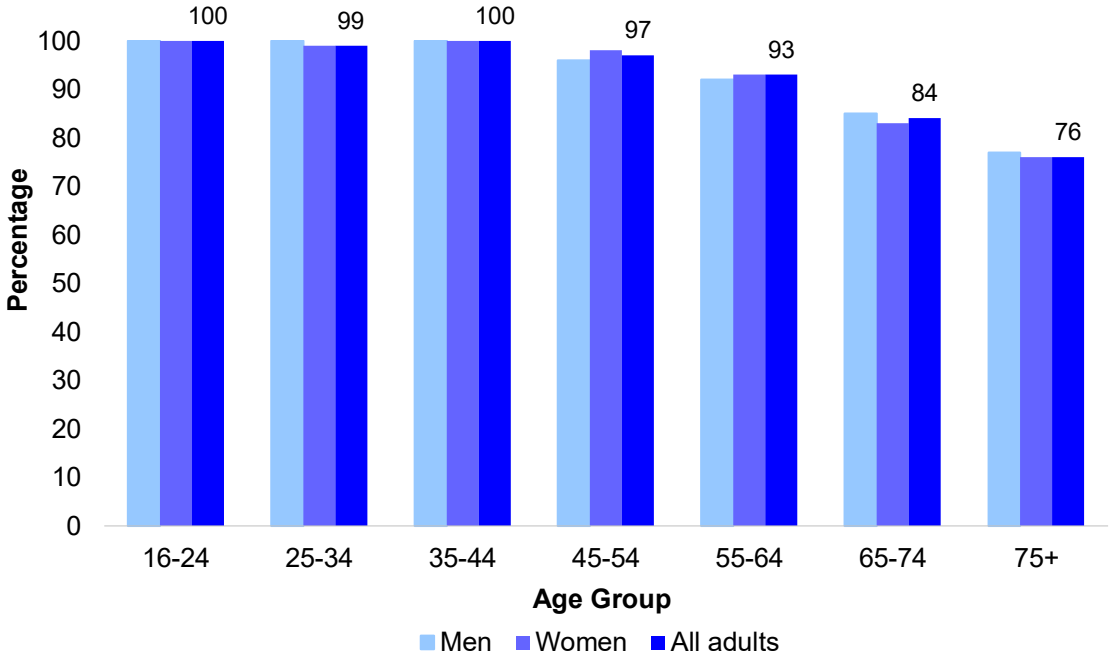
4.2 Dental health

4.2.1 Number of natural teeth/no natural teeth (adults), 2022, by age and sex

In 2022, the majority (94%) of adults in Scotland had at least some natural teeth whilst 6% had none. Just over three quarters of adults (77%) had 20 or more natural teeth.

The association between natural teeth prevalence and age in 2022 continues the pattern documented in previous SHeS reports. In 2022, almost all adults (97-100%) aged 16-54 had at least some natural teeth, this proportion decreased with age to 76% among those aged 75 and over.

Figure 4A
Percentage of adults with any natural teeth, 2022, by age and sex



No significant differences were observed between men and women in natural teeth prevalence with the age groups following similar patterns for both sexes. **Figure 4A, Table 4.1**

4.2.2 Issues with mouth, teeth or dentures, 2022, by age and sex

In 2022, most adults (89%) in Scotland reported having no issues with their mouth, teeth or dentures whilst the remaining 11% reported having one or more issues.

The two most common problems reported with mouth, teeth and dentures were difficulty in eating food (6%), and/or difficulty smiling, laughing and showing teeth without embarrassment (6%). The third most common (2%) problem was speaking clearly.

Overall, significant variations in issues with the mouth, teeth or dentures were not evident by age or sex. However, issues with eating food increased in prevalence with age, from 3% among those aged 16-34 to 10% among those aged 75 and over.

Figure 4B
Natural teeth prevalence and issues with eating food, 2022, all adults by age group

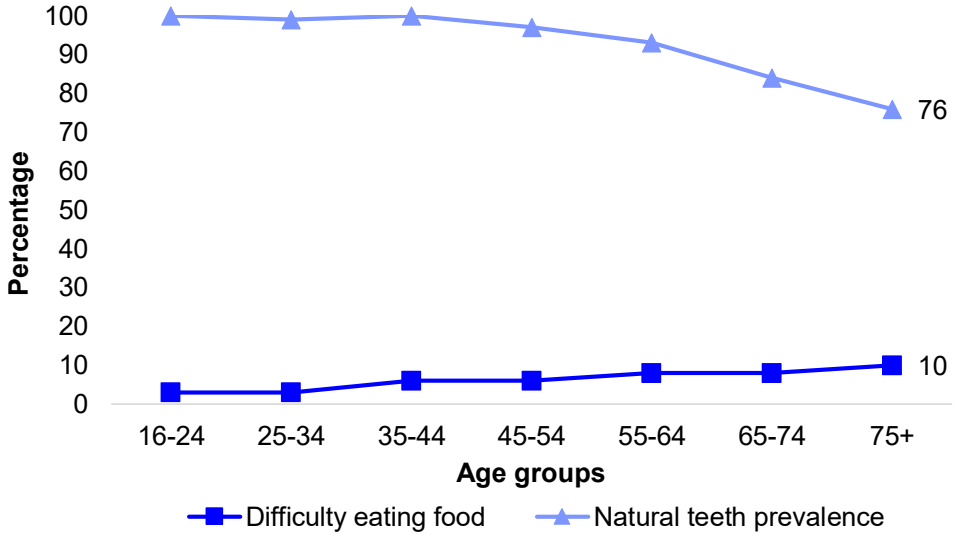


Figure 4B, **Table 4.1**, **Table 4.2**

4.2.3 Adult WEMWBS mean score (age-standardised), 2022, by issues with mouth, teeth or dentures, and sex

In 2022, adults who had any issues with their mouth, teeth or dentures reported lower mental wellbeing on average than those who had no such issues, with mean WEMWBS scores of 41.9 compared with 47.7 respectively.

This pattern was evident for both men and women. There was not a significant difference in average wellbeing by sex among those with issues with the mouth, teeth or dentures.

Figure 4C
Adult WEMWBS mean score (age-standardised), 2022, by issues with mouth, teeth or dentures, and sex

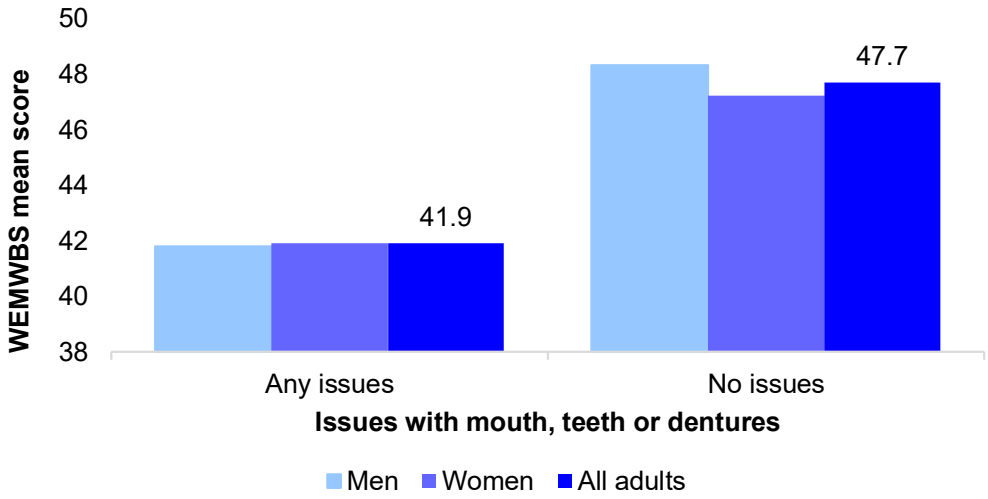


Figure 4C, Table 4.3

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Table 4.2 Issues with mouth, teeth or dentures, 2022, by age and sex
Table 4.3 Adult WEMWBS mean score (age-standardised), 2022, by issues with mouth, teeth or dentures, and sex

References and notes

[1] World Health Organisation (2012). What is the burden of oral disease? [Online]. Available from: https://www.who.int/oral_health/disease_burden/global/en/

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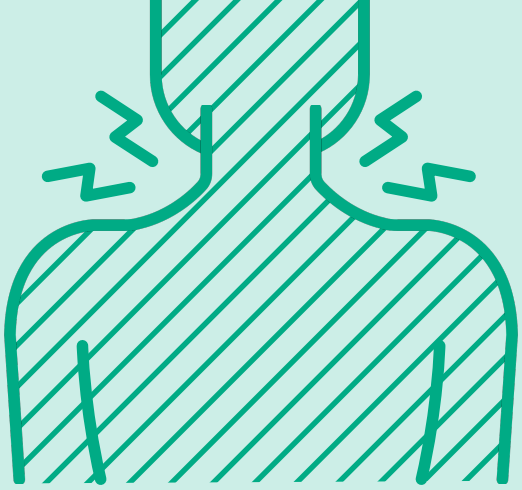
Chapter 5

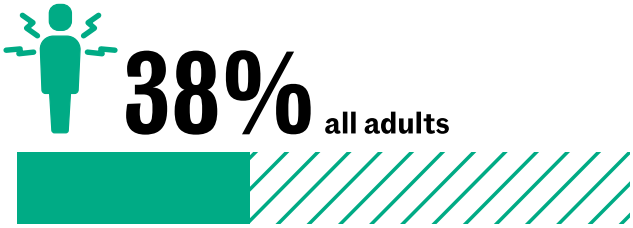
Chronic Pain

CHAPTER 5

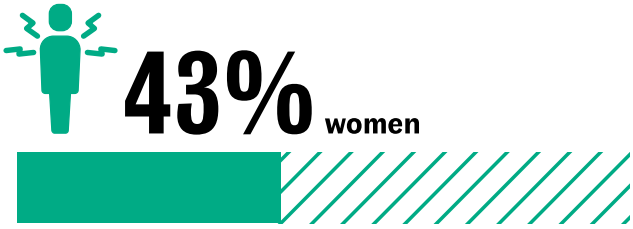
Chronic Pain

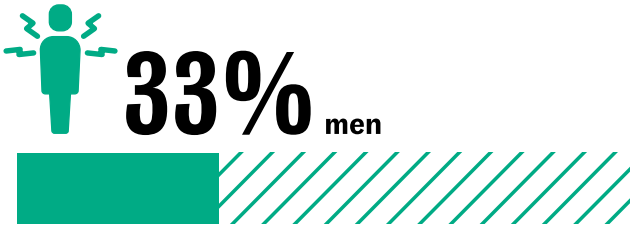


In 2022, more than one-third of adults were currently being troubled by pain or discomfort that lasted three months or more, referred to as chronic pain.

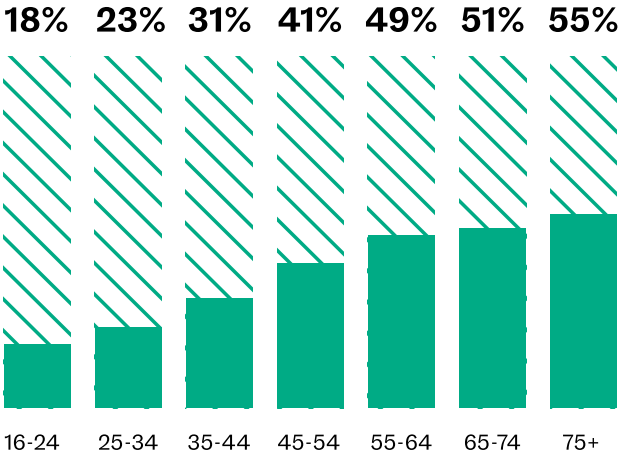


A higher proportion of women reported being in chronic pain compared with men.





The proportion of adults experiencing chronic pain increased with age.



In 2022:

6%

of all children had experienced chronic pain for three months or more.

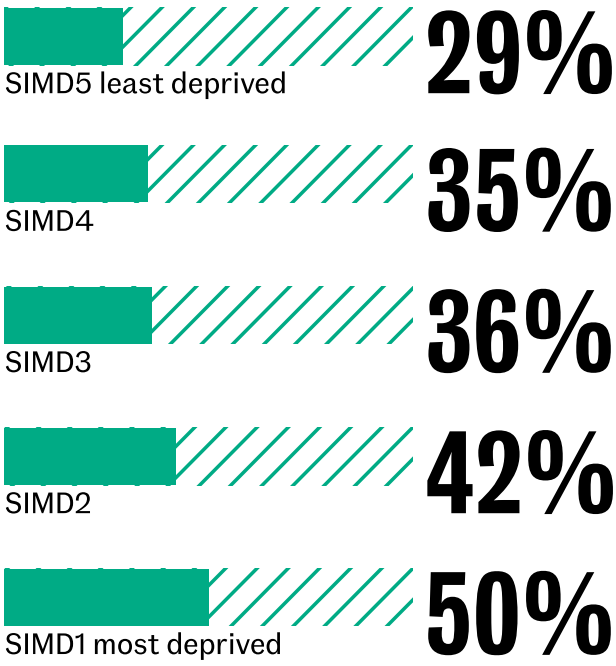
8%

of 8–15 year olds compared with

3%

of 0-7 year olds.

The proportion of all adults experiencing chronic pain was higher in the most deprived areas than in the least deprived.



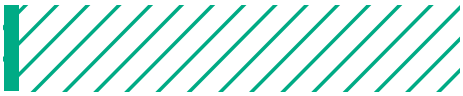
The most common types of chronic pain experienced by all adults in 2022 were:

25%
Pain in arms, hands, hips, legs or feet

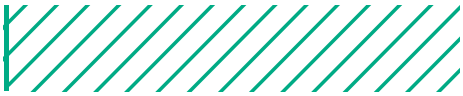
18%
Back pain

9%
Neck or shoulder pain

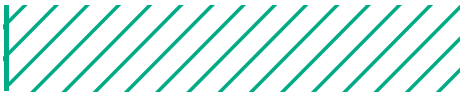
The most common types of pain experienced by all children aged 0-15 were:



3%
Arms, hand, hips, leg, or feet



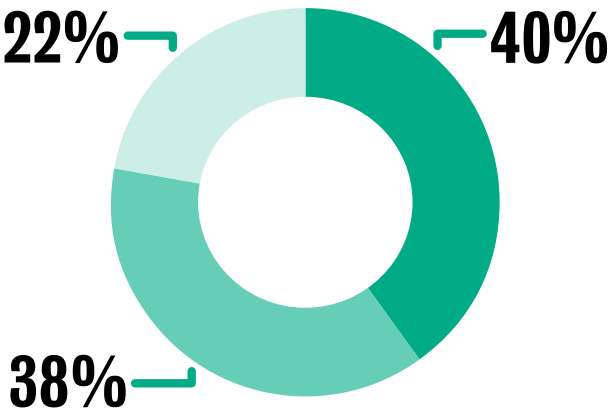
1%
Stomach ache or abdominal pain



1%
Headaches, facial or dental pain

In 2022, of those adults experiencing chronic pain:

- Four in ten reported that it limited their life/work a lot.
- Almost two-fifths reported that it limited their life/work a little.
- The remaining adults did not experience any impact on their life/work.



Among all adults who reported chronic pain in 2022:

The majority reported receiving support from their GP.

69%

While almost a third reported receiving support from a physiotherapist.

31%

In 2022, most children suffering from chronic pain received support from a GP (66%) while 28% received support from a physiotherapist.

66%
Received support from a GP

28%
Received support from a physiotherapist

Adults who experienced pain/discomfort for 3 months or more in 2022 had a lower average WEMWBS mean score than those who experienced pain/discomfort for less than 3 months and those who were not experiencing any pain.

44.1 Experiencing pain/discomfort for 3+ months

48.0 Experiencing pain/discomfort for less than 3 months

49.0 Did not report any pain/discomfort

WEMWBS scores range from 14 to 70. Higher scores indicate greater wellbeing.

5 Chronic Pain

Sophie Birtwistle

5.1 Introduction

Chronic pain has been broadly defined as persistent pain that continues for longer than 12 weeks despite medication or treatment and can affect all ages and different parts of the body[1]. The International Classification of Diseases (ICD-11), which came into effect in January 2022[2], was updated by the World Health Organisation (WHO) to include two categories of chronic pain: chronic primary pain, whereby the pain cannot be explained as a symptom of another chronic condition (for example, fibromyalgia, chronic migraine, etc.) and chronic secondary pain caused by other conditions (such as cancer or surgery) which then becomes a separate issue and may persist beyond successful treatment of the initial cause[3].

The challenges presented by chronic pain not only relate to physical wellbeing but can also include detrimental effects on areas such as overall quality of life, mental wellbeing and employment, with evidence suggestive of an additional link with health inequalities[4].

Understanding lived experience alongside prevalence helps to inform understanding and strategies for chronic pain. Collation of the views of a group of individuals with lived experience of chronic pain by Healthcare Improvement Scotland were used to inform recommendations across several priority areas including staff training, patient support, gathering patient feedback, information provision, support for accessing care and addressing health inequalities[5].

5.1.1 Policy background

Chronic pain has a substantial impact on the lives of those affected and with projections that factors contributing to it could increase, its importance as a key policy area for the Scottish Government has been underlined.

The **Framework for Pain Management Service Delivery: implementation plan**[4] (published in 2022 and informed in part by public consultation)[6] is based on four primary aims that cover a commitment to person-centred care (physical and mental); timely access to locally-based care and community support; safe and effective treatment choices; and improving the quality of life of people with lived experience of chronic pain.

The framework builds on previous Scottish Government initiatives and policies related to chronic pain including clinical and community workshops, funding and performance monitoring for pain clinics and residential courses. In addition, the **Management of chronic pain in children and young people**[7] guidelines were made available in 2018 for clinicians, patients and their families, as was **Quality Prescribing For Chronic Pain**, a guide intended to promote quality improvement for medicines and therapies designed to manage chronic pain[8].

Through the Framework, steps are being taken to address the measurement of chronic pain and healthcare services in Scotland, including a national Pain Data Group to improve the quality and consistency of data used to inform and promote improved service delivery, where needed, for those with chronic pain.

5.1.2 Reporting on chronic pain in the Scottish Health Survey

This chapter presents data collected for the first time in SHeS for both adults and children on the prevalence and impact on the lives of individuals living with chronic pain in Scotland, as well as access to support. The Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) is also included to assess mental wellbeing among adults living with chronic pain. Figures are also reported by age, sex and area deprivation.

The area deprivation data are presented in Scottish Index of Multiple Deprivation (SIMD) quintiles. To ensure that the comparisons presented are not confounded by the different age profiles of the quintiles, the data have been age-standardised. For a detailed description of both SIMD and age-standardisation as well as definitions of other terminology used in this chapter and for details on the data collection methods for chronic pain, please refer to Chapter 2 of the Scottish Health Survey 2022 - volume 2: technical report.

Supplementary tables on chronic pain are also published on the Scottish Government website: Scottish Health Survey.

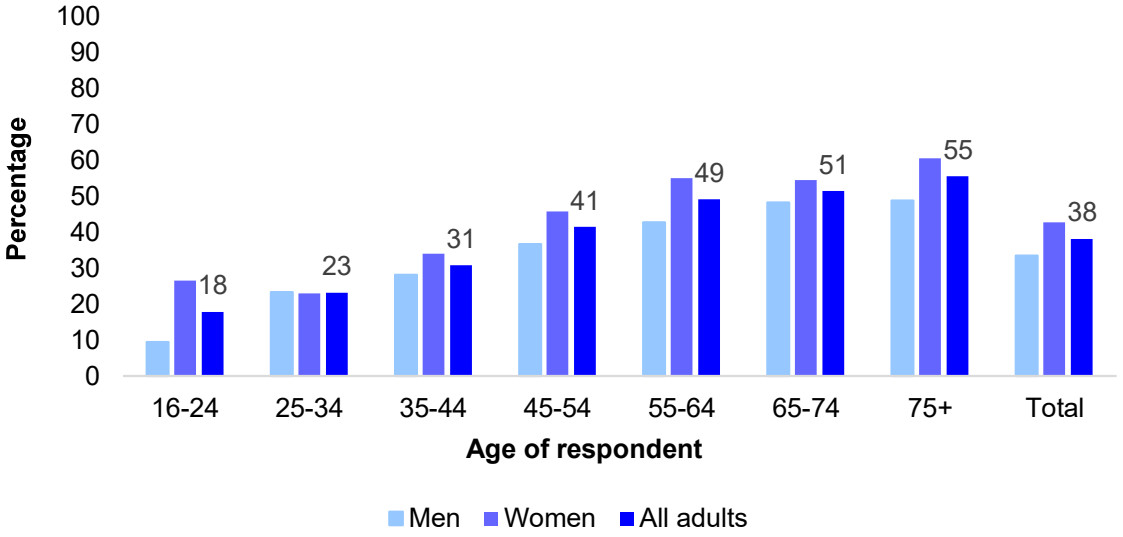
5.2 Chronic Pain

5.2.1 Currently troubled by pain or discomfort and whether lasted more than 3 months, 2022, by age and sex

Among all adults in 2022, more than one-third (38%) were currently being troubled by pain or discomfort that lasted three months or more, referred to as chronic pain. A higher proportion of women (43%) reported being in chronic pain compared with men (33%).

The proportion of adults experiencing chronic pain increased with age: 18% of 16-24 experienced chronic pain for 3 months or more with a linear increase by age to 55% of those aged 75 and above.

Figure 5A
Adults currently troubled by pain or discomfort for 3 months or more, 2022, by age and sex



In 2022, 6% of all children had experienced chronic pain for three months or more, with no significant difference by sex. However, this did vary by age with a larger proportion of 8–15-year-olds (8%) having experienced chronic pain for 3 months or more compared with those aged 0–7-years (3%). **Figure 5A, Table 5.1**

5.2.2 Currently troubled by pain or discomfort and whether lasted more than 3 months (age-standardised), 2022, by area deprivation and sex

Variation in experiences of chronic pain lasting three months or more was evident by area deprivation. The proportion of all adults experiencing chronic pain was higher in the most deprived areas (50%) compared with the least deprived (29%).

Similar patterns appeared to be evident among both men and women. Among men, experience of chronic pain in the last 3 months or more varied from a low of 23% in the least deprived areas to 46% in the most deprived areas. For women, the pattern was not entirely linear, however, overall, the proportion experiencing chronic pain increased from 35% in the least deprived areas to 55% in the most deprived areas.

Figure 5B
Adults currently troubled by pain or discomfort for 3 months or more (age-standardised), 2022, by area deprivation and sex

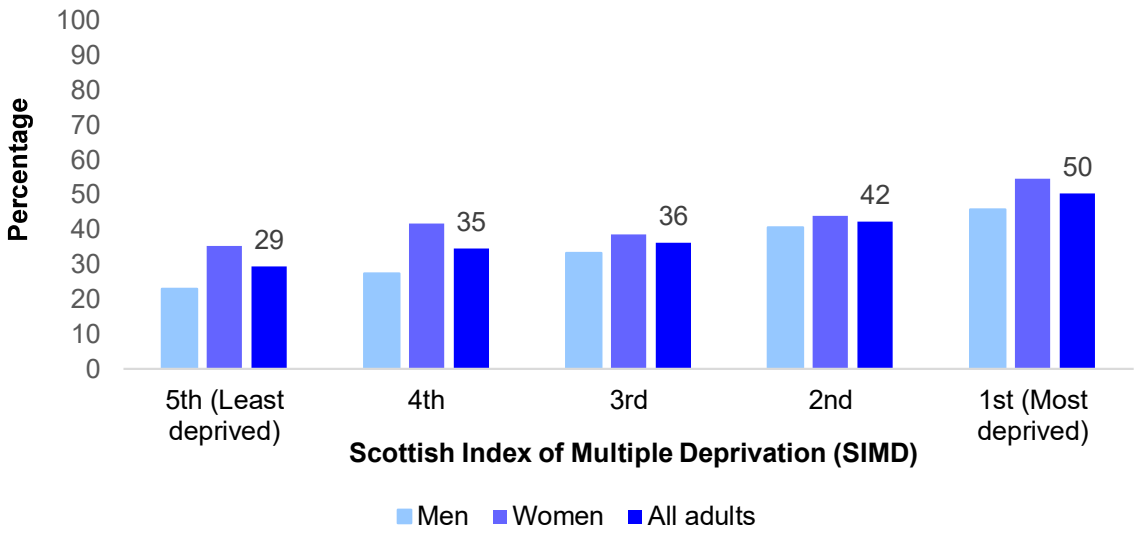


Figure 5B, Table 5.2

5.2.3 Type of pain/discomfort, 2022, by age and sex

The most common types of chronic pain experienced by all adults in 2022 were pain in arms, hand, hips, leg, or feet (25%), followed by back pain (18%) and neck or shoulder pain (9%). Lower proportions experienced chronic pain in their stomach or abdomen (5%), or in their head, face or teeth (4%).

Chronic pain in the arms, hands, hips, legs or feet increased linearly with age from 5% among adults aged 16-24, to 16% of adults in the 35 to 44 years group, to 41% of those aged 75 years or older. Across most age groups, the incidence of these forms of chronic pain was higher for females than for males. Only in the 25-34 age group were they more prevalent for males (13%) than for females (11%). The difference was greatest in the age groups 55 to 64 years (males: 29%, females: 38%) and 75+ (males: 35%, females: 45%).

A similar pattern occurred for chronic back pain, with incidence increasing from 5% among adults aged 16-24 to 25% of those in the 75+ category. Differences between men and women were not significant.

The most common type of chronic pain experienced by those aged 0-15 was in arms, hand, hips, leg, or feet (boys: 4%, girls 2%).

Figure 5C

Type of chronic pain/ discomfort, 2022, by age

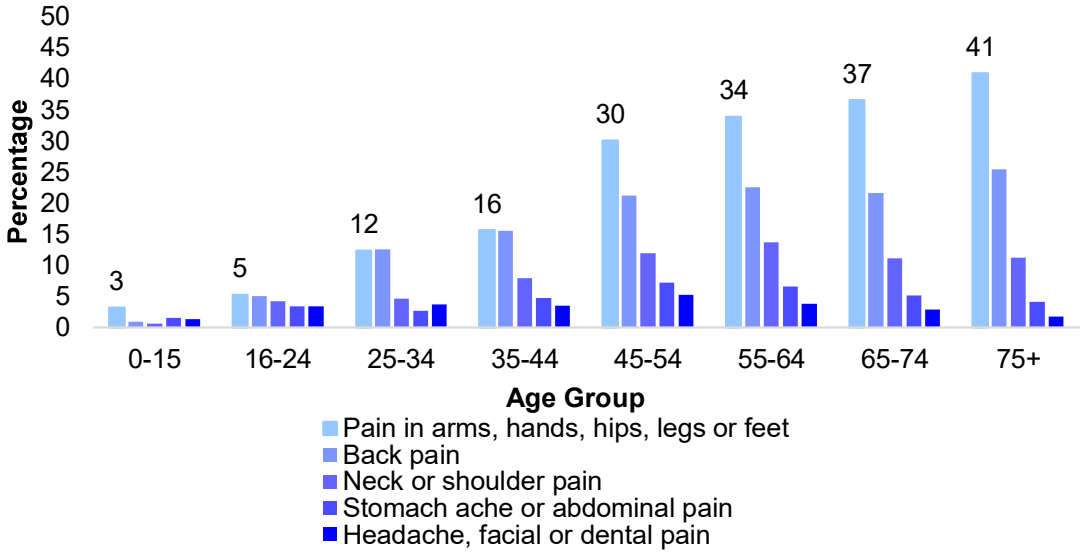


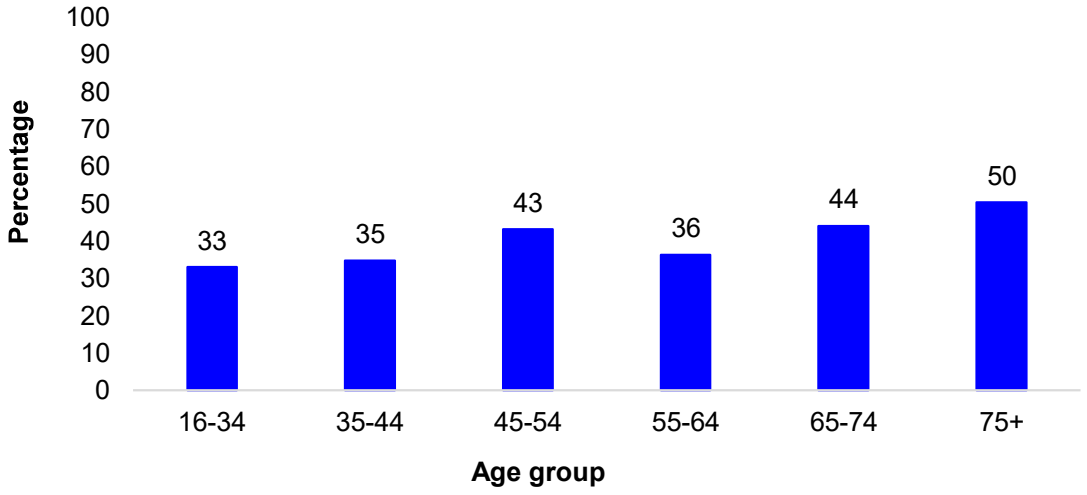
Figure 5C, Table 5.3

5.2.4 Whether pain/discomfort limits life/work activities, 2022, by age and sex

In 2022, almost four-fifths of adults who experienced chronic pain/discomfort indicated that it limited their life/work activities to some extent (78%), while the remaining 22% did not experience any impact as a result of chronic pain.

Four in ten adults experiencing chronic pain reported that it limited their life/work a lot. While not a linear pattern, this proportion generally increased with age from 33% of 16-34-year-olds with seriously limiting chronic pain/discomfort to 50% among those aged 75+. A similar pattern was evident for both men and women.

Figure 5D
Chronic pain/discomfort limiting life/work activities a lot, 2022, by age, all adults who had experienced chronic pain/discomfort for 3 months or more



For children, the majority of those who had experienced chronic pain reported that it limited their life activities a little (57%) and 23% that it impacted on these a lot, with no significant difference by sex.

Figure 5D, Table 5.4

5.2.5 Support received for pain/discomfort, 2022, by age and sex

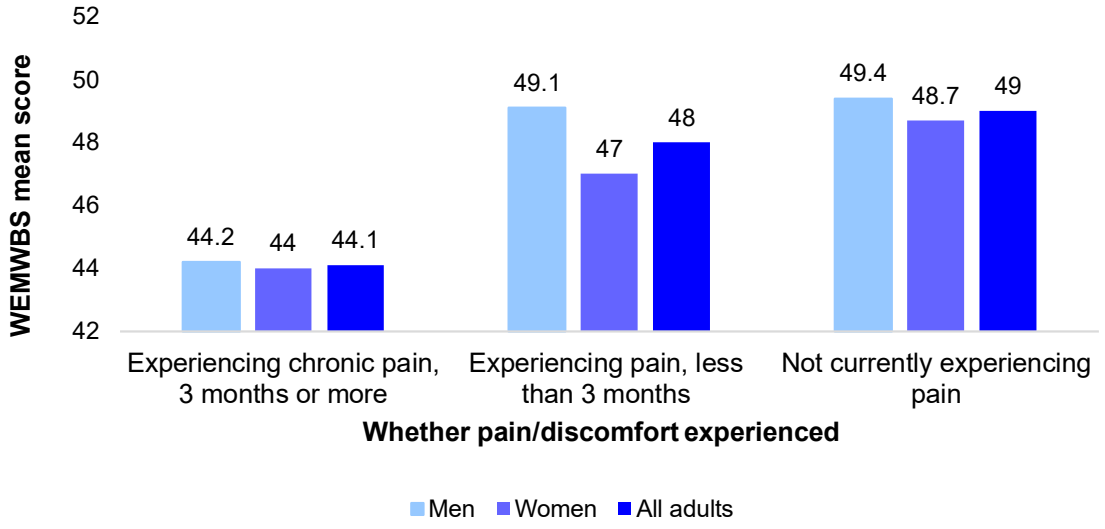
Among all adults who reported chronic pain in 2022, the majority reported receiving support from their GP (69%), while almost a third (31%) reported receiving support from a physiotherapist.

In 2022, most children suffering from chronic pain received support from a GP (66%) while 28% received support from a physiotherapist. A similar pattern was evident by sex. **Table 5.5**

5.2.6 Adult WEMWBS mean scores (age-standardised), 2022, by whether been in pain/discomfort for more than 3 months and sex

Adults who experienced chronic pain/discomfort for 3 months or more in 2022 had a lower average WEMWBS mean score of 44.1 compared to those who were not currently experiencing pain/discomfort (49.0) and those who had experienced pain/discomfort but for less than three months (48.0). This pattern was the same for both men and women.

Figure 5E
Adult WEMWBS mean scores (age-standardised), 2022, by whether been in pain/discomfort for more than 3 months and sex



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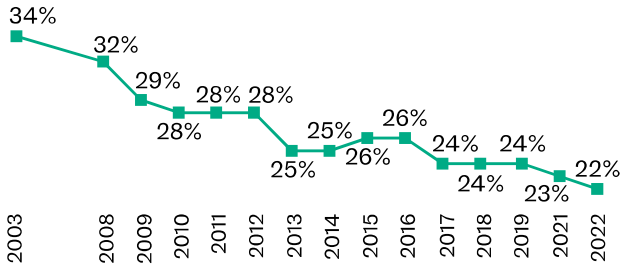
Chapter 6

Alcohol

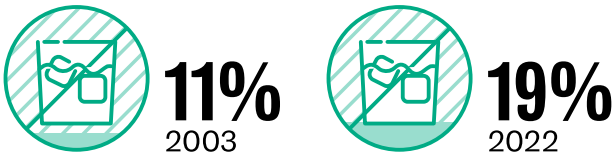
CHAPTER 6

Alcohol

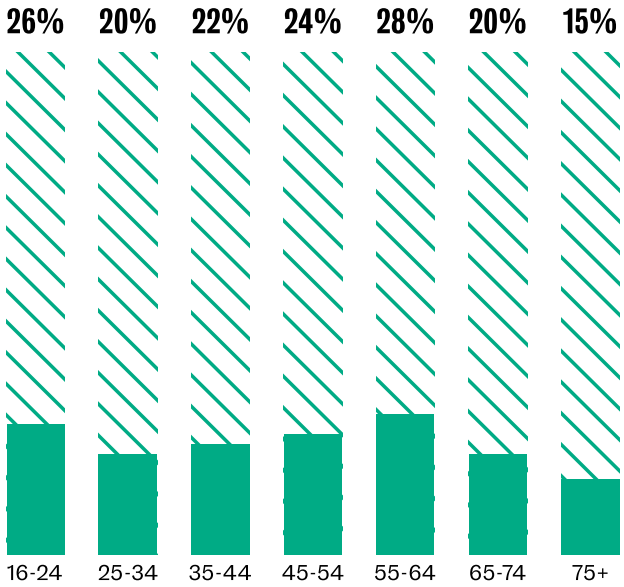
For all adults, prevalence of hazardous or harmful drinking has generally decreased over time, with levels dropping from 34% in 2003 to 22% in 2022.



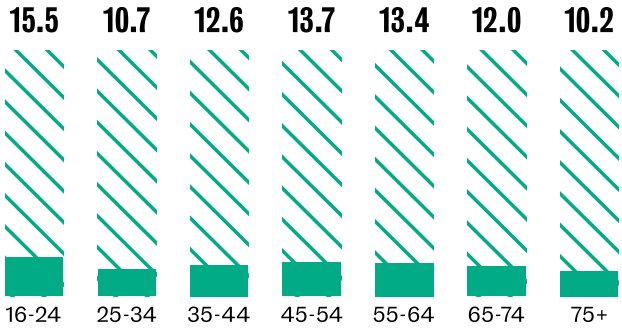
Non-drinking prevalence rose from 11% in 2003 to 19% in 2022.



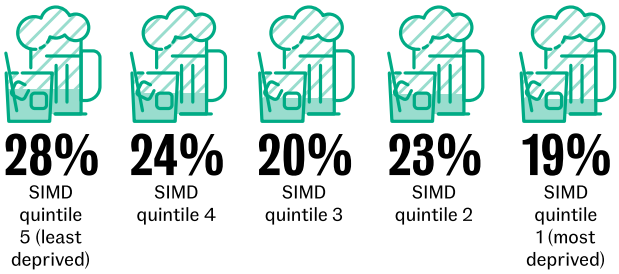
In 2022, hazardous or harmful drinking levels varied by age, ranging between 15% of those aged 75 and over to 28% among those aged 55 – 64.



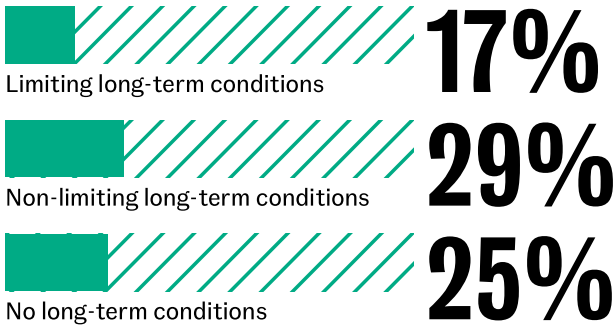
In 2022, the average number of units of alcohol consumed per week by all drinkers was 12.6 units, ranging significantly by age from 15.5 units among drinkers aged 16-24 years to 10.2 among drinkers aged 75+.



Prevalence of hazardous or harmful drinking levels was significantly higher among those living in the least deprived areas (28% in SIMD quintile 5) than among those living elsewhere (19-23%).



Hazardous or harmful drinking was most prevalent among those who reported having a non-limiting long-term condition and least prevalent among those with a long -term condition that limited their activities.



6 Alcohol

Erin Deakin

6.1 Introduction

Harmful alcohol consumption, which has been linked with a risk of physical and mental health problems and social and economic losses[1], has been a public health challenge in Scotland for decades. A total of 21,840 people were admitted to a general acute hospital with an alcohol-related diagnosis in 2021/22[2]. In addition, in 2022, 1,276 people in Scotland died from alcohol-specific causes, a 2% increase from 2021 and the highest number of annual deaths recorded since 2008[3]. Rates of alcohol-specific death were more than twice as high for men as for women in 2022, with males aged 45 years or older being most at risk. Rates of alcohol-specific death have been reported to be 5.6 times higher in the most deprived areas of Scotland than in the least deprived areas[4].

While both 2020 and 2021 recorded the lowest level of alcohol sales in Scotland over the available time series (since 1994), 9.4 litres of pure alcohol were sold per adult, comprised primarily of spirits (2.9 litres), wine (2.8 litres), beer (2.7 litres) and cider (0.5 litres), and representing 18.1 units of alcohol per adult per week[5]. This is nearly 30% above the UK Chief Medical Officers' guidelines of 14 units per adult per week.

In 2021, 85% of all pure alcohol sold in Scotland was sold through the off-trade (supermarkets and other off-licences). This is a decrease from 90% in 2020 but an increase from 72% in 2019. The average price of alcohol in 2021 in the off-trade was 64 pence per unit, whereas it was £2.04 per unit in the on-trade (such as pubs, clubs and restaurants)[6]. It should be noted that COVID-19 restrictions continued to affect alcohol sales in 2021 through on-trade premises.

6.1.1 Policy background

The Scottish Government's Alcohol Framework 2018: Preventing Harm[7] endorses the World Health Organization (WHO) Safer initiative of evidence-based strategies to tackle alcohol-related harm[8]. The framework includes actions related to putting the voices of children and young people at the heart of alcohol preventative measure development, supporting families and communities, keeping the licensing system and statutory guidance under review and consulting on marketing restrictions. The actions included in the framework are grouped into four key impacts focused on:

- Protecting young people
- Tackling health inequalities
- Improving national systems
- A whole population approach

A key strategy for tackling alcohol-related harm in Scotland was the introduction of minimum unit pricing in 2018 (MUP), setting the minimum cost of one unit of alcohol to 50p. MUP has been associated with a 13.4% reduction in alcohol-related deaths[9]. In addition, the

Scottish Government work in partnership with both local and national partners to help develop strategies aimed at reducing harmful alcohol use, helping to facilitate recovery, reducing the impact of alcohol on individuals, families and communities and supporting clinicians and clinical organisations[10].

6.1.2 Reporting on harmful alcohol in the Scottish Health Survey

This chapter reports weekly alcohol consumption trends and figures for 2022 for adults, including data for weekly alcohol consumption by age, sex, area deprivation and long-term illness. Data are also presented for the number of days on which alcohol was consumed by adults for 2021 and 2022 combined, by age and sex.

The area deprivation data are presented in Scottish Index of Multiple Deprivation (SIMD) quintiles. To ensure that the comparisons presented are not confounded by the different age profiles of the quintiles, the data have been age-standardised. For a detailed description of both SIMD and age-standardisation as well as definitions of other terminology used in this chapter and for further details on the data collection methods for alcohol consumption and days on which alcohol was consumed, please refer to the Scottish Health Survey 2022 - volume 2: technical report.

Supplementary tables on alcohol use are also published on the Scottish Government website: Scottish Health Survey.

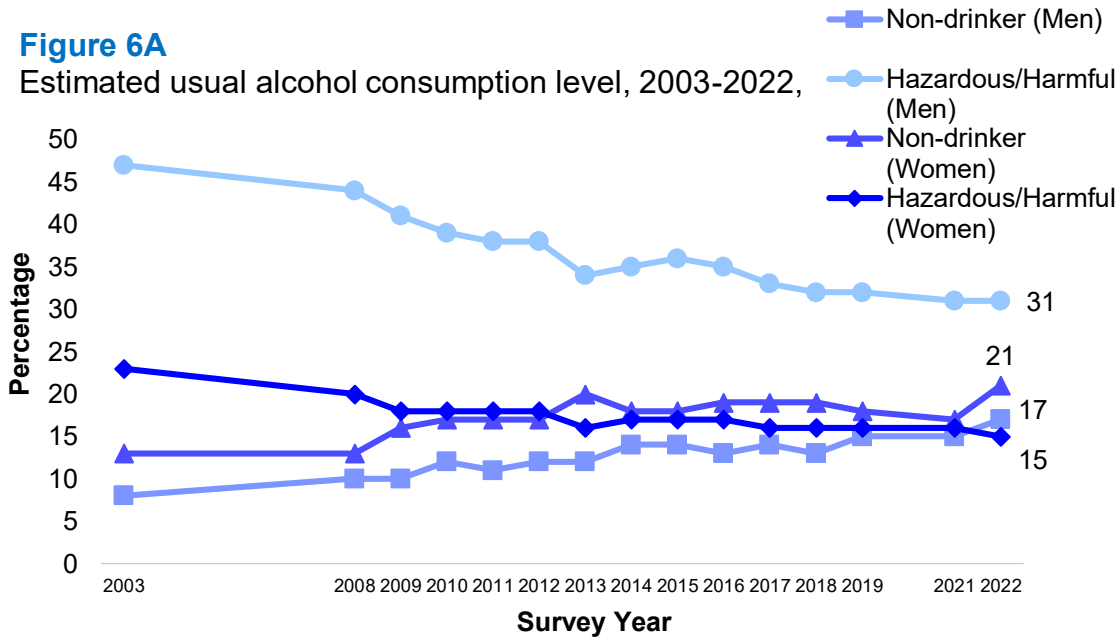
6.2 Alcohol

6.2.1 Estimated usual weekly alcohol consumption level, 2003 to 2022, by sex

For all adults, prevalence of hazardous or harmful drinking has generally decreased over time, with levels dropping from 34% in 2003 to 22% in 2022. While the proportion of men drinking at hazardous or harmful levels has consistently been higher than for women, both have declined over the course of the time series, and the decline has been more pronounced for men than for women. In 2003 47% of men and 23% of women drank to hazardous or harmful levels. The equivalent figures in 2022 were 31% and 15%, respectively.

Figure 6A

Estimated usual alcohol consumption level, 2003-2022,



The decrease in drinking at hazardous or harmful levels occurred alongside an increase in the proportion of adults classified as non-drinkers. Non-drinking prevalence rose from 11% in 2003 to 19% in 2022. The increase in non-drinking was observed for both men and women with 17% of men and 21% of women classified as non-drinkers in 2022, compared with 8% and 13%, respectively in 2003.

Over time, the mean number of units of alcohol consumed by adults per week decreased from 16.1 units in 2003 to 12.6 units in 2022. Mean unit consumption has followed a similar pattern for men and women with consumption remaining higher among men than women in 2022 (16.5 units of alcohol for men, compared with 8.9 units for women).

Figure 6B

Mean number of units of alcohol consumed per week

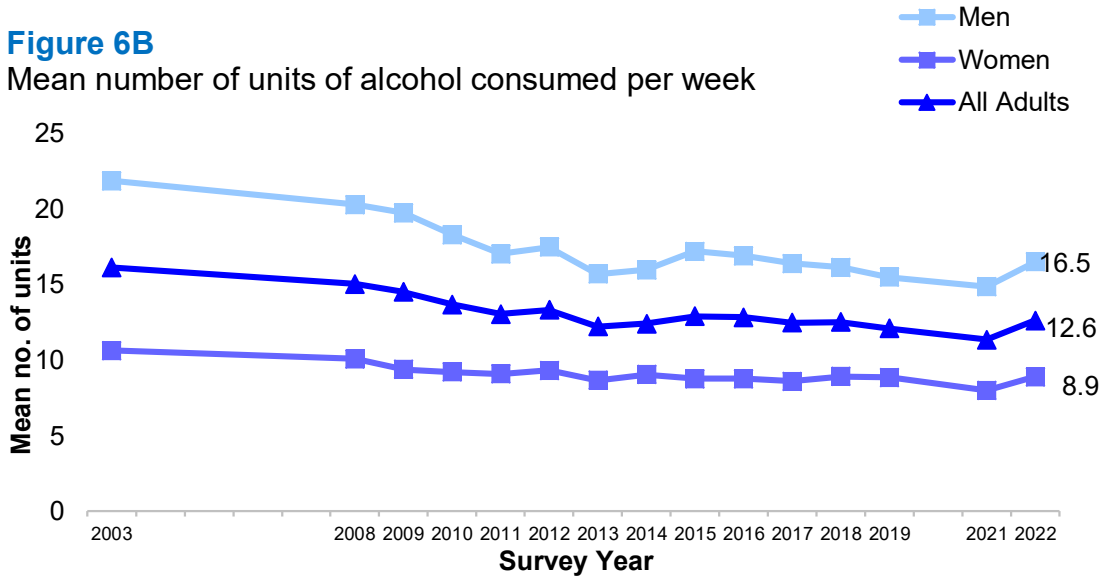


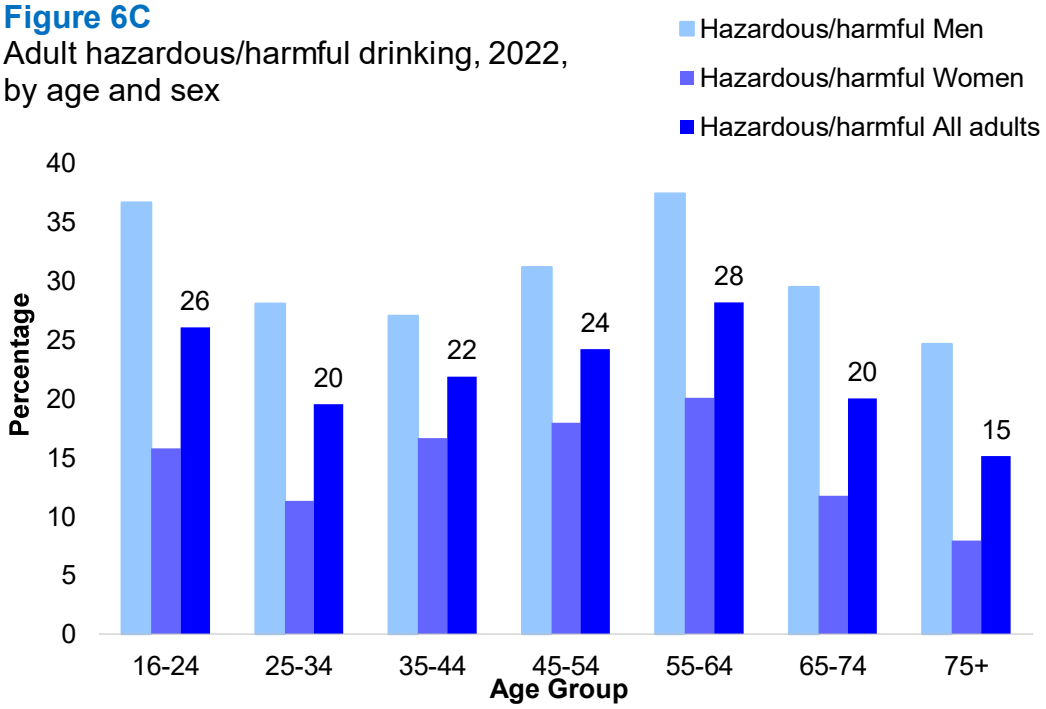
Figure 6A, Figure 6B, Table 6.1

6.2.2 Estimated usual weekly alcohol consumption level, 2022, by age and sex

In 2022, hazardous or harmful drinking levels varied by age, ranging between 15% of those aged 75 and over to 28% among those aged 55-64. As observed in previous years, men were significantly more likely than women to display higher levels of hazardous or harmful drinking across all age groups. The proportion of men classified as drinking to hazardous or harmful levels was highest among those aged 55-64 (37%) and 16-24 (37%). Among women, hazardous or harmful drinking was most prevalent among those aged 35-64 years old (17-20%). Levels of hazardous or harmful drinking were lowest for men and women aged 75 or over (25% of men and 8% of women).

For all adults, non-drinking prevalence was highest among those aged 16-24 (23%) and 65 years and older (23-27%), with similar patterns for men and women.

Figure 6C
Adult hazardous/harmful drinking, 2022, by age and sex



In 2022, the average number of units of alcohol consumed per week by all drinkers was 12.6 units, ranging significantly by age from 15.5 units among drinkers aged 16-24 years to 10.2 among drinkers aged 75+. Average unit consumption was higher among men than women across all groups, and this was most pronounced in the 45-54 age category (men aged 45-54 consumed 19.2 unit per week, compared with 8.6 units for women in the same age group).

Figure 6D
Mean number of units of alcohol consumed per week among adults, 2022, by age and sex

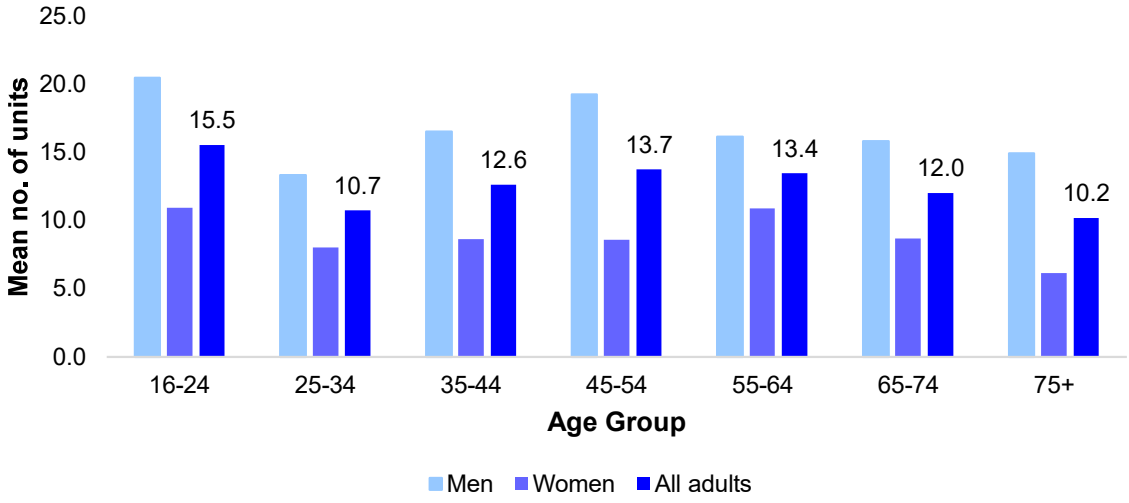


Figure 6C, Figure 6D, Table 6.2

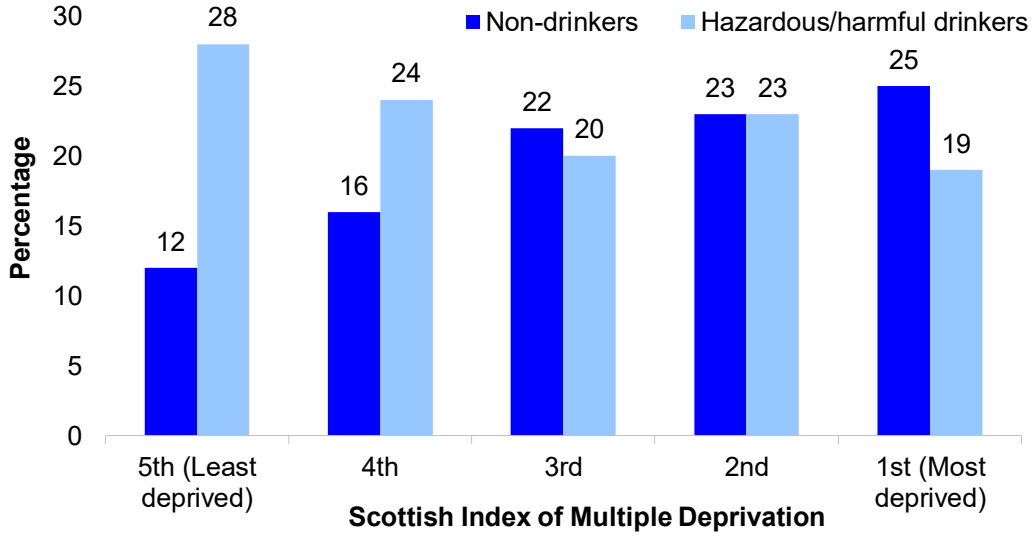
6.2.3 Estimated usual weekly alcohol consumption level (age-standardised), 2022, by area deprivation and sex

In 2022, levels of age-standardised weekly alcohol consumption varied by area deprivation. Prevalence of hazardous or harmful drinking levels was significantly higher among those living in the least deprived areas (28% in SIMD quintile 5) than among those living elsewhere (19-24%). This pattern between area deprivation and estimated usual alcohol consumption was observed for both men and women.

There was also a significant association between area deprivation and non-drinking prevalence in 2022, with the highest proportion of non-drinkers living in the most deprived areas (25% in SIMD quintile 1) and lowest in the least deprived areas (12% in SIMD quintile 5). This linear pattern was observed for women but for men, non-drinking prevalence was highest among those living in SIMD quintile 3 (22%).

Figure 6E

Non-drinkers and hazardous/harmful drinkers, 2022, age-standardised and by area of deprivation



The age-standardised mean number of units of alcohol consumed per week by adult drinkers did not vary significantly by area deprivation. Across all deprivation quintiles, men consumed a higher mean number of units of alcohol per week than women, with this being most pronounced in the most deprived areas (19.6 units for men and 7.7 units for women in SIMD quintile 1).

Figure 6F

Mean number of units of alcohol consumed per week among adults, 2022, age-standardised, by area deprivation and sex

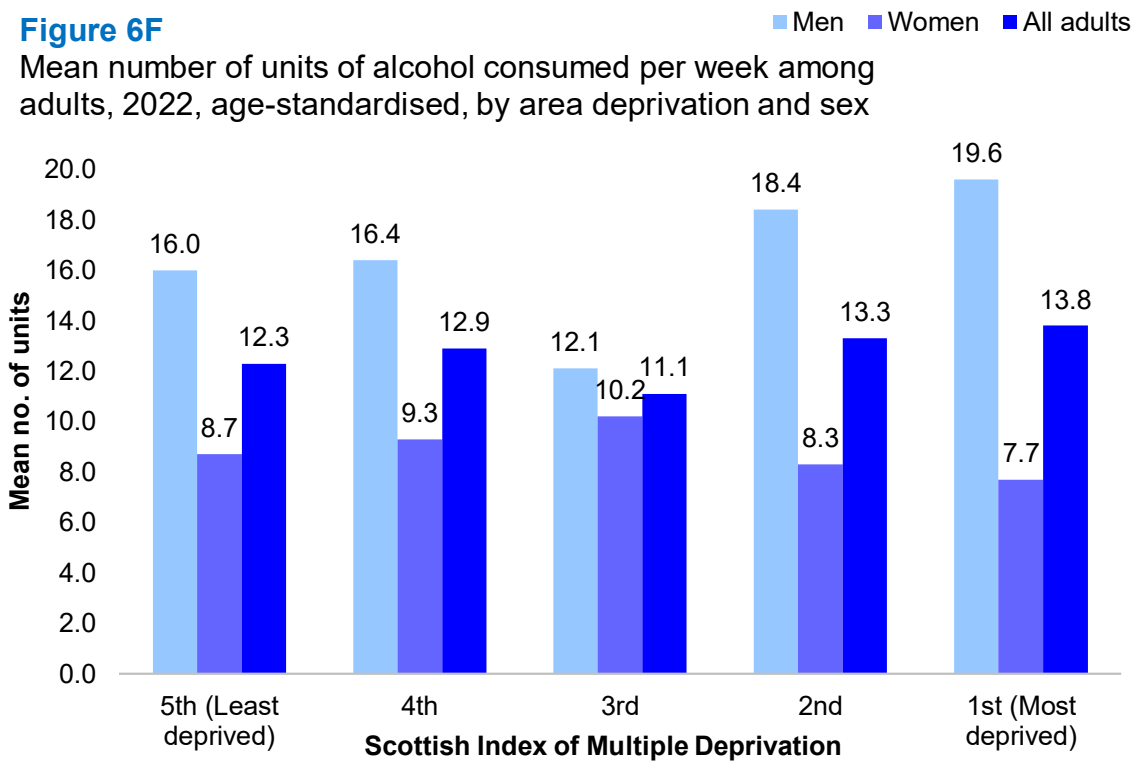


Figure 6E, Figure 6F, Table 6.3

6.2.4 Estimated usual weekly alcohol consumption level (age-standardised), 2022, by limiting long-term condition and sex

Hazardous or harmful drinking was most prevalent among those who reported having a non-limiting long-term condition (29%) and least prevalent among those with a long-term condition that limited their activities (17%). This pattern by long-term condition was observed for men (43% of men with a non-limiting long-term condition reported drinking hazardous or harmful amounts, compared to 24% of those with a limiting long-term condition), whereas prevalence of hazardous or harmful drinking for women was similar irrespective of whether they had a long-term condition or not (13-16%).

For all adults, those with a limiting long-term condition were most likely to be non-drinkers (26%), compared with 14% of those with a non-limiting long-term condition and 15% of those with no long-term condition. This pattern was observed across both sexes, with women more likely to be non-drinkers than men.

The age-standardised mean number of units of alcohol consumed per week by adult drinkers varied significantly by long-term condition. On average, adults with a non-limiting long-term condition drank significantly more units of alcohol per week than those with either a limiting long-term condition or no long-term conditions (18.1 units compared to 12.7 for those with limiting long-term conditions and 12.5 for those with no long-term condition). Across all groups, a higher mean number of units of alcohol was consumed per week amongst men compared with women, with the greatest differences observed between men and women with a non-limiting long-term condition (27.4 units for men, 7.1 units for women).

Figure 6G
Mean number of units of alcohol consumed per week among adults, 2022, age-standardised, by limiting long-term condition and sex

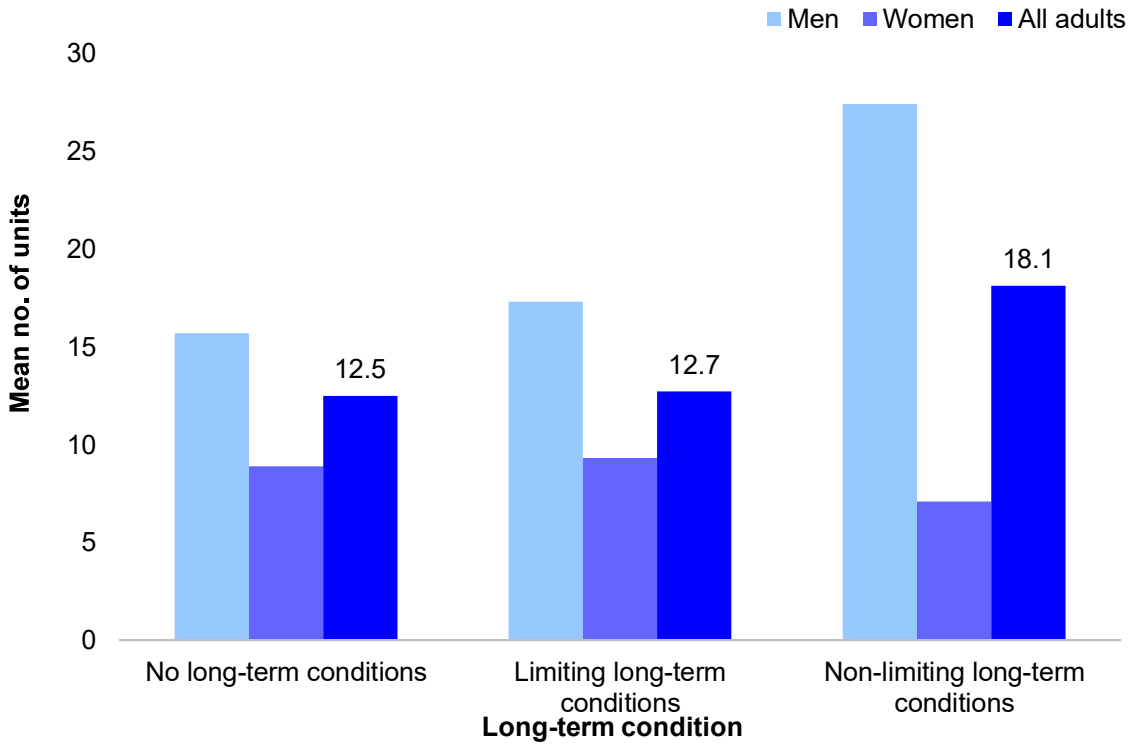


Figure 6G, Table 6.4

6.2.5 Number of days on which adult drinkers drank alcohol in the past week, 2021/2022 combined, by age and sex

In 2021/2022, 7% of adult drinkers who consumed alcohol in the week prior to interview, did so almost every day. The proportion of drinkers consuming alcohol almost every day in the previous week increased with age. Just 1% of 16-24-year-old drinkers drank almost every day in the last week, compared with 20% of those aged 75 and over. While this linear pattern was observed for both sexes, it was more pronounced for male drinkers than female drinkers.

The mean number of days on which adult drinkers drank alcohol in the week prior to interview was 2.6 days in 2021/2022. The average number of days on which adult drinkers drank alcohol in the previous week increased with age from 2.0 days for those drinkers aged 16-24 to 3.3 days for those aged 75 or over. The pattern by age was observed for both men and women and was most pronounced for men. Male drinkers aged 16-24 drank on an average of 1.9 days in the week prior to interview and the mean for female drinkers this age was 2.0 days. The equivalent figures for drinkers aged 75 or over was 3.6 days for men and 2.9 for women.

Figure 6H
Number of days in last week had a drink, 2021/22, adult drinkers by age and sex

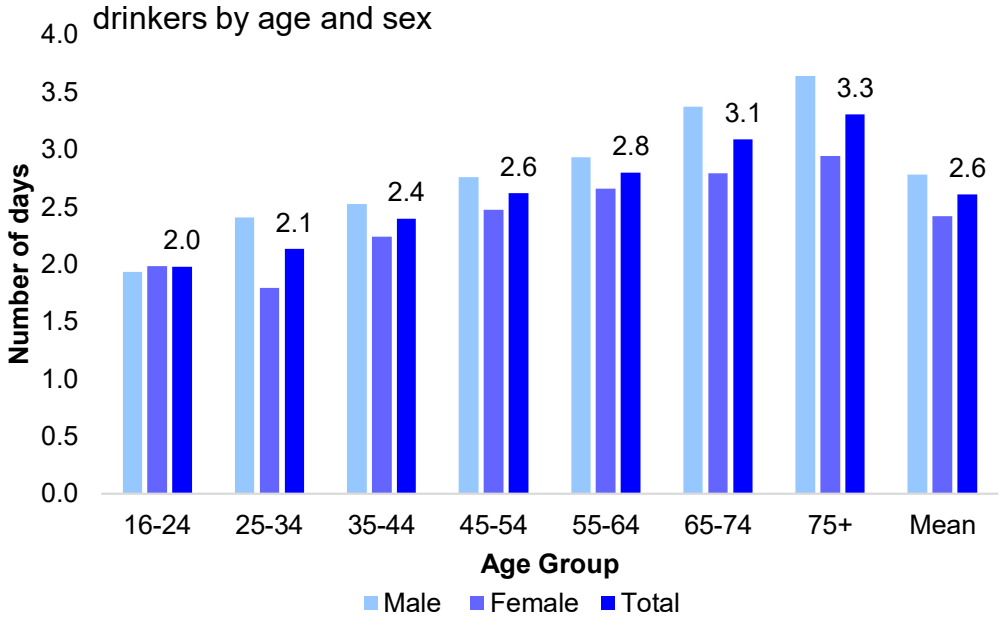


Figure 6H, Table 6.5

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Table 6.4 Estimated usual weekly alcohol consumption level (age-standardised), 2022, by limiting longstanding illness and sex
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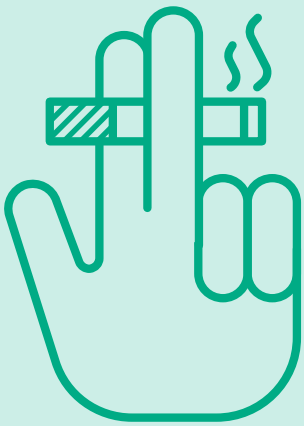
Chapter 7

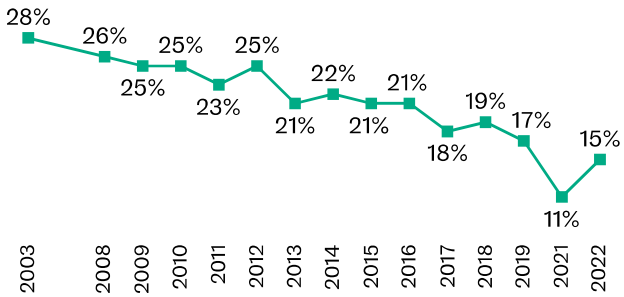
Smoking

CHAPTER 7

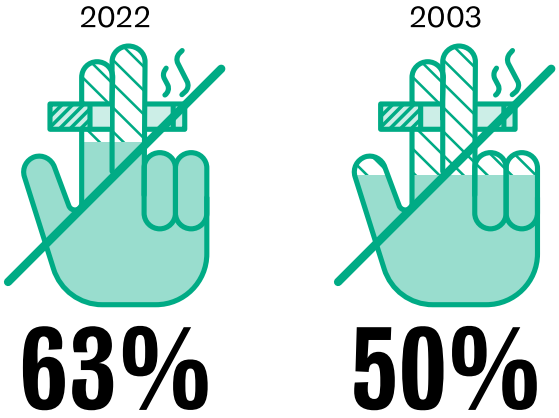
Smoking



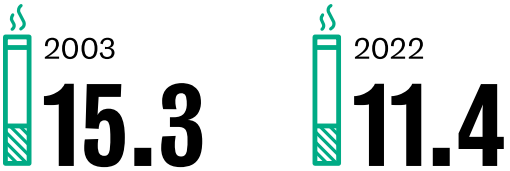
The proportion of adults who reported themselves to be current smokers in 2022 was 15%. While this is higher than the figure reported in 2021 (11%), the 2022 figure is in line with the general downward trend in previous years (17% in 2019.)



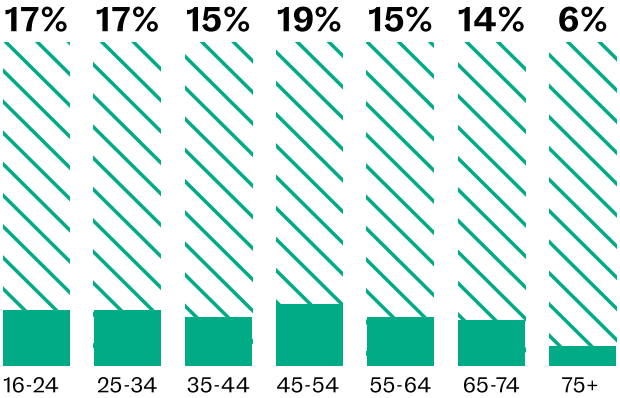
In 2022, almost two thirds of adults reported never having smoked or previously having smoked only occasionally, an overall increase from 50% in 2003.



As was the case with current smoking rates, an overall decrease in the mean number of cigarettes smoked by current smokers has been recorded, with a peak of 15.3 per day recorded among all current smokers in 2003.

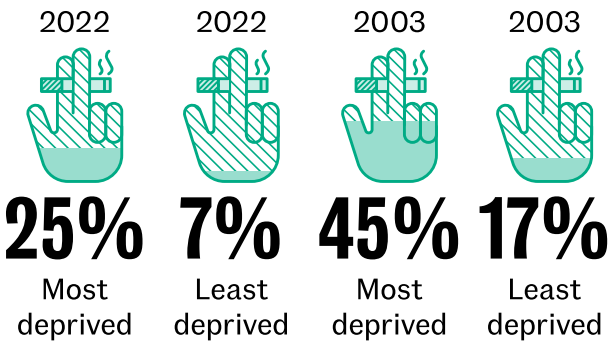


In 2022, smoking was most prevalent for those aged 45-54, and least prevalent for those aged 75 and over. Significantly more men (18%) than women (13%) reported that they were currently smokers.

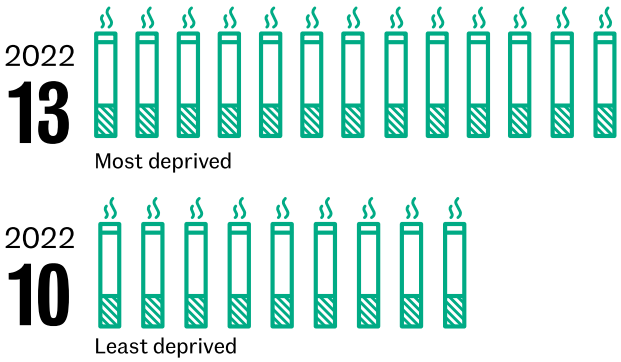


The number of cigarettes consumed per day tended to increase with age up to a peak of 15.6 among those aged 65-74.

In 2022, the age-standardised prevalence of current cigarette smoking remained highest (25%) among adults living in the most deprived areas, and lowest among those living in the least deprived areas (7%). This continued the trend observed since 2003, when smoking prevalence was 45% in most deprived areas and 17% in least deprived areas.



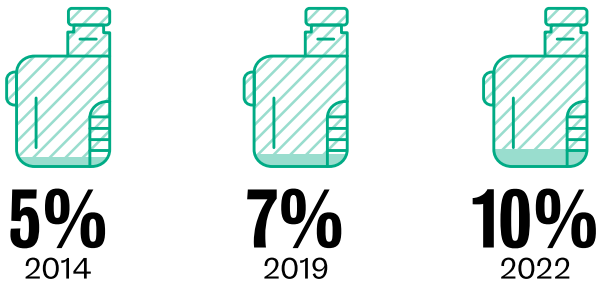
In 2022, the age-standardised mean number of cigarettes smoked per day was highest among adults living in most deprived areas and lowest among those living in least deprived areas.



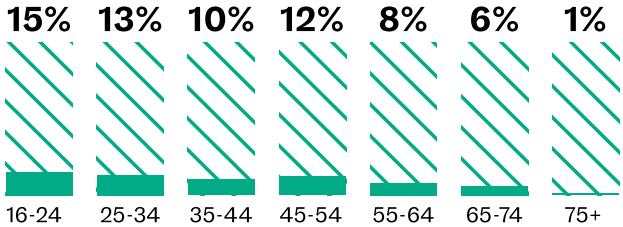
In 2022, a small proportion (3%) of children were reported to be exposed to second-hand smoke in their own home.

The 2022 figure represents a slight but not significant increase compared with 2021 but an overall decrease of nine percentage points since 2012.

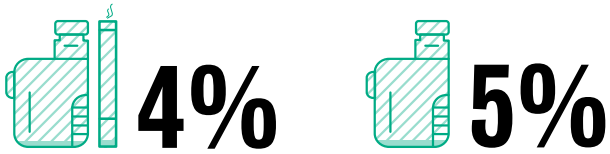
Current Nicotine Vapour Product (NVP) use increased in 2022 among all adults to 10%, having remained in the range 5 - 7% between 2014 and 2021.



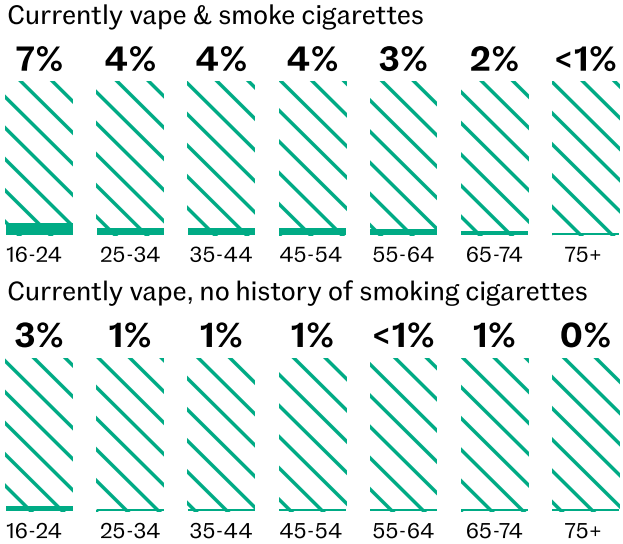
The use of NVPs was most prevalent among those aged 16-24. 15% of adults aged 16-24 reported that they currently used NVPs and usage was lowest among those aged 75 and older: 1% reported that they currently use NVPs.



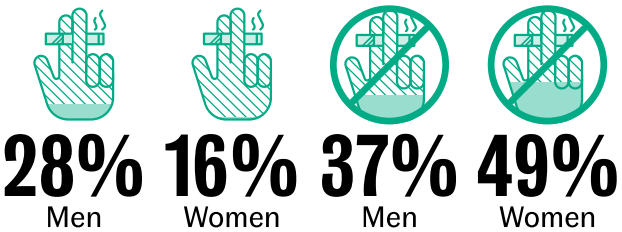
4% of all adults reported using both NVPs and cigarettes, while 5% reported current use of NVPs and previous use of cigarettes.



Use of NVPs tended to decrease with age, with dual use of NVPs and cigarettes and use of NVPs with no history of smoking highest among those aged 16-24 (7% and 3% respectively) and lowest among those aged 75 and older (<1% and 0% respectively).



A higher proportion of men than women had never tried to stop smoking in 2021/2022 combined (28% men; 16% women), while a lower proportion of men than women had tried to stop smoking three times or more (37% and 49% respectively).



7 Smoking

Eleanor Holman

7.1 Introduction

Tobacco is recognised internationally as a major public health threat. More than eight million deaths worldwide each year are a direct result of tobacco use, with over one million attributed to second-hand smoke exposure[1]. The impacts of tobacco include a significant healthcare burden through the treatment of tobacco attributable diseases and morbidity.

Smoking is the cause of around one in five deaths and the primary preventable cause of premature death and ill health in Scotland[2,3]. Evidence of differences by deprivation mean that smoking also remains an ongoing health inequality challenge[4]. Smoking-related health risks increase over time but can be substantially reduced following smoking cessation interventions; cost-effective interventions that help to reduce the economic and human cost of smoking-related illnesses and conditions[5].

Less is known about the long-term impact of Nicotine Vapour Products (NVPs) (electronic cigarettes and all related equipment, including liquids). However, these practices are not deemed to be risk-free, particularly where there is dual use alongside tobacco products[6,7]. Further research to evaluate the long-term effects of NVPs is needed. While NVPs are deemed lower risk than tobacco products and a useful cessation aid, there is evidence of potential for harm including to the cardiovascular system[8].

7.1.1 Policy background

The overall strategic objective for health in the Scottish Government's **National Outcomes Framework** is 'We are healthy and active'[9]. Scottish Health Survey data is used as a National Indicator to measure the proportion of adults with two or more of the following health risk behaviours: currently smoking, harmful drinking, low physical activity and obesity[10].

Scottish Government's new **Tobacco and Vaping Framework: a roadmap to 2034**[11], launched in November 2023, outlines interventions and policies that aim to ensure Scotland is raising a tobacco-free generation by 2034 (defined as 'a smoking prevalence among the adult population of 5% or lower'). This includes working with the UK Government on their Smoke Free Generation, further action on NVPs and measures to reduce the environmental impact of single use NVPs and to encourage responsible disposal[12].

A Fairer, Greener Scotland: Programme for Government 2021-22[13] pledged to develop a renewed action plan to identify additional

interventions that will help to achieve the ambition for a tobacco-free generation by 2034.

7.1.2 Reporting on smoking in the Scottish Health Survey

This chapter presents trend data for cigarette smoking and NVPs use as well as prevalence of adult cigarette smoking by age, sex and area deprivation, NVP use for 2022, and dual use of both cigarettes and NVPs. This chapter also presents data on trends in second-hand smoke exposure among children and data on attempts to quit smoking, analysed by age, sex and area deprivation, as well as the use of nicotine replacement therapy (NRT) and other products for smoking cessation.

The area deprivation data are presented in Scottish Index of Multiple Deprivation (SIMD) quintiles. To ensure that the comparisons presented are not confounded by the different age profiles of the quintiles, the data have been age-standardised. For a detailed description of both SIMD and age-standardisation, as well as definitions of other terminology used in this chapter and further details on the data collection methods for smoking, please refer to Chapter 2 of the Scottish Health Survey 2022- volume 2: technical report.

Please note that some caution should be exercised when interpreting data for 2021 within any time series data presented. In 2021, an opt-in telephone methodology was used due to the COVID-19 restrictions in place. In addition, the data may also have been impacted by the wider societal context in which the survey was undertaken. Please see the 2022 Scottish Health Survey technical report for more information.

Supplementary tables on smoking are also published on the Scottish Government website: Scottish Health Survey.

7.1.3 Comparability with other UK statistics

The Health Survey for England, Health Survey for Northern Ireland and the National Survey for Wales provide estimates of smoking prevalence in the other home nations within the UK. The surveys are conducted separately and have different sampling methodologies, so smoking prevalence estimates across the surveys are only partially comparable. Smoking prevalence estimates from the UK-wide Integrated Household Survey for Scotland, Wales, England and Northern Ireland have been deemed to be fully comparable[14].

7.2 Smoking

7.2.1 Cigarette smoking status, 2003 to 2022, by sex

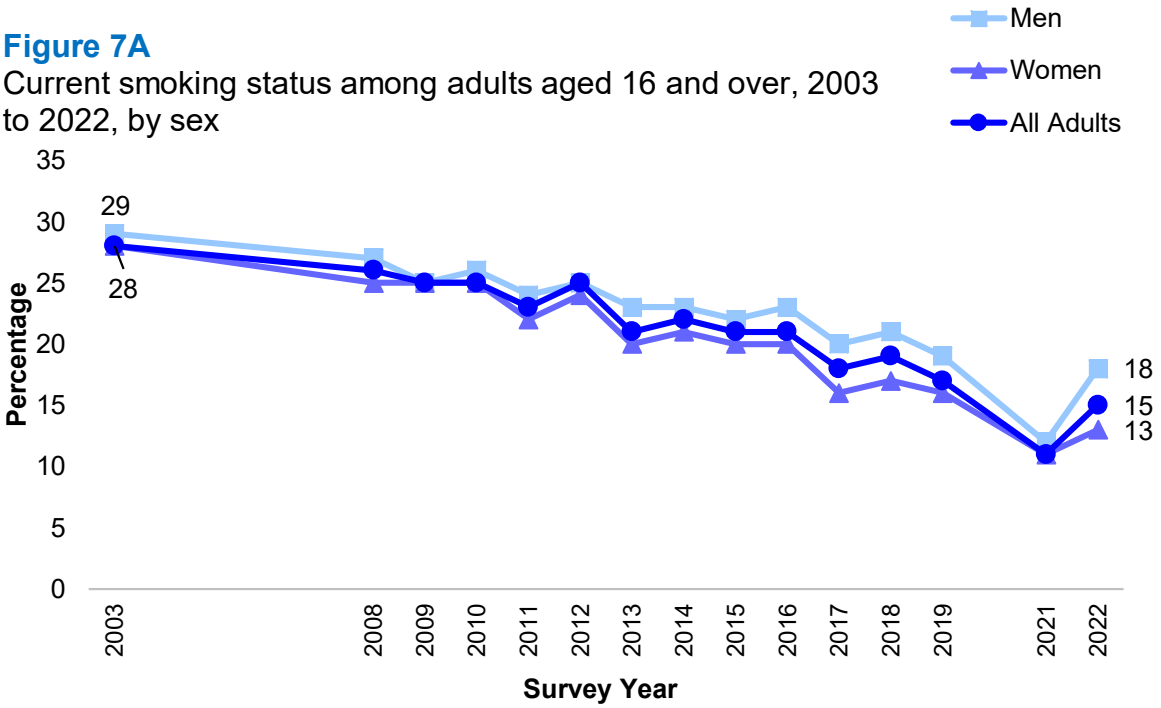
The proportion of adults who reported themselves to be current smokers in 2022 was 15%. While this is higher than the figure reported in 2021 (11%), the 2022 figure is in line with the general downward trend in previous years (17% in 2019). The 2022 proportion of current

smokers represents an overall decrease from a peak of 28% in 2003. However, some caution should be exercised when interpreting the lower current smoking prevalence reported in 2021 (see section 7.1.2 and the 2022 technical report).

As was the case for all adults, there has been an overall decrease in the proportions reporting themselves to be current smokers by sex since the start of the timeseries in 2003 (28% of women and 29% of men).

The proportion who reported themselves to be current smokers among men was 18% in 2022, returning to a similar proportion as recorded in 2019 (19%). While the 2022 figure for women (13%) was higher than in 2021 (11%), it remains lower than the 2019 proportion of 16%.

Figure 7A
Current smoking status among adults aged 16 and over, 2003 to 2022, by sex



Despite variations in the proportion of current smokers, the proportion of ex-smokers has remained relatively stable over time. Just over one-fifth (22%) of adults in 2022 reported that they used to smoke cigarettes regularly but no longer do, with this proportion having been in the range 22 - 26% since 2003. Similarly consistent patterns for ex-smokers were evident among both men and women.

In 2022, almost two thirds (63%) of adults reported never having smoked or previously having smoked only occasionally, an overall increase from 50% in 2003. Similar patterns were recorded by sex, with this proportion increasing overall from 47% in 2003 to 59% in 2022 among men and from 53% to 66% respectively among women.

Among all adults who were current smokers, a mean of 11.4 cigarettes per day was recorded in 2022, with no significant variation by sex (11.1 per day for women and 11.7 for men). As was the case with current

smoking rates, an overall decrease in the mean number of cigarettes smoked by current smokers has been recorded, from a peak of 15.3 per day recorded in 2003. Similar patterns were evident by sex.

Figure 7B

Mean number of cigarettes smoked per current smoker among adults aged 16 and over, 2003 to 2022, by sex

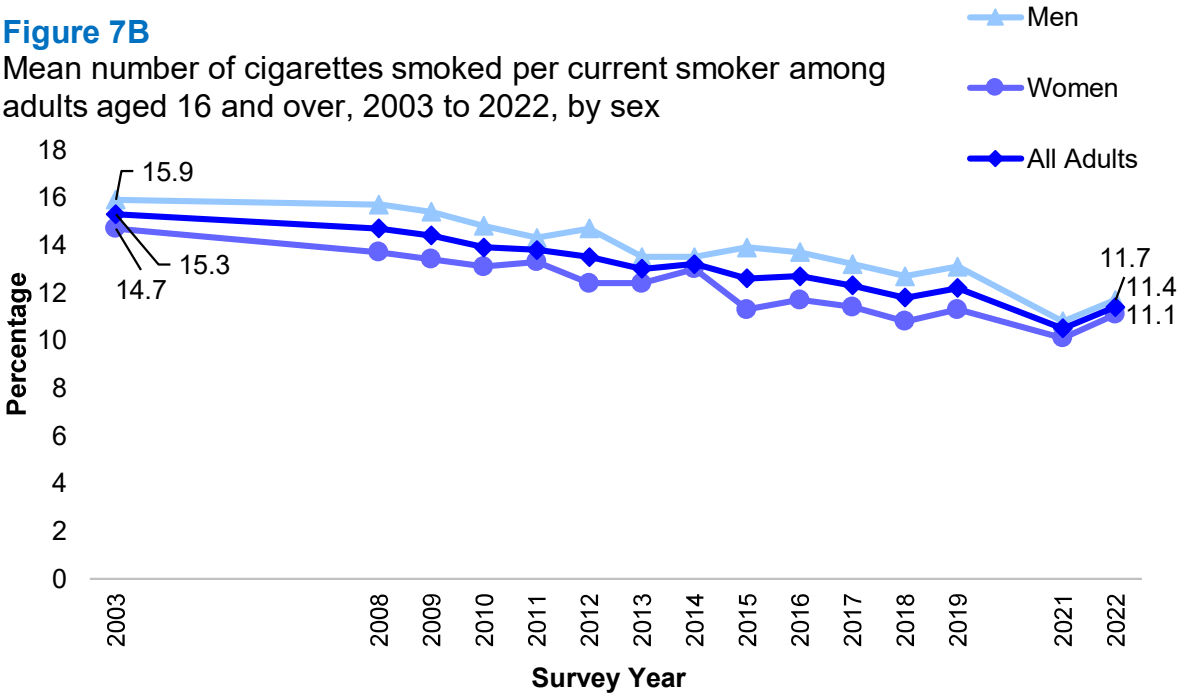
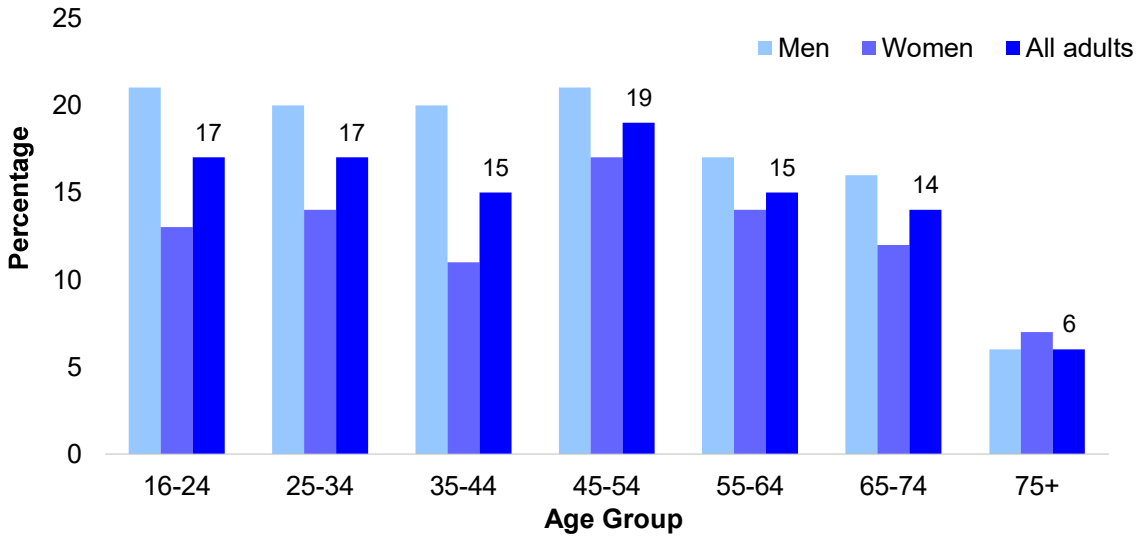


Figure 7A, Figure 7B, Table 7.1

7.2.2 Cigarette smoking status, 2022, by age and sex

As noted above, in 2022, 15% of all adults were current smokers. Smoking was most prevalent for those aged 45-54 (19%), and least prevalent for those aged 75 and over (6%). Significantly more men than women reported that they were currently smokers (18% and 13% respectively). Conversely, significantly more women than men indicated that they had never smoked (66% and 59% respectively).

Figure 7C
Current cigarette use, 2022, by age and sex



Of those who smoked, the mean number of cigarettes consumed per day was 11.4, with similar patterns for men and women. The number of cigarettes consumed per day tended to increase with age up to a peak of 15.6 among those aged 65-74.

Ex-regular smokers tended to be older, with only 6% of those aged 16-24 reporting having smoked regularly in the past, compared with 34% of those aged 75 and older. The reverse pattern was found for those who had never smoked, falling from 77% of those aged 16-24 to 55-59% of those aged 45 and older. **Figure 7C**, **Table 7.2**

7.2.3 Cigarette smoking status (age-standardised), 2003 to 2022, by area deprivation and sex

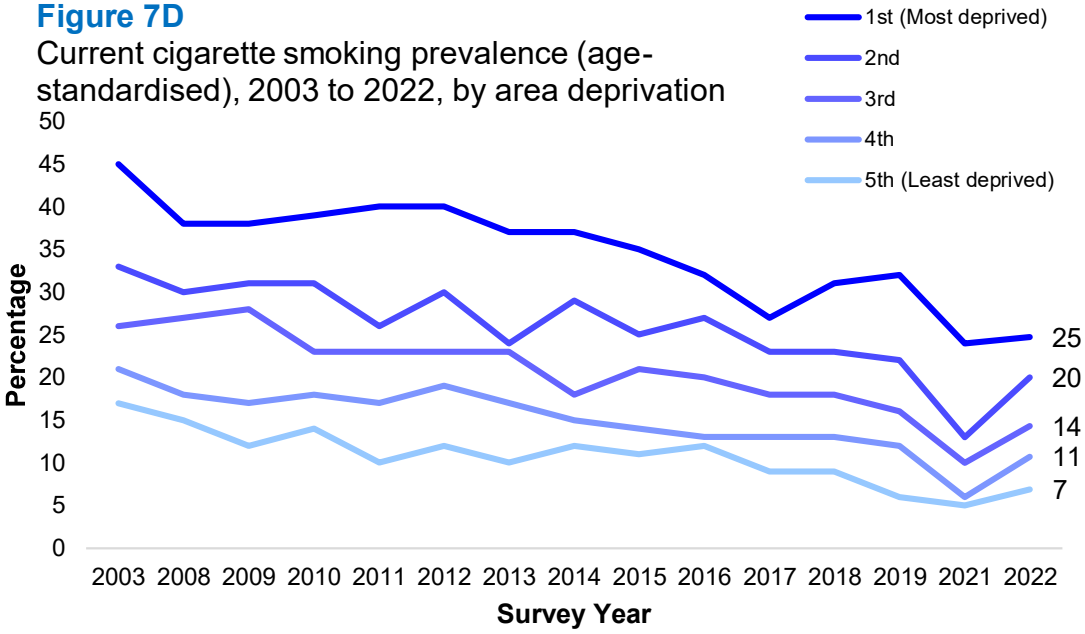
In 2022, the age-standardised prevalence of current cigarette smoking remained highest among adults living in the most deprived areas (25%), and lowest among those living in the least deprived areas (7%). This continued the trend observed since 2003, when smoking prevalence was 45% in most deprived areas and 17% in least deprived areas.

When evaluating the 2022 data in comparison with data recorded prior to and during the pandemic, some variations by area deprivation were evident. In 2022, the proportion of current cigarette smokers was similar to levels recorded in 2019 for all deprivation areas except the most deprived, where the 2022 proportion (25%) remained similar to 2021 (24%) and lower than in 2019 (32%). The proportion of current smokers

has varied for this deprivation area in recent years and further data is required in order to assess whether this is a potential trend.

Figure 7D

Current cigarette smoking prevalence (age-standardised), 2003 to 2022, by area deprivation



In 2022, the age-standardised mean number of cigarettes smoked per day was highest among adults living in the most deprived areas (13.0 per day) and lowest among those living in least deprived areas (10.0). This pattern has been evident across the timeseries.

Figure 7D, Table 7.3

7.2.4 Children's exposure to second-hand smoke, 2012 to 2022, by sex

In 2022, 6% of children aged 0-15 were living in accommodation in which someone regularly smoked indoors, a figure which was consistent for both boys and girls. This is a slight but not significant increase compared with 2021 (4%), however, it represents a decrease since 2019 (11%) and an overall decrease of 13 percentage points since 2012 (19%). As with the figures on adult smoking rates, the figures for 2021 must be interpreted with caution (see section 7.1.2 and the 2022 technical report).

In 2022, a small proportion (3%) of children were reported to be exposed to second-hand smoke in their own home. Over the time series, this proportion has reflected a similar pattern to the proportion of children living in accommodation with someone who regularly smoked indoors. The 2022 figure (3%) represents a slight but not significant increase compared with 2021 (2%) but an overall decrease of nine percentage points since 2012 (12%). The pattern has been similar among boys and girls across the time series.

Figure 7E

Percentage of children exposed to second-hand smoke in their own home, 2012 to 2022, by sex

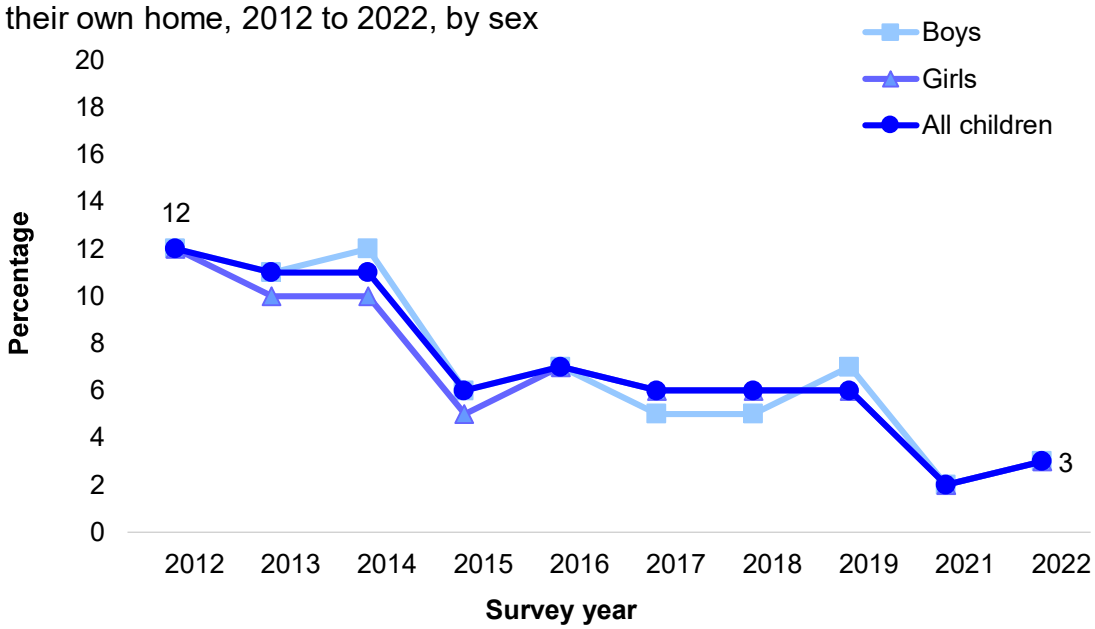


Figure 7E, Table 7.4

7.2.5 Nicotine Vapour Product use, 2014 to 2022, by sex

Current Nicotine Vapour Product (NVP) use increased in 2022 among all adults to 10%, having remained in the range 5 - 7% between 2014 to 2021. Similar patterns and increases in 2022 were recorded by sex.

The proportion of adults who had never used NVPs was 79% in 2022, a proportion which is slightly below the range recorded between 2014 and 2021 (80 - 85%). **Table 7.5**

7.2.6 Nicotine Vapour Product use, 2022, by age and sex

In 2022, 21% of all adults reported that they had ever used Nicotine Vapour Products (NVPs): 10% reported being current users and 11% reported having previously used them. 79% of adults had never used NVPs. Similar patterns were recorded for men and women.

The use of NVPs was most prevalent among those aged 16-24. About one in seven (15%) adults aged 16-24 reported that they currently used NVPs, while 24% of adults in this age group reported that they had previously used NVPs. Conversely, usage was lowest among those aged 75 and older with just 1% reporting that they currently use NVPs, and 3% reporting that they have previously used NVPs.

Figure 7F
Current Nicotine Vapour Product use, 2022, by age and sex

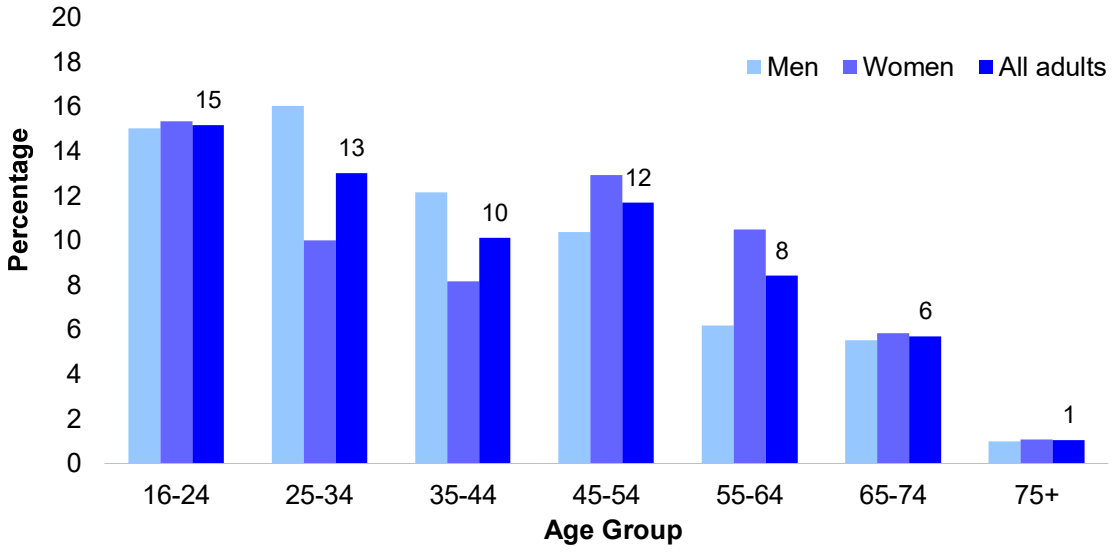


Figure 7F, Table 7.6

7.2.7 Dual use of Nicotine Vapour Products and cigarettes, 2022, by age and sex

In 2022, 4% of all adults reported using both NVPs and cigarettes, while 5% reported current use of NVPs and previous use of cigarettes. One percent reported current use of NVPs and no history of smoking cigarettes. Similar patterns were recorded for men and women, however significantly more women than men did not currently smoke or use NVPs (82% and 76% respectively).

Use of NVPs tended to decrease with age, with dual use of NVPs and cigarettes and use of NVPs with no history of smoking highest among those aged 16-24 (7% and 3% respectively) and lowest among those aged 75 and older (<1% and 0% respectively).

Figure 7G
Current dual use of cigarettes and Nicotine Vapour Products, 2022, by age and sex

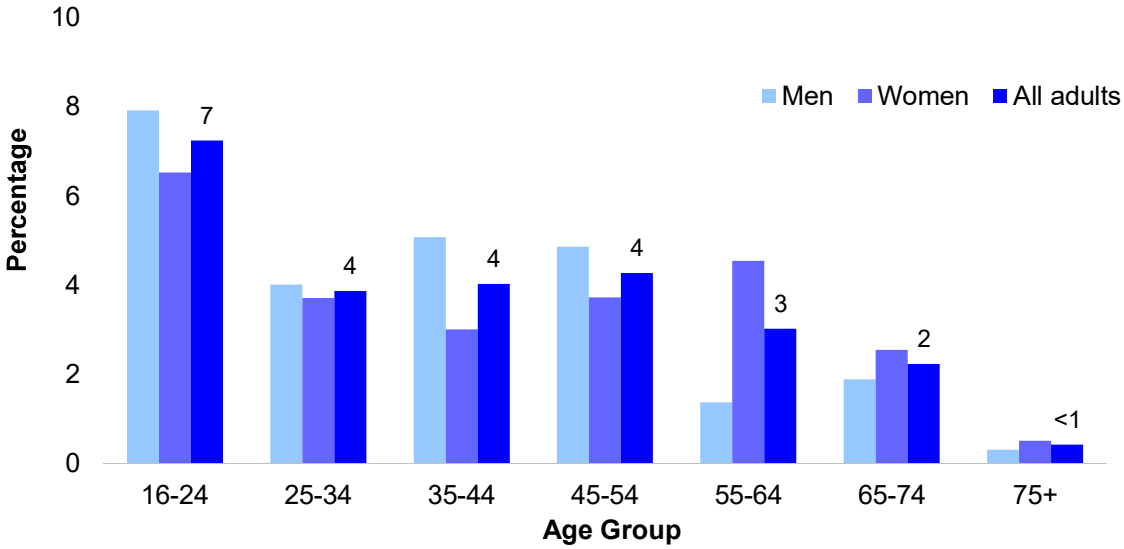


Figure 7G, Table 7.7

7.2.8 Attempts to quit smoking, 2021/2022 combined, by age and sex

In 2021/2022 combined, two-thirds (66%) of adult current smokers reported that they would like to give up smoking. A large proportion (78%) had tried to stop at least once, with 42% having tried to stop three times or more. Similar figures were recorded among men and women, with no significant variations.

Among those who had stopped smoking at some point in 2021/2022 combined, 44% reported that they had managed to stop smoking for over 6 months, with 56% having stopped for less than 6 months.

A higher proportion of men compared with women had never tried to stop smoking in 2021/2022 combined (28% men; 16% women), while a lower proportion of men had tried to stop smoking three times or more (37% and 49% respectively).

Adult smokers under the age of 64 were more likely to indicate that they wanted to give up smoking (66 – 73%) compared with those aged 75 and over (40 – 51%). However, it was the youngest age group that was most likely to indicate that they had never tried to stop (31% among those aged 16-44). **Table 7.8**

7.2.9 Use of NRT and other products, 2022, by age and sex

In 2022, 40% of adult ex-smokers and current smokers who had ever attempted to quit smoking, had used some form of Nicotine

Replacement Therapy (NRT) during their most recent attempt to quit smoking.

The most frequently used form of NRT was nicotine gum, patches, sprays/inhalers or lozenges/microtabs (25%), followed by NVPs (21%). Over half of adults who used to smoke or had ever tried to quit reported that they had not used any form of NRT (60%).

Similar patterns of NRT use were recorded for men and women.

Figure 7H
Current use of Nicotine Replacement Therapy, 2022, by age

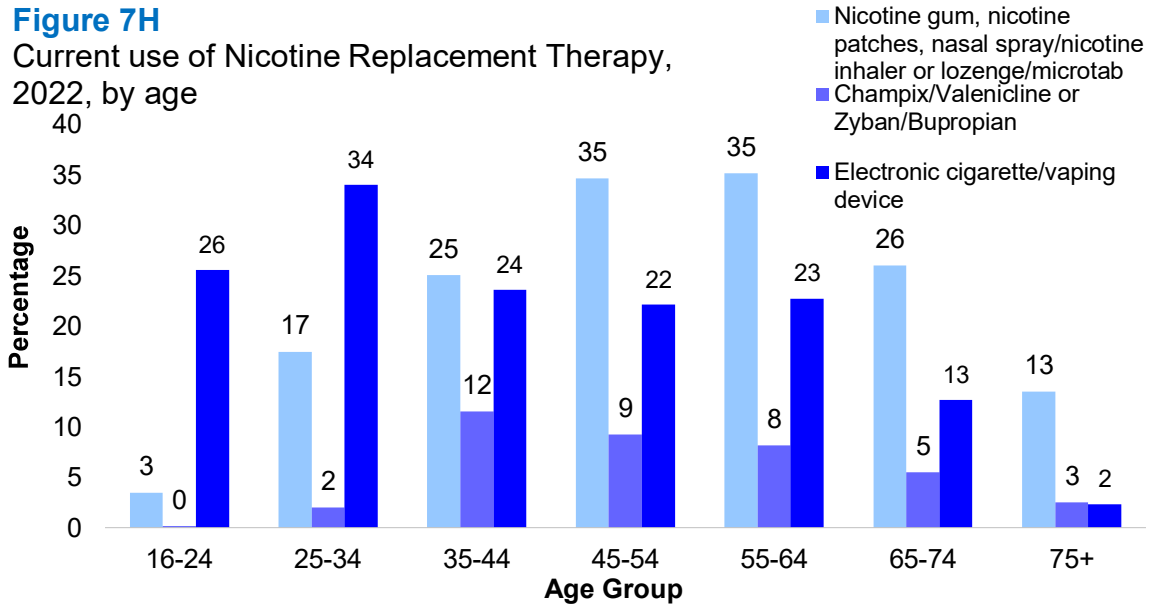


Figure 7H, Table 7.9

7.2.10 Use of NRT and other products that helped successful smoking cessation, 2018/2019/2021/2022 combined, by age and sex

Success rates of NRTs reported among those who had tried to use them were 74% for e-cigarettes/vaping devices; 73% for Champix/Valenicline or Zyban/Bupropian; and 60% for nicotine-containing products (gum, patches, sprays/ inhalers or lozenges/microtabs). These figures were similar for men and women.

Table 7.10

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Table 7.9 Use of NRT and other products, 2022, by age and sex

Table 7.10 Use of NRT and other products that helped successful smoking cessation, 2018/2019/2021/2022 combined, by age and sex

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[14] See: https://fingertips.phe.org.uk/documents/smoking_prevalence_comparisons_AUG2016.pdf

Chapter 8

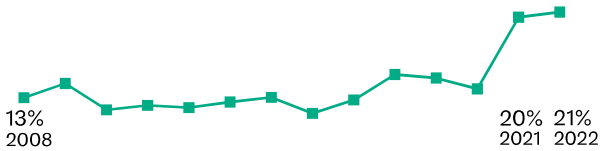
Diet and Obesity

CHAPTER 8

Diet and Obesity

The proportion of children aged 2-15 eating five or more portions of fruit and vegetables a day was higher in 2021 and 2022 than in the rest of the time series, the mean number of portions of fruit and vegetables consumed per day followed the same pattern.

% who ate 5 or more portions per day.



Mean number of portions per day

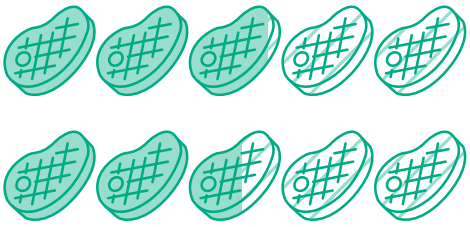
The proportion of children that did not consume any fruit or vegetables increased with age

4%	4%	10%	11%	14%
Aged 2-4	Aged 5-7	Aged 8-10	Aged 11-12	Aged 13-15

In 2021/2022 there continued to be a decline in the proportion of children consuming tuna fish once a week or more, whilst the proportion of children consuming oily fish or white fish once a week or more increased.

Tuna fish	Oily fish	White fish
2008/2009	2008/2009	2008/2009
32%	13%	48%
2021/2022	2021/2022	2021/2022
22%	19%	52%

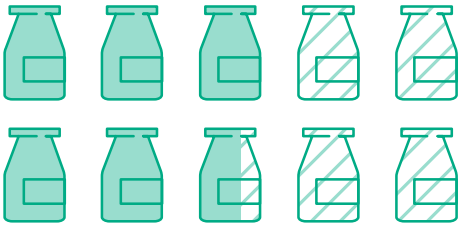
Children's consumption of red meat at least twice a week has declined over time.



2008/2009
57%

2021/2022
51%

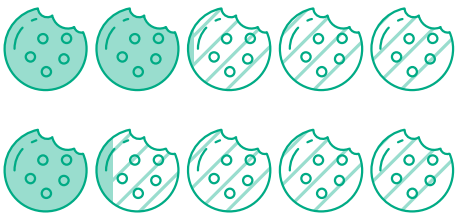
Children's consumption of skimmed or semi-skimmed milk has declined over time.



2008/2009
57%

2021/2022
52%

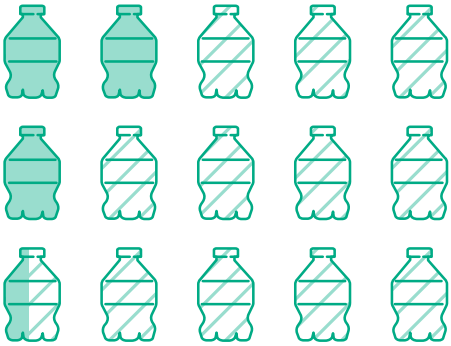
The linear decline in consumption of biscuits once a day or more continued in 2021/2022.



2008/2009
42%

2021/2022
24%

The greatest change over the time series has occurred in consumption of non-diet soft drinks once a day or more, from 38% in 2008/2009 to 16% in 2017/2018, and to 5% in 2021/2022.

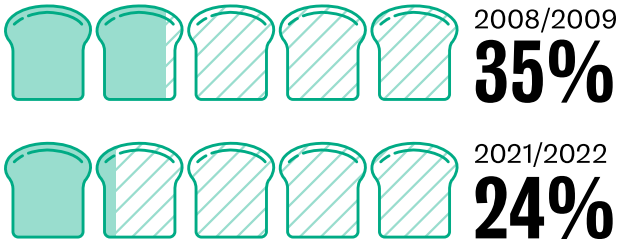


2008/2009
38%

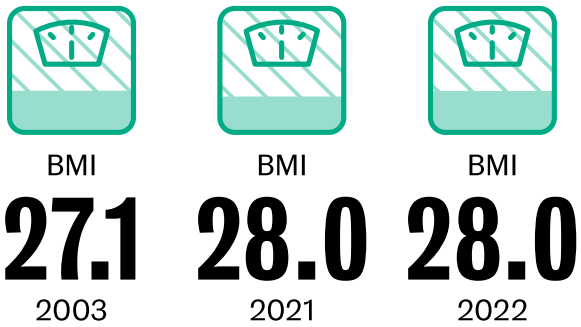
2017/2018
16%

2021/2022
5%

Children's consumption of at least 2-3 slices of high fibre bread a day has declined over time.

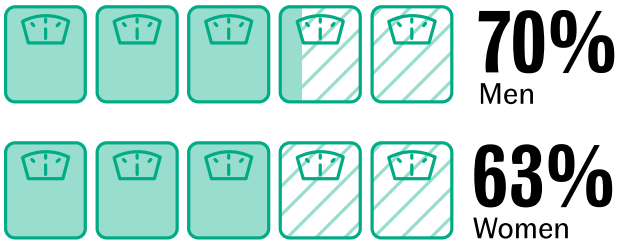


In 2022, the Body Mass Index (BMI) for adults was 28.0, the same as in 2021, and an increase from 27.1kgm^{-2} in 2003.

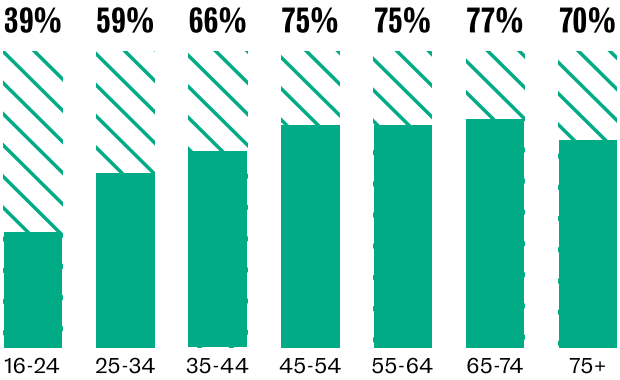


In 2022, 32% of all adults had a BMI between 18.5 and 25 kgm^{-2} - classed in the healthy weight category

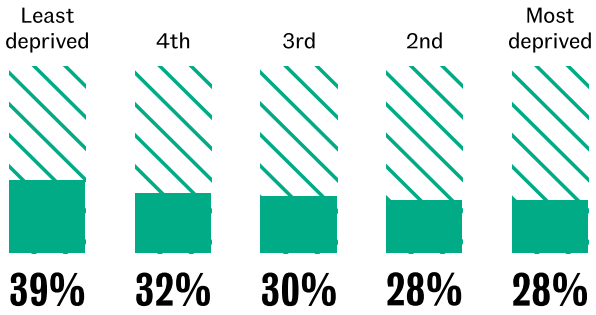
Around two-thirds of all adults (67%) were living with overweight (including obesity) in 2022, with a higher prevalence in men than women.



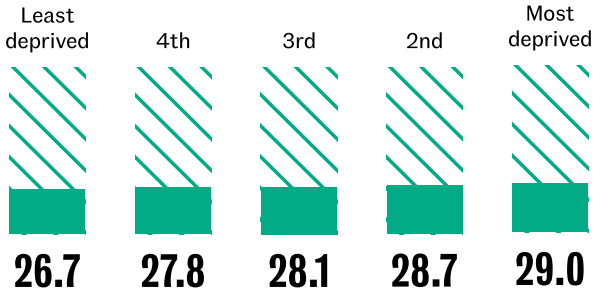
Those aged 16-24 had a significantly lower prevalence of living with overweight (including obesity) compared with older age groups.



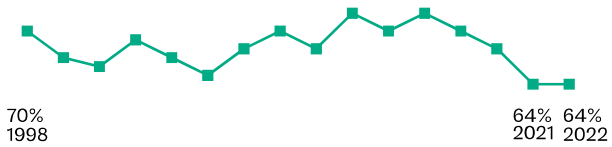
The proportions of adults in the healthy weight category decreased as area deprivation increased, from 39% in the least deprived areas to 28% in the most deprived areas.



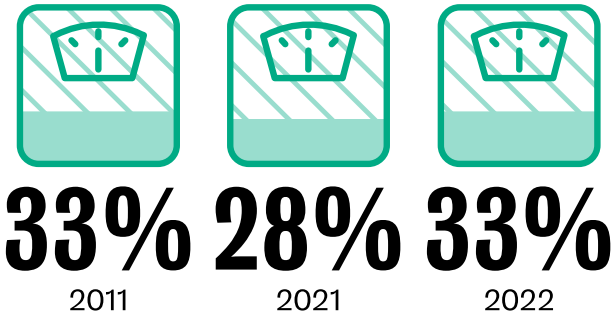
Mean adult BMI varied significantly by area deprivation in 2022, increasing from 26.7kgm^{-2} in the least deprived areas to 29.0 kgm^{-2} in the most deprived areas.



In 2022, 64% of children were in the healthy weight category. This was at the same level as in 2021, which was the lowest since the start of the time series in 1998.



One third of children were at risk of overweight (including obesity). This was 5 percentage points higher than in 2021, and the highest level since 2011.



8 Diet and Obesity

Eleanor Holman & Josephine Wildman

8.1 Introduction

Poor diet is a leading risk factor for ill health internationally[1] and has been linked to a range of poor health outcomes including, dental caries, obesity, type 2 diabetes, cardiovascular disease (CVD), hypertension and certain cancers[2,3,4].

Obesity is defined by the World Health Organisation as a disease characterised by excess adiposity. It is a "chronic, relapsing disease resulting from complex interactions between a range of factors, including those that occur at a biological, commercial, social and political level"[5]. Obesity is classified as having a Body Mass Index (BMI) of 30 kg/m^2 or more.

Research has shown that more than 1 in 20 adult cancer cases are linked to excess weight in the UK making obesity possibly the second largest preventable cause of cancer[6]. Obesity, independently of diet, has also been linked to a range of health outcomes including type 2 diabetes, CVD and hypertension in addition to cancer[7,8].

Studies have indicated that there is an association between mental health problems such as depression and anxiety and living with obesity[9,10,11]. There is also evidence of a link between living with overweight and obesity in midlife and possible dementia in late life[12,13,14]. The evidence also suggests that younger people in the UK are living with a higher BMI at an earlier age and staying at that higher BMI for longer[15]. The longer a person lives with a higher BMI, the greater their risk of developing chronic diseases and some forms of cancer[16]. More recently, evidence suggests that living with excess weight is also associated with an increased risk of serious COVID-19 outcomes[17,18].

The risk of such conditions can be reduced by improvements in the nutritional content of diets and overall reductions in elevated body mass[19]. Nutritional requirements include the consumption of five 80g portions of fruit and vegetables per day. For children, a portion size will vary in accordance with age, body size and level of physical activity, and approximates the amount that fits into the palm of their hand[20].

8.1.1 Policy background

Eating well, maintaining a healthy weight and regular physical exercise are key public health priorities for Scotland. **A Healthier Future: Scotland's Diet and Healthy Weight Delivery Plan**[21], published in July 2018, sets out a vision where everyone eats well and has a healthy weight, working towards five outcomes:

- Children have the best start in life – they eat well and have a healthy weight, including seeking to halve the prevalence of child obesity by 2030.
- A food environment that supports healthier choices.
- People have access to effective weight management services.
- Leaders across all sectors promote healthy weight and diet.

- Diet-related health inequalities are reduced.

These outcomes are supported by a wide range of actions including efforts to address factors such as environmental cues that encourage people to make less healthy choices, including food choices available outside of the home as advocated in the 2021 Out Of Home Action Plan[22]. Tranformation of the food environment is more likely to be effective in improving diet and reducing health inequalities than encouraging behaviour change alone. A Scottish Government commitment to legislation restricting the promotion of less healthy food and drink sold to the public will be informed by a forthcoming consultation on the detail of proposed regulations.

The Delivery Plan is underpinned by the Scottish Dietary Goals[23] and implemented alongside intiatives such as: Eat Well Your Way (a guide to help people plan, prepare and cook healthier food)[24]; the Scottish Grocers' Federation Healthy Living Programme (which supports retailers, predominantly in areas of higher deprivation, to offer and promote healthy choices at the point of sale)[25]; Parent Club (a holistic support package for parents and carers which includes advice on easy, healthy meals and snacks for children)[26]; and the Reformulation For Health Programme (a partnership with the Food and Drink Federation Scotland to encourage small and medium-sized business reformulation to improve the nutritional composition of food products available for purchase)[27].

8.1.2 Reporting on diet and obesity in the Scottish Health Survey (SHeS)

This chapter presents trend data on children's fruit and vegetable consumption, as well as data for 2022 by age and sex, along with trend data on children's eating habits for 2008/2009 to 2021/2022. Diet questions for adults were not included in the survey in 2022. In addition, adult and child body mass index (BMI)[28], disaggregated by age and sex, BMI trends, and age-standardised BMI by area deprivation are reported.

The area deprivation data are presented in Scottish Index of Multiple Deprivation (SIMD) quintiles. To ensure that the comparisons presented are not confounded by the different age profiles of the quintiles, the data have been age standardised. For detailed definitions of both SIMD and age-standardisation as well as terminology used in this chapter and for further details on the data collection methods for diet and obesity, please refer to Chapter 2 of the Scottish Health Survey 2022- volume 2: technical report.

Supplementary tables on diet and obesity are also published on the Scottish Government website: Scottish Health Survey.

8.1.3 Comparability with other UK statistics

Adult obesity is defined consistently in the Scottish Health Survey (SHeS) and the other health surveys within the UK using BMI

classifications. Sampling methodologies differ between the surveys. Of the four UK health surveys, SHeS and Health Survey for England are the most closely aligned.

8.2 Diet and Obesity

8.2.1 Child fruit and vegetable consumption, 2008 to 2022, by sex

In 2022, the proportion of children aged 2-15 who consumed five or more portions of fruit and vegetables in a day, at 21%, was consistent with consumption in 2021 (20%) and significantly higher than earlier in the time series when it was fairly stable at between 11 and 16%. This pattern was observed for both boys and girls.

In 2022, the proportion of children aged 2-15 consuming no fruit and vegetables on the day before the interview (8%) returned closer to the level seen prior to 2021 (9-11% between 2016 and 2019, compared with 5% in 2021). The increase, between 2021 and 2022, in the proportion eating no fruit and vegetables was true for both boys (from 6% to 9%) and girls (from 5% to 7%).

In line with the consistent pattern observed for the proportion of 2-15 year olds eating five or more portions of fruit and vegetables a day, the mean number of portions consumed per day by children aged 2-15 in 2022 (3.2 portions) was consistent with 2021 (3.4) and significantly higher than earlier in the time series (2.6-2.9 portions between 2008 and 2019). This pattern was observed for boys and girls. **Table 8.1**

8.2.2 Child fruit and vegetable consumption, 2022, by age and sex

In 2022, the proportion of children aged 2-15 consuming five or more portions of fruit or vegetables in a day did not vary significantly by sex or age, with this proportion in the range 18-24% across all age groups.

However, the proportion that did not consume any fruit or vegetables did vary significantly by age, increasing from 4% among children aged 2-7 to 14% among those aged 13-15. This increase was observed for both boys and girls.

The mean number of portions consumed per day also varied by age, increasing from 2.8 portions among those aged 13-15 to 3.6 portions among children aged 2-5. Again, this pattern by age was observed among both boys and girls. **Table 8.2**

8.2.3 Summary of child eating habits, 2008/2009 to 2021/2022, by sex

While the eating habits of children were broadly consistent between 2008/2009 and 2021/2022, some changes have been observed. In 2021/2022 there continued to be a decline in the consumption of tuna fish once a week or more from 32% in 2008/9 to 22% in 2021/22. This decline was coupled with an increase in consumption of other types of fish since 2008/2009.

Children's consumption of red meat at least twice a week declined from 57% in 2008/2009 to 51% in 2021/2022, the decline being greater for girls (56% to 46%) than for boys (59% to 55%). Over the same period, consumption of other meat products fluctuated between 38-42%.

In 2021/2022 52% of children aged 2-15 drank skimmed or semi-skimmed milk. This represents a decline from 57% in 2008/2009.

The linear decline in consumption of biscuits once a day or more continued in 2021/2022 (42% in 2008/2009 compared with 24% in 2021/2022). The greatest change over the time series has occurred in consumption of non-diet soft drinks once a day or more, from 38% in 2008/2009 to 16% in 2017/2018, and to 5% in 2021/2022. This decline was observed for both boys and girls.

Almost one-quarter (24%) of children (26% of boys and 23% of girls) consumed at least 2-3 slices of high fibre bread a day in 2021/2022. This proportion has declined from a high of 35% in 2008/2009.

Figure 8A
Child eating habits, 2008/2009 combined to 2021/2022

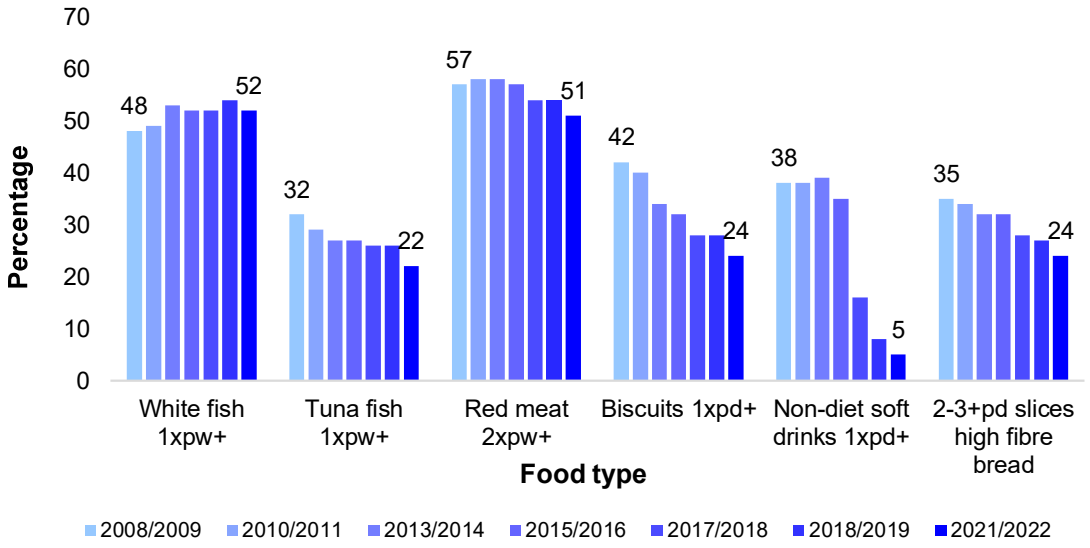


Figure 8A, Table 8.3

8.2.4 Child eating habits, 2021/2022, by age and sex

Consumption of white fish once a week or more declined linearly from 63% among children aged 2-4 years (boys 64%; girls 62%), to 38% among 13-15 year olds (boys 43%; girls 33%). Across all age groups, consumption was higher among boys than girls (55% compared with 49%, respectively).

Across most age groups (with the exception of those aged 2-4), the proportion of children eating red meat twice or more per week was

higher among boys than girls with the largest difference occurring among 8-10 year olds (61% for boys, compared with 45% for girls).

There was an increase in the proportion of children drinking skimmed or semi-skimmed milk by age, from 29% of those aged 2-4, to 63% of those aged 13-15. The proportion of girls drinking skimmed or semi-skimmed milk was higher than for boys across all age groups.

At age 2-4, almost four in ten (39%) children were consuming sweets or chocolates once a day or more, this increased to 55% of those aged 8-10, and decreased to 47% of those aged 13-15. Across most age groups, consumption was higher among girls than boys.

Whereas 1% of children aged 2-4 drank non-diet soft drinks once a day or more, 9% of those aged 13-15 years did so, with boys aged 13-15 most likely to consume such drinks.

Conversely, the consumption of high fibre/low sugar cereal at least 5-6 times a week decreased with age from 39% among 2-4 year olds, to 19% among 13-15 year olds.

Across most age groups, boys were more likely than girls to consume chips twice or more times per week, and potatoes, pasta or rice five or more times per week, and at least 2-3 slices of high fibre bread a day, although differences were not statistically significant.

Patterns of consumption of oily or tuna fish once a week or more did not differ significantly among children by age or sex. Similarly, consumption of cakes twice or more per week did not differ by age or sex, nor did consumption of ice-cream once a week or more.

Figure 8B

Child eating habits, 2021/2022 combined, by age and sex

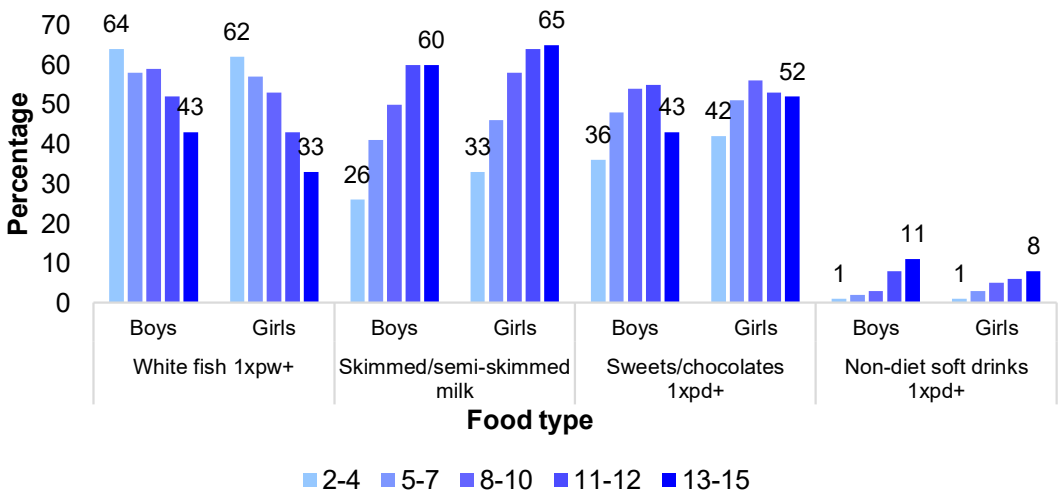


Figure 8B, Table 8.4

8.2.5 Adult BMI, 2003 to 2022, by sex

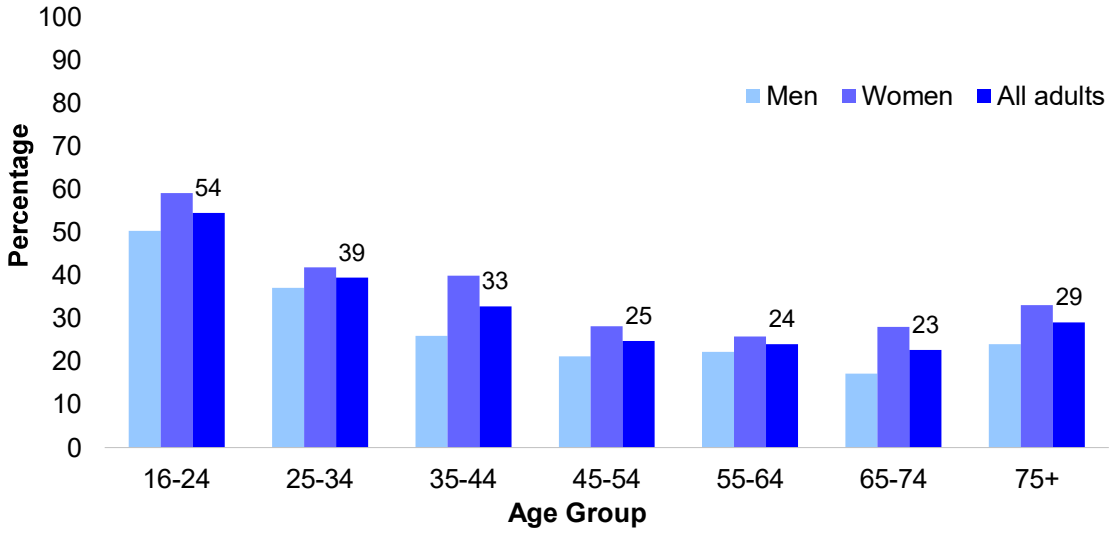
In 2022, the Mean Body Mass Index (BMI) for adults was 28.0kgm^{-2}, the same level as in 2021, and with a small difference between males (27.6) and females (28.1). This level has increased from a mean of 27.1kgm^{-2} for adults measured in 2003. The proportion of men with a BMI of 25 or more (defined as living with overweight, including obesity) increased from 65% in 2003 to 70% in 2021 and 2022. The proportion of women with a BMI of 25 or more increased from 60% to 63% during the same period. Moreover, the proportions with a BMI of 30 or more (defined as living with obesity) increased between 2003 and 2022 from 22% to 28% of men and from 26% to 30% of women. **Table 8.5**

8.2.6 Adult BMI, 2022, by age and sex

In 2022, 32% of all adults had a BMI of 18.5 to less than 25 kgm^{-2}, classed as a healthy weight, with a higher proportion of women compared with men in this category (36% and 28% respectively). Around two-thirds of all adults were living with overweight, including obesity, in 2022 (67%), with a higher prevalence in men (70%) compared with women (63%). The prevalence of living with obesity did not differ significantly between men and women in 2022 (28% and 30% respectively).

Figure 8C

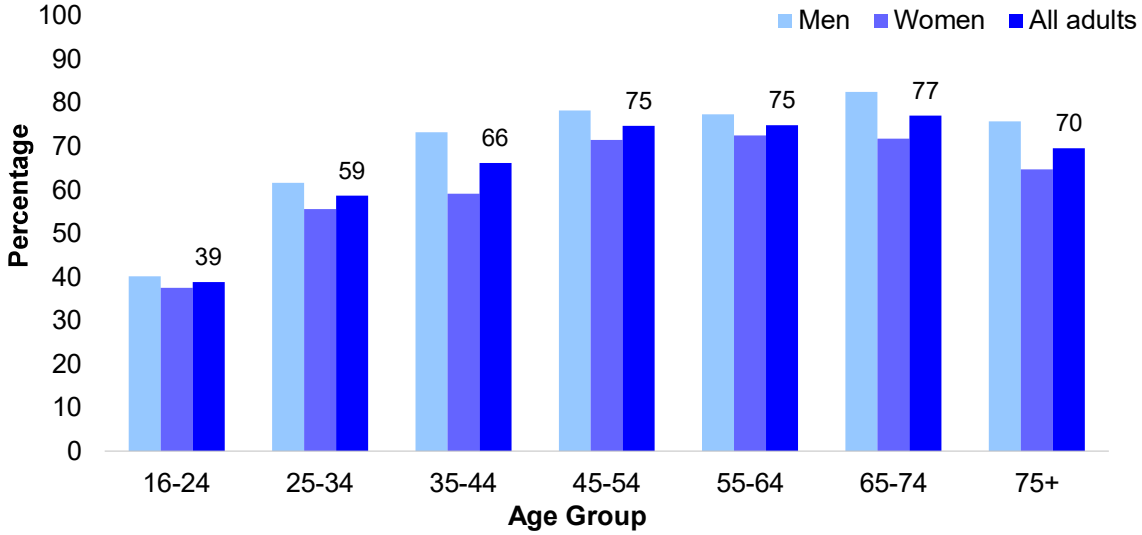
Adults with healthy weight (BMI 18.5 - <25kgm^{-2}), 2022, by age and sex



Just over half of adults aged 16-24 were in the healthy weight category (54%), a higher proportion than among other age groups with the prevalence of healthy weight in the range 23-39% among those aged 25 and over. Those aged 16-24 had a significantly lower prevalence of living with overweight (39%) compared with 59-77% among older age groups or obesity (16% compared with 23-39% among older age groups).

Figure 8D

Adults with overweight or obesity (BMI 25kgm^{-2} or more) 2022, by age and sex



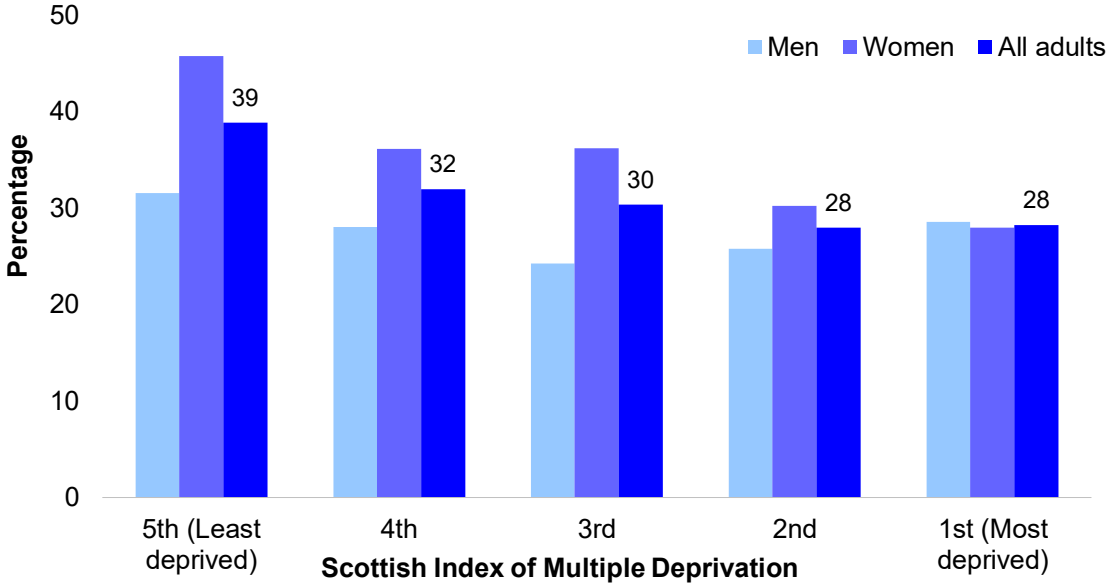
There was also a significant variation in mean BMI by age ranging from 25.2 kgm-2 for those aged 16-24 of to between 27.1 - 29.6 kgm-2 among the older age groups. **Figure 8C, Figure 8D, Table 8.6**

8.2.7 Adult BMI (age-standardised), 2022, by area deprivation and sex

The proportions of adults in the healthy weight category (18.5 to 25 kgm-2) decreased as area deprivation increased, from 39% in the least deprived areas to 28% in the most deprived areas. The pattern among women followed this trend and there was a statistically significant difference between women living in the most and least deprived quintiles. However, among men the proportion decreased from 32% in the least deprived areas to 23% in the mid-deprivation areas, and increased again to 29% in the most deprived areas.

Figure 8E

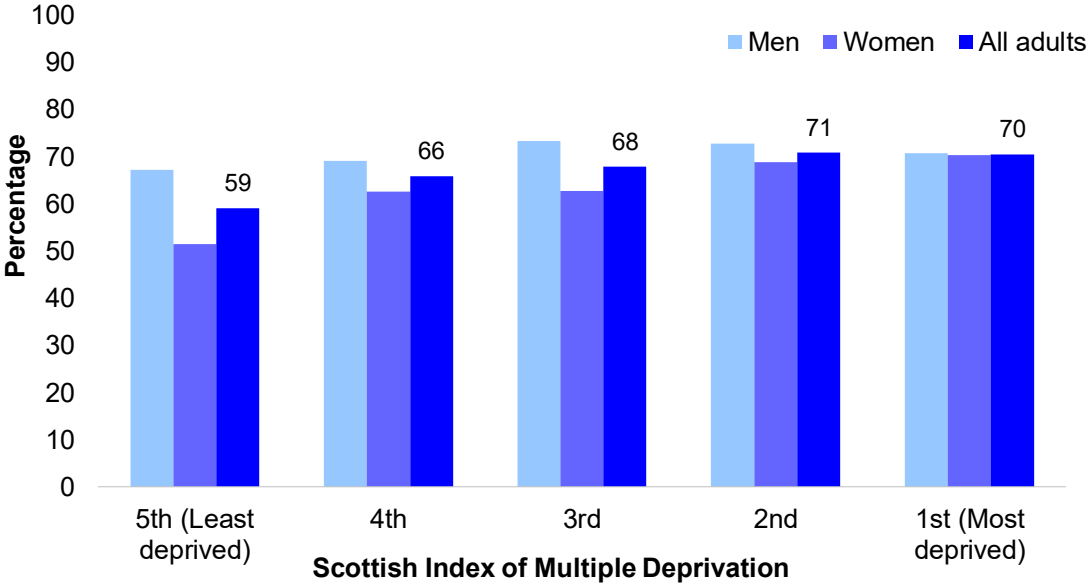
Adults with healthy weight (18.5 - <25 kgm^{-2}, age-standardised), 2022, by area deprivation and sex



In 2022, the proportion of adults living with overweight or obesity increased as area deprivation increased. The proportion of those in this weight category increased from 59% in the least deprived areas to 70-71% in the two most deprived quintiles and the proportion of adults living with obesity increased from 19% in the least deprived areas to 36% in the most deprived areas.

Figure 8F

Adults with overweight or obesity (25 kgm^{-2} or more) age-standardised), 2022, by area deprivation and sex



The mean BMI also varied significantly by area deprivation in 2022, increasing from 26.7 kgm-2 in the least deprived areas to 29.0kgm-2 in the most deprived areas. **Figure 8E, Figure 8F, Table 8.7**

8.2.8 Child BMI, 1998 to 2022, by sex

In 2022, 64% of children were in the healthy weight category. This was at the same level as in 2021, which was the lowest in the time series. Just over one third (36%) of children had a weight outside of the healthy range (at risk of underweight, overweight or obesity) in 2022. This was the same as in 2021, which was highest level since the start of the time series in 1998.

One-third (33%) of children were classed as at risk of overweight (including obesity). This was 5 percentage points higher than in 2021, and the highest level since 2011. **Table 8.8**

8.2.9 Child BMI, 2022, by age and sex

Prevalence of children at risk of overweight or obesity increased from 29% among those aged 2-6 years to 38% among those aged 12-15, although this difference was not statistically significant. There were no significant differences in the proportion of children in any of the BMI categories by age or sex in 2022.

Figure 8G

Children at risk of overweight or obesity, 2022, by age and sex

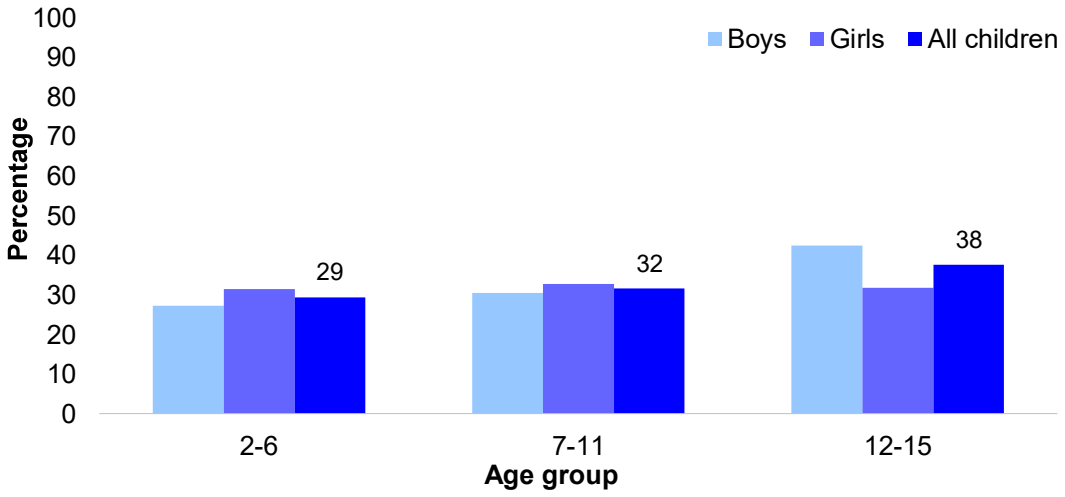


Figure 8G, Table 8.9

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Table 8.5 Adult BMI, 2003 to 2022, by sex
Table 8.6 Adult BMI, 2022, by age and sex

Table 8.7 Adult BMI (age-standardised), 2022, by area deprivation and sex
Table 8.8 Children BMI, 1998 to 2022, by sex
Table 8.9 Children BMI, 2022, by age and sex

References and notes

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[2] Defined in adults as a body mass index (BMI) of 30 kg/m² or greater.

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[28] Data for 2022 are based on interviewer-administered measurements only for children. For adults in 2022, both self-reported and interviewer administered height & weight measurements were combined. Self-reported height and weight measurements were adjusted according to formulae developed by Public Health England for use on the Active Lives survey from Health Survey for England data. The formulae have the effect of increasing self-reported weight and decreasing self-reported height, particularly among older adults. In 2021, the telephone format of the survey meant that all adult and child measurements were self-reported. The measurements for adults were adjusted as described above. No equivalent adjustment factors were available for children and hence the analysis for children in 2021 was based on self-reported measures. Therefore, caution should be taken when comparing data with the 2021 and 2022 surveys.

Chapter 9

Physical Activity

CHAPTER 9

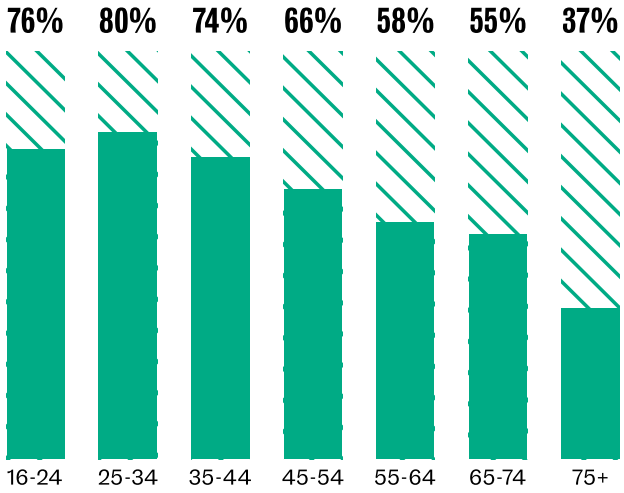
Physical Activity

In 2022:

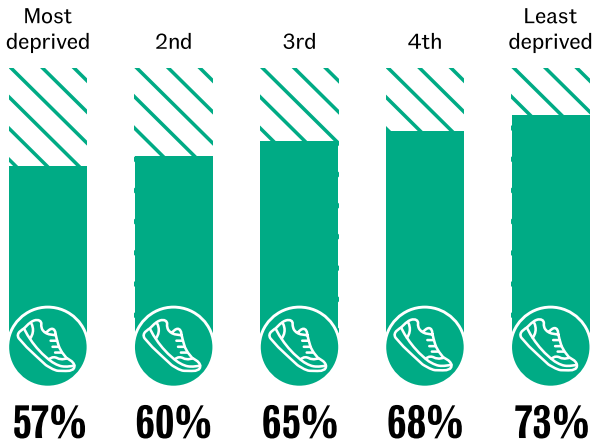
65%

of adults met the guidelines for moderate or vigorous physical activity (MVPA).[1]

As in previous years, younger adults were more likely than older adults to have met the MVPA guidelines.

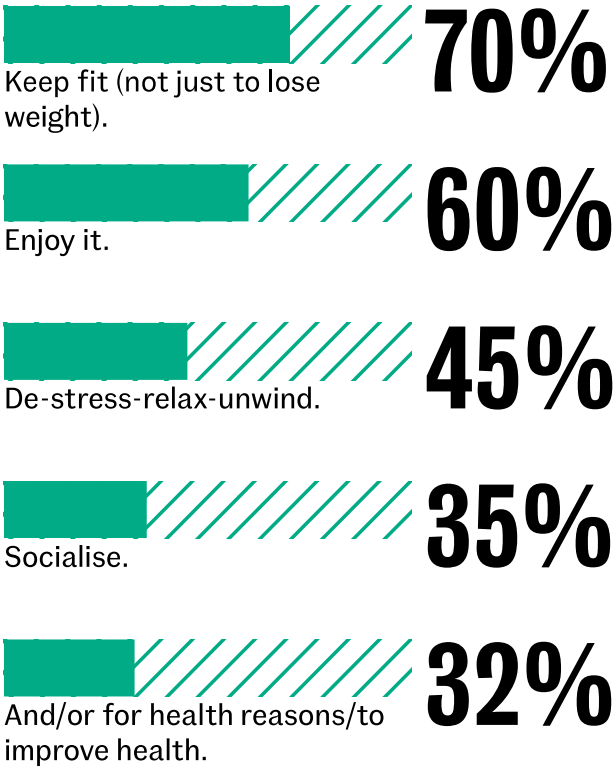


In 2022, the age-standardised proportion of adults meeting the MVPA guidelines increased as deprivation decreased.

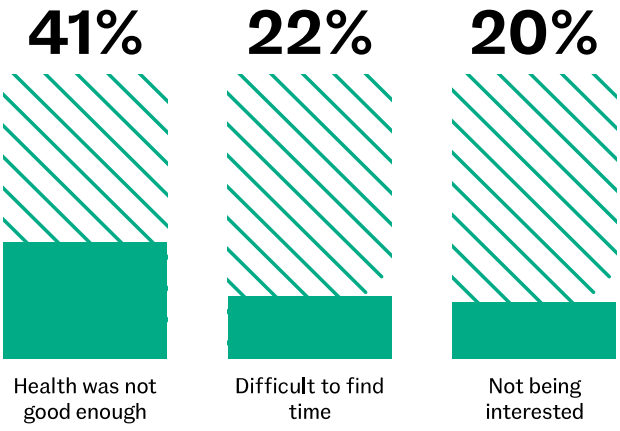


In 2022:

The most common reasons given by all adults for participation in physical activities were to:



Amongst adults who did not meet the MVPA guidelines, the most common reasons given were:



1. At least 150 minutes of moderately intense physical activity or 75 minutes of vigorous activity per week or an equivalent combination of both.

The average time adults spent sitting on weekdays, excluding time working, at college or at school, increased from:

5.2hrs
2015

5.6hrs
2022

The average time adults spent sitting on weekends, excluding time working, at college or at school, increased from:

5.9hrs
2015

6.3hrs
2022

The average amount of time children spent on sedentary activities on weekdays, excluding time at school or nursery, has been in the range from:

3.3hrs – 3.6hrs
between 2015 and 2022

It has increased over weekends from:

4.5hrs
2015

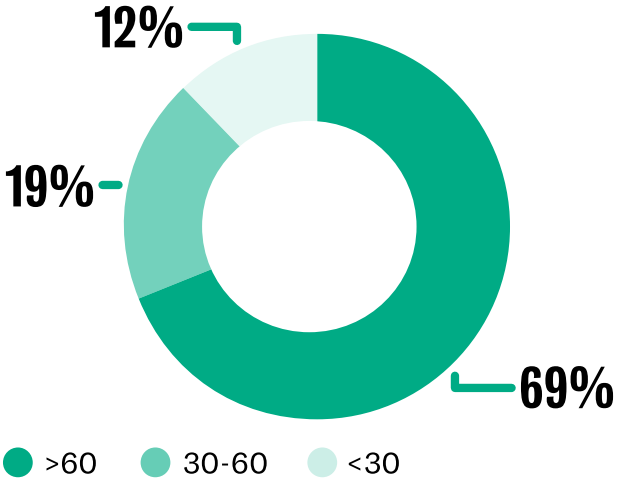
5.1hrs
2022

In 2022, the proportion of all children aged 5-15 undertaking at least 60 minutes of activity on average per day in the previous week was:

69%
Including school-based activities

59%
Excluding school-based activities

Including school-based activities, around two in ten children aged 5-15 achieved at least 30 but less than 60 minutes per day on average. While just over one in ten achieved less than 30 minutes of physical activity on average per day:



Girls were more likely to undertake at least 30 but less than 60 minutes of activity on average per day (22%) than boys (16%).

Girls

66%
>60

22%
30-60

12%
<30

Boys

72%
>60

16%
30-60

12%
<30

9 Physical Activity

Stephen Rule

9.1 Introduction

The World Health Organisation lists physical inactivity as one of the four key modifiable behaviours which increase the risk of non-communicable diseases (NCDs), along with tobacco use, unhealthy diet, and the harmful use of alcohol[1]. Physical activity is beneficial for physical health, maintenance of a healthy weight, mental health (including maintaining cognitive ability), childhood educational attainment and overall wellbeing. A lack of physical activity can result in preventable cases of conditions such as cardiovascular disease, depression, dementia and type 2 diabetes[2].

The UK Chief Medical Officers' Physical Activity Guidelines[3] (2019) were constructed as advice to the general population about the recommended frequency, intensity, time and types of physical activity required to prevent major chronic disease and to maintain health.

The guidelines recommend that, for good physical and mental health, adults should aim to be physically active every day. Any activity is better than none, and more is better still. Each week, adults should accumulate at least 150 minutes of moderate intensity activity; or 75 minutes of vigorous intensity activity; or even shorter durations of very vigorous intensity activity; or a combination of moderate, vigorous and very vigorous intensity activity. The guidelines also recommend that muscle strengthening activities are undertaken on at least two days a week but that any strengthening activity is better than none. Sedentary time should be minimised as far as possible.

For children and young people, the recommendations[4] are that those aged 5 to 18 years should endeavour to participate in an average minimum of 60 minutes of moderate to vigorous intensity physical activity per day, which should include activity that develops movement skills, bones and muscles; and conversely spend less time sitting or lying down and break up periods of physical inactivity with sporadic movement and activity.

9.1.1 Policy background

The Active Scotland Outcomes Framework[5] sets out the shared vision and goals which have shaped the approach the Scottish Government and a wide range of partner organisations have taken to supporting and enabling people in Scotland to be more physically active. The framework facilitates a cross-government commitment to the importance of physical activity and sport in achieving a wide range of outcomes, including the percentage of schools meeting the physical education target.

The **Active Scotland Delivery Plan (A More Active Scotland)**[6], published in 2018, identifies a wide range of actions across all sectors with the overall aim of reducing physical inactivity in adults and teenagers by 15% by 2030 and addressing existing inequalities in access to opportunities for physical activity, barriers to participation and

how to develop both the confidence and competence needed to encourage lifelong participation in physical activity and sport among children and young people. This plan is currently being revised to reflect the impact of the pandemic and the availability of new international guidance on where efforts should be focussed to improve levels of physical activity across the world.

9.1.2 Reporting physical activity in the Scottish Health Survey

This chapter presents findings on several aspects of physical activity amongst adults and children. For adults aged 16 years and older[7], these include trend and 2022 age and sex breakdowns of adherence to recommended physical activity levels, including muscle strengthening activity levels, reasons for participating in activity, barriers to being more active, and daily sedentary time. For children aged 5 to 15 years, findings are presented on summary activity levels (including and excluding school-based activities) since 1998, 2022 activity by age (2-15 years), and sedentary time.

Breakdown of adult physical activity by deprivation is presented in Scottish Index of Multiple Deprivation (SIMD) quintiles. To ensure that the comparisons presented are not confounded by the different age profiles of the quintiles, the data have been age-standardised. For a detailed description of both SIMD and age-standardisation as well as definitions of other terminology used in this chapter and for details on the 2019 UK Physical Activity Guidelines and data collection methods for physical activity, please refer to Chapter 2 the Scottish Health Survey 2022 - volume 2: technical report.

Please note that some caution should be exercised when interpreting data for 2021 within any time series data presented. In 2021, an opt-in telephone methodology was used due to the COVID-19 restrictions in place. In addition, the data may also have been impacted by the wider societal context in which the survey was undertaken. Please see the 2022 Scottish Health Survey technical report for more information.

Supplementary tables on physical activity are also published on the Scottish Government website: Scottish Health Survey.

9.2 Physical Activity

9.2.1 Adult summary activity levels, 2012 to 2022, by sex

In 2022, 65% of adults met the guidelines for moderate or vigorous physical activity (MVPA)[8]. This is within the range of 62-66% recorded between 2012 and 2019, but lower than the proportion recorded in 2021 (69%).

In 2022, smaller proportions of all adults reported undertaking some (9%), low levels (4%) or very low levels (22%) of physical activity. As in previous years, in 2022, a higher proportion of men (70%) reported adhering to the MVPA guidelines than women (60%).

However, these proportions represented a decline since 2021 (men 73%; women 65%) after increasing from the 2019 levels of 71% and 61% respectively.

Figure 9A
Adult adherence to MVPA guidelines, 2012 to 2022, by sex

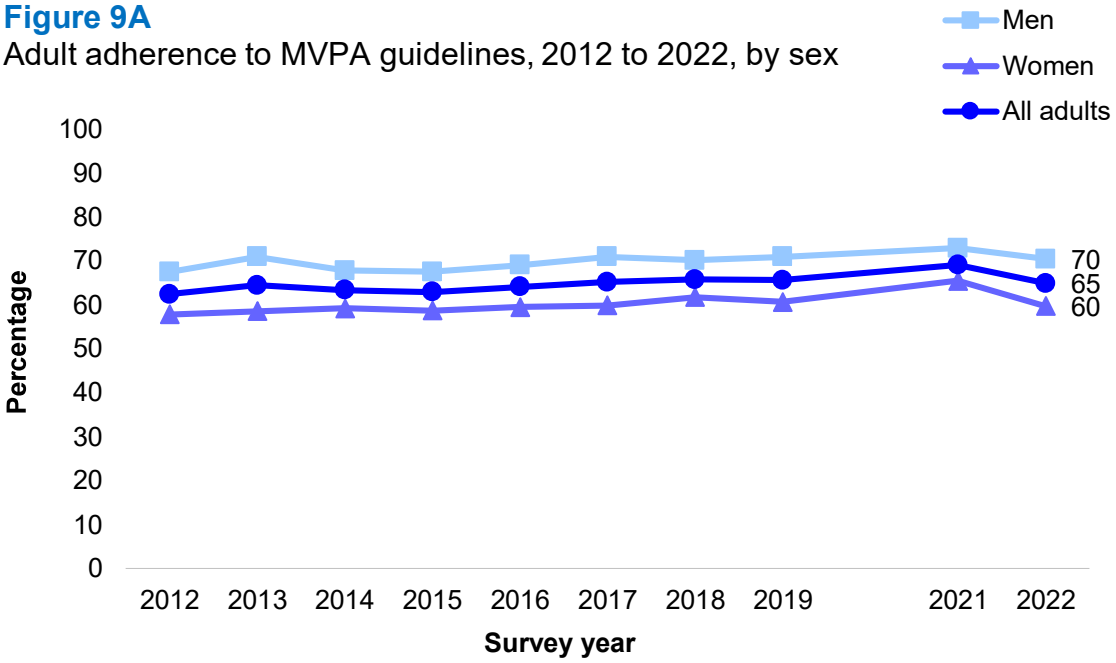
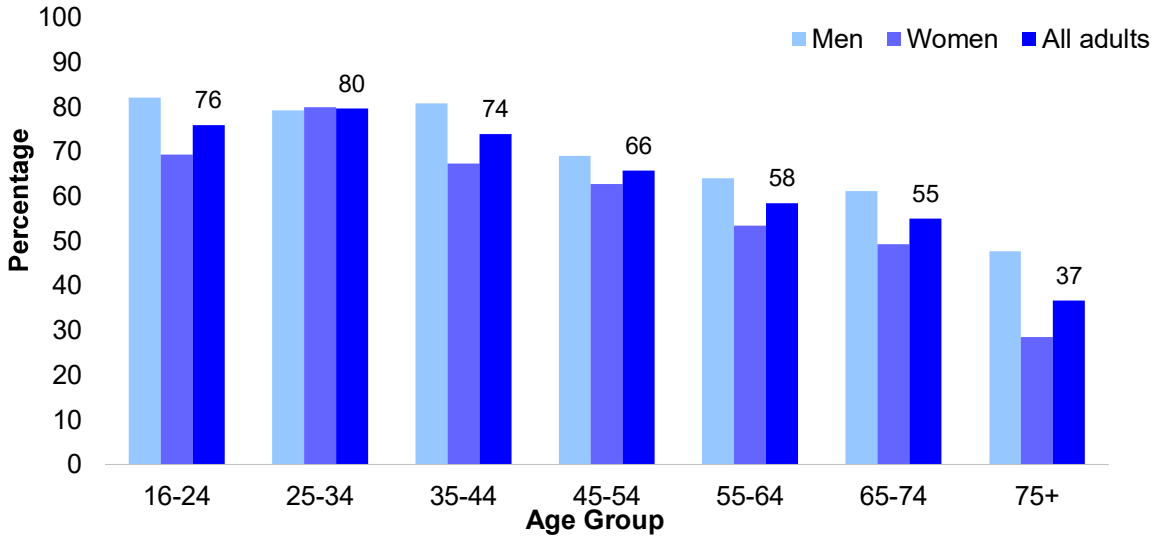


Figure 9A, Table 9.1

9.2.2 Adult summary activity levels, 2022, by age and sex

As in previous years, younger adults were more likely than older adults to have met the MVPA guidelines. In 2022, 74% to 80% of those aged 16-44 met the guidelines, a proportion which decreased by age to 37% among those aged 75 and over.

Figure 9B
Adult adherence to MVPA guidelines, 2022, by age and sex



As in previous years, statistically significant differences in the proportions adhering to the MVPA guidelines were recorded by sex for the older age groups in 2022. Among those aged 55-64 years, 64% of men and 54% of women adhered to the guidelines, as did 62% of men compared with 49% of women in the 65-74 age group, and 48% of men compared with 28% of women aged 75 and over. **Figure 9B, Table 9.2**

9.2.3 Adult summary activity levels (age-standardised), 2022, by area deprivation and sex

As in previous years, in 2022, the age-standardised proportion of adults who met the MVPA guidelines was lowest among those living in the most deprived quintile (57%) and highest among those living in the least deprived quintile (73%). Similar patterns were evident among men and women.

Figure 9C

Adult adherence to MVPA guidelines, 2022, by area deprivation and sex

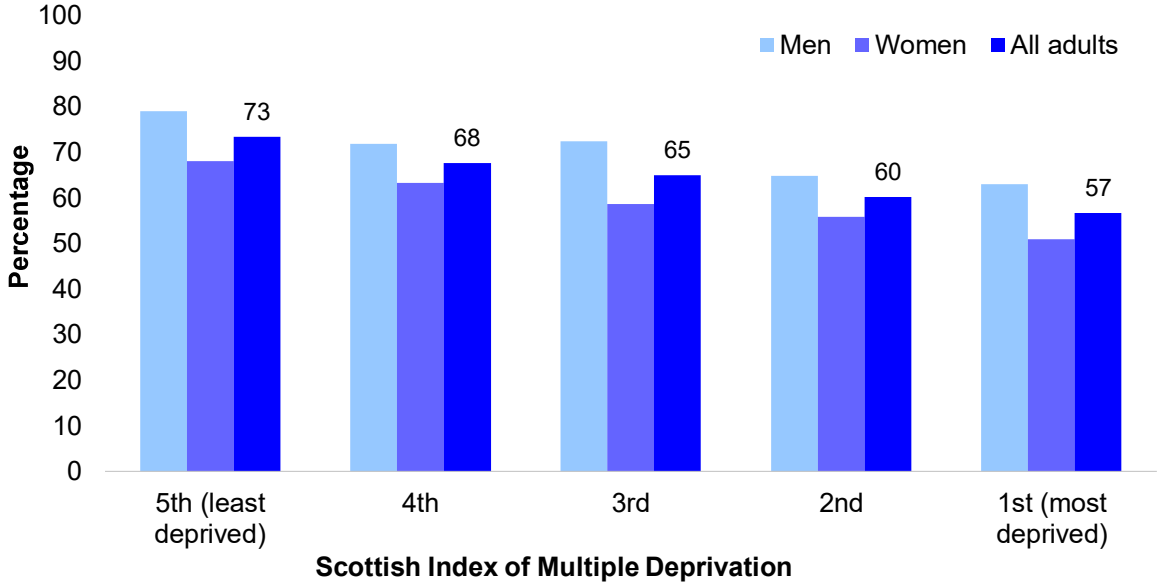


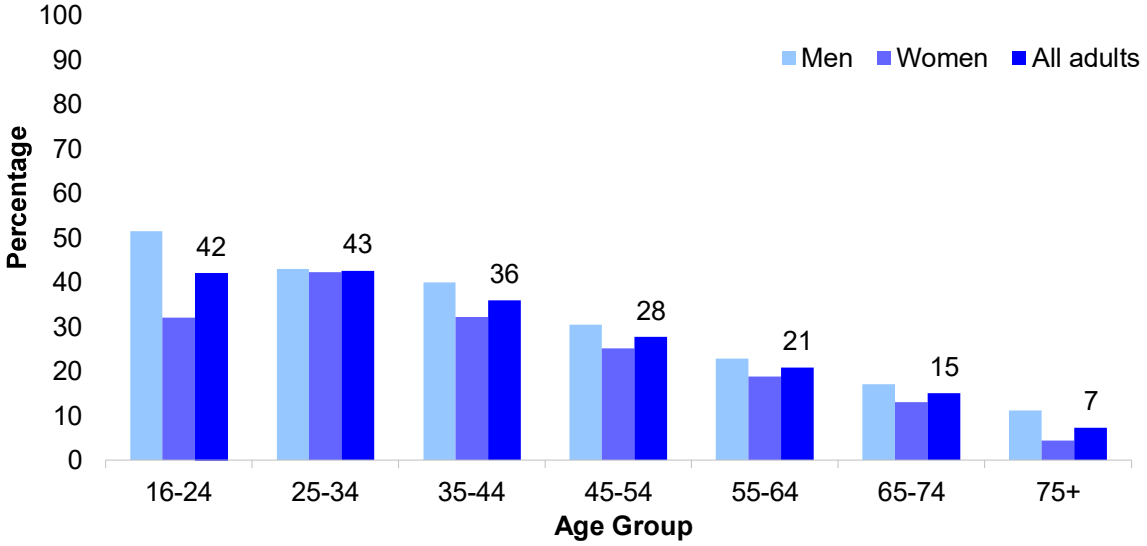
Figure 9C, Table 9.3

9.2.4 Adult MVPA and muscle strengthening physical activity, 2022, by age and sex

In 2022, 28% of adults adhered to both the MVPA and muscle strengthening recommendations[9], while 37% met the MVPA guidelines only. Just over one-third (35%) of adults in 2022 did not meet either of the recommendations, while 1% fulfilled the muscle strengthening recommendation only.

As in previous years, men were more likely than women to meet both guidelines in 2022 (32% and 25% respectively), although this difference was not significant.

Figure 9D
Adult adherence to MVPA and muscle strengthening recommendations, 2022, by age and sex



In 2022, adherence to both the MVPA and muscle strengthening recommendations decreased with age, from 36-43% among those aged 16-44 to 7% among those aged 75 and over. Similar patterns were recorded among men and women. The proportion not meeting either recommendation increased with age from 20-25% among those aged 16-44 to 63% among those aged 75 and over. **Figure 9D, Table 9.4**

9.2.5 Reasons for participating in activity, 2022, by age and sex

In 2022, the most common reasons given by all adults for participation in physical activities were to keep fit (not just to lose weight) (70%), to enjoy it (60%), to de-stress/relax/unwind (45%), to socialise (35%) and/or for health reasons/to improve health (32%). Similar patterns were evident among men and women.

In 2022, few significant patterns were evident by age; higher proportions of adults aged 45 and over participated in physical activity to help with an injury or disability (10-14%) compared with those aged 16-44 (1-8%).

Figure 9E
Reasons for participating in activity, 2022, by age

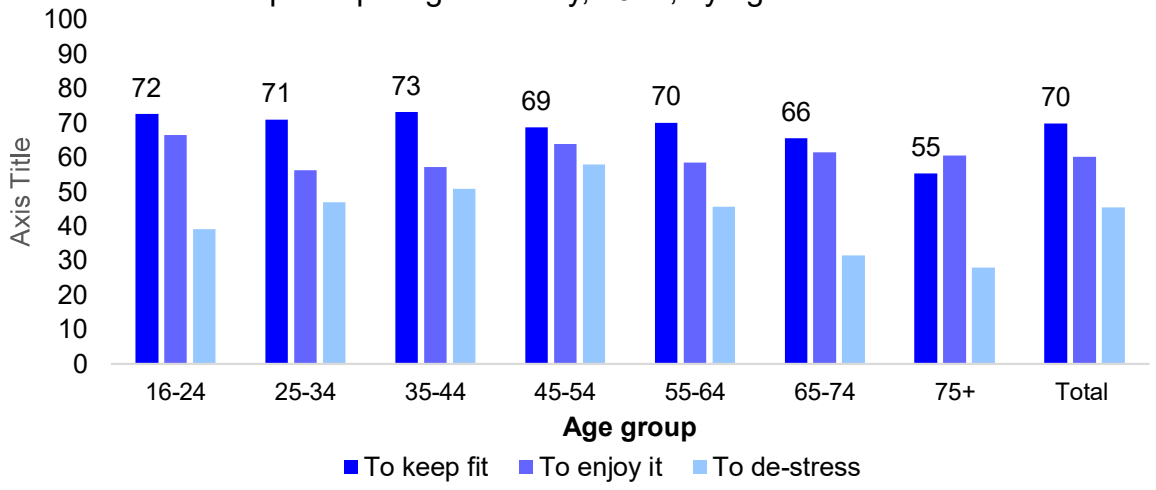


Figure 9E, Table 9.5

9.2.6 Barriers to being more active, 2022, by age and sex

Amongst adults who did not meet the MVPA guidelines, the most common reasons given were that their health was not good enough (41%), it was difficult to find time (22%) and not being interested (20%). These reasons did not differ significantly by age or sex.

Figure 9F
Barriers to being more active, 2022, by sex of adults aged 16+ who have not met NHS physical activity guidelines

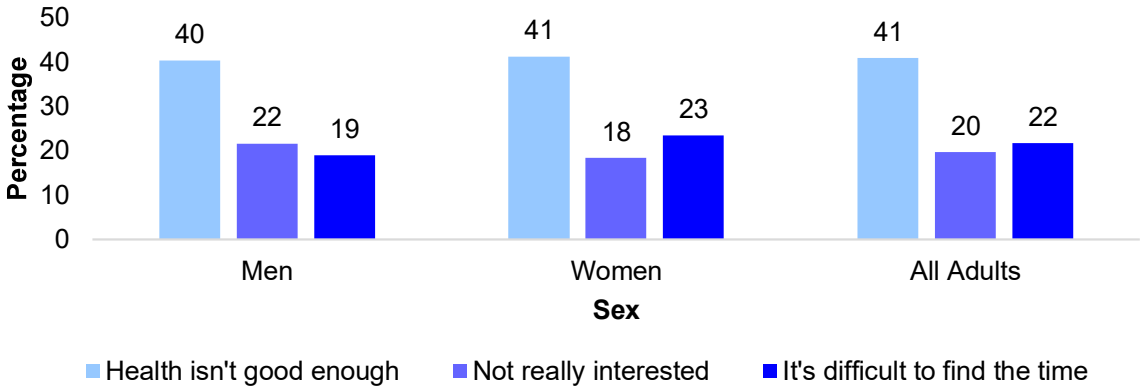


Figure 9F, Table 9.6

9.2.7 Adult sedentary time, 2015 to 2022, by sex

A small overall increase, not statistically significant, has been recorded in the average time spent sitting by an adult on weekdays (from 5.2 hours in 2015 to 5.6 hours in 2022) and weekends (from 5.9 to 6.3 hours respectively). The trend was similar for men and women. Although men and women were at the same weekday average (5.6 hours), the average sedentary time for men was 0.3 hours more (6.4) than for women (6.1) at weekends.

Figure 9G
Adult weekday sedentary time, 2015 to 2022, by sex

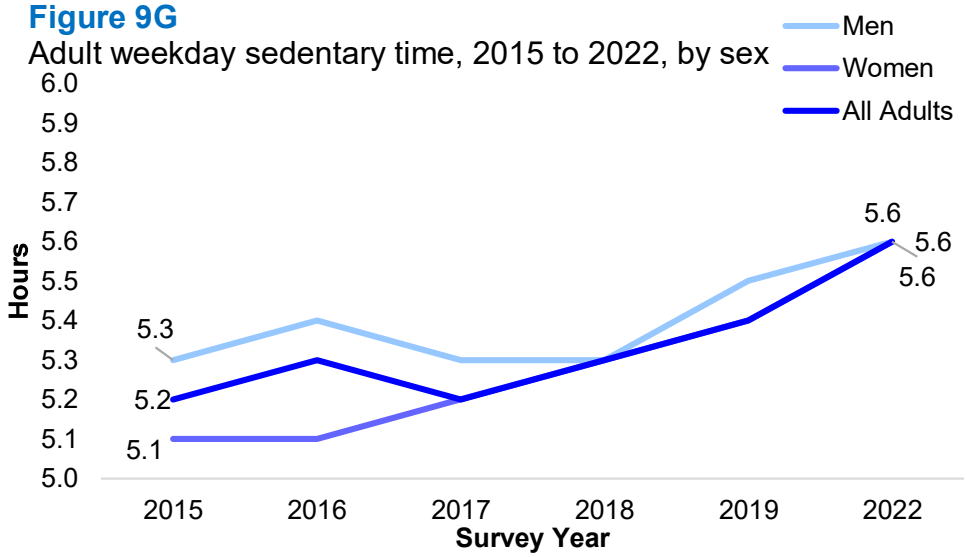


Figure 9H
Adult weekend sedentary time, 2015 to 2022, by sex

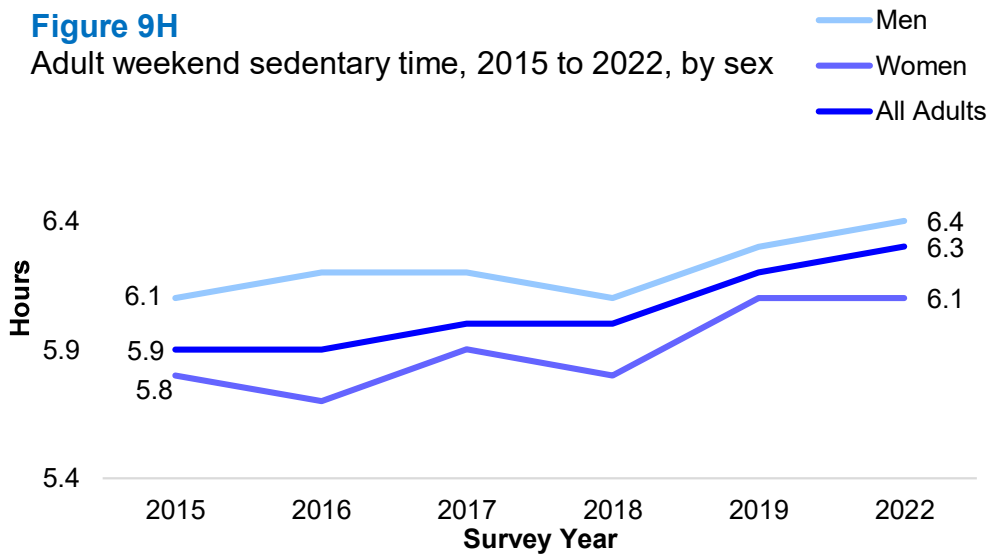


Figure 9G, Figure 9H, Table 9.7

9.2.8 Children sedentary time, 2015 to 2022, by sex

The average amount of time spent on sedentary activities among children aged from 5 to 15 years in 2022 was higher on weekends than weekdays (5.1 hours and 3.6 hours respectively).

Across the time series, the average amount of time spent on sedentary activities among all children on weekdays has hovered between 3.3 hours in 2015 and 3.6 hours in 2022. It has increased from 4.5 to 5.1 hours on weekends. The trend was similar for boys and girls.

Table 9.8

9.2.9 Children summary activity levels (including and excluding school-based activities), 1998 to 2022, by sex

In 2022, the proportion of all children aged 5-15 undertaking at least 60 minutes of activity on average per day in the previous week was 69% (including school-based activities) and 59% (excluding school-based activities). These levels have been relatively stable since 2019, having declined from peaks of 76% (including school-based activities) and 68% (excluding school-based activities) in 2014.

Similar patterns were recorded for both boys and girls.

Figure 9I
Percentage of children aged 5-15 meeting physical activity guidelines including and excluding school-based activities, 1998 to 2022, by sex

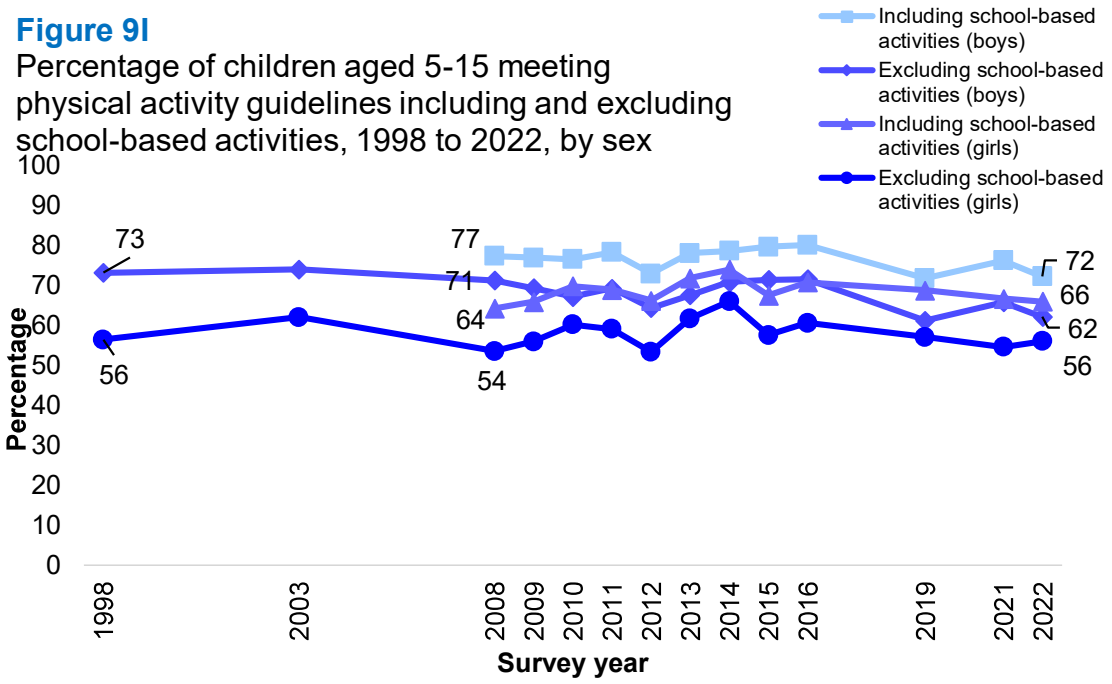


Figure 9I, Table 9.9

9.2.10 Children summary activity levels (including school-based activities), 2022, by age and sex

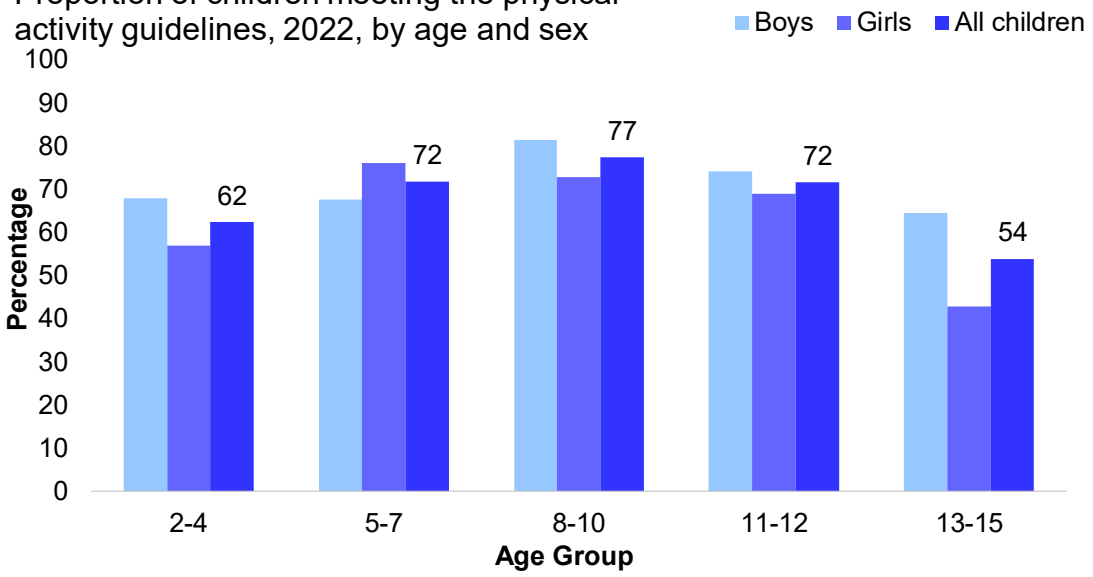
In 2022, around seven in ten children aged 5-15 met the physical activity guidelines of at least 60 minutes on average per day in the previous week (69%), including school-based activities (where applicable). Around two in ten (19%) achieved at least 30 but less than 60 minutes per day on average, and 12% achieved less than 30 minutes of physical activity on average per day.

In 2022, the proportion meeting the recommendations was lowest among those aged 13 to 15 years (54%), while adherence to the guidelines was in the range 62-77% among those aged 2-12.
With the exception of the 5-7 year age group, a higher proportion of boys than girls adhered to the physical activity guidelines in 2022. This variation was only significant among those aged 13-15, with a 22-percentage-point difference between boys and girls (65% and 43% respectively).

In 2022, girls were more likely to undertake at least 30 but less than 60 minutes of activity on average per day (22%) than boys (16%). However, there was no significant difference in the proportions undertaking less than 30 minutes of physical activity on average per day by sex (12% for boys and girls).

Figure 9J

Proportion of children meeting the physical activity guidelines, 2022, by age and sex



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[6] See: https://www.gov.scot/publications/active-scotland-delivery-plan/

[7] While the guidelines differ for those aged 16 to 18 years old, for the purposes of SHeS, the activity of these participants is included in the 'all adult' calculations.

[8] These comprise at least 150 minutes of moderate physical activity or 75 minutes of vigorous physical activity, or an equivalent combination of the two per week

[9] Carrying out at least ten minutes of exercise causing the muscles to feel some tension, shake or feel warm on at least two days of the week.

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