Scottish Government
Riaghaltas na h-Alba

The Scottish Health Survey

2021 edition | Volume 1 | Main Report

A National Statistics Publication for Scotland

Editors: Stephen Hinchliffe[1], Victoria Wilson[1].

Principal authors: Sophie Birtwistle[1], Erin Deakin[1], Rachel Whitford[1], Stephen Hinchliffe[1], Alys Daniels-Creasey[1] and Stephen Rule[1].

[1] ScotCen Social Research, Edinburgh.

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Chapter 9: Gambling

Chapter 10: Injuries/Accidents

SUMMARY

The Scottish Health Survey (SHeS) is commissioned by the Scottish Government Health Directorates to provide reliable information on the health, and factors related to health, of people living in Scotland that cannot be obtained from other sources. The series aims to:

- estimate the occurrence of particular health conditions
- estimate the prevalence of certain risk factors associated with health
- look at differences between regions and between subgroups of the population
- monitor trends in the population's health over time
- make a major contribution to monitoring progress towards health targets

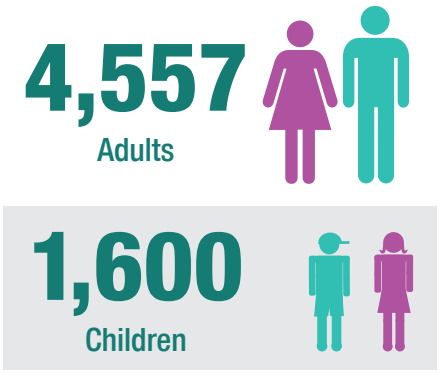
Key findings from the 2021 survey are presented here alongside some trends. Further discussion of the findings and full documentation of the survey's methods and questionnaire can be found in the 2021 annual report available from the SHeS website: https://www.gov.scot/collections/scottish-health-survey. The report is accompanied by a set of web tables for 2021.

Key trends and indicators for NHS health boards and local authorities are available in the SHeS dashboard: https://scotland.shinyapps.io/sg-scottish-health-survey/.

ABOUT THE SURVEY

The sample

SHeS has been designed to provide data on the health of adults (aged 16 and over) and children (aged 0-15) living in private households in Scotland annually. It provides data for NHS Health Boards and local authorities by combining data over four years. In 2021, 4,557 adults and 1,600 children took part in the survey.



The interview

The principal focus of the survey is cardiovascular disease (CVD) and related risk factors. Some questions and topics are asked annually while others vary from year to year. In 2021, interviews were conducted by telephone, because of the impacts of COVID-19, so no physical measurements were taken. Participants were also asked for permission to link survey responses to their administrative NHS health records. Following the survey, respondents were asked to complete online food intake recalls to get a more complete picture of peoples' diet. Key topics included in the 2021 survey were:

Editors' acknowledgements

Firstly, we would like to thank the 4,557 adults and 1,600 children across Scotland for giving up their time to participate in the 2021 survey.

We would also like to thank colleagues who contributed to the survey and this report:

- The ScotCen and Office for National Statistics (ONS) interviewers who worked on the project and who adapted so well to the alternative mode for administering the survey. The success of the survey is in large part down to the commitment and professionalism they apply to their work every day.
- ONS Field Operations Manager Joe Ruffell, Mandy Dalziel, Tim Fletcher, Lynne Semple, Kim Robinson, Mike Tarling and Jim Fagan.
- Joanne McLean for her dedicated management and oversight of the Scottish Health Survey at ScotCen and Shanna Christie for her work in launching the 2021 survey.
- Stephen Hinchliffe for his meticulous work on the Scottish Health Survey, expert analysis advice and support.
- The authors of the chapters: Sophie Birtwistle, Erin Deakin, Rachel Whitford, Stephen Hinchliffe, Alys Daniels-Creasey and Stephen Rule, as well as Lesley Birse for careful checking and formatting.
- Stephen Hinchcliffe, Laura Brown and Jamie Macfarlane whose hard work, attention to detail, knowledge and expertise have been invaluable to the preparation of the survey data as well as extensive analysis input to the report.
- Food Standards Scotland for their support of the Intake24 module.
- Caireen Roberts, David Collins, Polly Page and colleagues from the MRC Epidemiology Unit, University of Cambridge for their expert advice, preparation of dietary data and support for Intake24.
- Other research colleagues and partners, in particular: Lesley Birse, Ana Cristina, Geraldine McNeil (University of Aberdeen) and Aziz Sheikh (University of Edinburgh).
- Emma Fenn and colleagues in the NatCen Social Research Operations team. The principal programmer, Iain Templeton, along with Pete Baker and the team of dedicated coders.
- Freelance designer Amanda Gratwick for her hard work on the infographic chapter summaries.
- The NatCen Head of Data Collection Warren Lovell, Julie Foster, and Field Performance Managers, Jennifer Tarney, Chris Morgan, Russell Collins and Deborah Healey.

Ethical approval for the study was granted by the Research Committee for Wales (17/WA/0371). We are grateful to the committee, and its co-ordinator Dr Corrine Scott, for their careful scrutiny and on-going support.

Finally, special thanks are due to Julie Landsberg, Morag Shepherd, Xanthippi Gounari, Jamie Macfarlane and colleagues in the Scottish Government Health Directorates, for their continued support at all stages of the project.

Stephen Hinchliffe and Victoria Wilson.

Foreword from the Chief Medical Officer

This report presents the findings of the 2021 Scottish Health Survey. The survey results are more important than ever this year in the context of the COVID-19 pandemic and its impact on our health and wellbeing.

The survey provides us with immensely valuable information on cardiovascular disease, other health conditions, mental wellbeing, dental health and health related risk factors including smoking, alcohol consumption, physical activity and obesity. In 2021, questions on drug use and long COVID were included for the first time and dietary information for adults was collected using online dietary recalls (Intake24) allowing for monitoring of a number of the Scottish Dietary Goals. Questions on food insecurity, accidents and gambling (asked periodically) were also included.

The protections necessitated by the pandemic meant that the 2021 survey could not be conducted in the usual way of interviewing people within the home. Telephone interviews were undertaken instead, with interviewers able to visit sampled addresses to encourage response in the latter part of the year. The variation in survey methods should be borne in mind when interpreting changes compared with previous surveys.

Key changes highlighted in the survey results for 2021 include a decrease in levels of mental wellbeing compared to pre-pandemic and particularly high levels of food insecurity amongst single parent and single adult households in 2019/2021. We see smoking prevalence continuing to fall and an increase in the proportion of adults meeting the physical activity guidelines.

The survey was commissioned by the Scottish Government and produced by a collaboration between ScotCen Social Research, the MRC/CSO Social and Public Health Sciences Unit at the University of Glasgow and the Public Health Nutrition Research Group at Aberdeen University.

I welcome this valuable report and thank the consortium led by ScotCen Social Research for their cooperation and support in developing the survey and for conducting the survey and preparing this report. Most importantly, I would like to thank the 6,157 people who gave their time to participate. The information they have provided is invaluable in developing, evaluating and monitoring population health policy in Scotland at this time.

Professor Sir Gregor Smith

Chief Medical Officer for Scotland

INTRODUCTION

Victoria Wilson

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, and a disproportionate impact on several groups in Scotland[5]. The Scottish Government's **A stronger and more resilient Scotland: the Programme for Government 2022 to 2023**[6], published on 6th September 2022, includes commitments to publish a new Mental Health and Wellbeing Strategy and to invest in the long COVID Support Fund to assist those living with long-term effects of infection. Other commitments include continuing work to reduce the public health emergency of drug deaths, introducing legislation to restrict the promotion and marketing of junk foods to make it easier for people to spend less and make healthier food choices and driving forward the actions in the Women's Health Plan[7].

THE SCOTTISH HEALTH SURVEY (SHeS) SERIES

SHeS has been carried out annually since 2008 and prior to this was carried out in 1995[8], 1998[9], and 2003[10]. 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[11]. 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 national 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 2021 surveys were undertaken by ScotCen 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 2021 SURVEY

At the time of interviewing for the 2021 survey (April 2021 – March 2022), restrictions due to COVID-19 meant that an alternative way of sourcing data was needed than the usual face-to-face approach. Therefore, similar to 2020, data for 2021 was collected via a telephone survey, with potential respondents initially contacted by letter and asked to opt-in to an interview conducted over the phone. For the final third of fieldwork, interviewers were able to visit households on the doorstep to encourage response to the telephone interview, significantly increasing levels of response, this is known as a knock-to-nudge approach. Further details on the fieldwork approach can be found in Chapter 1 of the Scottish Health Survey 2021- 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. However, it should be noted that due to the difference in method for 2021, caution should be applied when comparing results from this survey year to those for previous years. Caution is advised due to:

- The use of an opt-in approach resulting in a lower proportion of respondent households in the most deprived areas and a lower proportion of respondents in the youngest age group than in previous survey years. Interviews achieved as part of the knock-to-nudge sample brought the overall achieved sample a bit closer to the profile in previous years. The weighting strategy adjusted the results to be representative of the household population as a whole as far as possible.

- Changes in the mode of survey administration to telephone with knock-to-nudge recruitment resulting in:
    - Reduced opportunity to build interviewer rapport
    - Possible changes to the way the respondents answer some questions including the potential for greater honesty when providing potentially sensitive information
- The use of self-reported height and weight data in place of objective measurements taken by interviewers. Whilst for adults some adjustment has been made for this, the mode of data collection requires the continued use of caution when interpreting such data.
- Changes to the sampling approach such as the use of an unclustered sample.

For further detail, please refer to 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[12,13], particularly in light of the impact of the pandemic. CVD is one of the leading causes of death in Scotland. In 2021, this included 11% of deaths which are caused by IHD, with a further 6% caused by cerebrovascular disease (including stroke)[14]. The incidence rate of cerebrovascular disease has fallen by 9% over the last decade[15], however, stroke remains one of the biggest killers in Scotland and the leading cause of disability[16]. In addition, while the coronary heart disease mortality rate has decreased by 22% in the last ten years, the rate of decline has slowed in the last five years[17] and there remains concern about continuing inequalities in relation to morbidity and mortality linked to these conditions[18].

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 problematic alcohol and/or drug use 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 4-8. The other five chapters focus on health conditions and experiences which have the potential to influence health outcomes in later life - General Health, Cardiovascular Disease and CPR Training (Chapter 1), Mental Wellbeing (Chapter 2), Respiratory Conditions including COVID-19 (Chapter 3), Gambling (Chapter 9) and Accidents (Chapter 10).

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 some comparability issues with the results collected from the short telephone survey conducted in 2020, NHS board results have been produced using data from the 2017, 2018, 2019 and 2021 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.

An initial sample of 64,524 addresses was drawn from the Postcode Address File (PAF) in 2021 on the basis of the survey being conducted by opt-in. These addresses comprised three sample types: main (core) sample version A, main (core) sample version B and the child boost screening sample. This sample was split into nine monthly waves of fieldwork, from April to December. For the core samples, only the first six months were issued, as the sample was superseded by a smaller knock-to-nudge sample for the final three months (the sample for knock-to-nudge was smaller due to higher expected levels of response for this approach). The child boost sample was used for the whole nine months.

Replacement core sample (3,839 addresses) was drawn for the last three months of 2021 to be issued as knock-to-nudge.

Fieldwork

For Phase 1 of the survey, participants were asked to opt-in using an online portal, or by contacting the NatCen freephone team. They were asked to leave a telephone number on which an interviewer would call them back. Addresses were only assigned to interviewers after the household had opted into the survey. Assignments comprised up to 10 addresses and a mix of all sample types.

For Phase 2 of the survey, the 3,839 addresses were grouped into 134 interviewer assignments, with around 44 assignments being issued to interviewers each month between October and December 2021.

Each sampled address was sent an advance letter that introduced the survey and for the knock-to-nudge sample, 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 2021; one for the core version A addresses, one for core version B addresses (with the biological module), and one for child boost addresses. There was a version of each of these letters for each organisation conducting interviews (ScotCen Social Research and ONS), as well as for the opt-in and knock-to-nudge samples. 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 leaflet, 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 telephone interview (CATI), and online or paper self-completion questionnaire.

As interviews were conducted by telephone, no height and weight measurements or biological measures could be taken. Participants were asked to estimate their own height and weight during the interview. In previous years, the core version B sample completed a biological module, and these addresses were only assigned to trained bio interviewers. For 2021, as no biological measurement could be taken the only real 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 included in the biological module.

Participants aged 16 and above were also invited to complete two online dietary recalls using Intake24 (https://intake24.org/). Participants were asked to provide verbal consent, which was recorded in CAPI. Respondents were also sent a leaflet with some key information about Intake24 included. If the respondent indicated to the interviewer that they had not read the Intake24 information leaflet (sent with their advance letter), the interviewer read out key information from this before obtaining consent. Those who agreed were invited to complete two dietary recalls, either independently or via a phone call with Cambridge University. Further information about Intake24 is provided in Chapter 2 of the Scottish Health Survey 2021- volume 2: technical report.

Survey response

In 2019, across all sample types, interviews were held in 3,688 households with 4,557 adults (aged 16 and over), and 1,600 children (aged 0-15). The number of participating households and adults in 2021 is presented separately for the opt-in and knock-to-nudge samples in the tables below. Further details on survey response in 2021 are presented in Chapter 2 of the Scottish Health Survey 2021- 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 due to lower expected response rates for both the opt-in and knock-to-nudge approaches, larger samples were required for both, which impacted on the response rates for 2021.

Opt-in sample

Main adult sample	
Participating households	2,050
Eligible households responding	10%
Adult interviews	2,984
Child boost sample	
Participating households	542
Eligible households responding	10%
Child interviews (child boost sample only)	823
Child interviews (main sample)	500

Knock-to-nudge sample

Main sample	
Participating households	1,096
Eligible households responding	31%
Adult interviews	1,573
Child interviews (core only)	277

Ethical Approval

Ethical approval for the 2021 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 samples. Additional weights have been created for use on combined datasets. A detailed description of the weights is available in Chapter 1 of the Scottish Health Survey 2021- 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 household type.

Statistical information

SHeS 2021 used a partially clustered, stratified multi-stage sample design (for the knock-to-nudge element). 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 1 of the Scottish Health Survey 2021- 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 2021- 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 2021 data will be deposited at the UK Data Archive along with copies of the combined datasets for 2019/2021 and 2017/2018/2019/2021. In addition, a detailed set of web tables for 2021, 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[19].

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 here: https://www.gov.scot/collections/scottish-surveys-core-questions/

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 2021, and is one of two volumes based on the survey, published as a set as 'The Scottish Health Survey 2021':

Volume 1: Main Report

1. General Health, CVD and CPR Training
2. Mental Health and Wellbeing
3. Respiratory Conditions including COVID-19
4. Diet and Food Insecurity
5. Obesity
6. Physical Activity
7. Smoking
8. Alcohol and Drugs
9. Gambling
10. Accidents

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 2021 report are available on the Scottish Government website: https://www.gov.scot/collections/scottish-health-survey.

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.

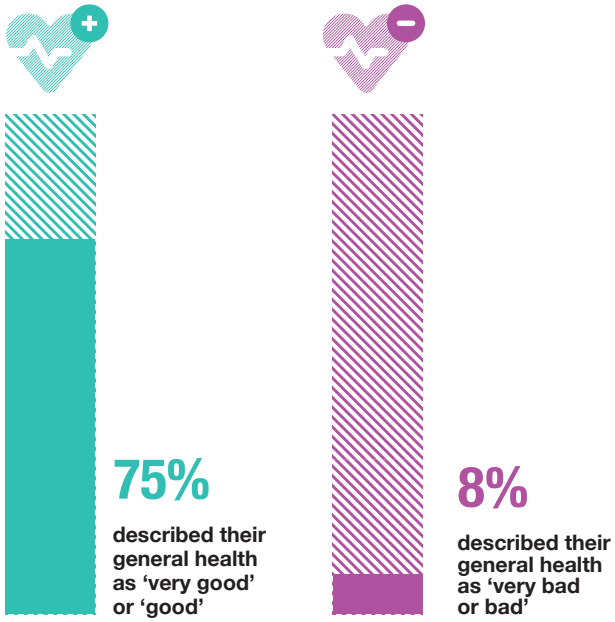
Chapter 1

General Health, CVD and CPR training

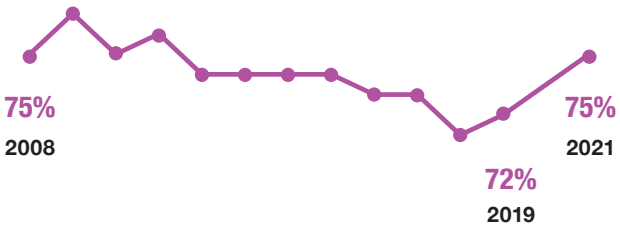
CHAPTER 1

General Health, CVD and CPR Training

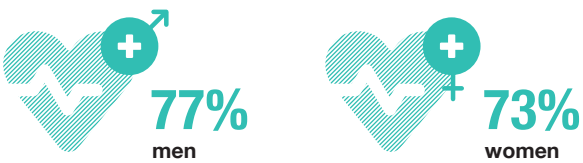
Among all adults in 2021:



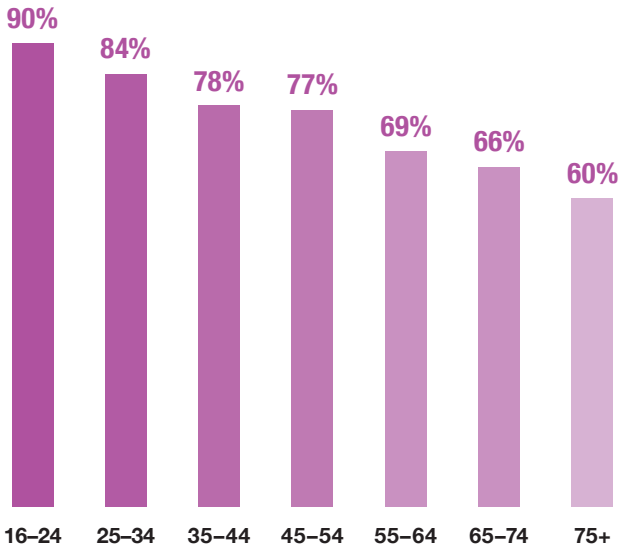
Self-assessed 'very good' or 'good' general health has increased since 2019, although it has remained at around 75% for most of the period 2008 to 2021.



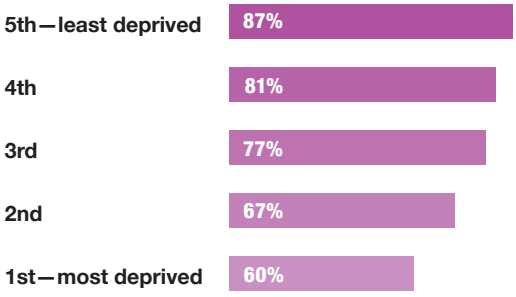
A higher proportion of men self-assessed their general health as 'very good' or 'good' in 2021.

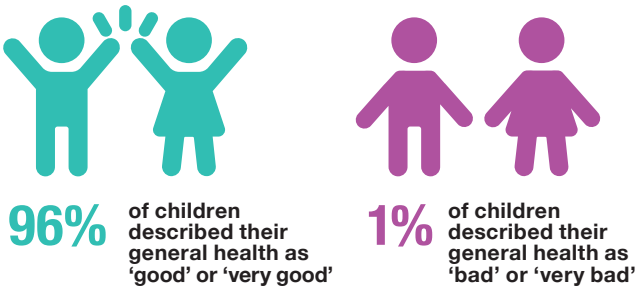


The proportion of adults who self-assessed their general health as 'very good' or 'good' decreased with age in 2021.



The proportion of adults who self-assessed their general health as 'very good' or 'good' decreased with increasing levels of deprivation in 2021.





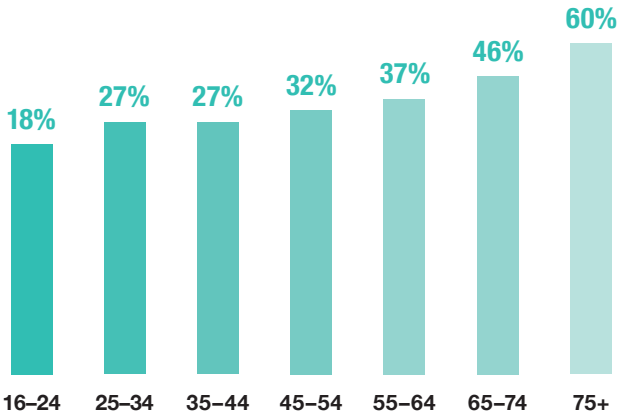
Almost half of all adults reported living with a long-term condition in 2021.

47%
living with a long-term condition

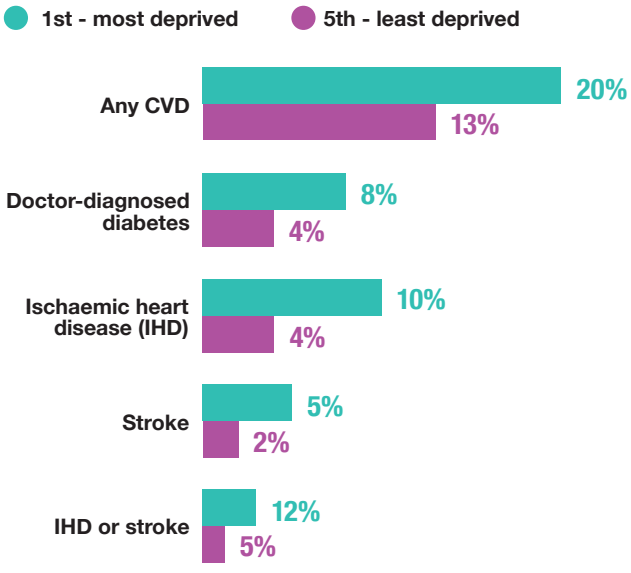
A third said they had a long-term condition which limited their day-to-day activities.

34%
limited day-to-day activities

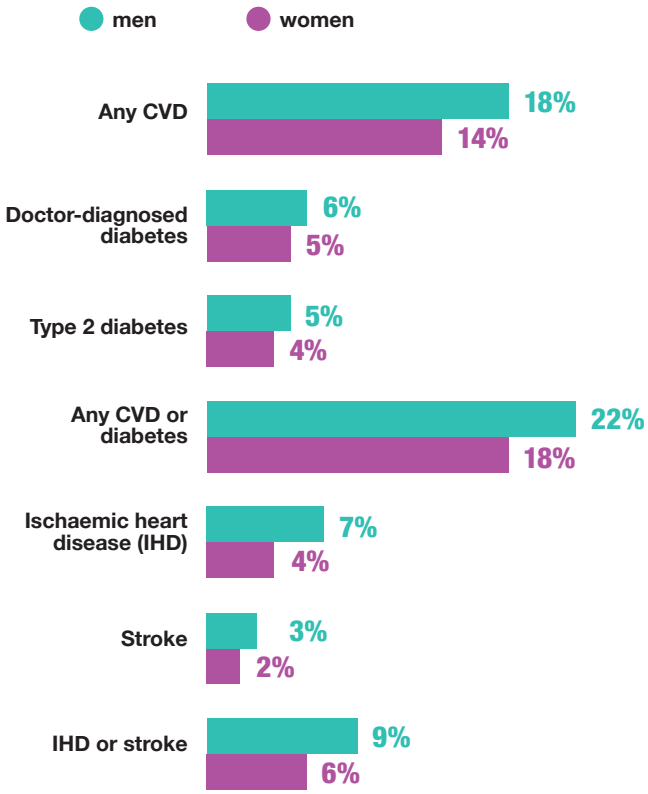
The proportion of adults living with a limiting long-term condition increased with age.



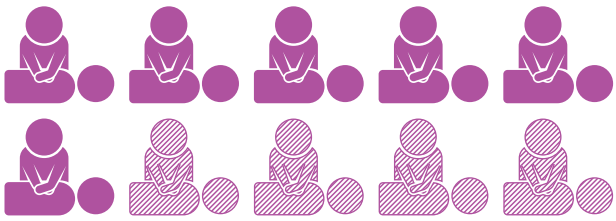
Following the same pattern as for all survey years since 2003, prevalence of cardiovascular disease (CVD) and diabetes was much higher in the most deprived areas compared with the least deprived in 2021.



Higher proportions of men than women had:



In 2021, nearly two thirds of adults reported ever attending cardiopulmonary resuscitation (CPR) training.



61% CPR training

Of those who had ever attended training:

46%
had attended refresher training

26%
had received some form of training in the last two years

1 GENERAL HEALTH, CARDIOVASCULAR CONDITIONS AND CPR TRAINING

Sophie Birtwistle

1.1 INTRODUCTION

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

The prevalence of long-term conditions has placed considerable and unsustainable strain on healthcare provision[2]. Further challenges are presented by ongoing inequalities in health outcomes and the ageing population[3].

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[4,5]. Since 2009, there has been a steady downward trend in incidence and deaths from IHD and stroke in Scotland[6]. However, IHD continues to be one of the leading causes of death in Scotland, with stroke also remaining as one of the biggest killers as well as the leading cause of disability in Scotland[5].

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, and this reflects better survival and the rising prevalence in children. The majority of registered people have Type 2 diabetes. The number of people registered with Type 2 diabetes has increased since 2013 which could relate to several factors, including: demographic change - diabetes is more prevalent in older people, so the increasing number of older people each year increases the prevalence of diabetes - better survival, and possibly better detection[7].

Cardiac arrest is when the heart suddenly stops pumping blood round the body. When someone has a cardiac arrest cardiopulmonary resuscitation (CPR) will keep blood circulating until attempts are made to restart the heart. Every year over 3,000 people around Scotland are treated by the Ambulance Service after having an Out of Hospital Cardiac Arrest (OHCA) with around 1 in 10 surviving to hospital discharge. Key factors in determining survival from OHCA are early, high quality hands-only CPR and counter-shock therapy (defibrillation).

1.1.1 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[8] 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**[9]**, stroke**[10] and **diabetes**[11].

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.

Increasing survival following a cardiac arrest is supported by Scotland's OHCA Strategy[12]. Through the delivery of the initial OHCA Strategy (2015-2020), OHCA survival rates rose from 1 in 20 to 1 in 10, and bystander CPR rates rose from 43% before the strategy to 64% in 2020. In addition, over 640,000 people were equipped with the skills to perform CPR during the lifetime of the strategy. The strategy was refreshed in 2021[13]. Key aims of the refreshed strategy are to equip a total of 1 million people in Scotland with CPR skills by 2026 and to increase the number of OHCAs which have a defibrillator applied before the ambulance service arrive from 8% to 20%.

The Stroke Improvement Plan (2014) provides the overarching policy framework for improving stroke services in Scotland. A Progressive Stroke Pathway[14] was published on 22 March 2022 and met with public endorsement from the Stroke Association. The Progressive Stroke Pathway was produced by the National Advisory Committee on Stroke and 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 will inform the publication of Scottish Government's refreshed Stroke Improvement Plan, to be published by the end of 2022. Work is also continuing to progress the rollout of a National Thrombectomy Service in Scotland, with 'hub' centres providing mechanical thrombectomy in NHS Tayside, NHS Lothian, and NHS Greater Glasgow & Clyde.

In 2014, the Scottish Government published its first Diabetes Improvement Plan, which set out aims and priorities to deliver safe, effective, and person-centred healthcare, treatment, and support to those living with diabetes. The Plan has been refreshed and was subsequently published on 25th February 2021, outlining commitments from 2021 to 2026.

The Framework for the Prevention, Early Detection and Early Intervention of Type 2 Diabetes was published in July 2018. It targets early identification of those at risk of type 2 diabetes and identification of those with pre-diabetes through diagnostics.

1.1.2 Reporting on general health, CVD, diabetes and CPR training in the Scottish Health Survey

In this chapter trends in self-assessed general health for adults and children are presented. Prevalence of self-reported long-term conditions in adults is reported for 2021. Trends for self-reported CVD conditions and diabetes prevalence in adults are presented as well as for 2021. Blood pressure level trends and detection and treatment of

hypertension are not presented in 2021 as physical measurements were not taken during fieldwork as a result of COVID-19 restrictions. Prevalence of CPR training (including refresher training) and the length of time since CPR training was last attended are also reported for 2021.

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 2021- volume 2: technical report.

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

1.2 GENERAL HEALTH, CVD AND CPR TRAINING

1.2.1 Self-assessed general health, adults and children, 2008 to 2021, by sex

The proportion of adults who reported their general health as 'good' or 'very good' has shown only small fluctuations between 2008 and 2021. Since 2019 this proportion has increased from 72% to 75% in 2021. A similar pattern was observed for both men and women, with the proportion of men self-reporting as being in 'good' or 'very good' health the same as or higher than the proportion of women between 2008 and 2021 (77% of men and 73% of women in 2021). Self-assessed 'bad' or 'very bad' general health for all adults has remained in the range of 7%-9% since 2008 (8% in 2021). This trend was also observed for both men and women (8% for both men and women in 2021).

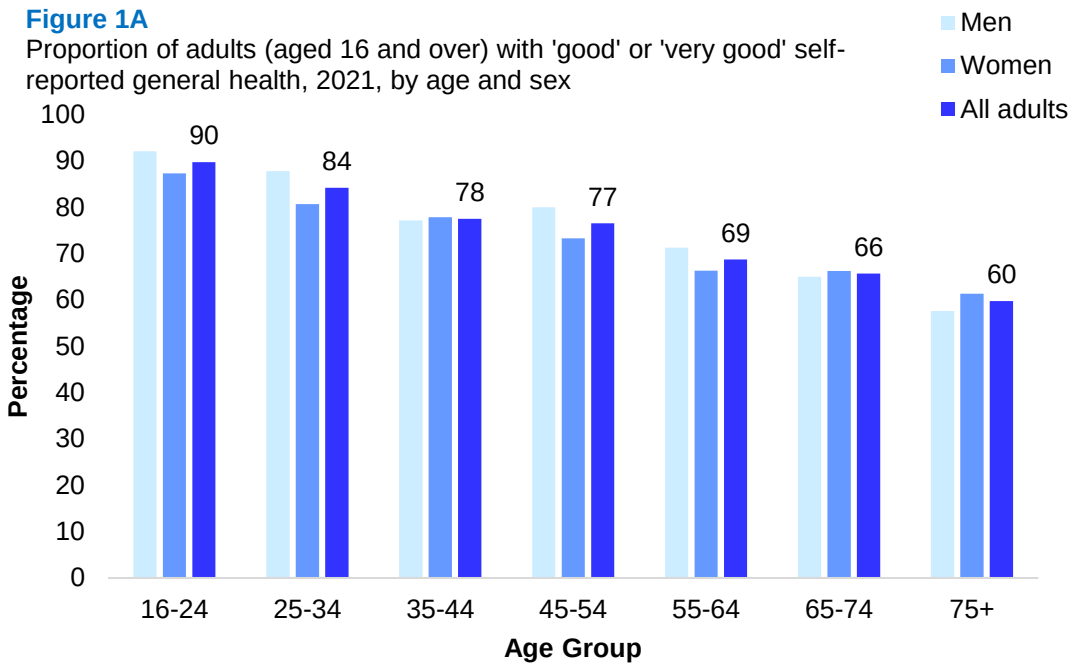
For children, the large majority continue to be reported as having 'good' or 'very good' general health (96% in 2021). No more than 1% of children have been reported as being in 'bad' or 'very bad' general health in any year since 2008. **Table 1.1**

1.2.2 Adult self-assessed general health, 2021, by age and sex

The proportion of adults self-assessing their general health as 'good' or 'very good' decreased with age. In 2021, 90% of those aged 16-24 described their health as 'good' or 'very good' with this proportion falling to 60% of those aged 75 and above. A similar pattern was observed for both men and women.

The proportion of adults who self-assessed their general health as 'bad' or 'very bad' generally increased with age, from 3% for those aged 16-24 to 13% for those aged 75 and above. **Figure 1A, Table 1.2**

Figure 1A
Proportion of adults (aged 16 and over) with 'good' or 'very good' self-reported general health, 2021, by age and sex



1.2.3 Adult self-assessed general health (age-standardised), 2021, by area deprivation and sex

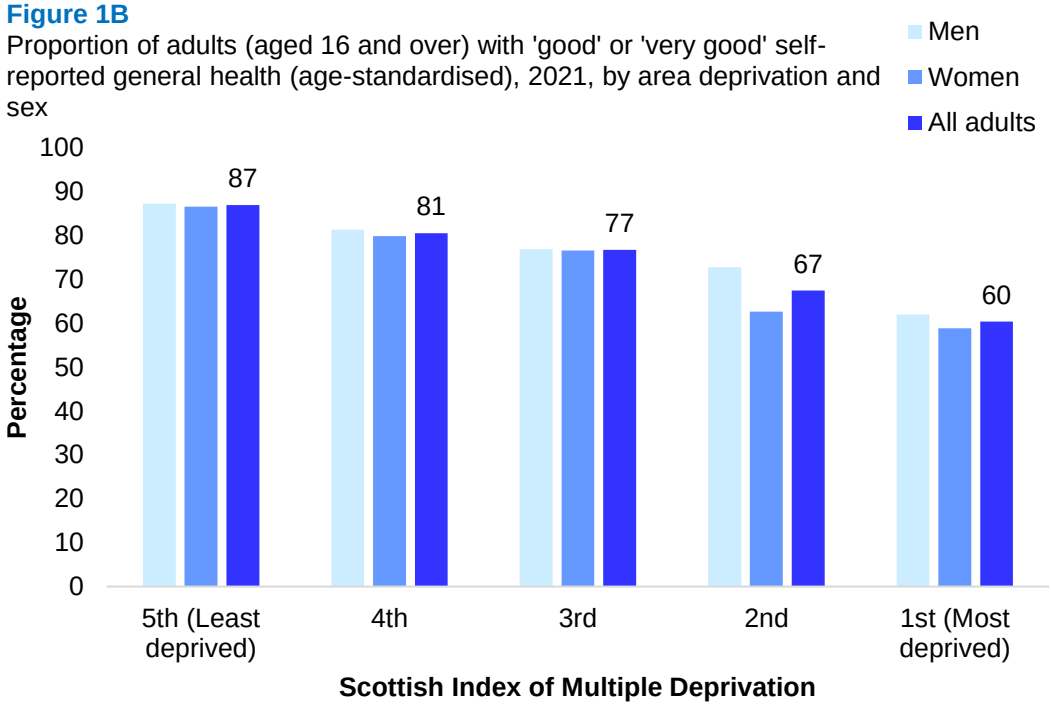
In 2021, the age-standardised proportion of adults that self-assessed their general health as ‘good’ or ‘very good’ decreased as area deprivation increased. This proportion declined from 87% in the least deprived quintile to 60% in the most deprived quintile.

This pattern was reversed for adults (age-standardised) who self-assessed their general health as ‘bad’ or ‘very bad’. This proportion increased from 3% in the least deprived quintile to 15% in the most deprived quintile. The patterns were similar for both men and women.

Figure 1B, Table 1.3

Figure 1B

Proportion of adults (aged 16 and over) with 'good' or 'very good' self-reported general health (age-standardised), 2021, by area deprivation and sex

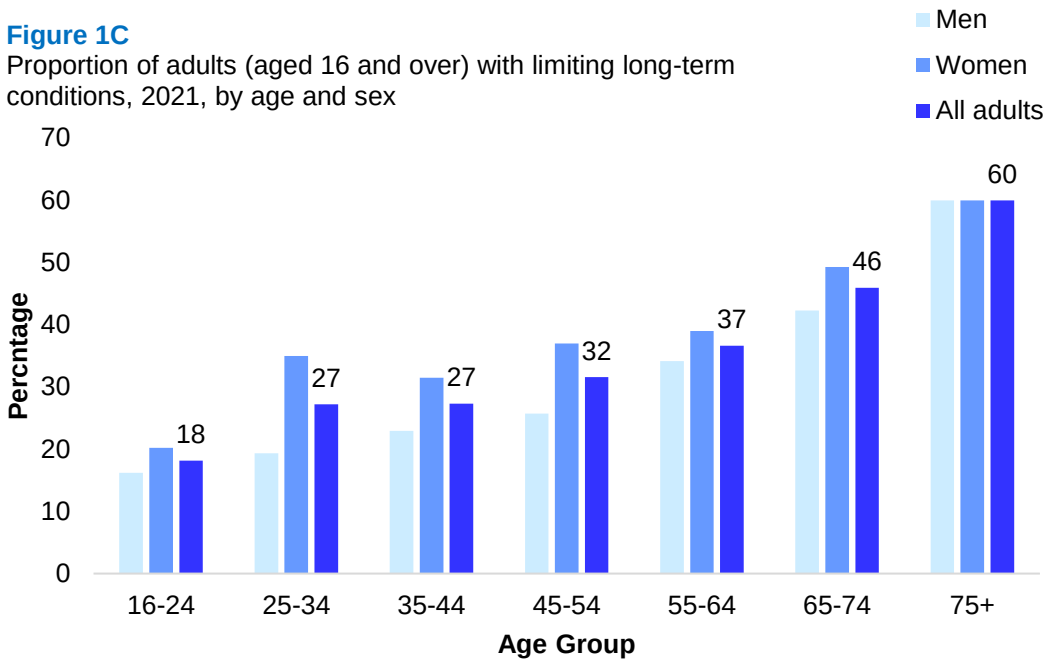


1.2.4 Prevalence of long-term conditions in adults, 2021, by age and sex

In 2021, almost half (47%) of the adult population reported living with a long-term health condition. Women were more likely than men to report having such a condition (52%, compared with 43%). This proportion increased with age for both men and women. Just over a quarter (26%) of all adults aged 16-24 reported living with a long-term condition, rising to almost three-quarters (74%) of those aged 75+.

In 2021, a third (34%) of adults reported living with a *limiting* long-term condition, more than two-thirds of those with any long-term condition. The proportion of adults living with a limiting long-term condition increased with age. Less than one-in-five (18%) of those aged 16-24 reported living with a limiting long-term condition compared with three-in-five (60%) of those aged 75 and above. Again, women were more likely than men to report having a limiting condition (39% compared with 30%). **Figure 1C, Table 1.4**

Figure 1C
Proportion of adults (aged 16 and over) with limiting long-term conditions, 2021, by age and sex



1.2.5 CVD and diabetes, 2021, by age and sex

Any CVD

In 2021, 16% of adults reported having ever had any Cardiovascular Disease (CVD), with this proportion increasing with age. Prevalence of CVD was 5% for those aged 16-24 compared with 41% for those aged 75 and above. Men reported a higher prevalence of CVD than women (18%, compared with 14%), although the difference was only significant for those aged 65 to 74 (33% of men compared with 20% of women).

Doctor-diagnosed diabetes

In 2021, 6% of adults reported having doctor-diagnosed diabetes, and the prevalence of this increased with age. Of those aged 16-24 fewer than 0.5% reported having doctor-diagnosed diabetes compared with 13% of those aged 75 and above. Prevalence of diabetes was slightly higher for men than for women (6% compared with 5%).

Diabetes Type 1

In 2021, 1% of adults had Type 1 diabetes. This proportion did not vary between men and women and did not vary significantly by age.

Diabetes Type 2

In 2021, Type 2 diabetes was more common than Type 1, with 5% of adults reporting this condition. Prevalence increased with age, from less than 0.5% of those aged 16-24 to 12% for those aged 75 and above. This pattern was similar for both men and women.

Any CVD or diabetes

In 2021, 20% of adults reported having any CVD or diabetes. The prevalence of CVD or diabetes increased with age from 5% of those aged 16-24 to 47% of those aged 75 and above. Men reported a higher prevalence of having any CVD or diabetes than women (22% compared with 18%). Differences in this proportion between men and women were significant in the 55-64 age group (29% of men compared with 22% of women of this age) and the 65-74 age group (41% of men compared with 26% of women).

Ischaemic Heart Disease (IHD)

In 2021, 5% of adults reported ever having had IHD, and the prevalence of this increased with age. No one aged 16-24 participating in the survey had ever had IHD, compared with 20% of those aged 75 and above. This pattern was similar for both men and women, albeit with men reporting a higher prevalence of IHD than women (7% compared with 4% of women).

Stroke

In 2021, 3% of adults reported ever having had a stroke. This proportion increased with age. None of the participants in the survey aged 16-24 reported ever having had a stroke compared with 10% of those aged 75 and above. This pattern was similar for both men and women. Men reported a higher overall prevalence of stroke compared with women. In 2021, 3% of men reported having ever had a stroke compared with 2% of women.

IHD or Stroke

The proportion of adults in 2021 that reported ever having had IHD or a stroke was 7%. This proportion increased with age, from no one participating in the survey aged 16-24 to 26% of those aged 75 and above. Prevalence of IHD or stroke was higher for men than women (9% compared with 6%). **Table 1.5**

1.2.6 CVD and diabetes prevalence (age-standardised), 2003 to 2021, by area deprivation and sex

Any CVD

Prevalence of age-standardised CVD by area deprivation has varied a little since 2003, but CVD has remained more prevalent in the most deprived quintile compared with the least deprived. In 2021, 20% of adults in the most deprived quintile reported having any CVD compared with 13% in the least deprived quintile. Patterns were similar for both men and women.

Doctor-diagnosed diabetes

As in previous years, age-standardised doctor-diagnosed diabetes was more prevalent in the most deprived quintiles compared with the least deprived quintiles. In 2021, 8% of adults in the most deprived quintile

reported doctor-diagnosed diabetes compared with 4% in each of the two least deprived quintiles. Patterns were similar for both men and women.

Ischaemic Heart Disease (IHD)

In 2021, 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 (10%) than in the three least deprived quintiles (4%). Similar patterns were observed for both men and women.

Stroke

In 2021, as in every year since 2003, the prevalence of stroke varied by area deprivation and was more prevalent in more deprived quintiles compared with less deprived quintiles. In 2021, 5% of adults in the two most deprived quintiles reported ever having had a stroke compared with 1% - 2% in the three least deprived quintiles.

IHD or stroke

The pattern of prevalence of IHD or stroke across the SIMD quintiles has not changed since 2003. In 2021, prevalence was higher in more deprived quintiles compared to less deprived quintiles. In 2021, there was a 12% prevalence in IHD or stroke in the most deprived quintile compared with 5% in the three least deprived quintiles. This pattern was similar for both men and women with men having a higher prevalence of IHD or stroke compared to women. In the most deprived quintile, there was a 15% prevalence in IHD or stroke for men and 10% for women. In the least deprived quintile, there was 7% prevalence for men and 3% prevalence for women. **Table 1.6**

1.2.7 Adult prevalence of CPR training, length of time since original training and whether attended refresher, 2021, by age and sex

In 2021, 61% of adults reported ever having attended CPR training, with variation in this proportion by age. The proportion was highest for those aged between 25 and 54 (67 - 68%). Above this age it fell to 35% of those aged 75+. Women were slightly more likely than men to ever have attended training (63% of women compared with 59% of men).

Of those who reported having ever attended CPR training, 81% reported that their original training was four years ago or more. Only in the youngest age group was this proportion significantly lower (46%). There was no significant difference between men and women. Only 3% of adults reported having attended their original CPR training in the last 12 months and a further 3% reported having received their training between one and two years ago, while 12% reported receiving their original training between two and four years ago.

Of those who ever attended CPR training, just less than half (46%) reported attending refresher training. The proportion of those who attended refresher training was highest for those aged 45-54 (54%).

Of all adults in 2021, 16% reported attending any CPR training in the last two years, equating to 26% of those who had ever attended training. The proportion of adults who attended training in the last two years was just under a quarter (20% - 23%) for the younger age groups (16-54), and then decreased with age, to 1% of those aged 75 and above. **Figure 1D, Table 1.7**

Figure 1D
Proportion of adults (aged 16 and over) who ever attended CPR training, 2021, by age and sex

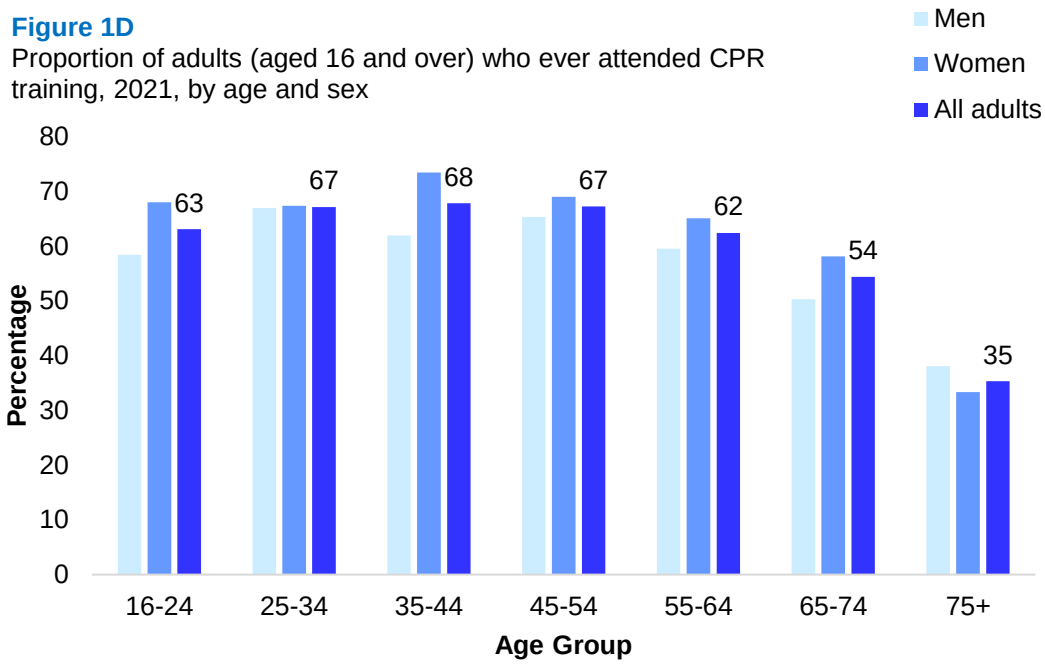


Table list

The tables can be found on the main report page under supporting files: https://www.gov.scot/publications/scottish-health-survey-2021-volume-1-main-report/

References and notes

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Chapter 2

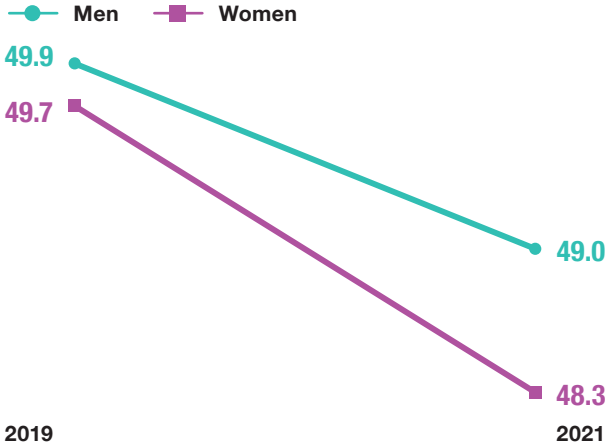
Mental Health and Wellbeing

CHAPTER 2

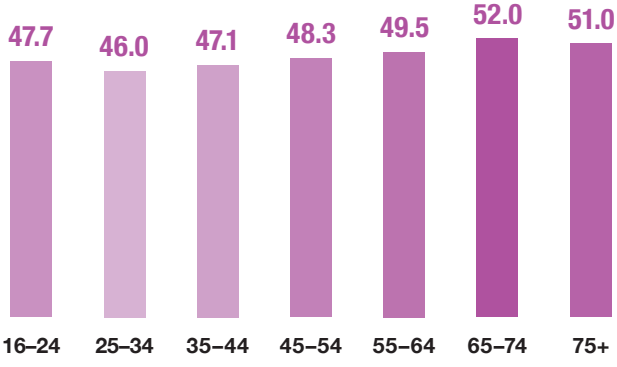
Mental Wellbeing

Average levels of mental wellbeing (measured by mean WEMWBS[1] scores) were lower in 2021 than in 2019, following a decade in which levels had remained fairly constant.

Women's average mental wellbeing scores fell by more than those for men.

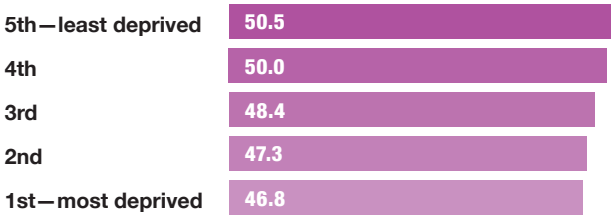


In 2021, adult mean WEMWBS scores varied by age; highest for those aged 65 and above, and lowest for those aged 25 to 34.



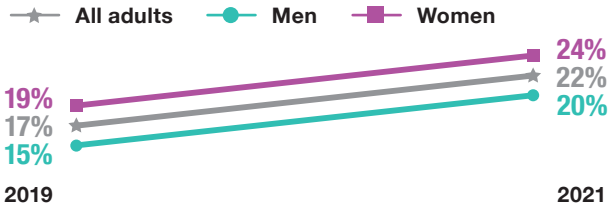
[1] WEMWBS scores range from 14 to 70. Higher scores indicate greater wellbeing.

In 2021, adult mean WEMWBS scores were lower in the most deprived areas.

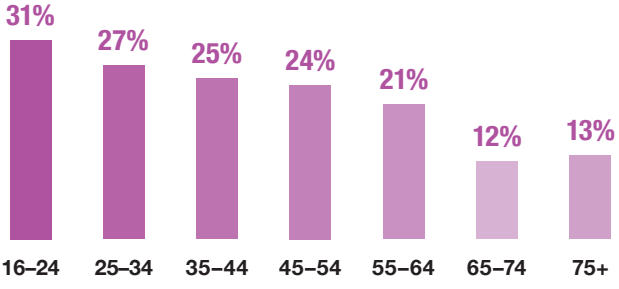


In 2017/2018/2019/2021 combined, boys aged 13-15 had higher mean WEMWBS scores than girls of the same age.

In 2021, 22% of adults had a GHQ-12[2] score of four or more (indicating a possible psychiatric disorder), an increase from 2019 for both men and women.

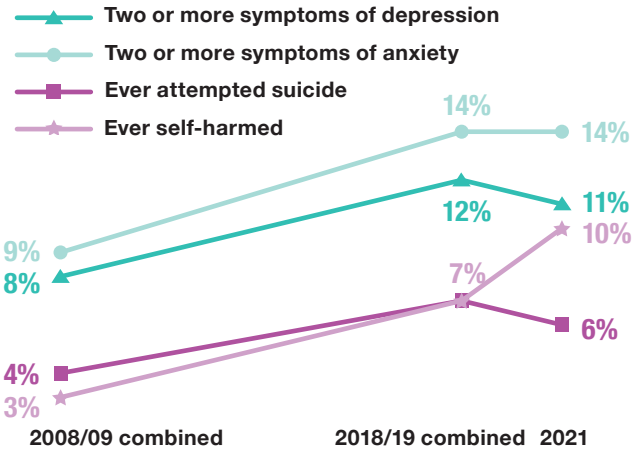


The proportion of adults with a GHQ-12 score of four or more tended to decrease with age.

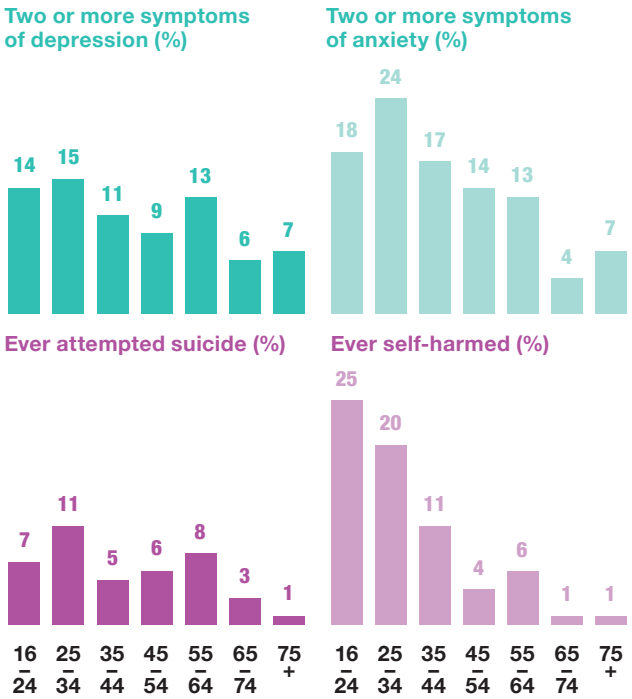


[2] GHQ-12 scores range from 0 to 12. Scores of 4 or more are indicative of a possible psychiatric disorder.

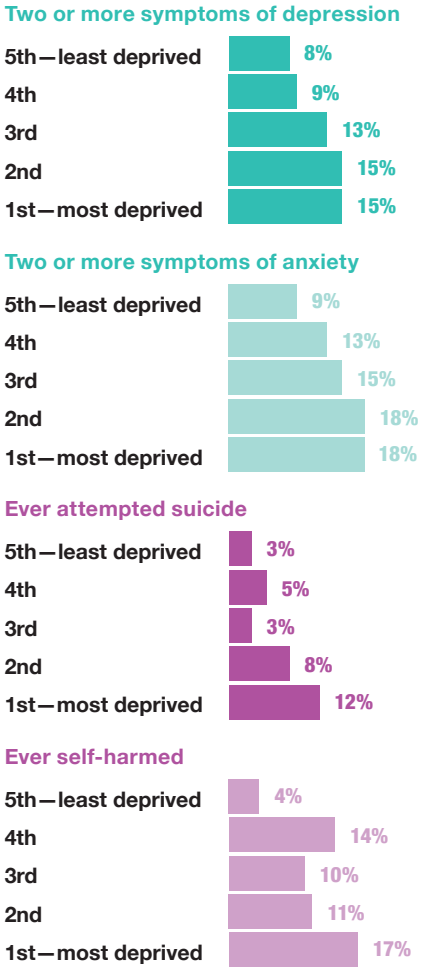
In 2021, prevalence of depression, anxiety and ever attempted suicide were at similar levels to 2018/2019 combined. Prevalence of ever having self-harmed increased over this period.



Depression, anxiety, ever attempted suicide and ever self-harmed were more common among younger than older age groups.

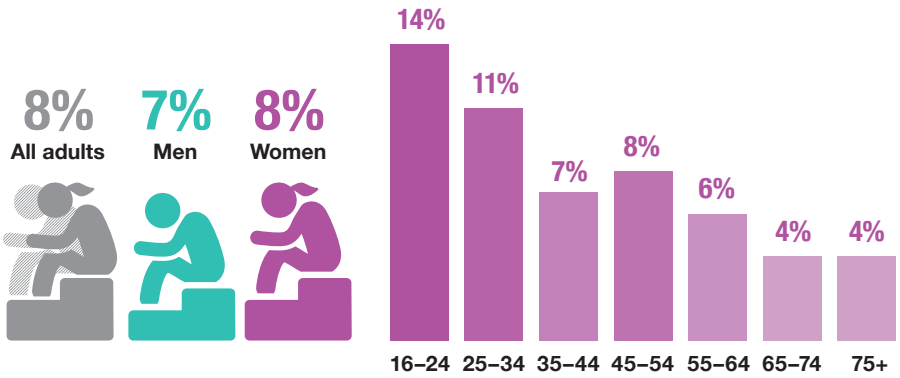


Depression, anxiety, ever attempted suicide and ever self-harmed were also more common in the most deprived areas.

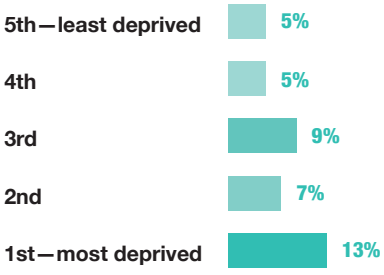


In 2021, prevalence of anxiety was higher for women than for men.

In 2021, 8% of adults reported feeling lonely 'most' or 'all of the time' in the last week. This was higher for younger people.



Prevalence of feeling lonely 'most' or 'almost all of the time' in the past week was highest in the most deprived areas in 2021.



2 MENTAL HEALTH AND WELLBEING

Erin Deakin

2.1 INTRODUCTION

Mental health is defined by the World Health Organization 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 encourages better quality of life overall, healthier lifestyles, better physical health, improved recovery from illness, better social relationships, and higher educational attainment[2]. Mental disorders often co-exist with physical illnesses[3] and those with severe mental disorders have a life expectancy 15-20 years shorter than the general population[4].

Around one in four[5] people are estimated to be affected by mental health problems in Scotland in any one year[6]. It is also evidenced that mental ill health in adolescence increases the risk of subsequent mental ill health later in life[7]. Globally, around 5% of adults are estimated to experience depression and along with anxiety it is more prevalent among women than men[8]. Around 700,000 people die due to suicide every year globally[9] 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 the wider community[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[15]. 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[16,17].

2.1.1 Policy background

The impact of the COVID-19 pandemic has been felt widely at both societal and individual levels, impacting on mental health. In response to this, the **Mental Health – Scotland's Transition and Recovery Plan**[18] sets out the mental health needs resulting from the pandemic and lockdown and how the Scottish Government is addressing these. The plan's commitments focus on areas or groups of people where COVID-19 is likely to have particularly impacted on mental health. Each area of focus includes responses that span multiple types of need including:

1. Promoting and supporting conditions for good mental health and wellbeing at a population level
2. Providing accessible signposting to help, advice and support
3. Providing rapid and easily accessible responses for those in distress, and

4. Ensuring safe, effective treatment and care for those living with a mental illness[3].

The plan acknowledges a range of pandemic-related pressures that may have impacted on mental wellbeing. These include inequalities, employment, impacts on particular groups such as children, young people, families, older people, and those with long-term conditions or disabilities[3].

Additionally, the plan lays out government action to provide the right help and support for mental illness. In particular, it illustrates the government's vision for the renewal of mental health services, including CAMHS and psychological therapies[3].

The Scottish Government is due to publish a new Mental Health and Wellbeing Strategy in 2022 which will build on the Transition and Recovery Plan and set out priorities for the coming years.

2.1.2 Reporting on mental wellbeing in the Scottish Health Survey

This chapter updates trends in mental wellbeing for adults and children 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 and loneliness. Figures are also reported by age, sex and area deprivation. To increase the sample size available, the analysis of child mental wellbeing used data from the 2017, 2018, 2019 and 2021 surveys 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 mental health and wellbeing and loneliness, please refer to Chapter 2, of the Scottish Health Survey 2021- volume 2: technical report.

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

2.2. MENTAL HEALTH AND WELLBEING

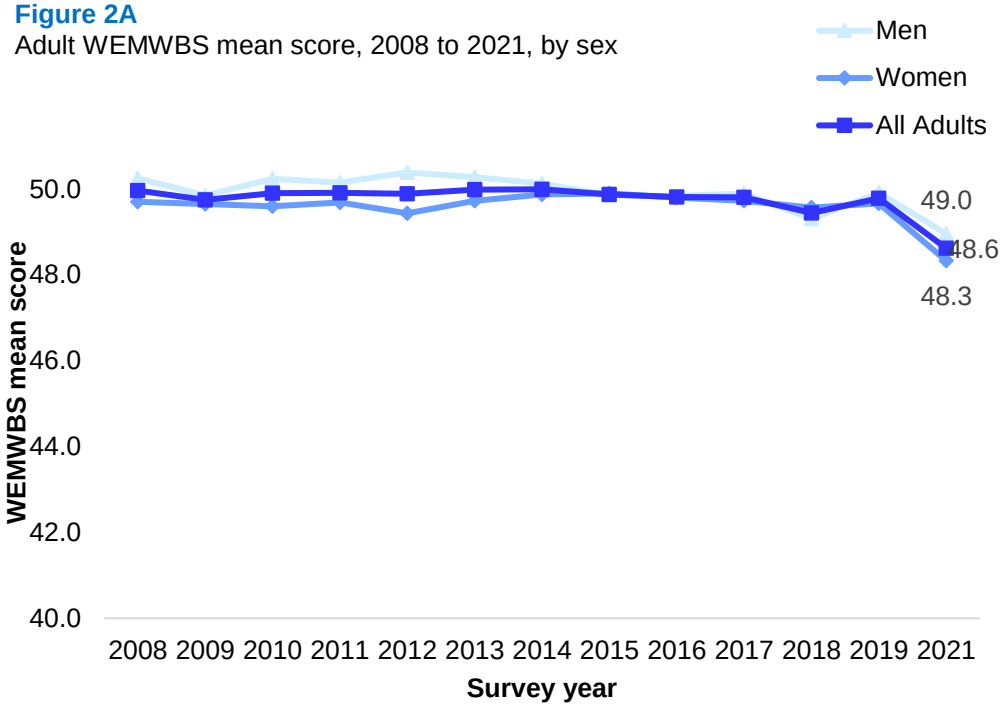
2.2.1 Adult WEMWBS mean score, 2008 to 2021, by sex

In 2021, the mean WEMWBS score for adults was 48.6, the lowest recorded and outside of the range observed over the rest of the time series (49.4 – 50.0).

Throughout the survey years, mean WEMWBS scores have varied by sex with men generally recording higher mean scores, although the differences have not always been significant. There was no signification

variation between the scores recorded in 2021 for men (49.0) compared with women (48.3). **Figure 2A, Table 2.1**

Figure 2A
Adult WEMWBS mean score, 2008 to 2021, by sex



2.2.2 Adult WEMWBS mean score, 2021, by age and sex

As reported in previous survey years[19], older adults generally reported higher mental wellbeing with a mean WEMWBS score of 52.0 recorded among those aged 65-74 and 51.0 among those aged 75 and over in 2021. In comparison, a mean score of 47.7 was recorded among those aged 16-24. In 2021, scores ranged between 46.0 - 49.5 for those aged 25-64, which is in line with previous years.

There were no significant variations by sex in 2021. **Table 2.2**

2.2.3 Adult WEMWBS mean score (age standardised), 2021, by area deprivation and sex

In 2021, area deprivation has continued to have a significant impact on the age-standardised adult WEMWBS mean scores. A decrease was recorded from a mean score of 50.5 in the least deprived areas to 46.8 in the most deprived.

No significant differences were recorded by SIMD between men and women in 2021.

Figure 2B
Adult WEMWBS mean score (age-standardised), 2021, by area deprivation and sex

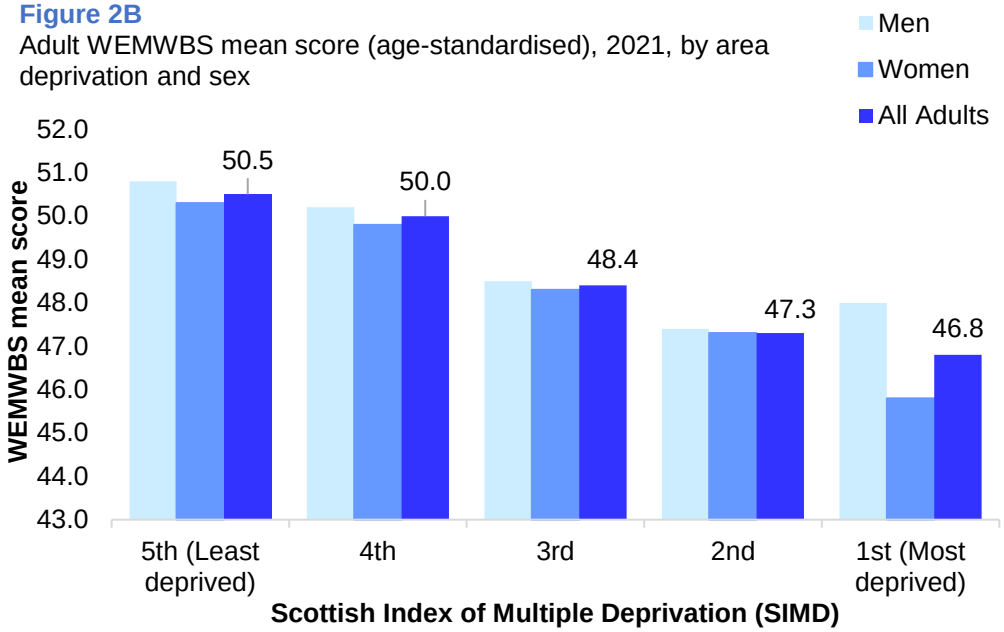


Figure 2B, Table 2.3

2.2.4 Child (aged 13-15) WEMWBS mean score, 2017/2018/2019/2021 combined, by sex

In 2017/2018/2019/2021 combined, the WEMWBS mean score for children aged 13-15 was similar to that recorded in previous years (50.8 compared to 51.0 in 2012-2015 combined).

As previously observed[19], there were significant differences by sex in 2017/2018/2019/2021 combined. A mean WEMWBS score of 51.9 was recorded among boys aged 13-15, while the score among girls aged 13-15 was significantly lower at 49.6. The scores for boys and girls remain similar to those recorded in previous survey years. **Table 2.4**

2.2.5 Child WEMWBS mean score, 2017/2018/2019/2021 combined, by area deprivation and sex

In 2021, no clear pattern was evident for the mean WEMWBS scores for children aged 13-15 by deprivation. Those living in the least deprived areas recorded a mean score of 51.4 with a similar score recorded among those living in the most deprived areas (51.2). The mean WEMWBS score for those living in the other three quintiles ranged between 50.0 – 50.9. **Table 2.5**

2.2.6 GHQ-12 score, 2003 to 2021, by sex

A GHQ-12 score of four or more is indicative of a possible psychiatric disorder. In 2021, the proportion of adults with a GHQ-12 score of 4 or more was 22%, a significant increase on the proportion recorded in 2019 (17%), as well as the scores recorded in previous years which ranged from 14%-19%.

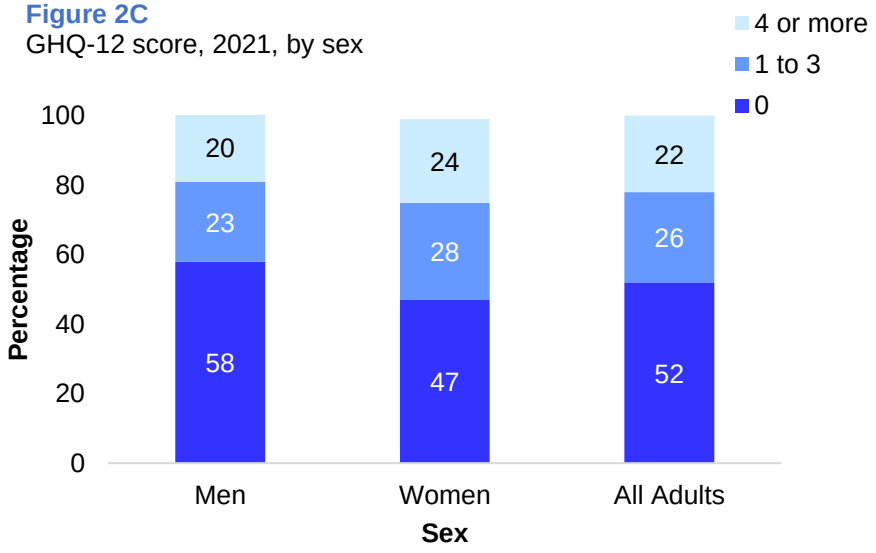
In 2021, the proportion of adults with a GHQ-12 score of zero (52%) is the lowest in the time series (with a similar score of 53% recorded in 2018), while the proportion with a score of between one and three (26%) in 2021 remains in the range 21% - 28% recorded between 2003 and 2019.

Similar patterns were observed by sex. **Table 2.6**

2.2.7 GHQ-12 score, 2021, by age and sex

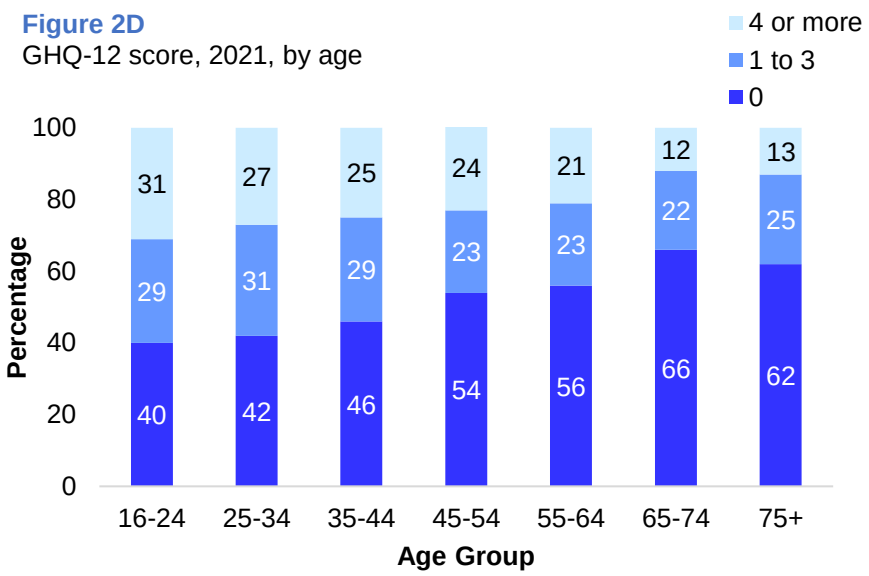
In 2021, a higher proportion of women recorded a GHQ-12 score of four or more compared to men (24% and 20% respectively), a pattern also recorded in previous survey years. Meanwhile, the reverse was recorded for the proportions recording a score of zero (47% of women compared with 58% of men). There was a difference of five percentage points when comparing scores between one and three by sex (28% for women and 23% for men).

Figure 2C
GHQ-12 score, 2021, by sex



In 2021, a decrease with age was observed in the proportion of adults recording a GHQ-12 score of four or more. Younger adults had higher scores with 31% of those aged 16-24 scoring four or more compared to 12% of those aged 65-74 and 13% of those aged 75 and over. For those with a score of zero, the opposite was observed as the proportion increased from 40% among those aged 16-24 to 66% among those aged 65-74 and 62% among those aged 75 and over. Similar patterns were observed for both men and women.

Figure 2D
GHQ-12 score, 2021, by age



Figures 2C and 2D, Table 2.7

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

To increase the sample size available, the analysis of anxiety and depression scores, attempted suicide and self-harm, by sex used sets of two-years of combined data from 2008/2009 to 2018/2019, while the data is presented for a single year for 2021 due to the lack of comparable data for 2020.

Depression

In 2021, the proportion of adults displaying two or more symptoms of depression (11%) remained in the range 10% - 12% recorded since 2014/2015 combined. No significant differences were found when comparing the proportion of men and women displaying two or more symptoms of depression (12% and 10% respectively).

The proportion of men that reported having two or more symptoms of depression increased overall from 7% in 2010/2011 combined to 12% in 2018/2019 combined and 2021. Scores for men in recent years are significantly higher than those in both 2010/2011 and 2012/2013 combined (7% and 9% respectively) indicating a real change regardless of the data collection mode (i.e. nurse interview or self-report).

The prevalence of two or more symptoms of depression has varied among women over the time series, with the highest level reported in 2016/2017 and 2018/2019 combined (both 11%). The proportion recorded in 2021 (10%) remains in the range 8% - 11% recorded since 2008/2009 combined.

Figure 2E
Two or more symptoms of depression, 2008/2009 combined to 2021, by sex

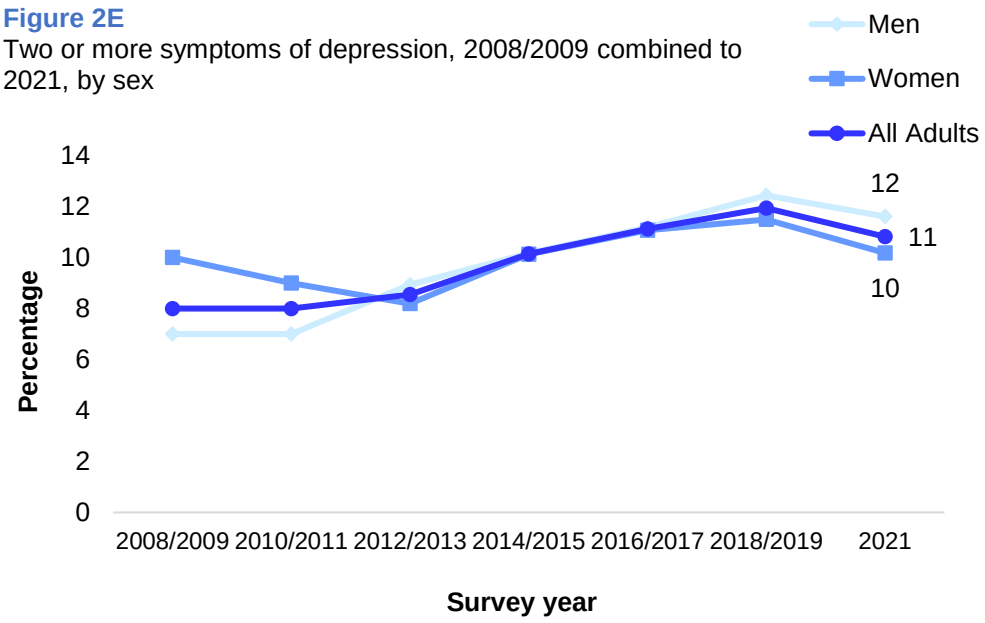


Figure 2E, Table 2.8

Anxiety

In 2021, the proportion of adults reporting having two or more anxiety symptoms was 14%, equal to that recorded for 2018/2019 combined and the highest proportion in the time series. By comparison, 9% recorded two or more symptoms of anxiety between 2008/2009 and 2012/2013 combined.

The prevalence of men reporting two or more symptoms of anxiety decreased to 10% in 2021 from 13% in 2018/2019 combined, returning to a similar level as recorded between 2008/2009 and 2016/2017 combined (in the range 7% - 9%).

There has been an overall increase over time in the prevalence of two or more symptoms of anxiety among women, which has risen from 10% - 11% in 2008/2009 and 2010/2011 combined to its highest score across the time series of 18% in 2021.

Over the time series (2008/2009 combined to 2021), women have been consistently more likely than men to record two or more symptoms of anxiety, although the difference has varied from 2 to 8 percentage points higher. The difference by sex in 2021 is the highest across the time series (eight percentage points).

Figure 2F
Two or more symptoms of anxiety, 2008/2009 combined to 2021, by sex

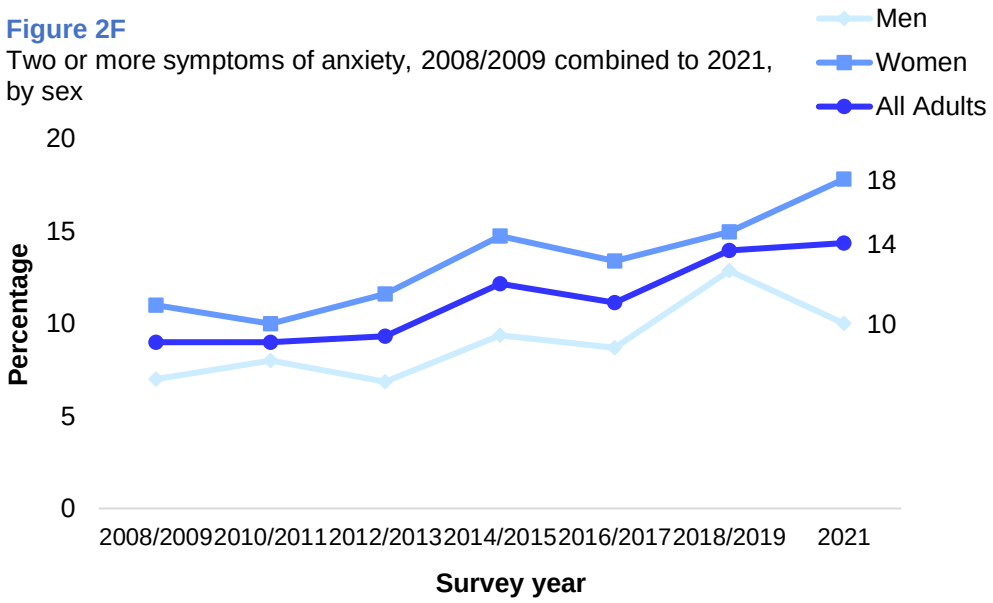


Figure 2F, Table 2.8

Attempted suicide

The proportion of adults reporting that they had ever attempted suicide was 6% in 2021. The 2019 SHeS report[19] highlighted potential evidence of an increasing trend in the attempted suicide rate, which had risen from 4% in 2008/2009 to 7% in 2018/2019 combined. However, further data is required to evaluate whether the slight decrease recorded in 2021 is evidence of a change in this potential trend or not.

The prevalence of ever attempting suicide has consistently been higher for women compared with men over the time series (two to three percentage points difference), with a non-significant difference in 2018/2019 combined. In 2021, the gap between men and women reduced to one percentage point, meaning that the difference in prevalence was not significant (6% for men and 7% for women).

Figure 2G
Prevalence of ever having attempted suicide, 2008/2009 (combined) to 2021, by sex

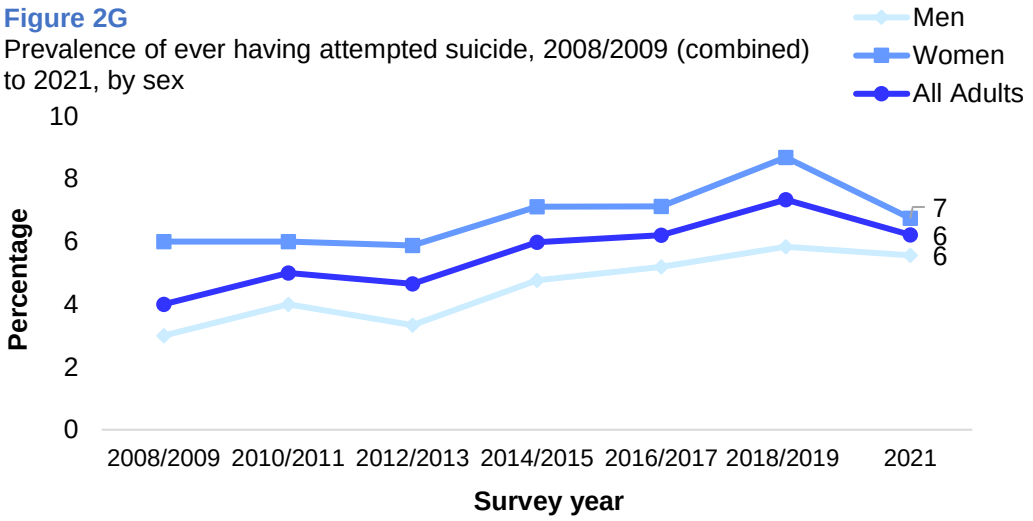


Figure 2G, Table 2.8

Self-harm

In 2021, one in ten adults reported ever having self-harmed (10%), the highest proportion recorded in the time series, with an overall increase from 2% - 3% in 2008/2009 combined and 2010/2011 combined. It should be noted that in 2012/2013 combined the mode of data collection changed from nurse administered to self-completion questionnaire.

In 2021, the prevalence of self-harm for both men and women was the highest in the time series at 8% and 11% respectively. Although women have consistently been more likely than men to report ever having self-harmed over the time series, the difference recorded in 2021 was not statistically significant.

Figure 2H
Prevalence of ever having self-harmed, 2008/2009 (combined) to 2021, by sex

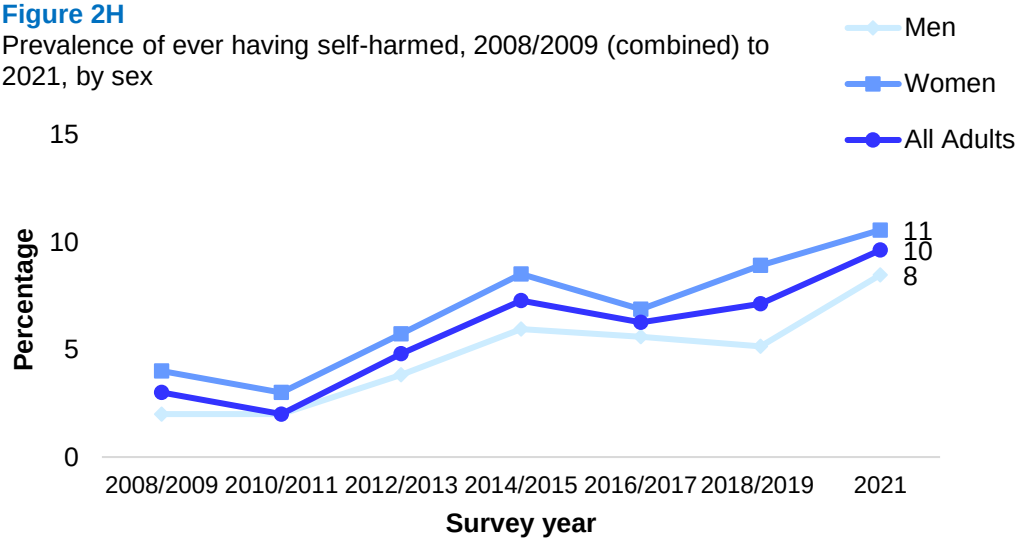


Figure 2H, Table 2.8

2.2.9 CIS-R anxiety and depression scores, attempted suicide and self-harm, 2021, by age and sex

In 2021, a general decrease in prevalence of two or more symptoms of depression was recorded with age, with the highest proportion recorded among those aged 25-34 (15%) and the lowest among those aged 65-74 (6%).

In 2021, a general decrease in prevalence of two or more symptoms of anxiety was recorded with age, with the highest proportion recorded among those aged 25-34 (24%) and the lowest among those aged 65-74 (4%). Younger women were significantly more likely to report two or more symptoms of anxiety compared to men of the same age, with proportions of 12% for men aged 25-34 and 33% for women in this age group.

Age was a significant factor in whether someone had ever attempted suicide, with those aged 25-34 most likely to report having ever tried to take their own life (11%) and those aged 75 and over the least likely to

report having done so (1%). A similar pattern by age was observed for both men and women.

Age was also a significant factor in relation to the prevalence of self-harm, with younger people being more likely than older people to have ever self-harmed (25% of those aged 16-24 and 20% of those aged 25-34 compared with 1% of those aged 65 and over). **Table 2.9**

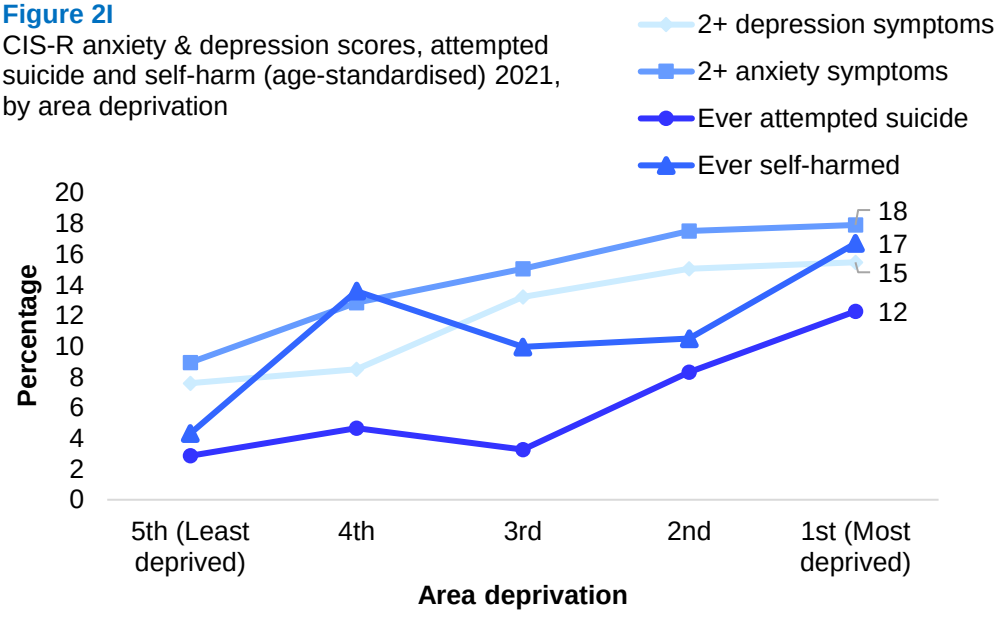
2.2.10 CIS-R anxiety and depression scores, attempted suicide and self-harm (age standardised), 2021, by area deprivation and sex

Neither the prevalence of two or more symptoms of depression nor anxiety were significant in 2021 when analysed by area deprivation.

However, significant variation was recorded in relation to whether suicide had ever been attempted, with adults from the most deprived areas being much more likely to ever have made an attempt to take their own life (12% compared to 3% among those in the least deprived areas).

Area deprivation also had a significant impact in relation to the prevalence of self-harm, however, there was not a linear pattern. The highest prevalence was among those in the most deprived areas (17%) and the lowest among those living in the least deprived areas (4%), with a range of 10% - 14% among those living in the three remaining areas.

Figure 2I
CIS-R anxiety & depression scores, attempted suicide and self-harm (age-standardised) 2021, by area deprivation



Similar patterns were reported for both men and women for depression, anxiety, suicide and self-harm when analysed by area deprivation in 2021, although prevalence was generally higher for women than men in the most deprived areas. **Figure 2I, Table 2.10**

2.2.11 Adult loneliness, 2021, by age and sex

In 2021, 8% of adults reported having felt lonely 'most' or 'all of the time' in the week prior to being interviewed. Meanwhile, 28% of adults reported having felt lonely 'some of the time' and 64% reported feeling lonely 'almost none of the time' or 'not at all'. Patterns were similar for men and women, with no significant variations by sex.

Overall, younger adults were more likely to report feeling lonely 'most' or 'all of the time' (14% of those aged 16-24) compared to older adults (4% of those aged 65 and over).

Figure 2J
Adult loneliness, 2021, by age

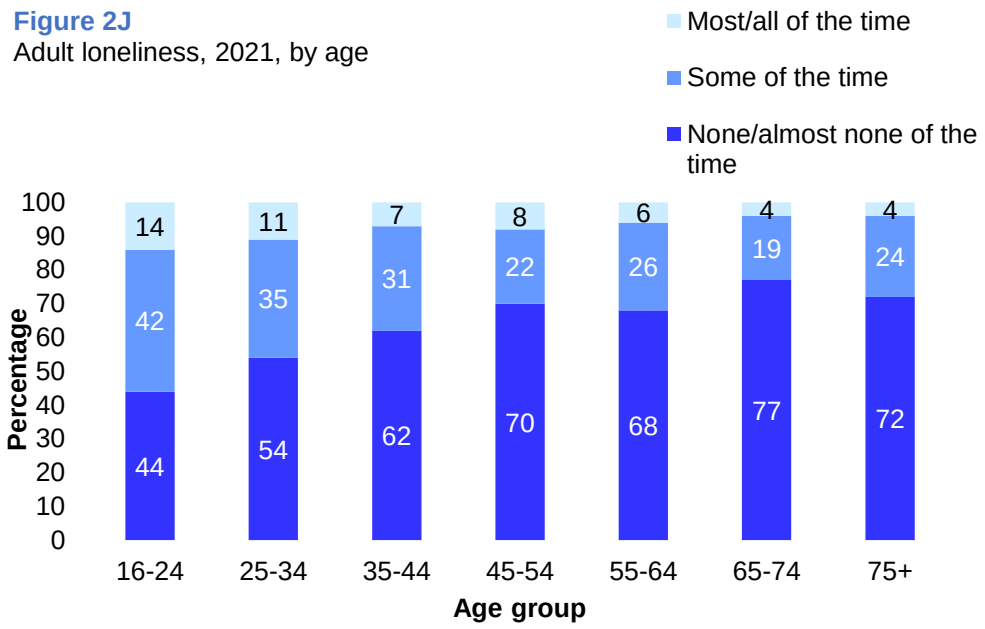


Figure 2J, Table 2.11

2.2.12 Adult loneliness (age-standardised), 2021, by area deprivation and sex

In 2021, loneliness was most prevalent among those in the most deprived areas, with 13% reporting having felt lonely 'most' or 'all of the time' compared with 5% among those in the least deprived areas.

Disparity by area deprivation was also evident for the proportions that reported feeling lonely 'none' or 'almost none of the time', which ranged from 72% among those living in the two least deprived areas to 52% among those living in the most deprived areas. No significant differences were observed between men and women. **Table 2.12**

2.2.13 Adult loneliness, 2021, by long-term illness and sex

In 2021, those with a limiting long-term condition were more likely to report being lonely 'most' or 'all of the time' (13%) compared to those with non-limiting long-term conditions (4%) and those who did not report having any long-term condition (5%).

Similar patterns were found for both men and women. **Table 2.13**

Table list

The tables can be found on the main report page under supporting files:
https://www.gov.scot/publications/scottish-health-survey-2021-volume-1-main-report/

References and notes

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Chapter 3

Respiratory Conditions including COVID-19

CHAPTER 3

Respiratory Conditions including COVID-19

Among all adults in 2021:

16% reported that they had doctor-diagnosed asthma

14% reported having wheezed in the last 12 months, lowest in the time series

26% reported ever having wheezed

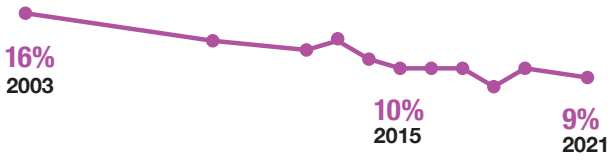
Among all children in 2021:

9% reported that they had doctor-diagnosed asthma

11% reported having wheezed in the last 12 months

20% reported ever having wheezed

The prevalence of doctor-diagnosed asthma in children has decreased since 2003.

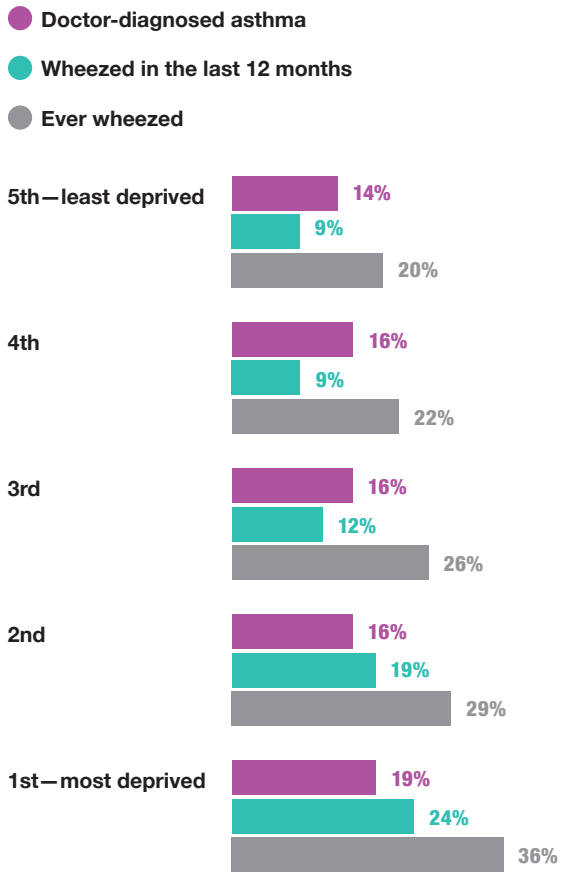


Boys were more likely to have doctor-diagnosed asthma than girls in 2021.

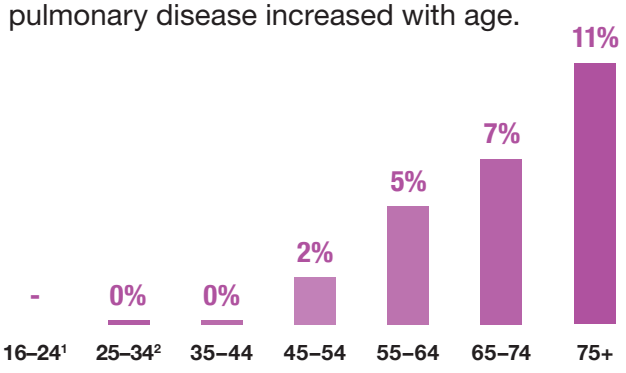
11% boys

6% girls

While prevalence of doctor-diagnosed asthma in adults did not vary significantly by deprivation in 2021, wheezing in the last 12 months was more common in more deprived areas.



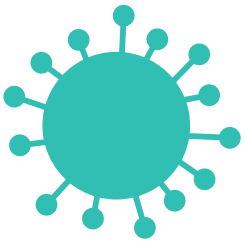
In 2021, doctor-diagnosed chronic obstructive pulmonary disease increased with age.



[1] - no observations (zero value)

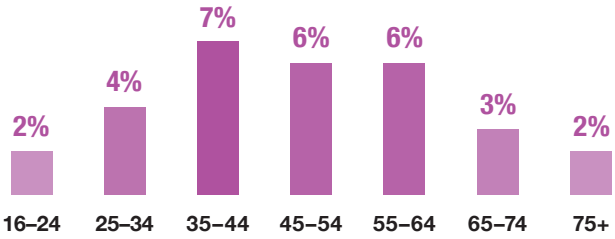
[2] 0 non-zero values of less than 0.5% and thus rounded to zero

In 2021:



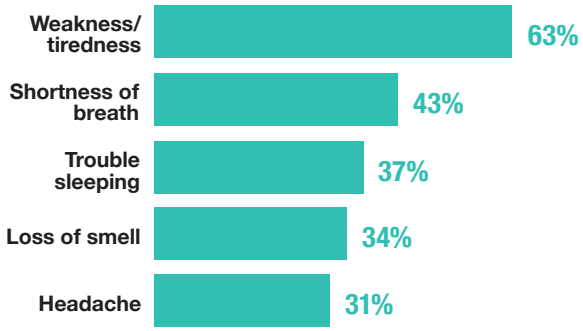
5%
of all adults reported having long COVID

The proportion of adults who reported having long COVID differed with age.

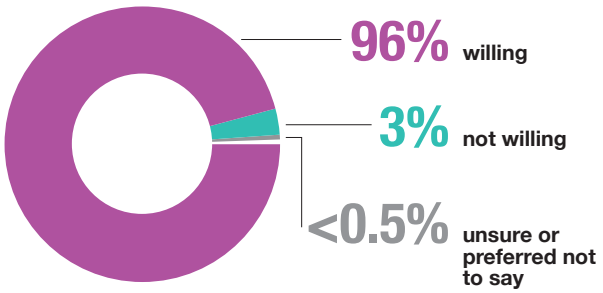


1%
of adults reported that long COVID limited their activities a lot

The most common symptoms of long COVID amongst adults were:

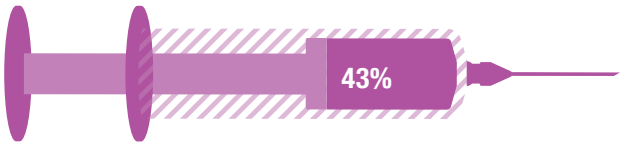


In 2021, the vast majority of adults reported that they had or were willing to take up the COVID vaccine, while a few said that they were not and the least that they were unsure or preferred not to say.



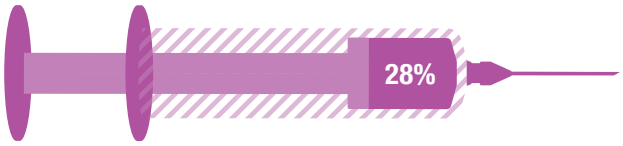
In 2021, the most common reasons for not taking up the COVID vaccine were:

'I need more information about the safety of the vaccines'

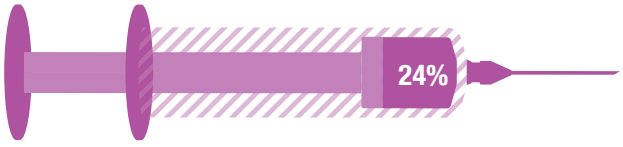


'I'm concerned about how quickly the vaccines have been approved'

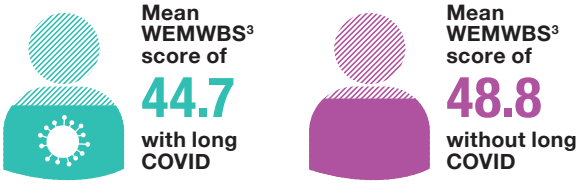
'I'm concerned about how quickly the vaccines have been developed'



'I don't think COVID would be a serious illness for me'



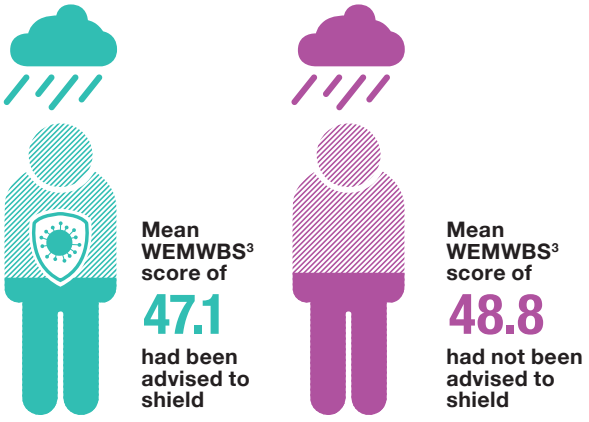
In 2021, mental wellbeing was lower amongst adults with long COVID compared with those who did not have long COVID.



Mean WEMWBS[3] score of 44.7 with long COVID

Mean WEMWBS[3] score of 48.8 without long COVID

Mental wellbeing was also lower in 2021 amongst adults who had been advised to shield compared with those who had not.



Mean WEMWBS[3] score of 47.1 had been advised to shield

Mean WEMWBS[3] score of 48.8 had not been advised to shield

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

3 RESPIRATORY CONDITIONS INCLUDING COVID-19

Rachel Whitford

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. These respiratory conditions are currently incurable, with particular concerns about asthma over- and under-diagnosis[1,2,3].

The UK has one of the highest rates of asthma in the world[4,5]. This illness is characterised by variable and recurring symptoms of breathlessness, wheezing, coughing and chest tightness. Around 1 in 14 people in Scotland are currently receiving treatment for asthma, a fifth of whom are children[6]. The reasons for the high prevalence of asthma in the UK are not certain; however, the risk factors identified include environmental (house dust mites, pollen, animals, specific foods, viral infections, moulds, fungi, environmental tobacco smoke and air pollutants) and genetic disposition, obesity, and lifestyle/stage (diet, drug use, caesarean sections, and breastfeeding)[7]. Occupational exposure also accounts for around 10% of cases of adult-onset asthma[8].

The prevalence of COPD means that it is now the third leading cause of mortality worldwide[9]. Not only does this reinforce the importance of monitoring and, where possible, tackling the causes and symptoms of this condition, 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[10]. Due to Scotland's health inequalities, the associations of long-term conditions like COPD with deprivation, lifestyle risk factors and wider social health determinants are increasingly important[11]. Smoking is the main cause of COPD with up to 25% of long-term smokers estimated to develop COPD and an estimated 8 out of 10 of those with the condition having either smoked or continue to smoke[12]. This smoking associated risk is higher for women compared to men[13].

Over the last two years, there has been an increase in public and clinical awareness of the longer-term effects of COVID-19 infection usually referred to as long COVID or post-COVID-19 syndrome. The overlapping long COVID symptoms sometimes experienced can affect body systems including the respiratory system. Recent evidence suggests that a sizeable proportion of people who report to have long COVID have long-term rehabilitation and support needs[14].

3.1.1 Policy background

The **Respiratory care – action plan: 2021 to 2026[15]** sets out the vision for improvement in the prevention, diagnosis, care, treatment and support of people living with respiratory conditions. This is supported by other key policy initiatives including the **Scottish Access Collaborative & Modernising Patient Pathways Programme,** 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** is for people in Scotland to 'live longer, healthier lives'[17], which includes a National Performance Indicator to 'reduce premature mortality' (deaths from all causes in those aged under 75)[18].

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[19].

In September 2021, the Scottish Government published **Scotland's Long COVID-19 Service**[20] paper. The paper sets out the key elements that underpin the approach to care and support for people with long COVID.

The Scottish Government's approach is based on four key elements: supported self-management, primary and community-based support, rehabilitation support and secondary care investigation and support.

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.

The Scottish Government consider it vital for the COVID-19 vaccination programme to reach everyone and that no one is left behind, both for individual health and our collective community wellbeing.

A range of outreach activities and partnerships with community and third sector organisations, and frontline local authority staff have supported the building of trust and enabled the removal of barriers for people who might not otherwise take up the vaccination offer. For example, vaccinating at community venues, places of worship and food banks. Recent research commissioned by Scottish Government shows that having a local and more flexible service is welcome[21].

Mobile outreach units have been provided by the Scottish Ambulance Service (SAS) and some Health Boards partnered with local transport providers to use their vehicles to go into community settings. Pop-up and drop-in clinics were used across the country for those who are unable to access the mass vaccination clinics. Local communities were often consulted on the location of mobile clinics.

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

This chapter updates trend data on adults' self-reported doctor-diagnosed asthma, COPD prevalence, and respiratory symptoms (wheezing). Data on long COVID prevalence, symptoms and impact on daily life and mental wellbeing (measured with WEMWBS – Warwick-Edinburgh Mental Wellbeing Scale) are reported as well as figures on reasons for not taking up the offer of the COVID-19 vaccination.

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 respiratory conditions and long COVID, please refer to Chapter 2 of the Scottish Health Survey 2021 - 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 CONDITIONS INCLUDING COVID-19

3.2.1 Doctor-diagnosed asthma, wheezed in the last 12 months, and ever wheezed, 2003 to 2021, by age and sex

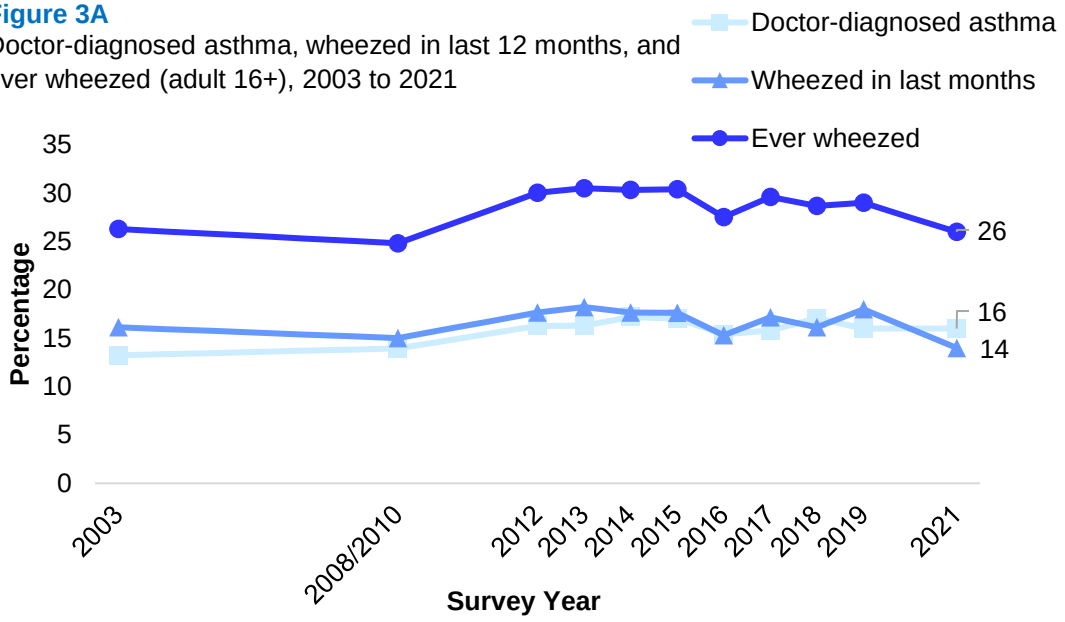
Adults

Doctor-diagnosed asthma of adults increased over time from 13% in 2003 to 16% in 2021 but has remained relatively stable since 2012 (16%). A similar pattern was observed for both women and men during this time. While there was a difference in the proportion of men and women who had doctor-diagnosed asthma in 2021, it was not statistically significant (15% and 17% respectively).

In 2021, the proportion of adults who had wheezed in the last 12 months was 14%, the lowest proportion since the time series began in 2003. Before 2021, the proportion of adults who had wheezed in the last 12 months fluctuated between 15% and 18% since 2003. Men followed the same pattern, seeing the lowest prevalence rate in 2021 (12%) since the time series began, which was also a five-percentage point decrease since 2019. In 2021, the proportion of women who had wheezed in the last 12 months (16%) was more reflective of previous survey years, with prevalence ranging between 15% and 19% since 2003.

In 2021, the proportion of adults who had ever wheezed was 26% (28% of women and 25% of men). This proportion was consistent with previous years in the time series, with prevalence remaining between 25% and 31% since 2003. **Figure 3A, Table 3.1**

Figure 3A
Doctor-diagnosed asthma, wheezed in last 12 months, and ever wheezed (adult 16+), 2003 to 2021



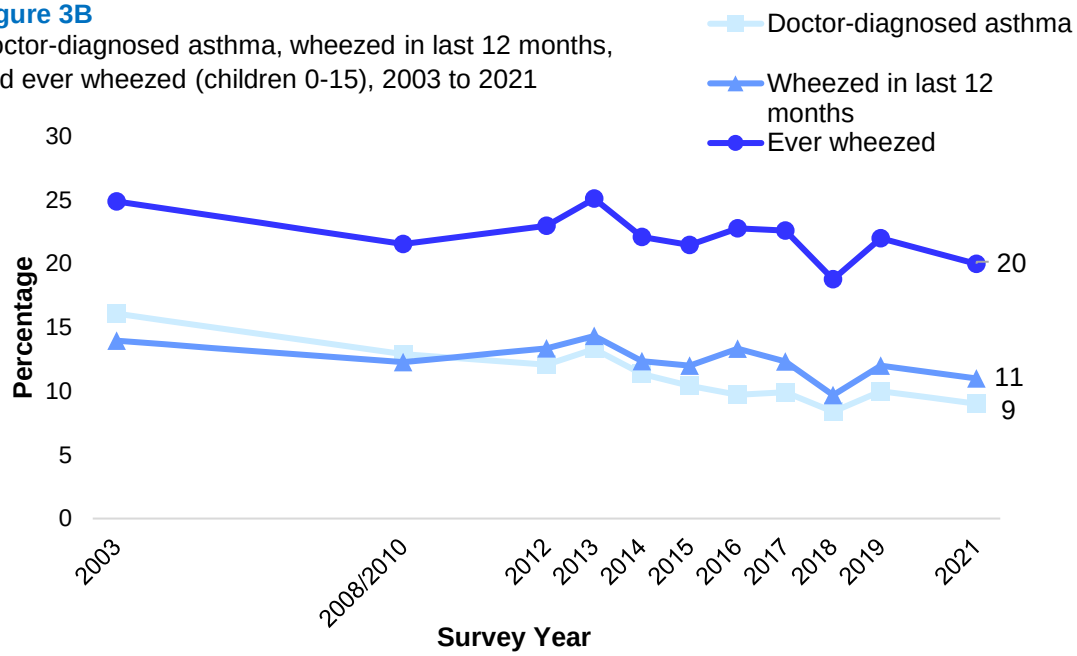
Children

In 2021, the prevalence of doctor-diagnosed asthma among children (aged 0-15) was 9%. The proportion of children diagnosed with asthma has almost halved since 2003 (16%), but prevalence has remained relatively stable since 2015 (10%). Boys were significantly more likely than girls to have doctor-diagnosed asthma in 2021 (11% compared with 6%).

The proportion of children who had wheezed in the last 12 months in 2021 was 11%. This was consistent with previous years in the time series, with proportions of children who had wheezed in the last 12 months fluctuating between 10% and 14% since 2003.

In 2021, 20% of children had ever wheezed, a figure which had not changed significantly since 2003 (fluctuating between 25% and 19%). Prevalence of boys ever having wheezed in 2021 was 22%, not significantly different from the 18% of girls. **Figure 3B, Table 3.1**

Figure 3B
Doctor-diagnosed asthma, wheezed in last 12 months, and ever wheezed (children 0-15), 2003 to 2021

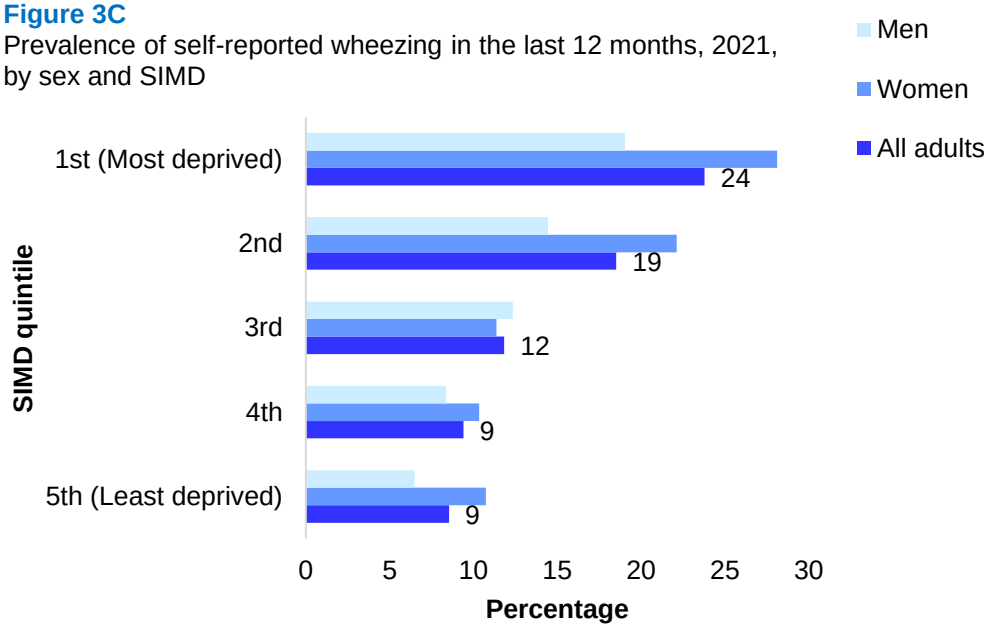


3.2.2 Doctor-diagnosed asthma, wheezed in last 12 months, and ever wheezed (age-standardised), 2021, by area deprivation and sex

In 2021, prevalence of doctor-diagnosed asthma did not vary significantly by levels of area deprivation. Proportions of age-standardised doctor-diagnosed asthma were between 14% and 19% in each of the SIMD quintiles.

There was, however, a significant difference in the proportion of adults who had wheezed in the last 12 months by level of deprivation, with 24% of those in the most deprived areas and 9% of those in the least deprived areas reporting this in 2021. **Figure 3C, Table 3.2**

Figure 3C
Prevalence of self-reported wheezing in the last 12 months, 2021, by sex and SIMD



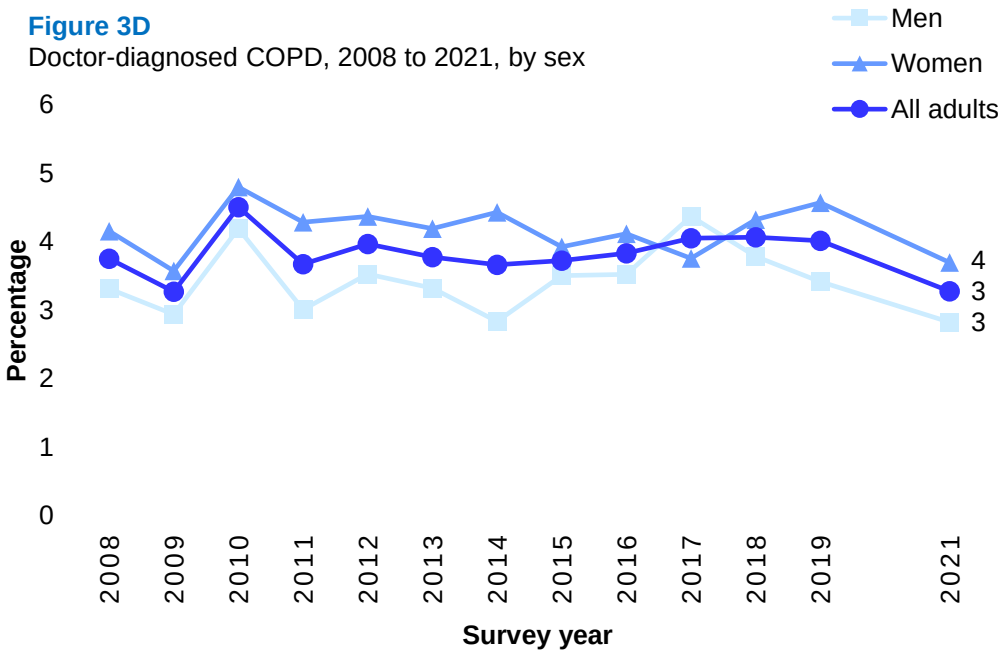
In 2021, the proportion of those who had ever wheezed also varied significantly by SIMD quintile. The proportion of adults who had ever wheezed increased with deprivation (20% in the least deprived areas compared with 36% in the most deprived areas). There were no significant differences between men and women by areas of deprivation. **Table 3.2**

3.2.3 Doctor-diagnosed COPD, 2008 to 2021, by sex

The proportion of adults with doctor-diagnosed COPD was 3% in 2021 which was not significantly different from the stable trend of 4% since 2011.

For most years since 2008, prevalence of COPD has been slightly higher for women than for men, but not significantly so. In 2021, 4% of women and 3% of men reported having doctor-diagnosed COPD. **Figure 3D, Table 3.3**

Figure 3D
Doctor-diagnosed COPD, 2008 to 2021, by sex



3.2.4 Doctor-diagnosed COPD, 2021, by age and sex

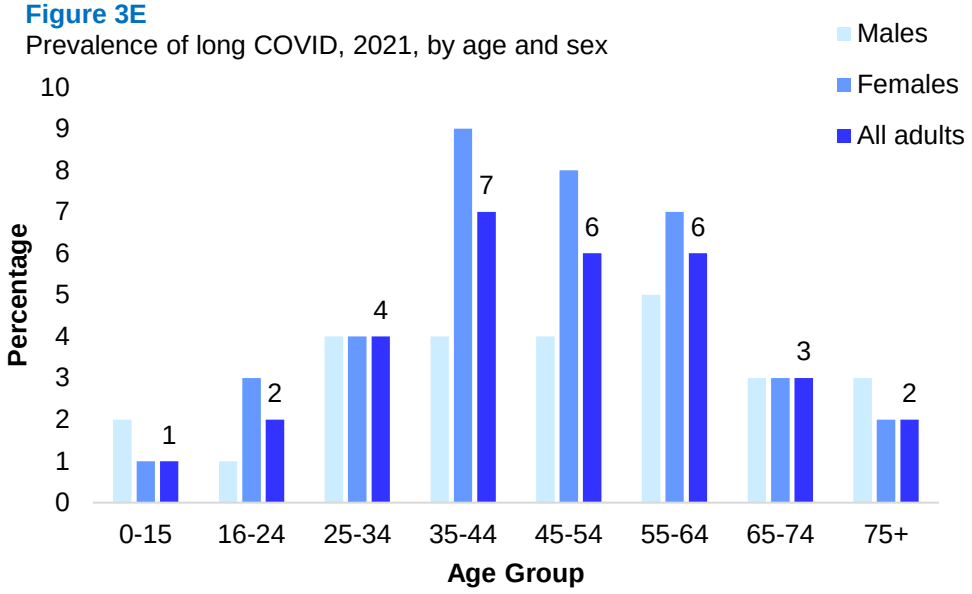
In 2021, the proportion of those with a diagnosis of COPD increased with age. Around one in ten (11%) of those aged 75 and above had doctor-diagnosed COPD, compared with less than 0.5% of those aged 16-44. A similar pattern was observed for both men and women. **Table 3.4**

3.2.5 Whether has long COVID and whether limiting ability to carry out day-to-day activities due to long COVID, 2021, by age and sex

In 2021, one in 20 people (5%) reported having symptoms of long COVID at least four weeks after first developing COVID-19. The proportion of those who had long COVID was highest amongst those

aged 35-64 (6 - 7%). Prevalence was lowest amongst the youngest and oldest age groups (1% of children, 2% of those aged 16-24 and 2% of those aged 75+). Women were slightly more likely than men to experience symptoms of long COVID (5% of women compared with 4% of men). **Figure 3E, Table 3.5**

Figure 3E
Prevalence of long COVID, 2021, by age and sex

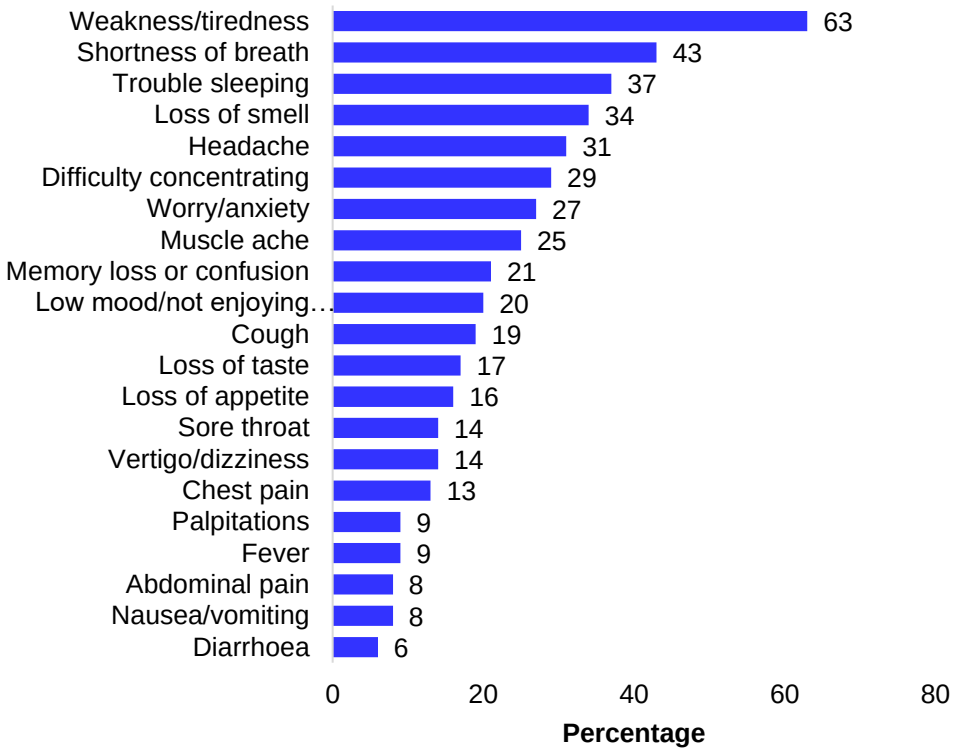


One per cent of adults reported that long COVID limited their activities a lot. Women were slightly more likely than men to report that they had symptoms of long COVID which limited their activities a lot (2% and 1% respectively). **Table 3.5**

3.2.6 Long COVID symptoms, 2021, by age and sex

In 2021, the most common symptom amongst adults who were experiencing long COVID was ‘weakness / tiredness’, with 63% of those with long COVID reporting this. This was followed by ‘shortness of breath’ (43%), ‘trouble sleeping’ (37%), ‘loss of smell’ (34%), ‘headache’ (31%), ‘difficulty concentrating’ (29%) and ‘worry / anxiety’ (27%).
Figure 3F, Table 3.6

Figure 3F
Long COVID symptoms



3.2.7 Whether have had or would be willing to have the COVID-19 vaccine, 2021, by age and sex

In 2021, the vast majority of adults (96%) reported that they had or were willing to take up the COVID-19 vaccine, while 3% said that they were not and less than 0.5% that they were unsure or preferred not to say. There were no significant differences between men and women.

Willingness to take up the COVID-19 vaccine varied significantly by age. Those aged 16-44 were most likely to be unwilling to take up the COVID-19 vaccine (5%) compared with 1% of those aged 65 and over.

Table 3.7

3.2.8 Reasons for not taking up COVID-19 vaccine, 2021, by age and sex

Adults who had not taken up the COVID-19 vaccine, or who said they were unsure or unlikely to do so when offered one, were asked the reason why. In 2021, the most common reasons for not taking up the COVID-19 vaccine were:

- ‘I need more information about the safety of the vaccines’ (43%);
- ‘I’m concerned about how quickly the vaccines have been approved’ (33%);
- ‘I’m concerned about how quickly the vaccines have been developed’ (28%);
- ‘I don’t think COVID-19 would be a serious illness for me’ (24%);

- ‘I am concerned about having an allergic reaction, even though I do not have a medical history of allergies’ (22%); and
- ‘I have heard that some people don't feel well after being vaccinated’ (18%)

Table 3.8

3.2.9 Adult WEMWBS mean score (age-standardised), 2021, by whether had COVID-19/long COVID and sex

In 2021, mental wellbeing was not significantly associated with ever having had COVID-19. The mean WEMWBS score (age-standardised) for adults who had had COVID-19 was 48.1 compared with 48.7 for those who had not had COVID-19.

The mean WEMWBS score for those with long COVID, however, was 44.7 compared with 48.8 for those who did not have long COVID, indicating significantly lower mental wellbeing for those with long COVID. **Table 3.9**

3.2.10 Adult WEMWBS mean score (age-standardised), 2021, by whether received a letter that advised to shield and sex

In 2021, those who had received a letter or text advising them to shield during the COVID-19 pandemic tended to have lower mental wellbeing than those who had not (WEMWBS score of 47.1 and 48.8 respectively). **Table 3.10**

Table list

The tables can be found on the main report page under supporting files: https://www.gov.scot/publications/scottish-health-survey-2021-volume-1-main-report/

References and notes

1 See: https://www.scotpho.org.uk/health-wellbeing-and-disease/asthma/key-points

2 See: https://www.scotpho.org.uk/health-wellbeing-and-disease/chronic-obstructive-pulmonary-disease-copd/key-points/

3 See: https://www.bbc.co.uk/news/health-35967380

4 To, T, Stanojevic, S, Moores, G, Gershon A S , Bateman, E, Cruz, A A, Boulet L-P (2012). *Global asthma prevalence in adults: findings from the cross-sectional world health survey* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3353191/

5 Beasley, R (1998). *Worldwide variation in prevalence of symptoms of asthma, allergic rhinoconjunctivitis and atopic eczema: ISAAC. The Lancet;* 351(9111): 1225-32.

6 See: https://www.asthma.org.uk/about/media/news/athma-deaths-in-scotland-highest-this-century/

7 See: https://www.scotpho.org.uk/health-wellbeing-and-disease/asthma/risk-factors/

8 See: https://www.asthma.org.uk/advice/understanding-asthma/types/occupational-asthma/

9 See: https://www.who.int/news-room/fact-sheets/detail/chronic-obstructive-pulmonary-disease-(copd)#cms

10 Chronic Obstructive Pulmonary Disease (COPD): best practice guide. Edinburgh, Scottish Government, 2017. Available at: https://www.gov.scot/publications/copd-best-practice-guide/

11 See: http://www.healthscotland.scot/health-inequalities/impact-of-ill-health/impact-of-deprivation-on-health

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

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14 Respiratory care – action plan: 2021 to 2026. Edinburgh, Scottish Government, 2021 Available at: https://www.gov.scot/publications/respiratory-care-action-plan-scotland-2021-2026/pages/4/

15 Respiratory care – action plan: 2021 to 2026. Edinburgh, Scottish Government, 2021 Available at: https://www.gov.scot/publications/respiratory-care-action-plan-scotland-2021-2026/pages/4/

16 Framework for reporting people through Recovery and Rehabilitation during and after the COVID-19 Pandemic. Edinburgh, Scottish Government. 2020 Available at: https://www.gov.scot/publications/framework-supporting-people-through-recovery-rehabilitation-during-covid-19-pandemic/

17 See: https://nationalperformance.gov.scot/

18 See: https://nationalperformance.gov.scot/measuring-progress/national-indicator-performance

19 See: https://nationalperformance.gov.scot/measuring-progress/national-indicator-performance

20 Scotland's Long COVID Service. Available at: https://www.gov.scot/publications/scotlands-long-covid-service/pages/1/

21 See: https://www.gov.scot/publications/vaccination-programme-user-journeys-experiences-covid-19-flu-vaccination/

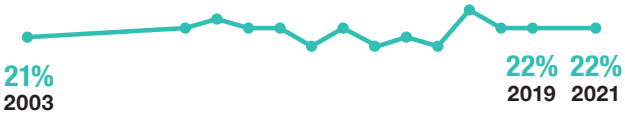
Chapter 4

Diet and Food Insecurity

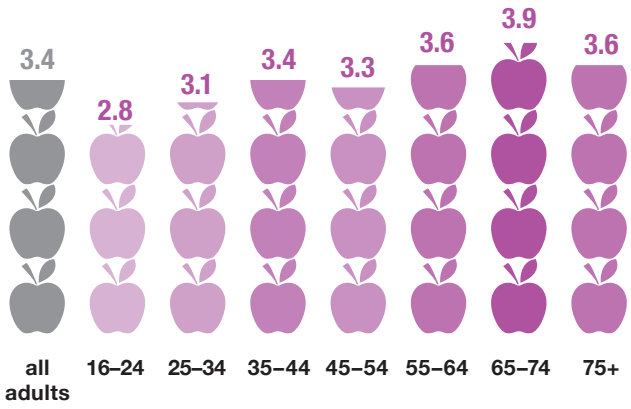
CHAPTER 4

Diet and Food Insecurity

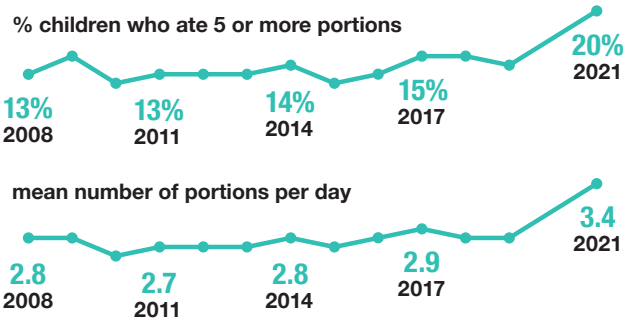
In 2021, the proportion of adults who consumed 5 or more portions of fruit and vegetables per day was the same as in 2019 and fairly stable since 2003[1].



Fruit and vegetable consumption (mean number of portions per day) was lowest for those aged 16-24 and highest for those aged 65-74.



In 2021, the proportion of children aged 2-15 who consumed 5 or more portions of fruit and vegetables and the average daily consumption was significantly higher than in any of the years 2008 to 2019[2].

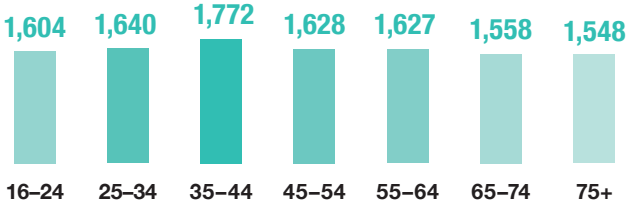


[1] Figures for 2021 have been calculated from data collected as part of the Intake24 dietary recalls. Data from earlier years was taken from the Scottish Health Survey fruit and vegetable module.

[2] The changes from face-to-face (in previous years) to telephone interviewing (in 2021) may have affected the time series.

In 2021, the average energy intake per person per day was significantly higher for men than for women.

Energy intake (kcal/day) varied by age; highest for those aged 35-44 and lowest for those aged 65 and above.



In 2021, one in five adults met the energy density[3] Scottish Dietary Goal (SDG) of no more than 125 kcal/100g/day, with women more likely to do so than men.

20%	16%	24%
of adults	of men	of women

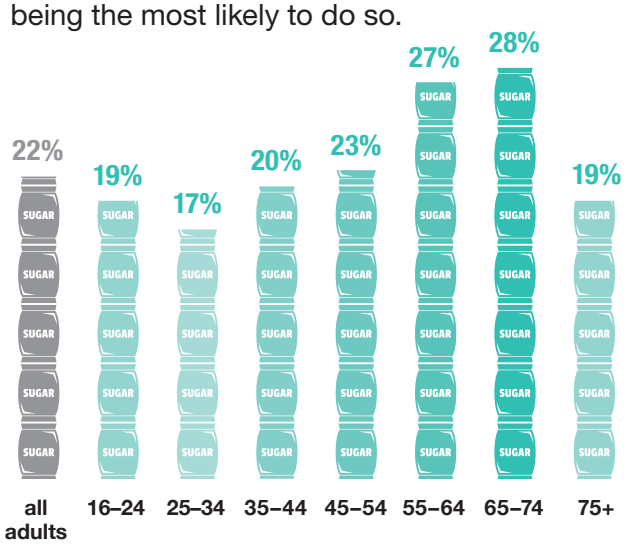
In 2021, almost half of all adults met the SDG for total fat intake[4], while only a quarter met the SDG for saturated fat intake[5].

[3] Energy density of food is generally higher for foods rich in fat and sugar, and lower for starchy carbohydrates, fruits and vegetables.

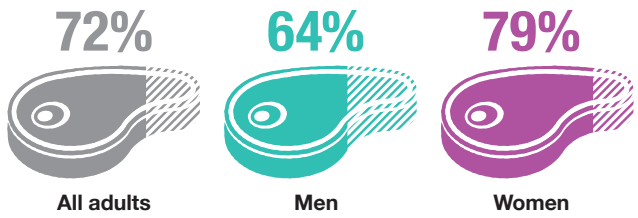
[4] The SDG is for average intake of total fat to reduce to no more than 35% of food energy. Food energy does not include energy from alcohol.

[5] The SDG is for average intake of saturated fat to reduce to no more than 11% of food energy. Food energy does not include energy from alcohol.

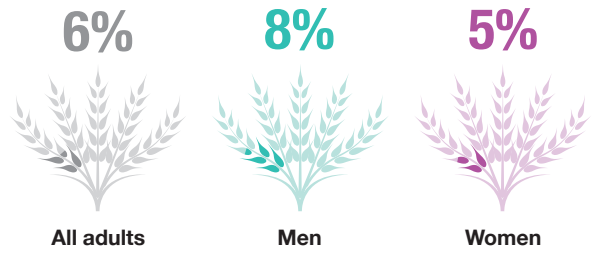
In 2021, just over a fifth of adults met the SDG for free sugars intake[6], with adults aged 55-74 being the most likely to do so.



Nearly three quarters of adults in 2021 consumed no more than 70g of red and red processed meat per day. Women were more likely than men to consume no more than 70g per day.



In 2021, a very low proportion of adults met the SDG for fibre intake[7], with men being more likely than women to do so.



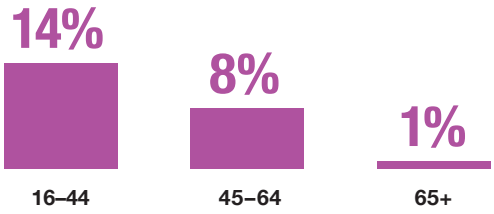
Across all adults in 2021, a lack of money or other resources in the previous 12 months resulted in:

- **9%** worried about running out of food
- **6%** ate less
- **3%** ran out of food

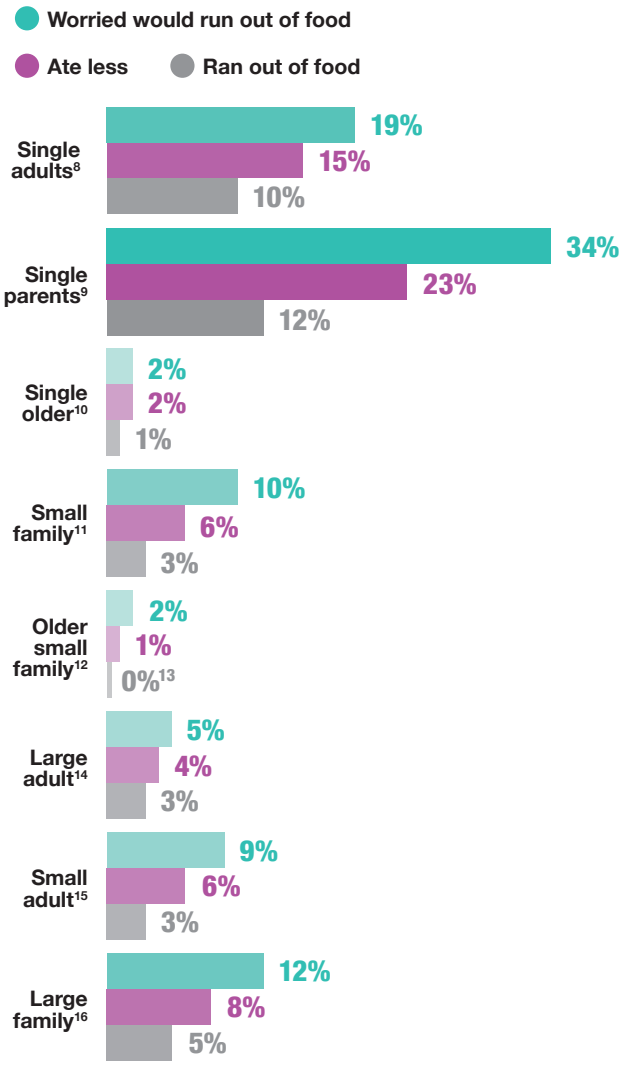
[6] The SDG is that average intake of free sugars does not exceed 5% of total energy. Total energy includes energy from alcohol.

[7] The SDG is for an increase in average consumption of AOAC (Association of Analytical Chemists) fibre to 30g/day.

In 2021, younger adults were more likely to be worried that they would run out of food.



In 2019/2021 combined, the highest levels of food insecurity were among single parents and single adults under the age of 65.



[8] One adult aged 16-64, no children.

[9] One adult any age and one or more children. It should be noted that the definition of a single parent does not make any distinction between situations where a child has regular contact and/or partly resides with their other parent and a child who solely resides with and is cared for by one parent.

[10] One adult aged 65 and over, no children.

[11] Two adults of any age and one or two children.

[12] One adult under 65 and one adult 65 and over or two adults 65 and over, no children.

[13] 0 non-zero values of less than 0.5% and thus rounded to zero.

[14] Three or more adults, no children.

[15] Two adults under 65, no children.

[16] Two adults of any age and three or more children or three or more adults and one or more children.

4 DIET AND FOOD INSECURITY

Stephen Hinchliffe

4.1 INTRODUCTION

Poor diet is a leading risk factor for ill health internationally[1] and has been linked to a range of comorbidities including diabetes, cardiovascular disease, hypertension and certain cancers[2,3]. The risk of such conditions can be reduced by improvements in the nutritional content of diets (increasing fibre, fruit and vegetable intake[4], decreasing salt, fats and sugar[5]) and overall reductions in elevated body mass[6].

Evidence is suggestive of varying impacts of the pandemic on diet and physical activity, with both positive and less beneficial behaviour adopted by individuals in response to their own and national circumstances, sometimes interchangeably[7]. Several reports have also highlighted the negative impact on food insecurity and the widening of existing inequalities with an 89% increase in demand for emergency food parcels in the UK in April 2020 compared with the same period in 2019 and foodbank demand more than doubling during the same period[8].

4.1.1 Policy background

Diet

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**[9], published in July 2018, sets out a wide range of actions that support people to eat well and maintain a healthy weight, while reducing diet-related inequalities.

The Scottish Dietary Goals (SDGs), revised in 2016[10], provide the basis for a healthy balanced diet.The Goals decribe, in nutritional terms, a diet that will improve and support the health of the Scottish population including:

- A reduction in calorie intake by 120 kcal per person per day, and average energy density of the diet to be lowered to 125kcal/100g by reducing intake of high fat and/or sugary products and by replacing with starchy carbohydrates (e.g. bread, pasta, rice and potatoes), fruits and vegetables.
- Average intake of a variety of fruit and vegetables to reach at least five portions per person per day (>400g per day).
- Oil rich fish consumption to increase to one portion (140g) per person per week.
- Average intake of red and red processed meat to be limited to around 70g per person per day. Average intake of the highest consumers of red and processed meat (90g per person per day) not to increase.
- Average intake of total fat to reduce to no more than 35% of food energy, average intake of saturated fat to reduce to no more than

11% of food energy and average intake of trans fatty acids to remain below 1% of food energy.
- Average intake of free sugars not to exceed 5% of total dietary energy.
- Average intake of salt to reduce to 6g per day for adults.
- An increase in average intake of dietary fibre to 30g per person per day for adults.
- Total carbohydrate to be maintained at an average population intake of approximately 50% of total dietary energy with no more than 5% from free sugars.

Food insecurity

The Scottish Government has committed to publishing a plan on ending the need for food banks. A consultation on a draft plan earlier this year set out a human rights approach to the issue of food insecurity which prioritises action to prevent poverty and promotes cash-first responses to hardship so that people are able to make choices that suit their needs and preferences. A final version of the plan will be published in the Autumn. The Scottish Government has allocated almost £3 billion to a range of supports this year that will contribute to mitigating the impact of the increased cost of living on households.

4.1.2 Reporting on diet and food insecurity in the Scottish Health Survey (SHeS)

This chapter presents findings on the reported dietary intakes of adults in the Scottish population in 2021, in relation to some of the SDGs. Reporting includes average daily intakes of[11]:

- Fruit and vegetables (portions)
- Energy (kcal) and energy density (kcal/100g)
- Total fat and saturated fat (g and % food energy)
- Free sugars (g and % total energy)
- Red and red processed meat (g)
- Fibre (g)

The proportion meeting each of these SDGs, with the exception of the SDG for reduction in energy intake, is also reported. The chapter also presents findings on children's fruit and vegetable consumption and reported food insecurity.

In 2021, dietary information for adults was collected using online dietary recalls (Intake24) (two recalls for each adult), following the conclusion of the main SHeS interview. The use of Intake24 allowed for monitoring of a number of the Scottish Dietary Goals. It also allowed for more comprehensive calculations of fruit and vegetable consumption than in previous years, as, for example, fractions of a portion within meat dishes or soups were counted in 2021, when this was not always the case before. As a consequence of this change, there may have been some disruption to the time series, particularly around the counting of those who had consumed no fruit and vegetables.

For detailed definitions of terminology used in this chapter and for further details on the data collection methods for diet and food insecurity, please refer to Chapter 2 of the Scottish Health Survey 2021-volume 2: technical report.

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

4.2 DIET AND FOOD INSECURITY

4.2.1 Adult fruit and vegetable consumption, 2003 to 2021, by sex

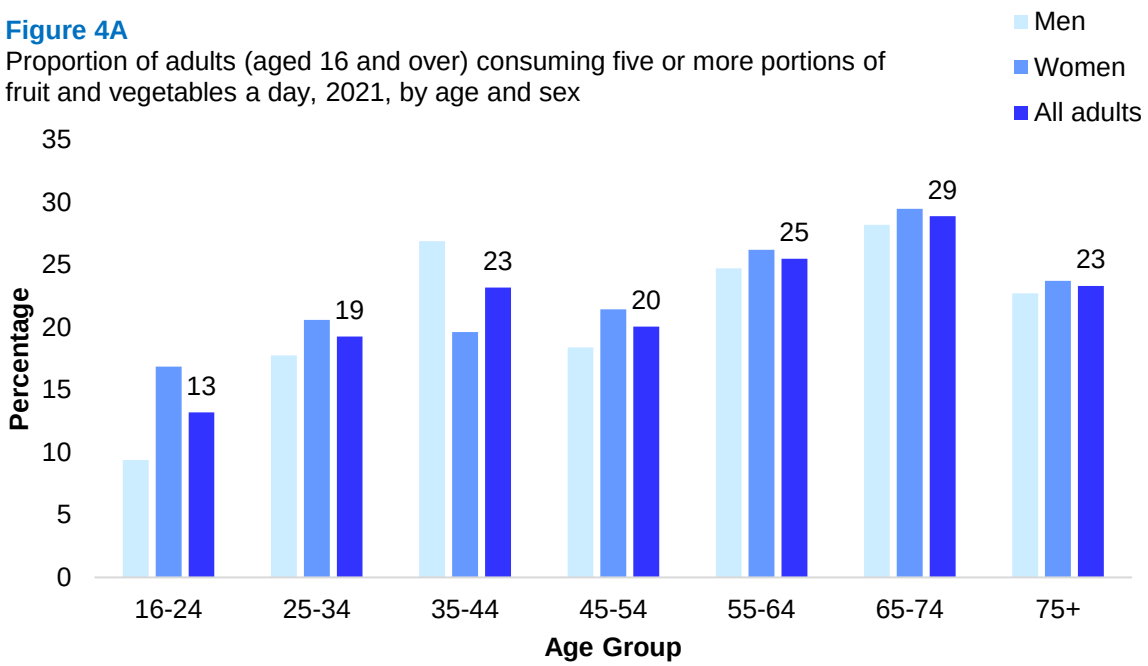
In 2021, just over one-in-five adults (22% overall; 22% of men and 23% of women) consumed the recommended five or more portions of fruit and vegetables per day[12], the same as in 2019. This figure has remained fairly stable since 2003 (21%). The change in the proportion recorded as consuming no fruit or vegetables, from 10% in 2019 to 5% in 2021 could be impacted by the inclusion of vegetables and fruit from composite dishes in 2021.

On average, adults consumed 3.4 portions of fruit and vegetables per day, similar to the portions consumed in 2019 (3.3). The mean portions of fruit and vegetables for men (3.3) and women (3.5) were not significantly different. **Table 4.1**

4.2.2 Adult fruit and vegetable consumption, 2021, by age and sex

In 2021, younger adults, and young men in particular, were less likely than others to consume the recommended five portions of fruit and vegetables per day. Of adults aged 16-24, 13% met the SDG, including 9% of men and 17% of women. This proportion was highest for those aged 65-74, where 29% consumed their five-a-day (28% of men and 29% of women).

Figure 4A
Proportion of adults (aged 16 and over) consuming five or more portions of fruit and vegetables a day, 2021, by age and sex



Mean consumption followed this same pattern, with the lowest number of fruit and vegetables on average for those aged 16-24 (2.8 portions, 2.5 for men and 3.1 for women), and the highest for those aged 65-74 (3.9 portions, 3.7 for men and 4.0 for women). **Figure 4A, Table 4.2**

4.2.3 Child fruit and vegetable consumption, 2008 to 2021, by sex

In 2021, dietary information for children was collected using the same questions as in previous years. However, changes from face-to-face to telephone interviewing may still have affected the time series.

In 2021, the proportion of children aged 2-15 who consumed five portions or more of fruit and vegetables in a day was 20%, significantly higher than in any of the years 2008 to 2019, when it stayed fairly constant at between 12% and 15%. Boys and girls were both likely to have met the SDG in 2021 (20% of boys and 21% of girls).

The proportion who consumed no fruit and vegetables in the previous day was also significantly lower in 2021 (5%) than in 2019 (9%), and in all years since 2008 with the exception of 2015 (7%). Again, there was no significant difference in 2021 between boys (6%) and girls (5%).

Similarly, the mean number of portions consumed per day by children aged 2-15 was higher in 2021 (3.4) than in any of the years 2008 to 2019 (2.6 to 2.9). This was the same for boys and girls in 2021 (3.4). **Table 4.3**

4.2.4 Child fruit and vegetable consumption, 2021, by age and sex

In 2021, there were no significant variations recorded in those eating some fruit and vegetables by age or sex among children aged 2-15. Mean consumption was between 3.2 and 3.5 portions for all age

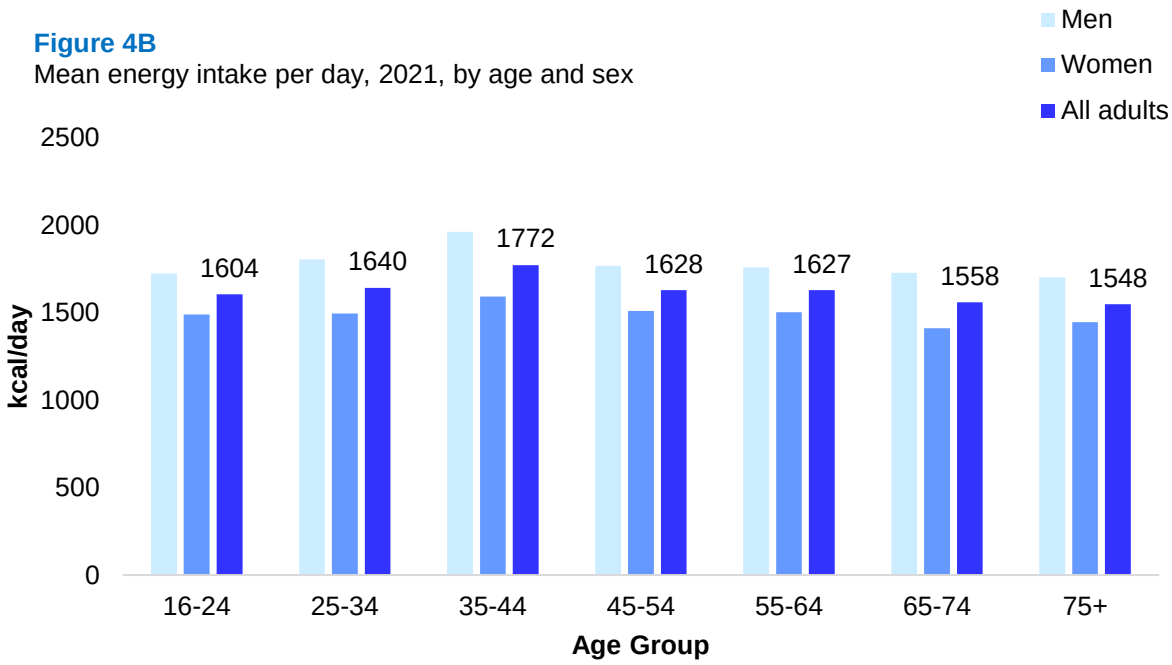
groups. The proportion meeting the five-a-day SDG was between 15% and 24% in each of the age groups (15% for children aged 11-12 and 24% for those aged 8-10). **Table 4.4**

4.2.5 Adult average energy intake per day and average energy density per day, 2021, by age and sex

In 2021, average energy intake per person per day was 1,632 kcal, significantly higher for men (1,786 kcal/day) than for women (1,495 kcal/day). It should be noted that, on average, men require more calories than women.

Energy intake varied by age, being highest among those aged 35-44 (1,772 kcal/day) and lowest for those aged 65 and above (1,548-1,558 kcal/day).

Figure 4B
Mean energy intake per day, 2021, by age and sex



Energy density of food is generally higher for foods rich in fat and sugar, and lower for starchy carbohydrates, fruits and vegetables. The average energy density of foods (including milk) consumed by adults in 2021 was 160 kcal/100g/day[13].

In every age group, for both men and women, average energy density exceeded the SDG of 125 kcal/100g/day. Average energy density was higher for men (165 kcal/100g/day) than for women (156 kcal/100g/day). It was also higher for younger than older adults (170-172 kcal/100g/day for those aged 16-44, compared with 145 kcal/100g/day for those aged 65 and above). One-in-five adults (20%) met the energy density goal, with women more likely to do so than men (24% and 16% respectively). Older adults were also more likely to meet the goal (29% - 31% for those aged 65 and above, compared with 8% for those aged 16-24). **Figures 4B, 4C and 4D, Table 4.5**

Figure 4C
Mean energy density of food intake per day, 2021, by age and sex

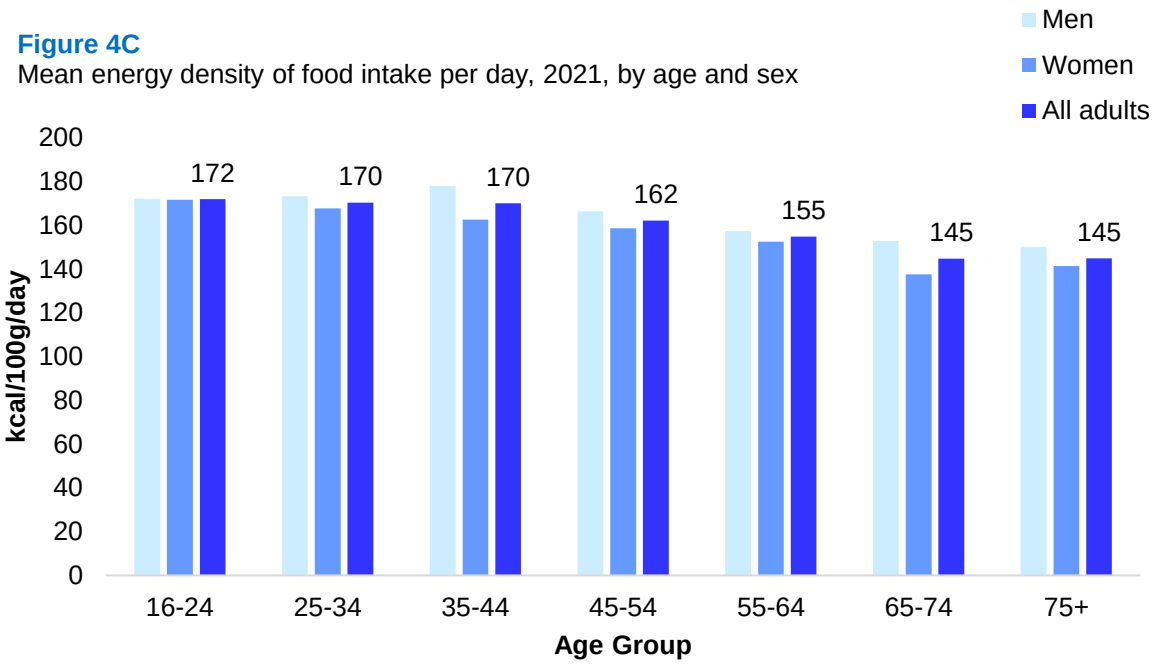
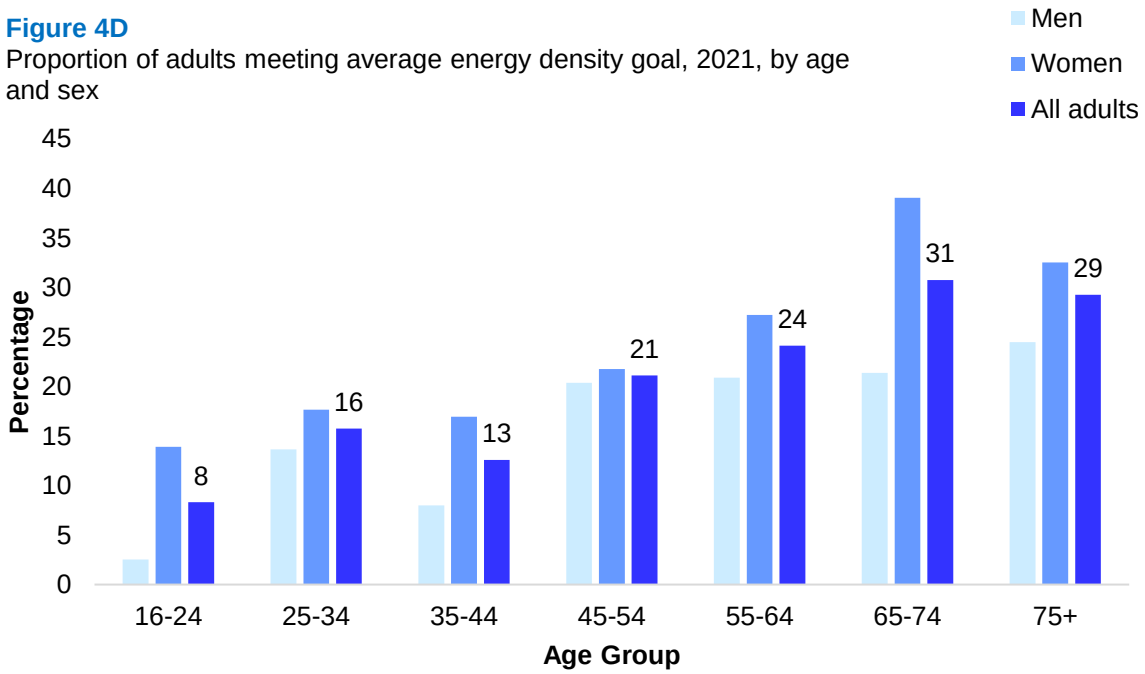


Figure 4D
Proportion of adults meeting average energy density goal, 2021, by age and sex



4.2.6 Adult total fat/saturated fat intake, 2021, by age and sex

Almost half of all adults (48%) met the SDG for total fat of no more than 35% of food energy, with men and women equally likely to achieve this goal (47% and 49% respectively). The proportion of food energy from total fat was an average of 34% (34% for men and 35% for women).

Adults were less likely to meet the SDG for saturated fat of no more than 11% of food energy; 26% of adults met this goal (27% of men and 26% of women). On average, adults derived 13% of their food energy from saturated fat (13% for both men and women).

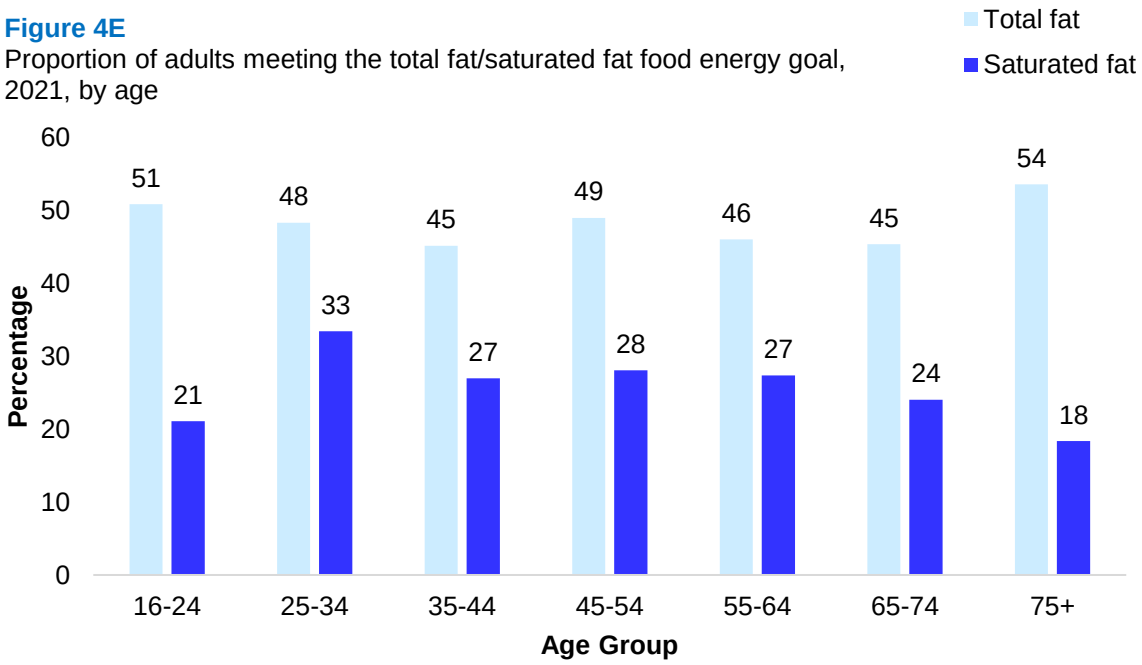
The average proportion of food energy from total fat, and the proportion of adults meeting the SDG for total fat did not vary significantly by age. The equivalent figures for saturated fat did, however, vary by age. Those aged 25-34 were most likely to meet the SDG for saturated fat (33%) and had the smallest average proportion of food energy derived from saturated fat (12%). The opposite was true for those aged 75 and above, with 18% meeting the SDG and an average of 14% of food energy from saturated fat.

In 2021, adults consumed 63.0g of total fat per day on average, of which 24.1g was saturated fat. Men, who consume more calories overall, consumed higher quantities of both fat (68.4g) and saturated fat (26.0g) on average than women (58.2g and 22.4g respectively).

The average amount of total and saturated fat in the diet varied by age, with the highest amounts among those aged 35-44 (69.4g/day and 26.3 g/day respectively). By comparison mean total fat consumption was 58.7g for those aged 75 and above, and between 61.0g and 63.6g for the other age groups. Saturated fat consumption in the diet was 22.7g to 24.1g for the other age groups (16-34 and 45 and over).

Figure 4E, Table 4.6

Figure 4E
Proportion of adults meeting the total fat/saturated fat food energy goal, 2021, by age



4.2.7 Adult free sugars intake, 2021, by age and sex

The SDGs recommend that free sugars account for no more than 5% of total dietary energy. Just over a fifth (22%) of adults met the SDG (same for both men and women).

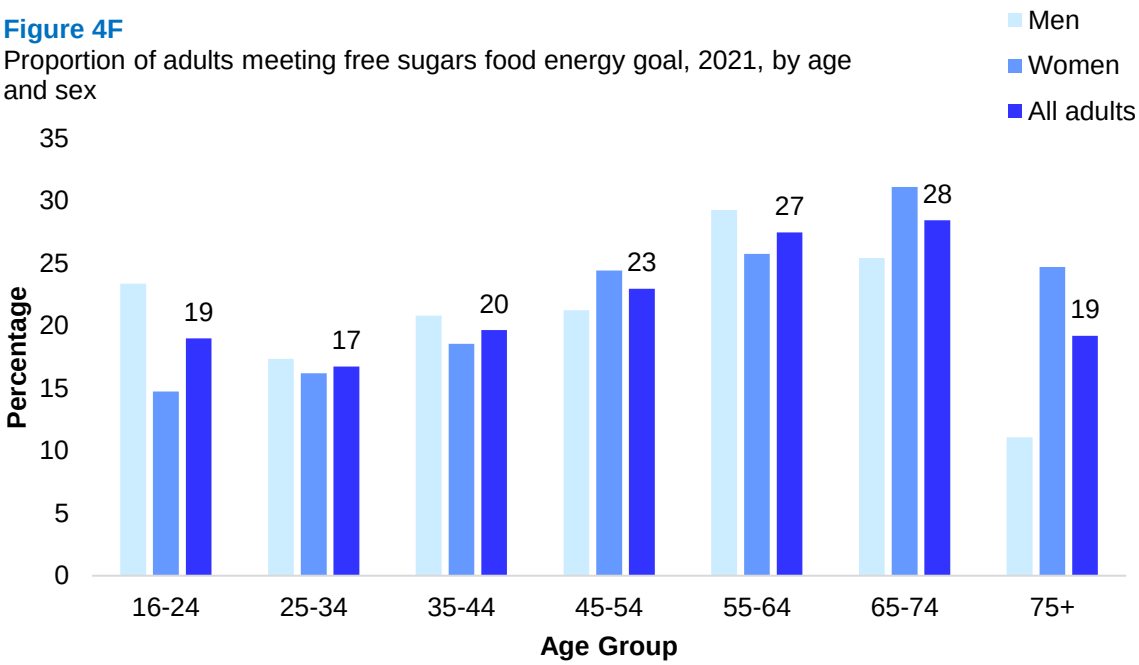
The proportion of total energy derived from free sugars was well above 5% for all age groups, for both men and women. On average, adults

derived 10% of their total energy from free sugars. The average proportion of total energy derived from free sugars was the same for both men and women (10%).

There were differences in free sugar consumption by age. Those aged 55-74 had the highest proportion meeting the SDG (27% - 28%) and the lowest average proportion of total energy that is from free sugars (8%).

In 2021, adults consumed 43.0g of free sugars per day on average. Men, who typically consume more calories than women, consumed more free sugars (a mean of 46.8g/day, compared with 39.7g/day). Those aged 55-74 had the lowest mean for free sugar intake (35.7 - 37.8g/day). **Figure 4F, Table 4.7**

Figure 4F
Proportion of adults meeting free sugars food energy goal, 2021, by age and sex



4.2.8 Adult red meat and red processed meat intake, 2021, by age and sex

The SDG is that average intakes of red and red processed meat is pegged at around 70g per person per day, and that average intakes of the highest consumers of red and processed meat (90g per person per day) do not increase.

Nearly three quarters (72%) of adults (both consumers and non-consumers) consumed no more than 70g of red and red processed meat per day. A further 10% consumed over 70g/day but no more than 90g/day, while 18% consumed more than 90g/day. Men were less likely than women to consume no more than 70g/day (64%) and more likely to exceed 90g/day (25%), compared with 79% and 12% of women.

The quantity of red and red processed meat consumed did not vary significantly by age, and there was only a small amount of variation in

the proportion meeting the SDG of no more than 70g/day, with this being highest for those aged 65 and above (76% - 77%) and lowest for those aged 35-44 (66%).

Among red and red processed meat consumers only[14], 63% consumed no more than 70g per day, while 24% consumed more than 90g/day. Patterns by age were similar to those observed for all adults, with those aged 65 and above most likely to meet the SDG (69% - 70%).

On average, adults consumed 48.7g/day of red and red processed meat per day (59.5g/day for men, and 39.2g/day for women). Among red and red processed meat consumers only[15], the average intake of red and red processed meat was 65.0g per day (75.6g for men and 54.6g for women). **Table 4.8**

4.2.9 Adult fibre intake, 2021, by age and sex

The SDGs recommend that adults consume 30g of fibre per day. In 2021, only 6% of adults met the goal. Men, who typically have a higher total food intake, were more likely to achieve the SDG (8% compared with 5%), whereas fibre intake did not vary significantly by age.

On average, adults consumed 17.2g of fibre per day, with men having a higher average consumption than women (18.0g/day and 16.6g/day respectively). **Table 4.9**

4.2.10 Adult food insecurity, 2017 to 2021, by age and sex

Levels of food insecurity have not changed significantly between 2017 and 2021. In 2021, 9% of adults were, at some time in the previous 12 months, worried that they would run out of food because of a lack of money or other resources. Equivalent figures for 2017 to 2019 were between 8% and 9%. In 2021, 6% reported that they had eaten less for this reason (6% - 7% in 2017 to 2019); and 3% ran out of food because of a lack of resources (3% - 4% in 2017 to 2019).

There was no significant difference between men and women in 2021 on any of these measures of food insecurity. There were, however, differences by age. Younger adults were more likely to be worried they would run out of food: 14% of those aged 16-44, compared with 8% of those aged 45-64 and 1% of those aged 65 and above. Older adults were less likely to say they had eaten less or had actually run out of food: 1% of those aged 65 and above had eaten less because of a lack of resources, compared with 9% of those aged 16-44 and 7% of those aged 45-64; and less than 0.5% had actually run out of food because of a lack of resources, compared with 4% of those aged 16-64.

Table 4.10

4.2.11 Adult food insecurity, 2019/2021 combined, by household type and sex

There were some very noticeable differences in levels of food insecurity by household type in 2019/2021 combined. The highest levels of food

insecurity were among single parents: 34% were worried that they might run out of food because of a lack of resources at some point in the previous 12 months, while 23% had eaten less than they otherwise would, and 12% had run out of food. Single adults under the age of 65 also had high levels of food insecurity, with 19% having worried that they would run out of food, 15% eating less and 10% running out of food in the previous 12 months. Families and other adult households with no one over the age of 64 had levels of food insecurity closer to the average, while older households were less likely to report having experienced food insecurity.

In 2019/2021 combined, 23% of men under the age of 65 living alone were worried they might run out of food, while 18% had eaten less and 12% had run out of food because of a lack of resources in the previous 12 months. These figures were all significantly higher than the respective ones for women under the age of 65 living alone (16%, 12% and 7% respectively). **Figure 4G, Table 4.11**

Figure 4G
Adult food insecurity, 2019/2021 combined, by household type

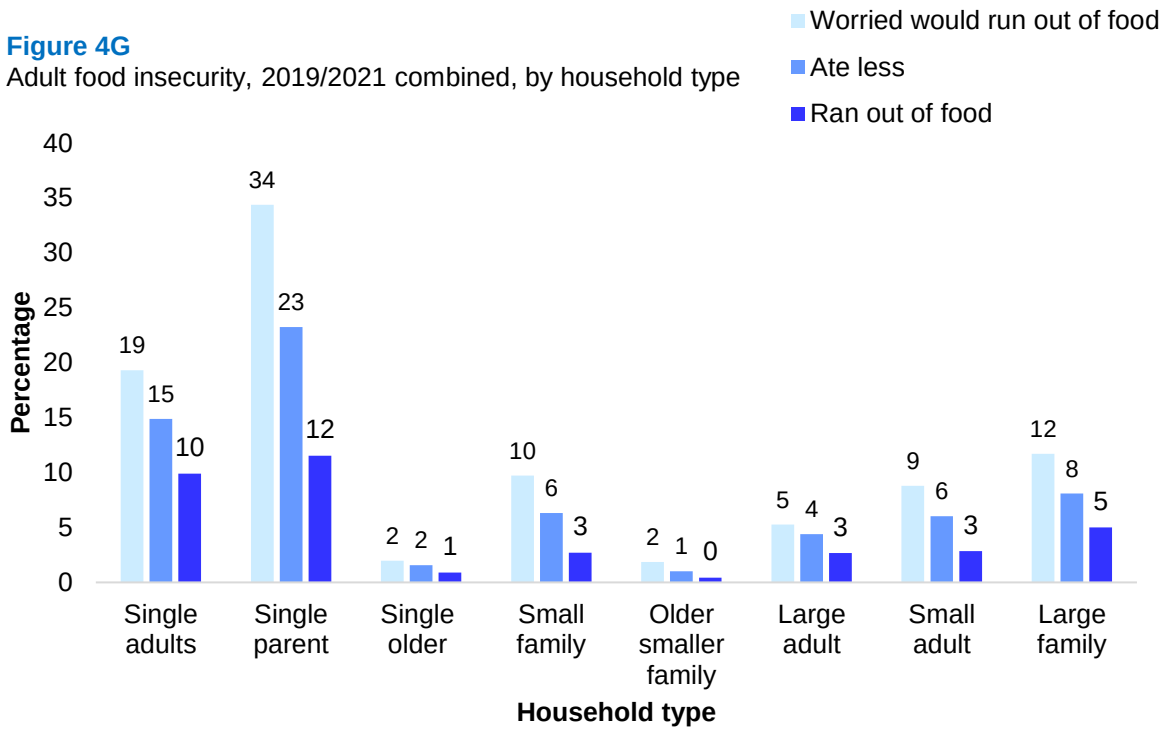


Table List

The tables can be found on the main report page under supporting files:
https://www.gov.scot/publications/scottish-health-survey-2021-volume-1-main-report/

References and notes

1 Editorial (2017). Life, Death and Disability in 2016. *The Lancet;* 390(10100): p1083-1464.

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

3 Abdelaal M, le Roux, C and Docherty, N (2017). Morbidity and mortality associated with obesity. *Annals of Translational Medicine;* 5(7): 101: p.1.

4 World Cancer Research Fund/American Institute for Cancer Research (2018). *Diet, nutrition, physical activity and cancer: a global perspective. Continuous Update Project Expert Report. Food, Nutrition and Physical Activity and the Prevention of Cancer: a Global Perspective*. [Online]. Available at: http://www.wcrf.org/dietandcancer

5 Food Standards Scotland. (2020). *The Scottish Diet: It needs to change 2020 update.* Available at: https://www.foodstandards.gov.scot/publications-and-research/publications/the-scottish-diet-it-needs-to-change-2020-update

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7 Ingram, J, Maciejewski, G and Hand, C. (2020). *Changes in Diet, Sleep, and Physical Activity Are Associated With Differences in Negative Mood During COVID-19 Lockdown.* Frontiers in Psychology. Available at: https://www.frontiersin.org/articles/10.3389/fpsyg.2020.588604/full

8 University of Glasgow: Policy Scotland (2020). *Evidence round-up: Issues in recovery, food insecurity and learning loss*. Available at: https://policyscotland.gla.ac.uk/evidence-round-up-food-insecurity-and-learning-loss/

9 *A Healthier Future: Scotland's Diet & Healthy Weight Delivery Plan*, Edinburgh: Scottish Government, 2018. Available at: http://www.gov.scot/Publications/2018/07/8833

10 Revised Dietary Goals for Scotland, Edinburgh: Scottish Government, 2016. Available at: https://www.gov.scot/publications/scottish-dietary-goals-march-2016/

11 Reporting will not include oily fish as the SDG is per week, salt as urinary sodium surveys are a more appropriate method to assess salt intakes, and trans fatty acids and total carbohydrate as the number of SDGs that could be reported on were limited.

12 An average of at least five portions on two days, calculated from the Intake24 food diaries. In previous years, participants were only asked about their consumption on the day prior to the interview.

13 For the energy density calculations used, see appendix four in D19-01_Final_Draft_Report_2001-2015_-_Following_Peer_Review_150818.pdf (foodstandards.gov.scot))

14 For the purposes of the analysis, red meat consumers are defined as those who consumed an average of more than 1g of red meat per day over the two days of the Intake24 dietary recalls.

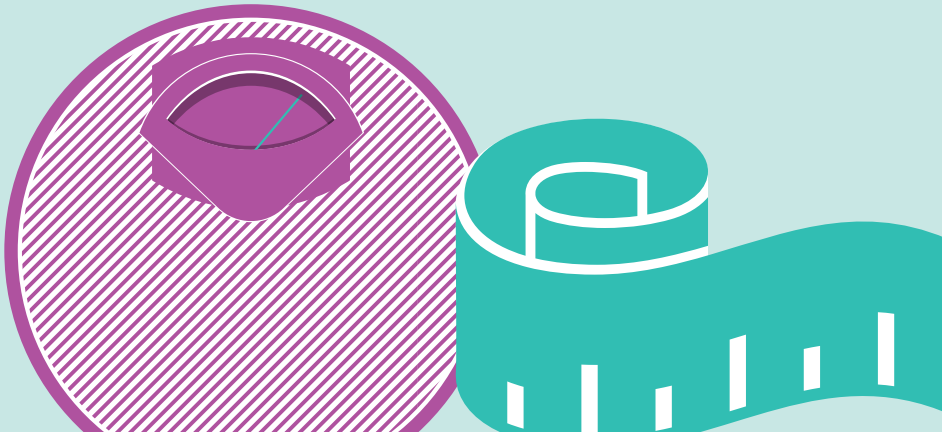
15 For the purposes of the analysis, red meat consumers are defined as those who consumed an average of more than 1g of red meat per day over the two days of the Intake24 dietary recalls.

Chapter 5

Obesity

CHAPTER 5

Obesity



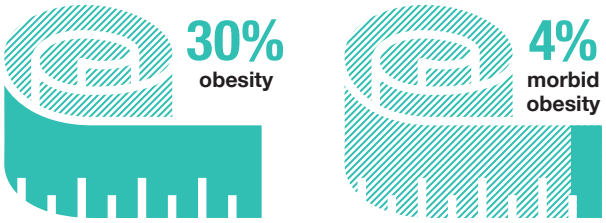
In 2021, height and weight measurements for adults were self-reported. BMI calculations have been adjusted to allow for comparison with previous years.

In 2021, two-thirds of adults were living with overweight[1], similar to or marginally higher than rates in each year since 2008.

67%
in 2021

Men have consistently shown higher prevalence of overweight than women each year since 2008.

Adults living with obesity[2] and morbid obesity[3] in 2021.

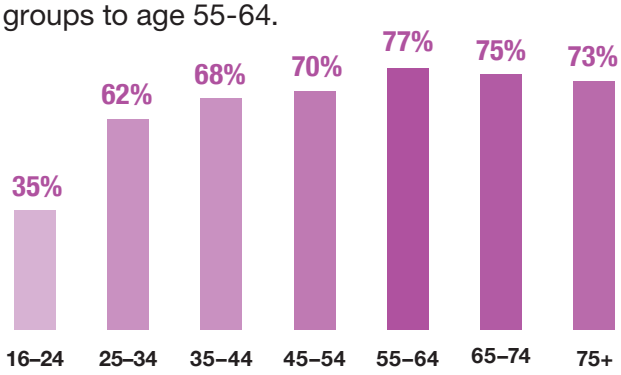


[1] A BMI of at least 25 kg/m²
[2] A BMI of at least 30 kg/m²
[3] A BMI of at least 40 kg/m²

Women were more likely to be living with morbid obesity than men in 2021.

In 2021, a much higher proportion of adults aged 16-24 had a healthy weight than those aged 25-34 with further decreases in older age groups.

In 2021, prevalence of overweight (including obesity) generally increased across the age groups to age 55-64.



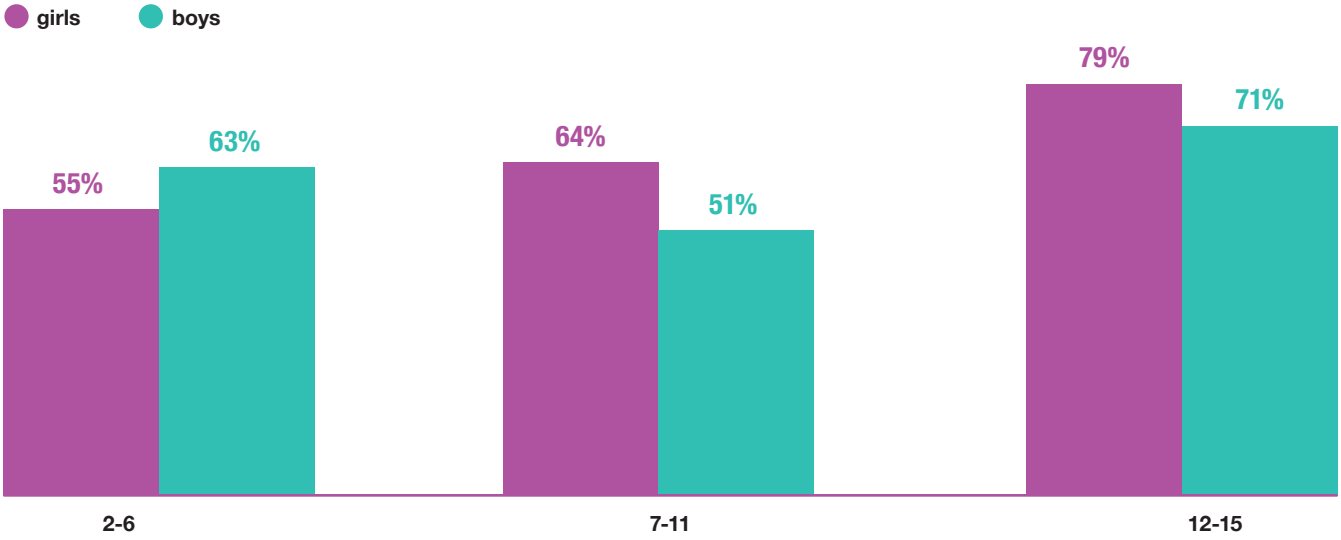
Mean BMI was lowest for those aged 16-24 and highest for those aged 55-64.

In 2021, BMI calculations for children were based on unadjusted, self-reported height and weight measurements. It is, therefore, not clear whether any changes compared with previous years are genuine or due to the way the data were collected.

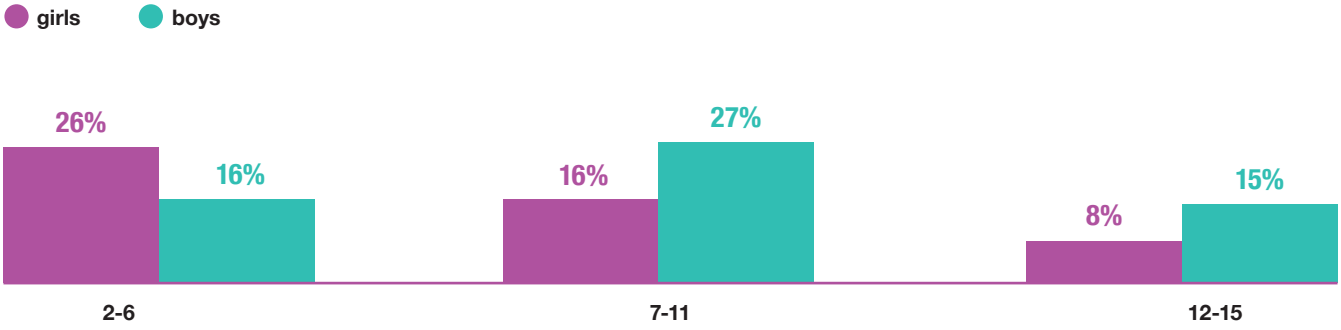
In 2021, almost two thirds of children were in the healthy weight range[4], the lowest the survey has recorded.

Almost one in five children were considered at risk of obesity[5] in 2021.

Children aged 12-15 were more likely to be in the healthy weight[4] category than younger children in 2021.



The risk of obesity[5] was highest for boys aged 7-11 and girls aged 2-6 in 2021.



[4] Within healthy range = BMI above 2nd percentile, below 85th percentile.

[5] At risk of obesity = BMI at or above 95th percentile.

5 OBESITY

Sophie Birtwistle

5.1 INTRODUCTION

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"[1].

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[2]. Obesity has been linked to a range of comorbidities including diabetes, cardiovascular disease (CVD), hypertension and certain cancers in adults[3,4]. Such conditions and/or the risk could be reduced overall even with modest reductions in body mass[5].

Studies have indicated that there is an association between mental health problems such as depression and anxiety and living with obesity[6,7,8]. There is also evidence of a link between living with overweight and obesity in midlife and possible dementia in late life[9,10,11]. 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[12]. The longer a person lives with a higher BMI, the greater their risk of developing chronic diseases and some forms of cancer[13]. More recently, evidence suggests that living with excess weight is also associated with an increased risk of serious COVID-19 outcomes[14,15].

5.1.1 Policy background

The Scottish Government published **A Healthier Future: Scotland's Diet and Healthy Weight Delivery Plan**[16] in July 2018. The Scottish Government sets out an aim to halve child obesity by 2030 and significantly reduce diet-related health inequalities. It sets out a wide range of actions aimed at ensuring:

- Children have the best start in life – they eat well and have a healthy weight.
- The food environment supports healthy choices.
- People have access to effective weight management services.
- Leaders across all sectors promote healthy weight and diet.
- Diet-related inequalities are reduced.

The Scottish Government also published its Out Of Home Action Plan in September 2021. The plan includes a commitment to consult on mandating calorie labelling and the creation of a code of practice for children's menus.

5.1.2 Reporting obesity in the Scottish Health Survey (SHeS)

This chapter updates trends for adults and children for body mass index (BMI)[17] as well as prevalence for 2021.

In 2021, the telephone format of the survey meant that height and weight measurements used to calculate BMI were self-reported by respondents rather than being taken by the interviewer as in previous years. The self-reported measurements for adults were uprated based on a comparison study by the Health Survey for England. No equivalent adjustment factors are available for children and hence the analysis is based on self-reported measurements.

For detailed definitions of terminology used in this chapter and for further details on the data collection methods for obesity, please refer to Chapter 2 of the Scottish Health Survey 2021- volume 2: technical report.

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

5.1.3 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.

5.2 OBESITY

5.2.1 Adult BMI, 2003 to 2021, by sex

Since 2008 prevalence of overweight including obesity (BMI of 25 kg/m² or over) has remained fairly constant, although levels in 2021 were slightly higher than a decade earlier (67% compared with 64% in 2011 and 2012).

The prevalence of overweight including obesity remained consistent for both men and women between 2008 and 2021. However, men consistently had a higher rate of overweight including obesity compared with women. Since 2008 it has fluctuated between 67% - 70% for men and 60%-64% for women, with figures for 2021 being at the top end of those ranges in both cases.

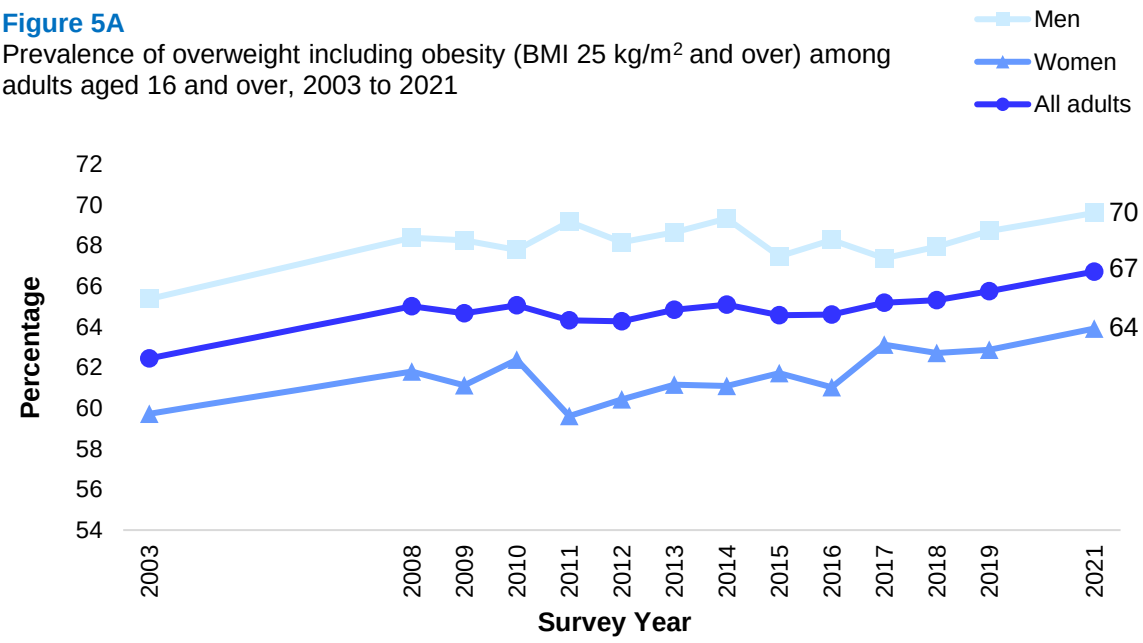
In 2021, there was no significant difference in the prevalence of obesity (BMI of 30 kg/m² or over) between men and women (30% overall: 29% for men and 31% for women). Between 2008 and 2021 the prevalence has fluctuated between 26% - 29% for men and 27% - 31% for women.

Prevalence of morbid obesity (BMI of 40kg/m² or over) has increased slightly since 2015, from 3% to 4% in 2021. While levels of morbid obesity have remained fairly constant for men at between 2% and 3%

(2% in 2021), during this period prevalence of morbid obesity has doubled for women, from 3% to 6%.

Mean BMI in 2021 was 28.0 kg/m^2 (27.9 for men and 28.2 for women). These figures have gradually risen since 2012, when mean BMI was 27.4 kg/m^2 for both men and women. **Figure 5A, Table 5.1**

Figure 5A
Prevalence of overweight including obesity (BMI 25 kg/m^2 and over) among adults aged 16 and over, 2003 to 2021



5.2.2 Adult BMI, 2021, by age and sex

In 2021, a third (32%) of all adults had a BMI of 18.5 to less than 25kg/m^2 and classed in the healthy weight category. There were a higher proportion of women in the healthy weight category compared with men (35% compared with 30%). Two thirds (67%) of all adults were living with overweight in 2021, and the prevalence was significantly higher for men compared with women (70% compared with 64%). The prevalence of living with obesity did not vary significantly between men and women in 2021 (29% and 31% respectively). However, the prevalence of morbid obesity was higher for women than for men (6% compared with 2%).

61% of adults aged 16-24 were in the healthy weight category. For other age groups this varied between 22% - 36%. Those aged 16-24 had a significantly lower prevalence of overweight and obesity, with 35% prevalence of overweight (including obesity) and 10% prevalence of obesity (including morbid obesity). By comparison, overweight and obesity were most prevalent among those aged 55-64 (77% and 36% respectively).

In 2021, mean BMI was 28.0 kg/m^2. It was lowest for those aged 16-24 at 24.7 kg/m^2 and increased across the age groups until age 55-64 (29.2 kg/m^2), before decreasing slightly to 28.2 kg/m^2 among those

aged 75+. Similar patterns were observed for both and women across age groups for mean BMI. **Figure 5B and 5C, Table 5.2**

Figure 5B
Adult BMI (kg/m²), 2021, by age

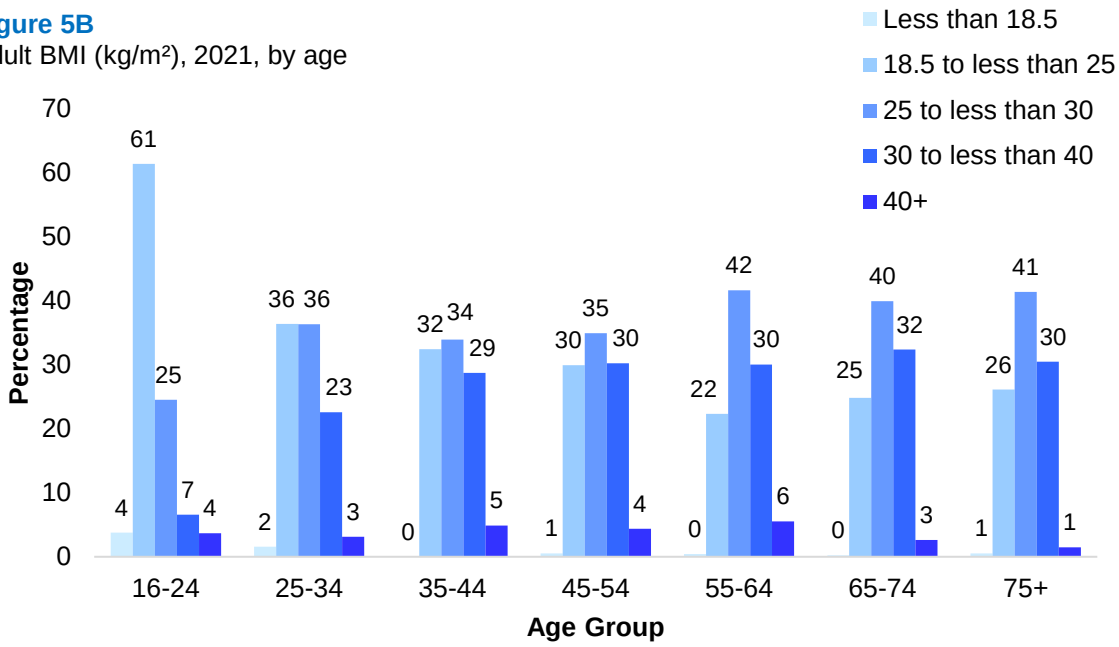
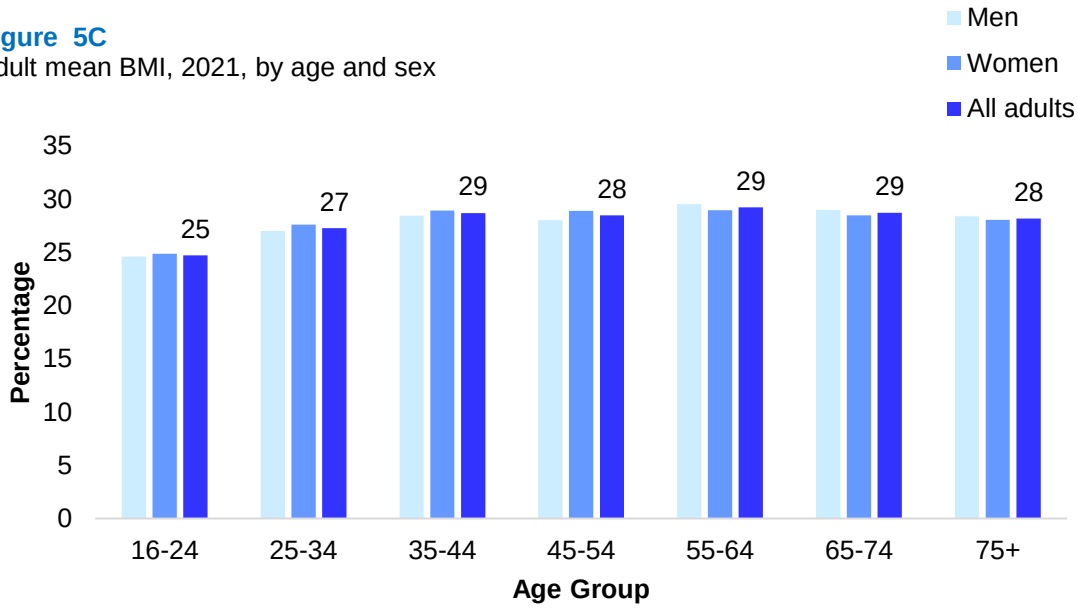


Figure 5C
Adult mean BMI, 2021, by age and sex



5.2.3 Child BMI, 1998 to 2021, by sex

The proportion of children in the healthy weight range (BMI above 2nd percentile and below 85th percentile) remained relatively consistent between 1998 and 2019. Figures for 2021 showed a decrease of 4% in the proportion of children in the healthy weight range, from 68% in 2019 to 64% in 2021; the lowest the survey has recorded since 1998. As heights and weights were self-reported in the 2021 survey and not adjusted, it is not clear whether this represents a genuine change or is due to the way the data were collected. More details are provided in

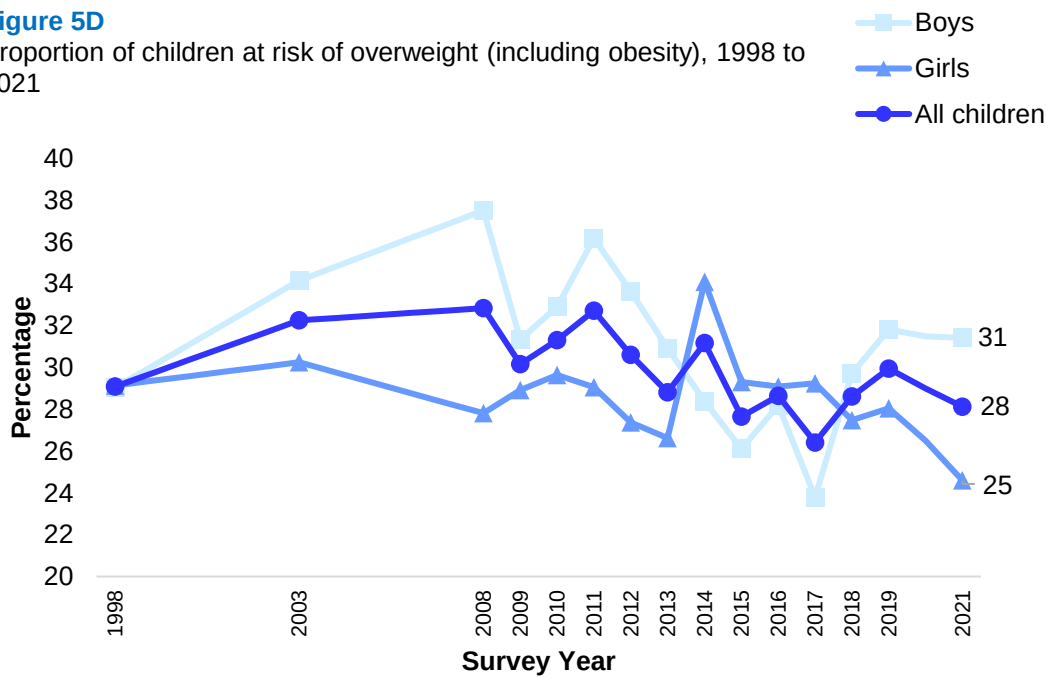
chapter 2 of the technical report. The proportion of children in the healthy weight category had decreased for both boys and girls since 2019 (from 66% - 61% and 70 - 67% respectively). Between 1998 and 2021, the proportion of children in the healthy weight range has fluctuated more for boys than for girls (between 61% - 75% and 65% - 72% respectively).

The proportion of children at risk of overweight including obesity (BMI at or above 85th percentile) has remained relatively stable, fluctuating between 26% - 33% between 1998 and 2021. In 2021 the proportion of children at risk of overweight including obesity was 28%. The proportion of girls in this category in 2021 was at the lower end of the range across the years (25% in 2021, 27 - 34% in earlier years of the survey), and lower than the proportion of boys in this category in 2021 (31%). This figure for boys was in the middle of the range of previous survey years (24% - 38%). Again, it is not clear whether these figures for girls represent a real change or reflect the difference in methodology from previous years.

The proportion of children at risk of obesity (BMI at or above 95th percentile) has remained relatively constant between 1998 and 2021. However, 2021 recorded the highest proportion of children at risk of obesity at 18%, a 5% increase on 2017 figures (13%).

Figure 5D, Table 5.3

Figure 5D
Proportion of children at risk of overweight (including obesity), 1998 to 2021



5.2.4 Child BMI, 2021, by age and sex

In 2021, there was a difference between the proportion of boys and girls in the healthy weight category (61% for boys and 67% for girls) but it was not significant. However, there were significant differences across age groups. Sixty-three percent of boys aged 2-6 were in the healthy

weight category. This figure decreased to 51% for those aged 7-11 and then greatly increased to 71% for those aged 12-15. This pattern was not the same for girls as there was continuous increase in the proportion of girls in the healthy range from 55%, then to 64% and then to 79% through the age groups.

In 2021, there was no significant difference between the proportion of boys and girls at risk of overweight (11% for boys and 9% for girls). There were differences across age groups in this weight category. Eight percent of boys aged 2-6 were at risk of overweight, this increased to 14% for boys aged 7-11 and decreased to 11% for boys aged 12-15. This pattern was similar for boys and girls.

In 2021, there was no significant difference between the proportion of boys and girls at risk of obesity (20% and 16% respectively). However, there was a significant difference across age groups for this weight category. Sixteen percent of boys aged 2-6 were at risk of obesity; this increased to 27% for boys aged 7-11 and decreased to 15% for boys aged 12-15. This pattern was not replicated for girls, as there was continuous decrease in the proportion of girls in this weight category, from 26% to 16% then to 8% across the age groups.

Figure 5E, Table 5.4

Figure 5E
BMI categories among children aged 2-15, 2021, by age and sex

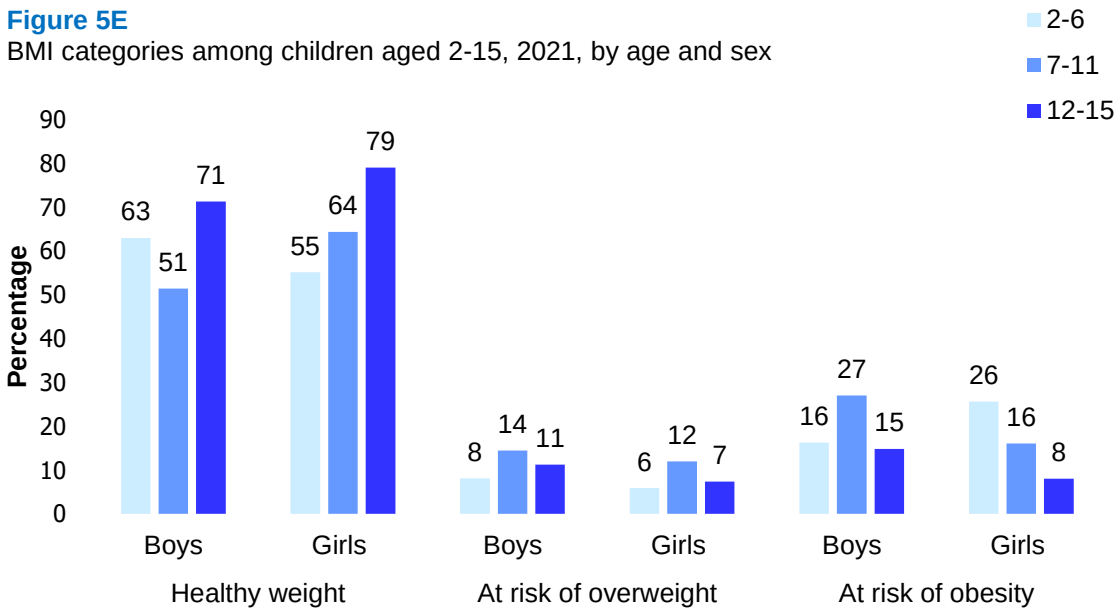


Table list

The tables can be found on the main report page under supporting files:
https://www.gov.scot/publications/scottish-health-survey-2021-volume-1-main-report/

References and notes

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[17] Based on self-reported height and weight data.

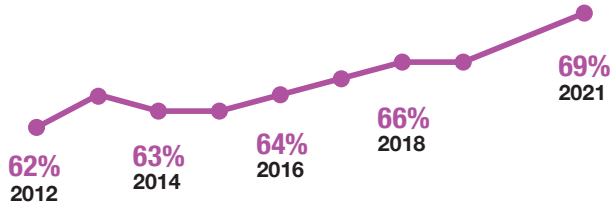
Chapter 6

Physical activity

CHAPTER 6

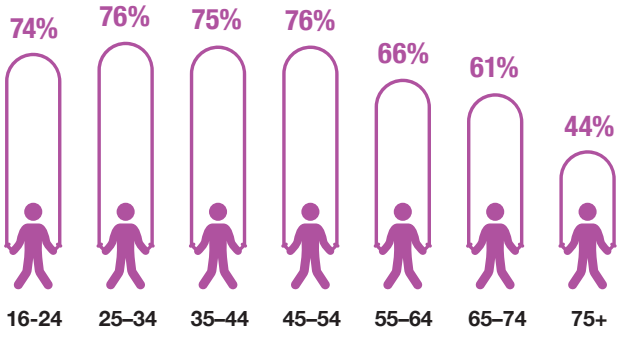
Physical Activity

In 2021, significantly more adults met the guidelines for moderate or vigorous physical activity (MVPA)[1], than previous years, continuing a general upwards trend since 2012.

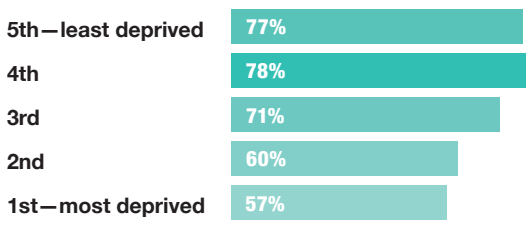


In 2021, a higher proportion of men met the MVPA guidelines than women.

Adults aged between 16 and 54 were more likely than older adults to have met the MVPA guidelines in 2021.

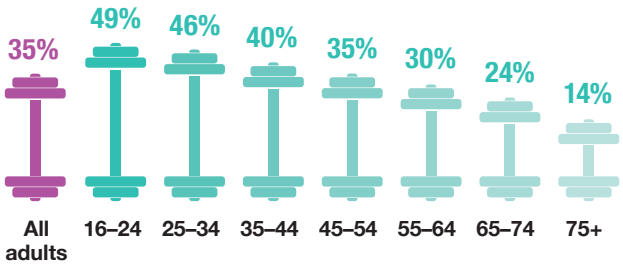


In 2021, the proportion of adults who met the MVPA guidelines was lowest among those living in the most deprived areas.

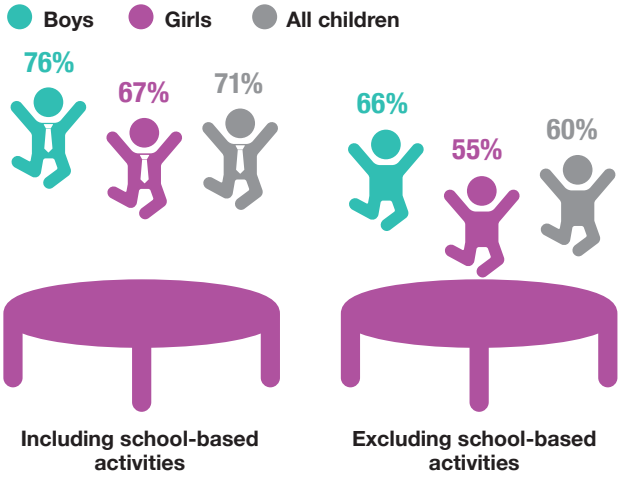


[1] At least 150 minutes of moderately intensive physical activity or 75 minutes vigorous activity per week or an equivalent combination of both.

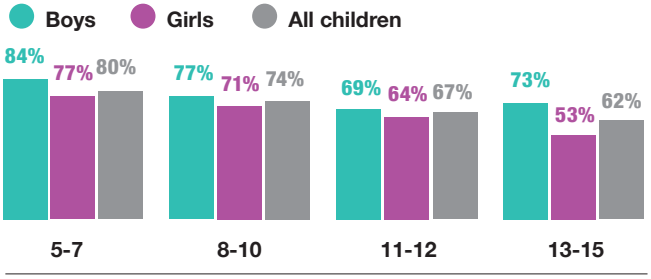
In 2021, just over a third of adults adhered to both the MVPA and muscle strengthening guidelines[2]. As age increased the proportion of adults adhering to both guidelines decreased.



In 2021, the majority of children aged 5-15 met the recommended guideline of at least 60 minutes of activity on average per day in the previous week. Boys were more likely than girls to meet the physical activity guidelines.



Across all age groups a higher proportion of boys adhered to the physical activity guidelines, with the highest proportion of children meeting the physical activity guidelines among those aged 5-7.



[2] Carries out activities that strengthen muscles on at least two days per week.

6 PHYSICAL ACTIVITY

Alys Daniels-Creasey

6.1 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. A lack of physical activity can lead to raised blood pressure and obesity, as well as increased concentrations of glucose and fats in the blood. These, in turn, may contribute to cardiovascular disease, the primary non-communicable cause of premature deaths[1].

The UK Chief Medical Officers' Physical Activity Guidelines[2] (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.

6.1.1 Policy Background

The **Active Scotland Outcomes Framework**[3] 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.

The **Active Scotland Delivery Plan**, 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 and barriers to participation in physical activity[4].

6.1.2 Reporting physical activity in the Scottish Health Survey

This chapter presents findings on summary activity levels[5] for adults and children and muscle strengthening activity among adults.

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 2021- volume 2: technical report.

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

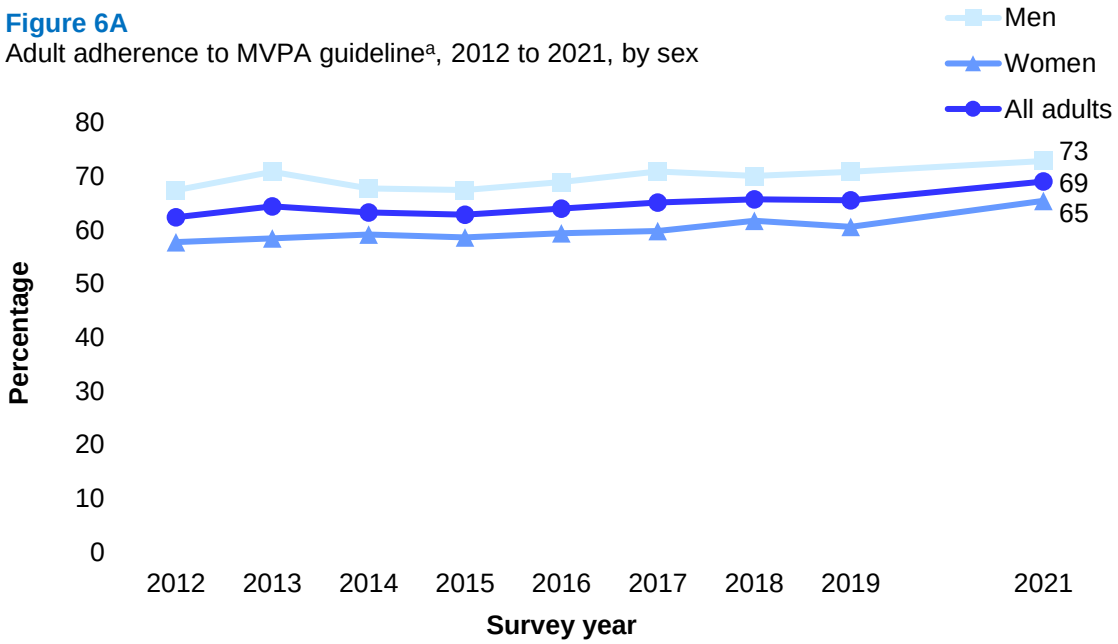
6.2 PHYSICAL ACTIVITY

6.2.1 Adult summary activity levels, 2012 to 2021, by sex

In 2021, 69% of adults met the guidelines for moderate or vigorous physical activity (MVPA) of at least 150 minutes of moderate physical activity or 75 minutes of vigorous physical activity, or an equivalent combination of the two per week. This is significantly higher than the proportions recorded between 2012 and 2019, which were in the range 62% to 66%.

Smaller proportions of all adults in 2021 reported undertaking some (10%), low levels (4%) or very low levels (16%) of physical activity.

Figure 6A
Adult adherence to MVPA guideline[a], 2012 to 2021, by sex

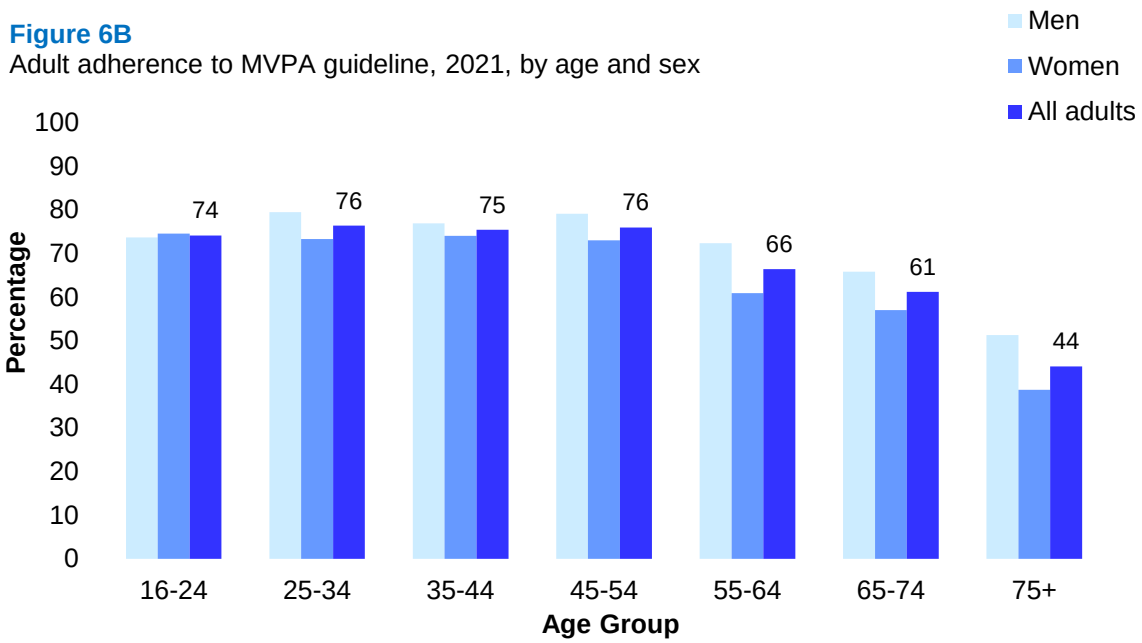


As in previous years, a higher proportion of men (73%) reported adhering to the guidelines than women (65%). However, between 2019 and 2021, there was a significant four-percentage-point increase for women (from 61% to 65%), while the two-percentage-point increase for men (from 71% to 73%) was not significant. **Figure 6A, Table 6.1**

6.2.2 Adult summary activity levels, 2021, by age and sex

As reported in 2019, younger adults were more likely than older adults to have met the MVPA guidelines in 2021 (74% to 76% among those aged 16-54, compared with 66% among those aged 55-64, 61% among those aged 65-74 and 44% among those aged 75 and over).

Figure 6B
Adult adherence to MVPA guideline, 2021, by age and sex



In 2021, significant differences in MVPA guideline adherence were recorded by sex among older groups, with 72% of men aged 55-64 having met these guidelines compared with 61% of women, as did 66% of men compared with 57% of women among those aged 65-74 and 51% of men compared with 39% of women among those aged 75 and older. **Figure 6B, Table 6.2**

6.2.3 Adult summary activity levels (age-standardised), 2012 to 2021, by area deprivation and sex

The extent of inequalities in age-standardised MVPA guideline adherence has varied since 2012, however, adherence has continued to be highest among those in the least deprived quintiles and lowest among those living in the most deprived quintiles. In 2021, 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 two least deprived quintiles (77% - 78%).

Similar patterns were evident among men and women.

Figure 6C
Adult adherence to MVPA guideline, 2012 to 2021, by area deprivation

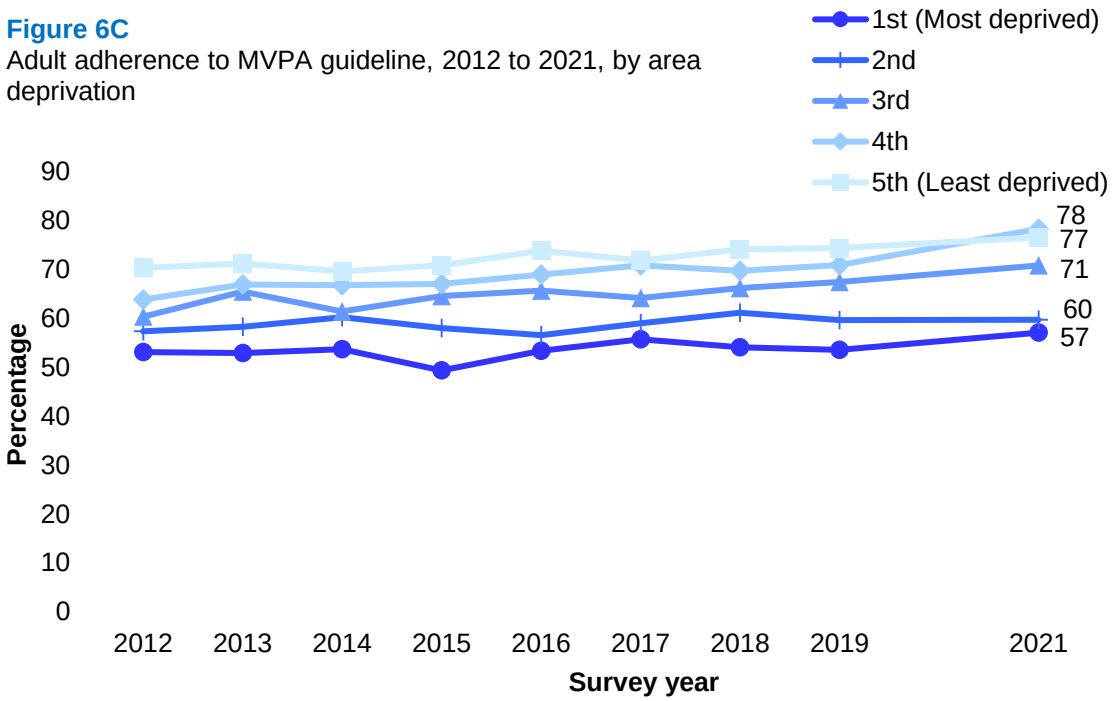


Figure 6C, Table 6.3

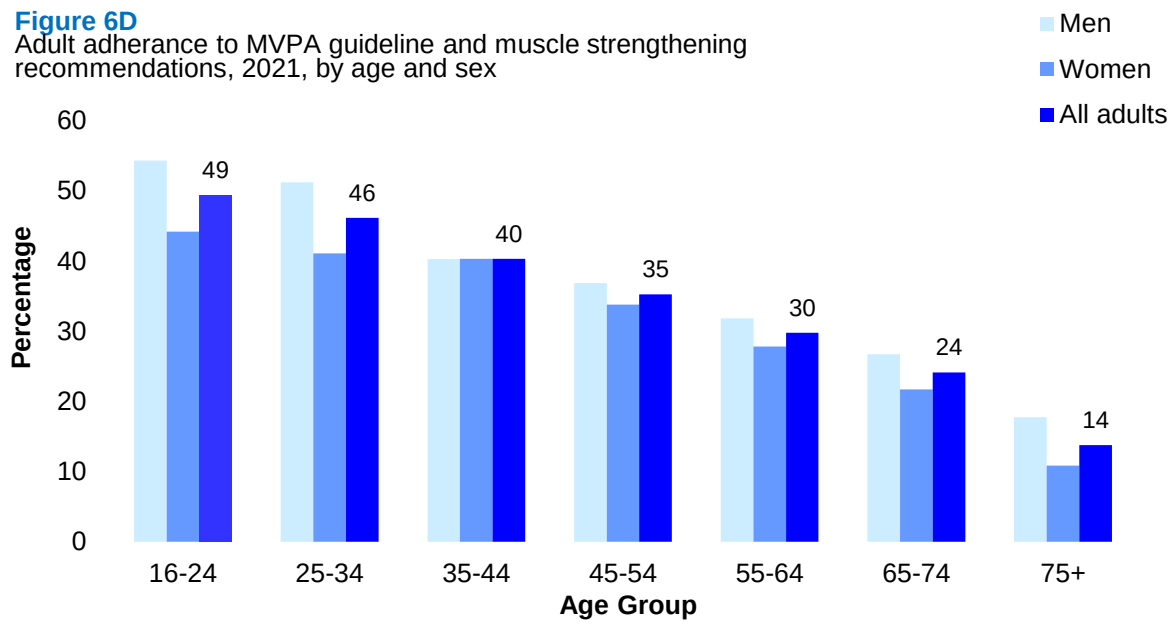
6.2.4 Adult muscle strengthening physical activity, 2021, by age and sex

In 2021, 35% of adults adhered to both the MVPA guidelines and muscle strengthening recommendations[6], whereas 34% met the MVPA guideline only. Three in ten adults in 2021 (30%) did not meet either of these, while 1% fulfilled the muscle strengthening recommendation only.

While a similar pattern was reported in 2019, a significant increase in the proportion of adults who met both the MVPA and muscle strengthening recommendations was recorded in 2021, with an increase from 29% to 35% among all adults.

Men were more likely than women to meet both guidelines in 2021 (38% and 32% respectively), while similar proportions met the MVPA guidelines only (35% and 33% respectively).

Figure 6D
Adult adherance to MVPA guideline and muscle strengthening recommendations, 2021, by age and sex



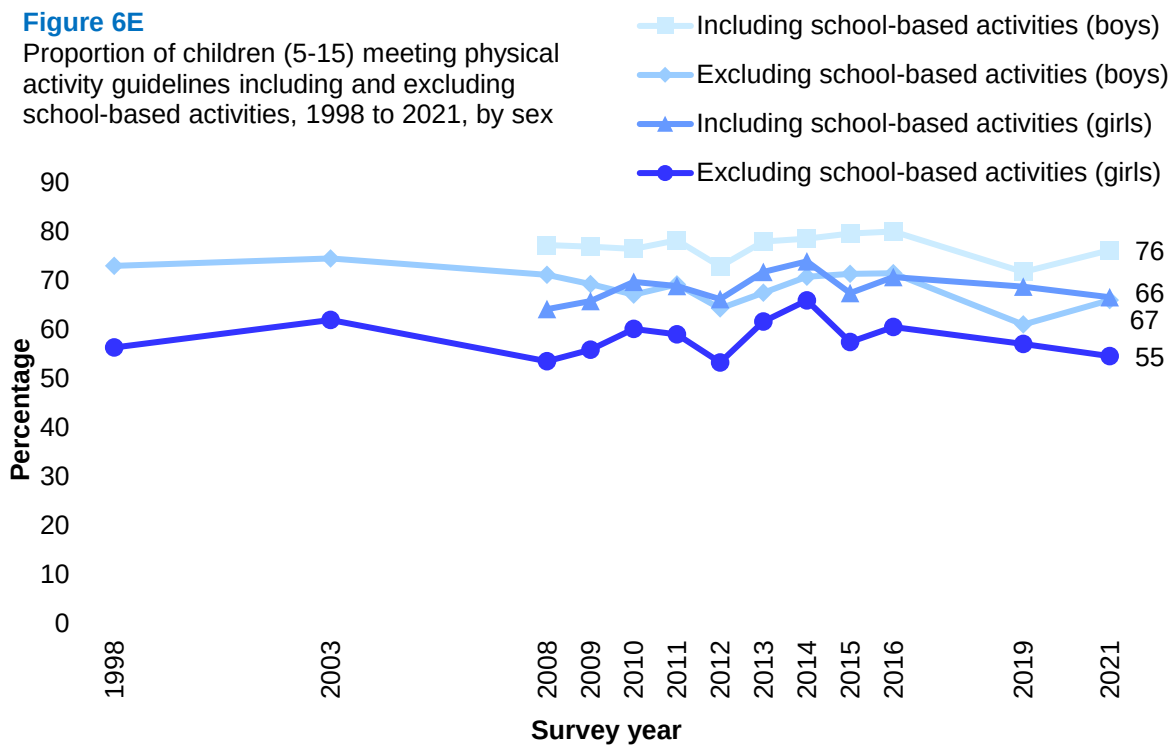
In 2021, as age increased, the proportion of participants who adhered to both the MVPA and muscle strengthening recommendations decreased, from 49% among those aged 16-24 to 14% among those aged 75 and over. Similar patterns were recorded among men and women.

In 2021, around a quarter of those aged 16-54 (22% - 25%) did not meet either the MVPA guidelines or muscle strengthening recommendations, a proportion which increased to 32% of those aged 55-64, 37% of those aged 65-74, and 54% of those aged 75 and over. Within these older age groups, there were also greater variations by sex than among the younger age groups, with a significant difference found between men aged 55-64 (27%) compared with women aged 55-64 (37%), and between men and women aged 75 and over (47% and 58% respectively). **Figure 6D, Table 6.4**

6.2.5 Children summary activity levels (including and excluding school-based activities), 1998 to 2021, by sex

In 2021, the majority of children aged 5-15 did at least 60 minutes of activity on average per day in the previous week: 71% when including school-based activities and 60% when excluding school-based activities. Neither result was significantly higher than the equivalent figures in 2019, which were 70% and 59% respectively.

Figure 6E
Proportion of children (5-15) meeting physical activity guidelines including and excluding school-based activities, 1998 to 2021, by sex

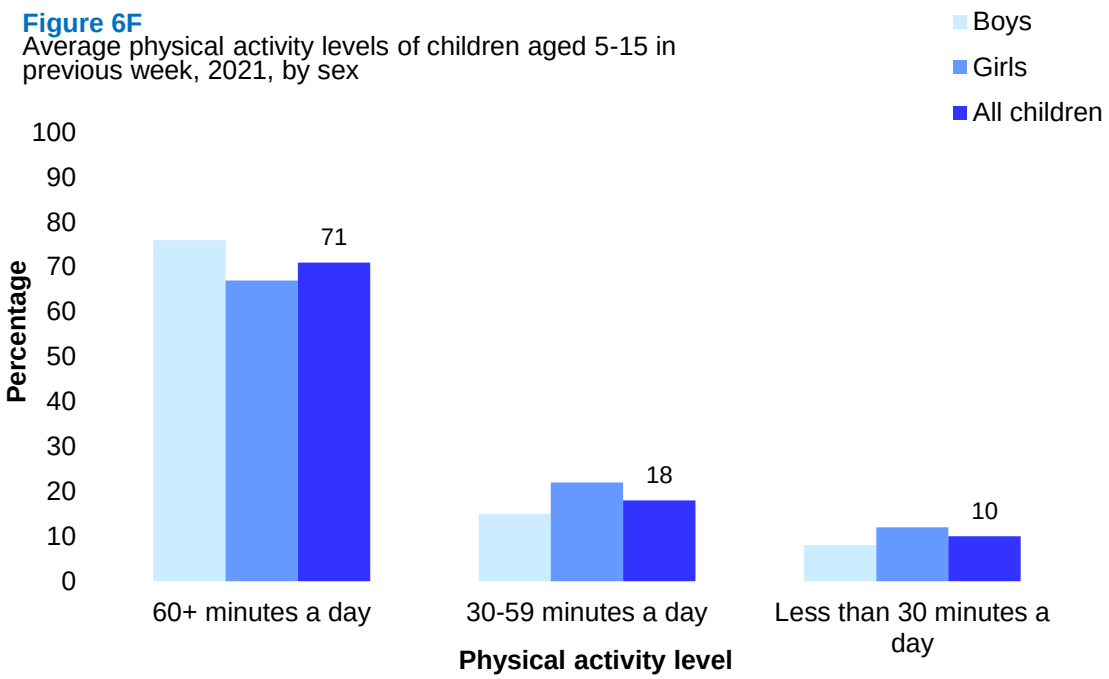


In line with previous years, boys were more likely than girls (aged 5-15) to meet the recommended level of physical activity on average per day in the previous week with significantly higher proportions in 2021 doing so both including school-based activities (76% of boys compared with 67% of girls) and excluding school-based activities (66% and 55% respectively). Despite apparent increases among boys both including and excluding school-based activity since 2019, the differences were not significant for either boys or girls. **Figure 6E, Table 6.5**

6.2.6 Children summary activity levels, including school-based activities, 2021, by age and sex

In 2021, in addition to the 71% of all children aged 5-15 who met the physical activity guidelines of at least 60 minutes on average per day in the previous week, 18% achieved 30-59 minutes a day on average across the previous week, and 10% reported less than 30 minutes of physical activity on average per day.

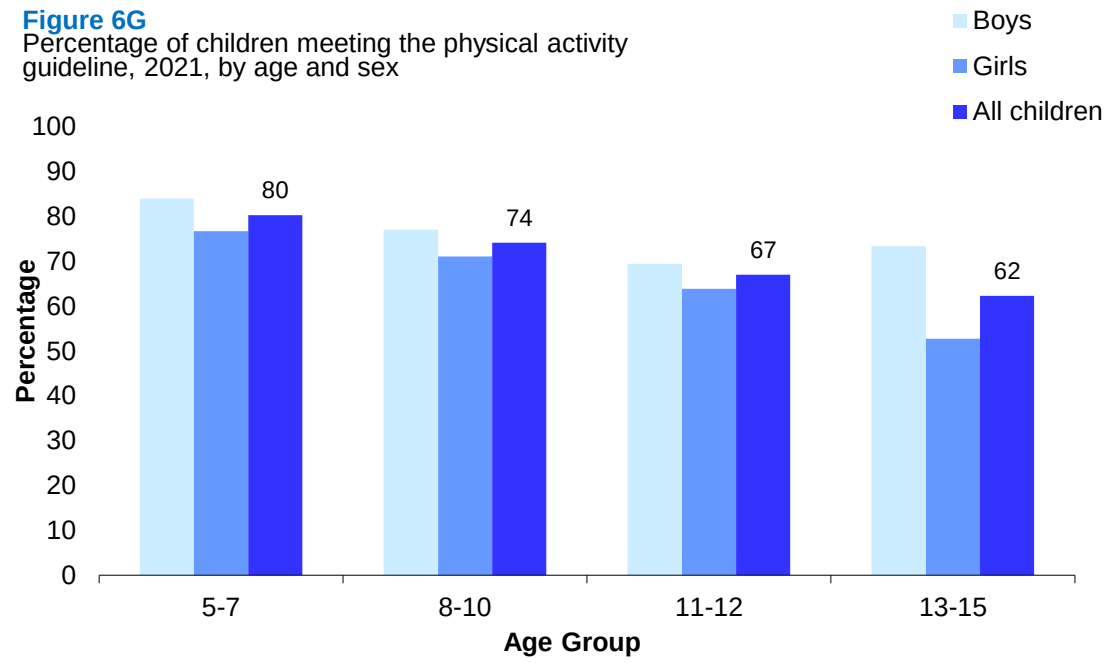
Figure 6F
Average physical activity levels of children aged 5-15 in previous week, 2021, by sex



In 2021, while girls were more likely to undertake 30-59 minutes of activity on average per day (22%) than boys (15%), there was no significant difference in the proportions of children undertaking less than 30 minutes of physical activity on average per day by sex (8% among boys and 12% among girls).

Adherence to physical activity guidelines for children varied by age in 2021, decreasing from 80% of those aged 5-7, the highest proportion of any of the children's age groups, to 62% among those aged 13-15.

Figure 6G
Percentage of children meeting the physical activity guideline, 2021, by age and sex



Across all age groups, a higher proportion of boys than girls adhered to the physical activity guidelines in 2021. This variation was only significant among those aged 13-15, with a 20-percentage-point difference between boys and girls (73% and 53% respectively).

Figures 6F and 6G, Table 6.6

Table list

The tables can be found on the main report page under supporting files:
https://www.gov.scot/publications/scottish-health-survey-2021-volume-1-main-report/

References and notes

1 World Health Organization (2021). Noncommunicable diseases. See: https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases

2 UK Chief Medical Officers' Physical Activity Guidelines (2019). Available from: https://www.gov.uk/government/publications/physical-activity-guidelines-uk-chief-medical-officers-report

3 Active Scotland Outcomes Framework (shinyapps.io)

4 See: https://www.gov.scot/publications/active-scotland-delivery-plan/

5 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.

6 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.

Chapter 7

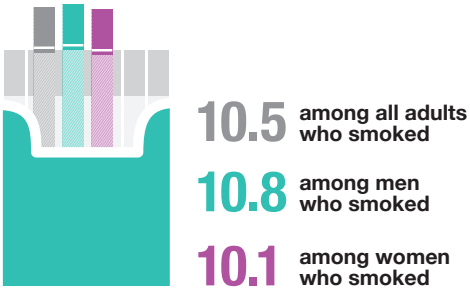
Smoking

CHAPTER 7

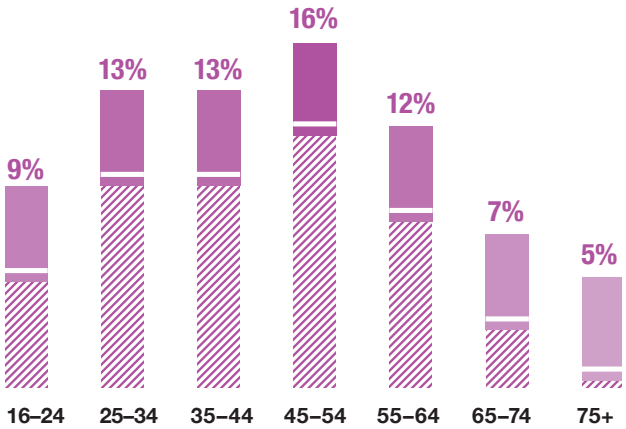
Smoking

Smoking rates have declined steadily since 2003[1], with 11% of adults identifying as current smokers in 2021.

The mean number of cigarettes smoked per day by current smokers did not differ significantly by sex in 2021.

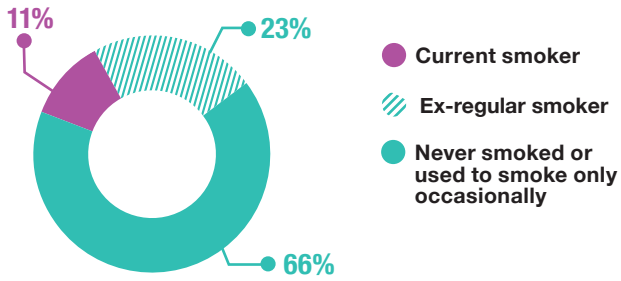


Smoking prevalence was highest among those aged 45-54 and lowest among those aged 75+.

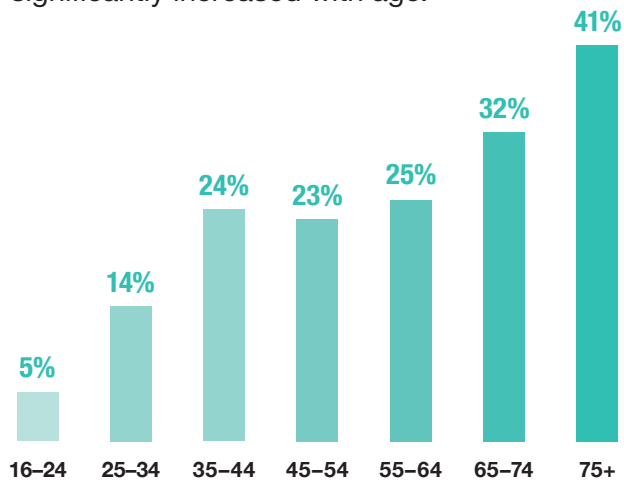


[1] While it is clear that the prevalence of cigarette smoking has been falling since 2003, the size of the drop between 2019 and 2021 should be treated with caution, due to the change in the method of data collection. With falling rates of smoking, an increase in the number of ex-smokers might be expected, but this is not the case.

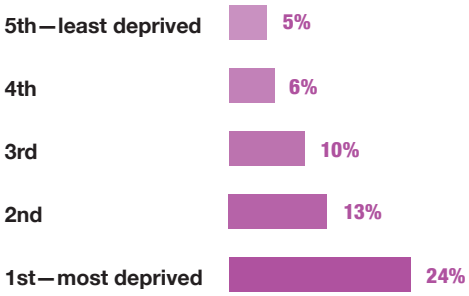
Two thirds of adults had never smoked or used to smoke only occasionally and almost one in four adults identified as ex-regular smokers.



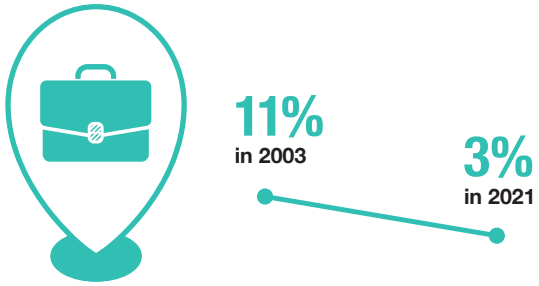
The prevalence of ex-regular smokers significantly increased with age.



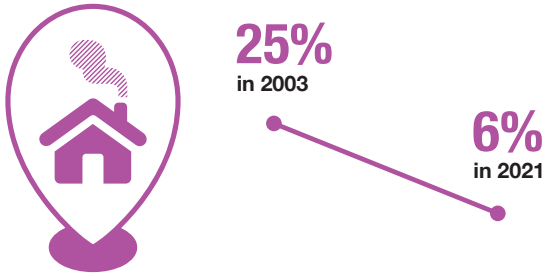
As in previous years, adults living in the most deprived areas in 2021 were more likely to be current cigarette smokers.



Exposure of adult non-smokers to second-hand smoke has reduced between 2003 and 2021.

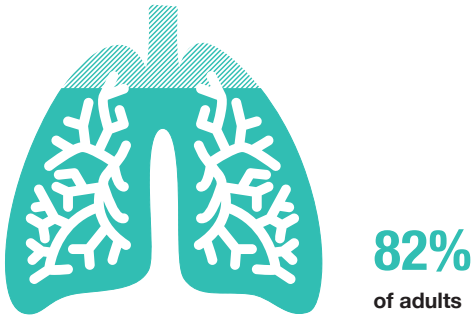


Proportion of adult non-smokers reported being exposed to second-hand smoke at work

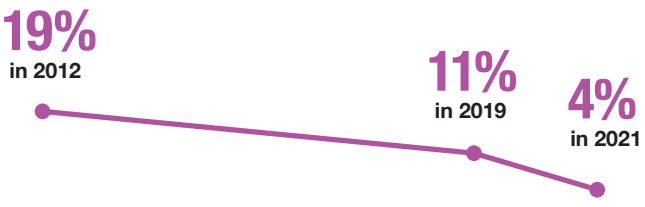


Proportion of adult non-smokers reported being exposed to second-hand smoke in their own or other people's homes

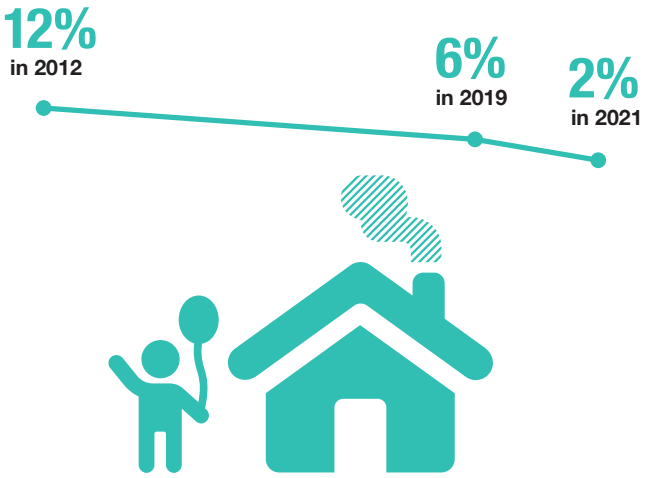
Over four fifths of non-smokers in 2021 reported not being exposed to second-hand smoke in any public place, at work, in someone's home or in a car.



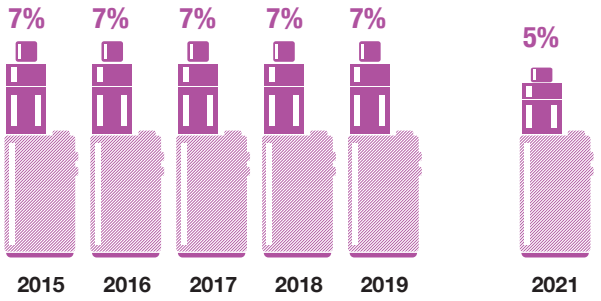
In 2021, the proportion of children living in accommodation in which someone regularly smoked indoors was significantly lower than in previous years.



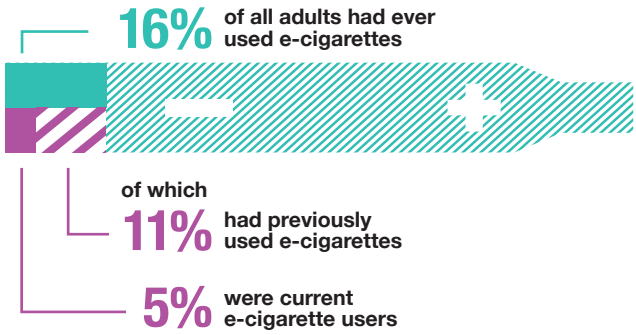
In 2021, the proportion of children exposed to second-hand smoke in their own home was also significantly lower than in previous years.



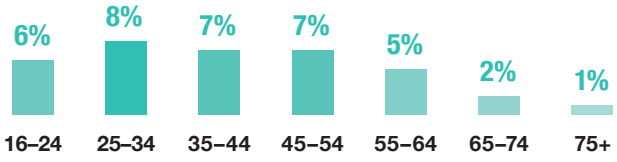
Current e-cigarette use, in 2021, declined after staying constant each year between 2015 and 2019.



In 2021:



Prevalence of current e-cigarette use, in 2021, was highest among those aged 25-34 and lowest among those 75 and over.



7 SMOKING

Stephen Rule

7.1 INTRODUCTION

Tobacco is recognised internationally as a major public health threat. More than eight million deaths each year worldwide are a direct result of tobacco use, with over one million attributed to second-hand smoke exposure. The production of tobacco is also destructive to the environment, with wide reaching health impacts[1,2].

Smoking is the cause of around one in five deaths and the primary preventable cause of premature death and ill health in Scotland[3,4]. While overall smoking rates have declined in Scotland, differences by deprivation have increased, with rates highest in the most deprived areas highlighting that smoking remains an ongoing health inequality challenge[5].

Smoking-related health risks increase as smokers continue to smoke but can be substantially reduced following cessation. Smoking cessation interventions such as nicotine replacement therapy are cost-effective interventions that help to reduce the costs associated with treatment for smoking related illnesses and conditions[6].

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'[7]. 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[8]. **Protecting Scotland, Renewing Scotland: The Government's Programme for Scotland 2020-21**[9] reaffirmed the government's commitment to the action plan outlined in **Raising Scotland's Tobacco-free Generation** published in June 2018[10]. The action plan 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').

A Fairer, Greener Scotland: Programme for Government 2021-22[11] pledged to develop a new action plan which will identify further interventions needed in order 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 prevalence of adult cigarette smoking and e-cigarette use for 2021 as well as trends in prevalence of cigarette smoking. Exposure to second-hand smoke among children and adult non-smokers is also reported.

It should be noted that, due to the change in the method of data collection in 2021, caution is advised in the interpretation in changes to

the smoking data recorded in 2021. More detail can be found in Chapter 1 of the Scottish Health Survey 2021 volume 2: technical report.

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 smoking, please refer to Chapter 2 of the Scottish Health Survey 2021-volume 2: technical report.

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[12].

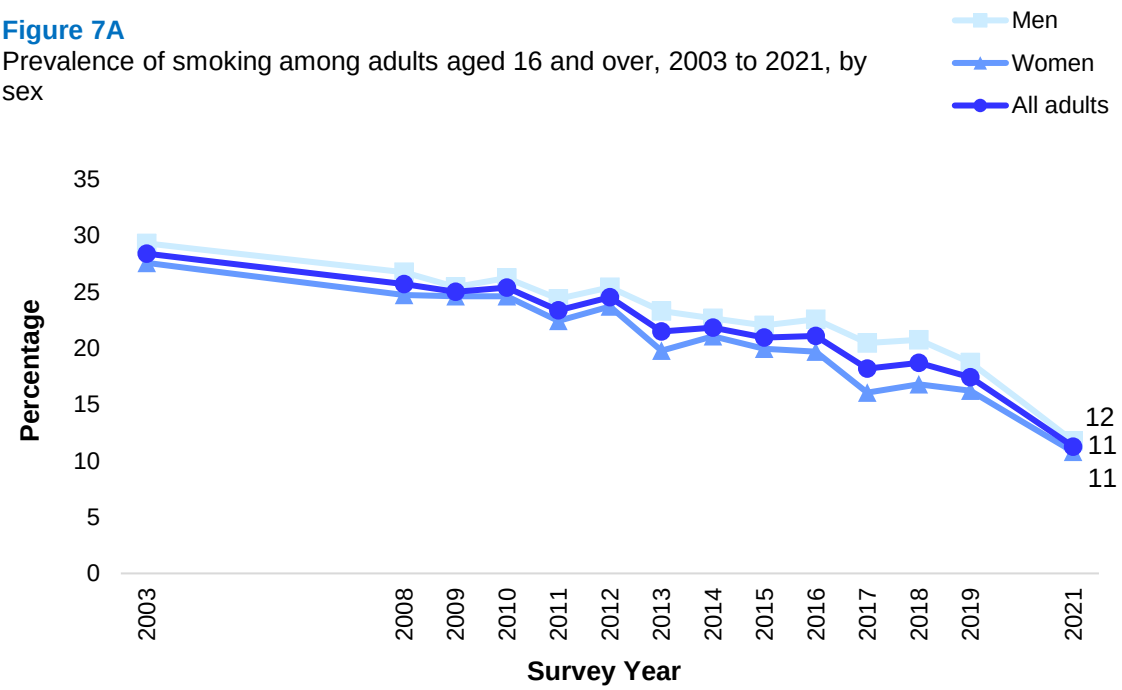
7.2 SMOKING

7.2.1 Cigarette smoking status, 2003-2021, by sex

The proportion of adults who reported themselves to be current smokers in 2021 was 11%. This represents a substantial decline since 2019, just prior to the COVID-19 pandemic, when the proportion was 17%. Prior to that, smoking rates had been decreasing, from 28% in 2003.

The magnitude of the decline was similar among men and women. In 2021, the proportion of women who were current smokers was 11%, while that of men was 12% (16% and 19% respectively in 2019). The downward trend has been tracked since 2003 when 28% of women and 29% of men were current smokers.

Figure 7A
Prevalence of smoking among adults aged 16 and over, 2003 to 2021, by sex

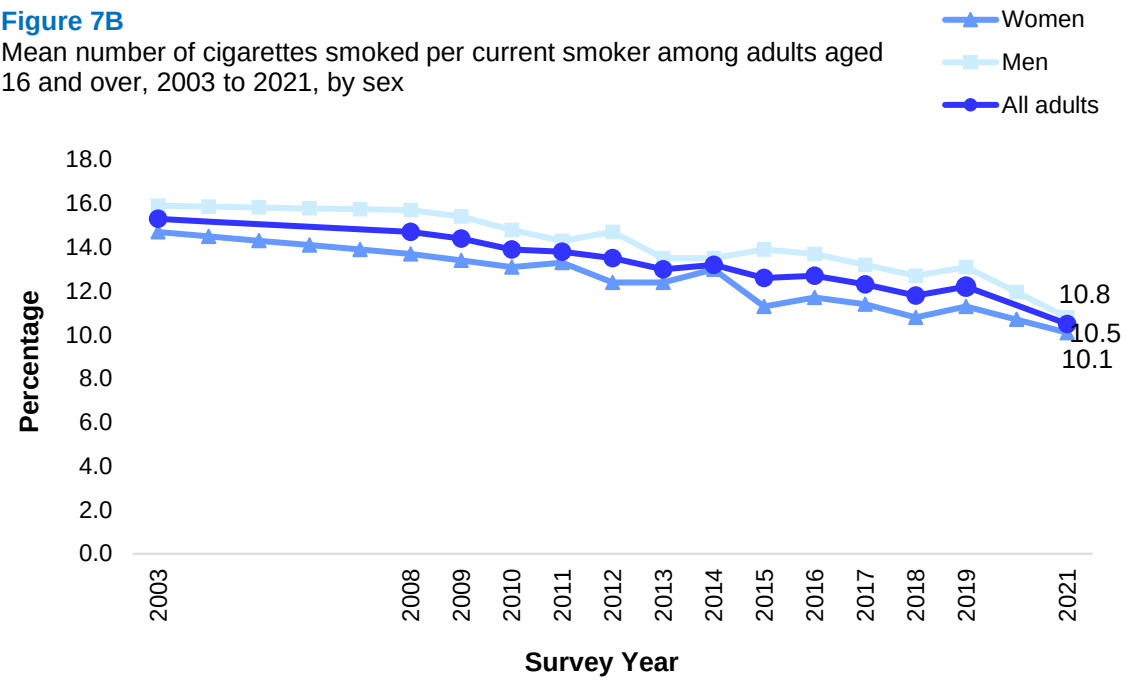


While it is clear that the prevalence of cigarette smoking has been falling since 2003, the size of the drop between 2019 and 2021 should be treated with caution, due to the change in the method of data collection (see Technical Report). With falling rates of smoking, an increase in the number of ex-smokers might be expected, but this is not the case. The proportion of adults who indicated that they used to smoke cigarettes regularly, but no longer do so, was 23% in 2021 (women 23%, men 24%). This has shown only a small amount of variation since 2003, ranging between 22% and 26%, with a slightly lower range for women (20% to 24%) than for men (22% to 28%).

In 2021, two thirds (66%) of adults reported never having smoked or previously having smoked cigarettes only occasionally (women 67%, men 64%). The proportion for all adults is considerably higher than in 2019 (59%).

Current smokers were smoking an average of 10.5 cigarettes per day in 2021 (women 10.1; men 10.8). This represents a continued decline since the mean of 12.2 cigarettes per day in 2019 (women 11.3, men 13.1) and the mean of 15.3 cigarettes per day in 2003 (women 14.7; men 15.9). **Figures 7A and 7B, Table 7.1**

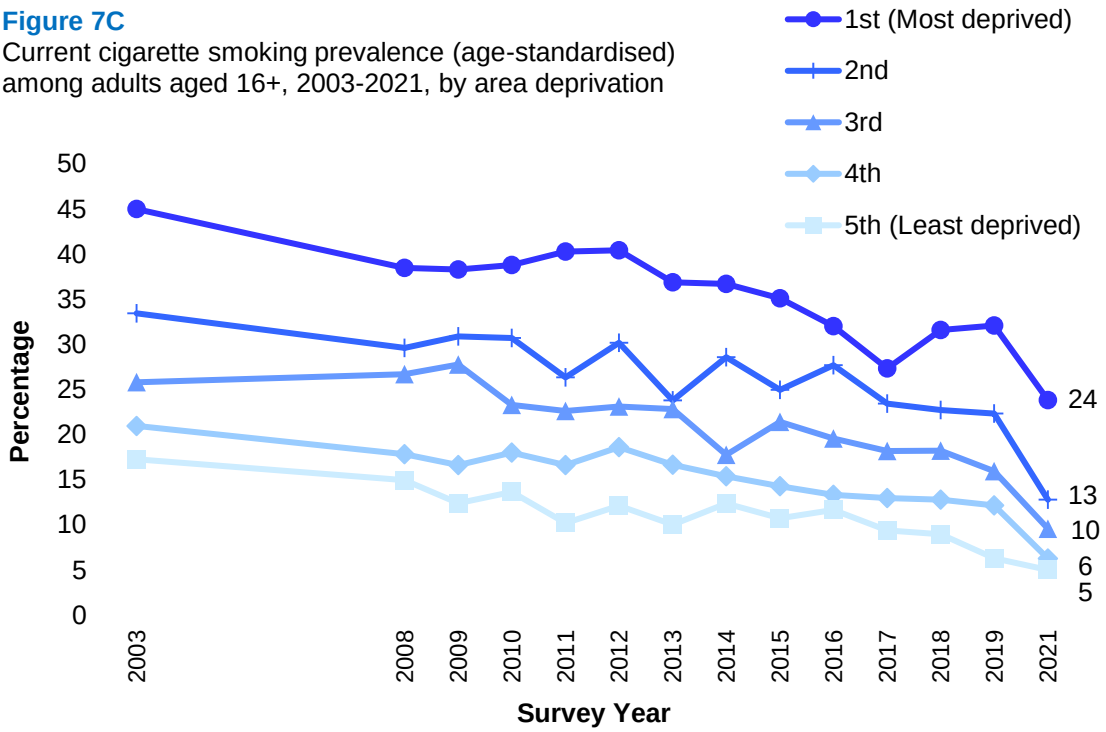
Figure 7B
Mean number of cigarettes smoked per current smoker among adults aged 16 and over, 2003 to 2021, by sex



7.2.2 Cigarette smoking status (age-standardised), 2003 to 2021, by area deprivation and sex

In 2021, the age-standardised prevalence of current smoking status continued to be higher among adults living in more deprived areas than among those living in less deprived areas (24% and 5% respectively). While significant decreases in smoking prevalence were recorded in 2021 for all but the least deprived areas, the overall pattern has held since 2003, when 45% of those who lived in the most deprived areas were current regular smokers compared with 17% in the least deprived areas.

Figure 7C
Current cigarette smoking prevalence (age-standardised) among adults aged 16+, 2003-2021, by area deprivation



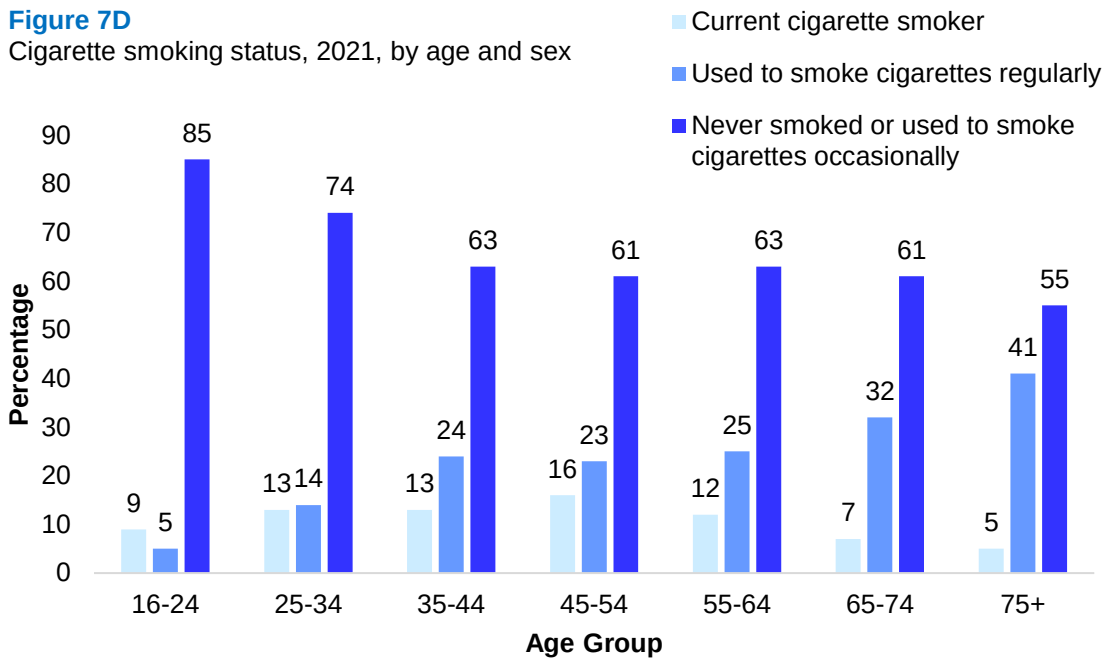
In 2021, the age-standardised mean number of cigarettes smoked per day did not differ significantly between current smokers who lived in the most deprived areas (10.8 cigarettes) and those who lived in the least deprived areas (9.7 cigarettes), unlike in 2019 when the mean number of cigarettes was significantly higher for current smokers living in the most deprived areas compared with those living in the least deprived (13.1 and 10.3 cigarettes respectively). **Figure 7C, Table 7.2**

7.2.3 Cigarette smoking status, 2021, by age and sex

As in previous years[13], differences in smoking prevalence by age were recorded in 2021, although with fewer significant variations between age groups. Smoking was most prevalent among those aged 45-54 years (16% of both men and women), and least prevalent among those aged 75 and older (5% of both men and women).

Ex-regular smokers tended to be more common among older age groups. In 2021, only 5% of those aged 16-24 reported having smoked regularly in the past, whereas this proportion increased to 41% for those aged 75 years or older. The reverse pattern was seen for the proportion of adults who have never smoked, falling from 85% of those aged 16-24, to 55% of those aged 75 and over. **Figure 7D, Table 7.3**

Figure 7D
Cigarette smoking status, 2021, by age and sex



7.2.4 Non-smokers' exposure to second-hand smoke, 2003 to 2021

The proportion of adult non-smokers that reported being exposed to second-hand smoke in their own or another person's home has reduced over the time series, with an overall decrease from 25% in 2003 to 6% in 2021. This pattern was evident for both men (24% in 2003 and 5% in 2021) and women (27% in 2003 and 6% in 2021). Please note that some caution should be exercised when interpreting the extent of the decrease in 2021 (see section 7.1.2 for more detail).

The proportion of adult non-smokers that reported being exposed to second-hand smoke outside of buildings has remained in the range 10% - 15% since 2012 (10% in 2021).

The proportion of adult non-smokers who reported that they were not exposed to second-hand smoke in any of the places included in the SHeS[14] increased to 82% in 2021 from 73% in 2019. Between 2012 to 2019, this proportion had remained between 70% - 74%, with similar patterns for men and women. **Table 7.4**

7.2.5 Children's exposure to second-hand smoke, 2012 to 2021

In 2021, 4% of children were living in accommodation in which someone regularly smoked indoors; a figure which was consistent for both boys and girls. This is a significant decrease from 2019, when this proportion was 11% and an overall decrease of fifteen percentage points from 2012 (19%). Please note that some caution should be exercised when interpreting the extent of the decrease in 2021 (see section 7.1.2 for more detail).

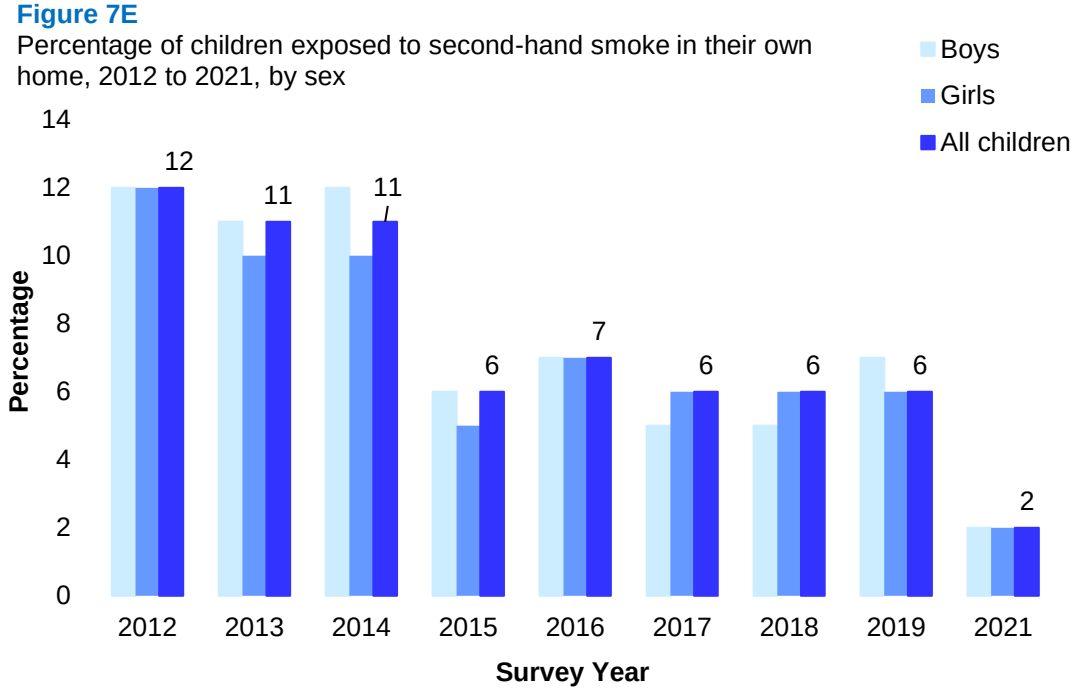
A small proportion (2%) of children were reported to be exposed to second-hand smoke in their own home in 2021. Over the time series,

this has followed a similar pattern to the proportion where there was a smoker in the household. Between 2012 and 2014, 11% - 12% of children were exposed to second-hand smoke in their own home. This proportion decreased to 6% - 7% between 2015 and 2019. This pattern has been similar among boys and girls across the time series.

Figure 7E, Table 7.5

Figure 7E

Percentage of children exposed to second-hand smoke in their own home, 2012 to 2021, by sex

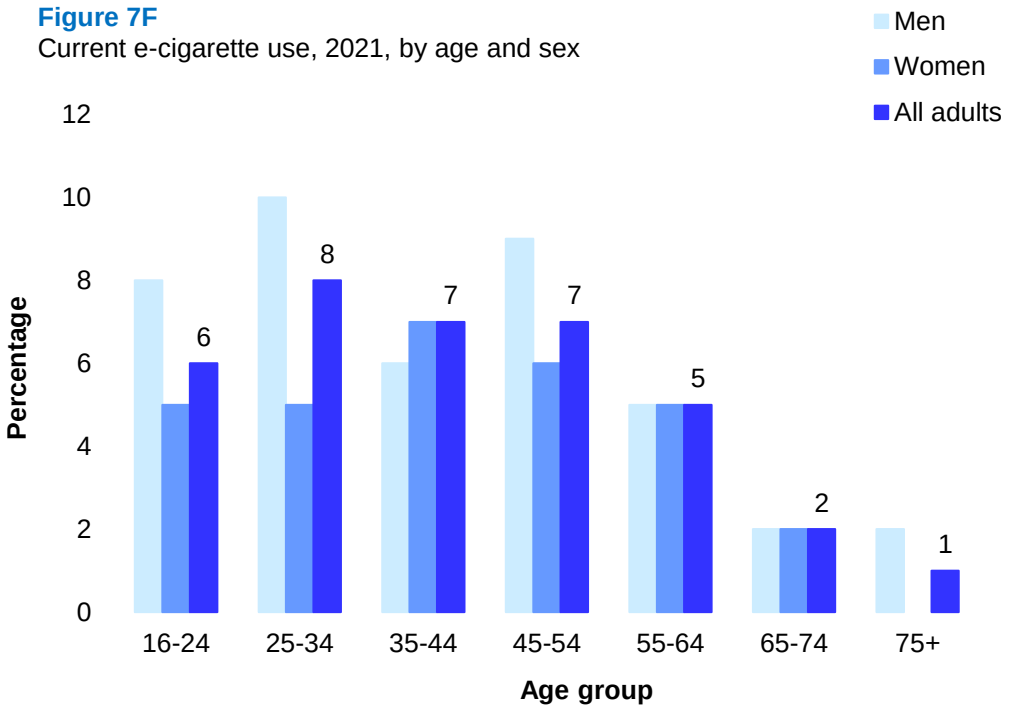


7.2.6 E-cigarette use, 2014 to 2021, by age and sex

In 2021, 16% of all adults reported that they had ever used e-cigarettes: 5% reported being current users and 11% having previously used them. More than four out of five adults (84%) had never used e-cigarettes. Similar patterns were recorded for men and women.

The highest proportion of current e-cigarette users in 2021 was recorded among those aged 25-34 (8%) with the lowest proportions among those aged 75 or older (1%) and those aged 65-74 (2%). The highest proportion of former e-cigarette users was among those aged 16-24 (19%), while the lowest was among those aged 75 years or older (2%).

Figure 7F
Current e-cigarette use, 2021, by age and sex



Current e-cigarette use has remained in the range 5% - 7% since 2014, with the 2021 figure at the lower end of this range (5%). The overall pattern of decreasing proportions having ever used e-cigarettes by age continued in 2021, ranging from 25% among those aged 16-24 to 3% among those aged 75 and over, with similar patterns for both men and women.

The proportion of adults that have never used e-cigarettes ranged from 80% to 85% between 2014 and 2021 and has consistently been highest among those aged 75 or over (95% - 98% over this period).

Figure 7F, Table 7.6

Table List

The tables can be found on the main report page under supporting files:
https://www.gov.scot/publications/scottish-health-survey-2021-volume-1-main-report/

References and notes

1 World Health Organisation (2019) Tobacco.
See: https://www.who.int/news-room/fact-sheets/detail/tobacco

2 See: https://www.who.int/campaigns/world-no-tobacco-day/2022

3 Raising Scotland's tobacco-free generation: our tobacco control action plan 2018. Edinburgh: Scottish Government, 2018.
Available at: https://www.gov.scot/publications/raising-scotlands-tobacco-free-generation-tobacco-control-action-plan-2018/

4 See: http://www.healthscotland.scot/health-topics/smoking/smoking-prevention#:~:text=There%20are%20around%2010%2C000%20smoking,were%20cigarette%20smokers%20in%20Scotland.

5 See: http://www.healthscotland.scot/news/2018/june/welcoming-scotland-s-tobacco-control-action-plan

6 A guide to smoking cessation in Scotland. Edinburgh: NHS Scotland, 2017.
Available at: http://www.healthscotland.scot/media/1097/helping-smokers-to-stop-smoking-2017.pdf

7 The National Performance Framework is described here: https://nationalperformance.gov.scot/

8 See: https://nationalperformance.gov.scot/measuring-progress/national-indicator-performance

9 Protecting Scotland, Renewing Scotland: The Government's Programme for Scotland 2020- 2021, p. 72 [Online]. Available at: https://www.gov.scot/publications/protecting-scotland-renewing-scotland-governments-programme-scotland-2020-2021/

10 Raising Scotland's tobacco-free generation: our tobacco control action plan 2018. Edinburgh: Scottish Government, 2018. Available at: https://www.gov.scot/publications/raising-scotlands-tobacco-free-generation-tobacco-control-action-plan-2018/

11 A Fairer, Greener Scotland: Programme for Government 2021-22. Available at: https://www.gov.scot/publications/fairer-greener-scotland-programme-government-2021-22/pages/4/

12 See: https://fingertips.phe.org.uk/documents/smoking_prevalence_comparisons_AUG2016.pdf

13 See for example, https://www.gov.scot/publications/scottish-health-survey-2019-volume-1-main-report/pages/8/

14 In their own or other people's homes; at work; in cars/vans; outside buildings (e.g. pubs, shops, hospitals), or in other public spaces.

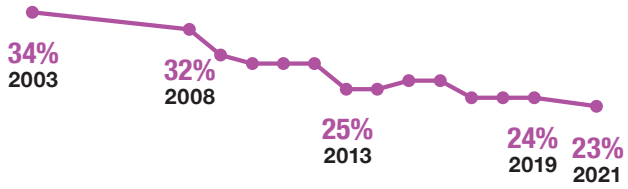
Chapter 8

Alcohol and drugs

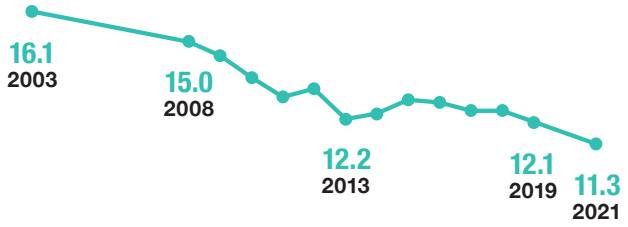
CHAPTER 8

Alcohol and Drugs

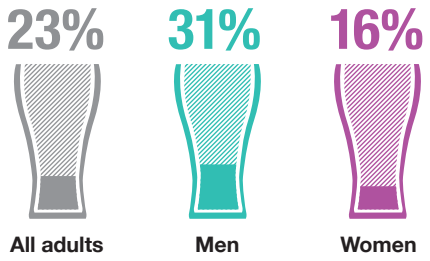
Prevalence of hazardous or harmful levels of weekly alcohol consumption[1] has declined steadily since 2003.



The mean number of units of alcohol consumed per week by adult drinkers has also declined since 2003.



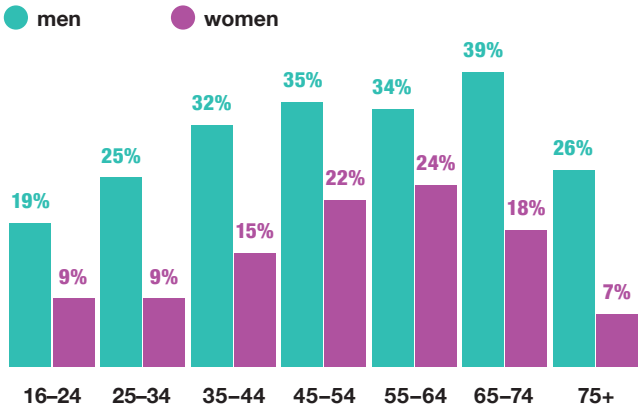
Prevalence of hazardous or harmful weekly alcohol consumption was around twice as high for men as for women in 2021.



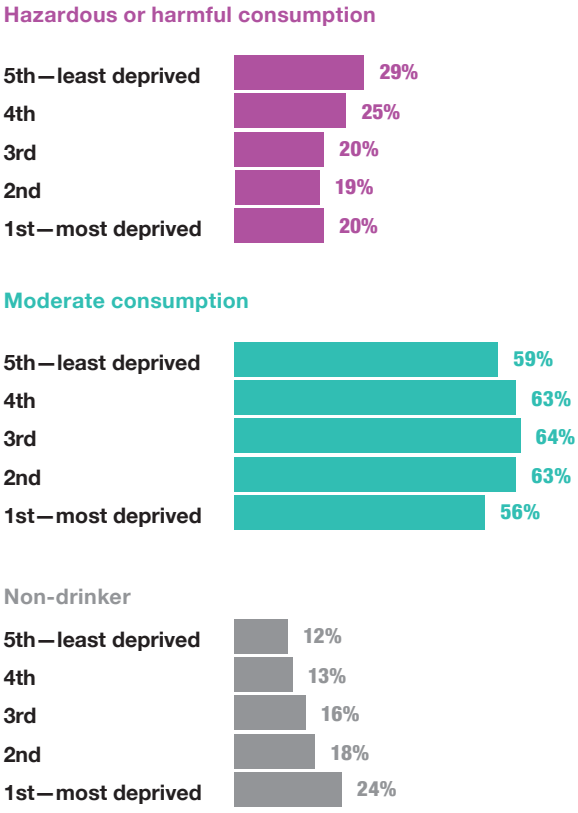
Male drinkers also consumed more units of alcohol per week than female drinkers in 2021.

[1] More than 14 units per week.

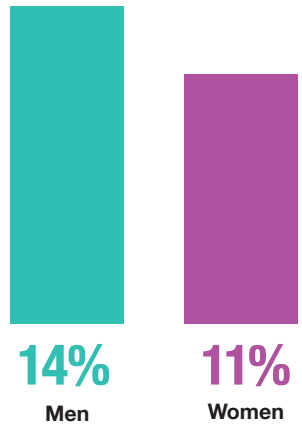
In 2021, hazardous or harmful levels of alcohol consumption were highest among those aged between 45 and 74.



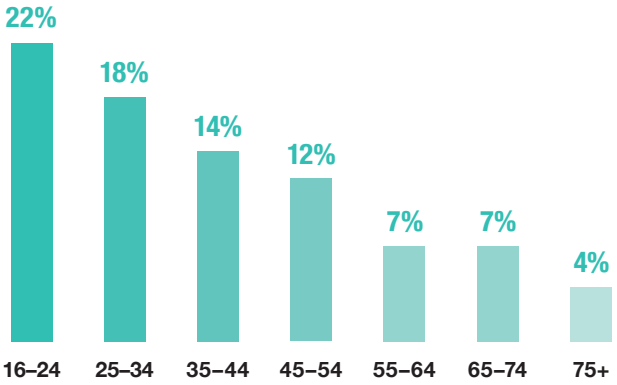
In 2021, among all adults, hazardous[1] or harmful levels of weekly alcohol consumption were more common in the least deprived areas, while not drinking was more common in the most deprived areas.



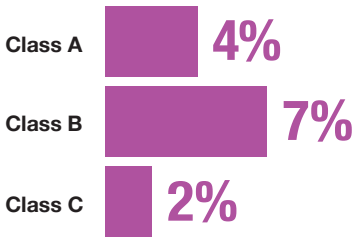
In 2021, 12% of adults reported using drugs in the previous 12 months, of these:



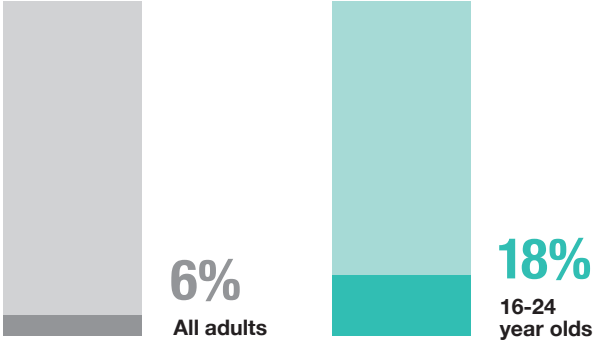
Drug use in the previous 12 months decreased with age:



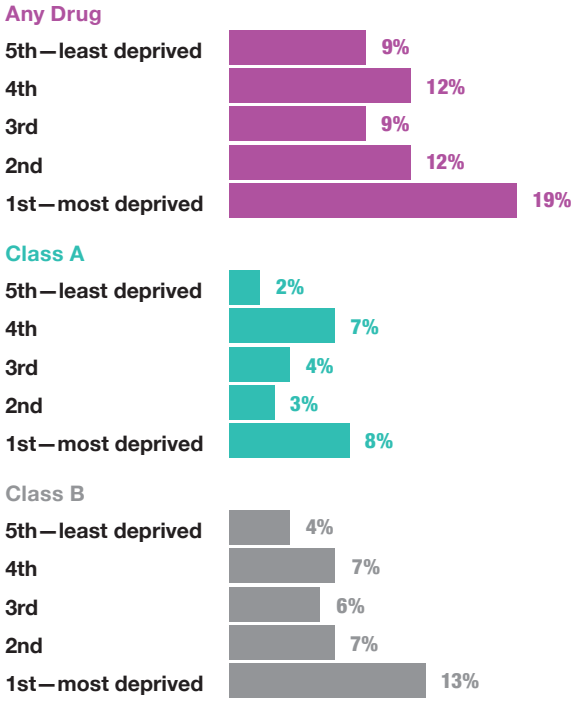
In 2021, the following proportions of adults used class A, class B or class C drugs in the previous 12 months:



Among all adults, cannabis was the most used drug in 2021 and had the highest prevalence among those aged 16-24.



In 2021, drug use was more common in the most deprived areas, and this was true for both class A and class B drugs[2].

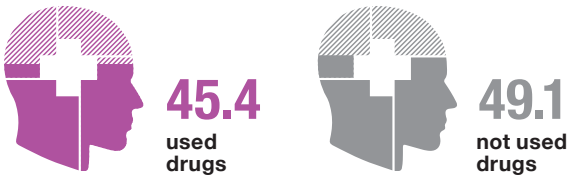


In 2021, 9% of adults reported ever having had a problem with alcohol, with 1% saying they still had a problem.

In 2021, 3% of adults reported ever having had a problem with drugs, with less than 0.5% saying they still had a problem.

Men were more likely that women to have had a problem with drugs in 2021.

In 2021, adults who had used any drug in the last 12 months had significantly lower mental wellbeing as measured by WEMWBS[3] on average than those who had not.



[2] Use of class A drugs was most prevalent in the most deprived areas, but was not significantly higher than in all other deprivation quintiles.

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

8 ALCOHOL AND DRUGS

Alys Daniels-Creasey

8.1 INTRODUCTION

Harmful alcohol consumption has been an ongoing public health challenge in Scotland for decades. It is linked with a risk of physical and mental health problems, as well as social and economic losses to individuals and society[1]. In 2021, 1,245 people died from alcohol-specific causes in Scotland which is a 5% increase from 2020, and the highest number of deaths since 2008[2]. In contrast, however, 2021 (as did 2020) saw the lowest level of alcohol sales over the available time series (1994) – 9.4 litres of pure alcohol were sold per adult in Scotland which represents 18.1 units of alcohol per adult per week[3] nearly 30% above the UK Chief Medical Officers' guidelines of 14 units per adult per week.

In 2021, COVID-19 restrictions continued to affect alcohol sales through on-trade premises (such as pubs, clubs and restaurants). 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.

Problem drug use in Scotland is defined as the problematic use of opioids (including illicit and prescribed methadone), and/or illicit use of benzodiazepines, routinely and over prolonged periods. Inevitably, much of the problem drug using population is hidden, and drug prevalence figures can only ever be estimates, combining available data on observed cases with an estimate of the unknown population. Nevertheless, a 2015/16 study estimated prevalence at between 55,800 and 58,900 individuals (1.62% of individuals aged 15-64 years)[4].

Existing inequalities mean that the burden of alcohol-related morbidity and mortality is greatest among those living in the most deprived areas[5,6]. The disease burden of drug use disorders is also much higher in the most deprived areas than in the least deprived areas[7].

8.1.1 Policy background

The **Alcohol Framework 2018: Preventing Harm**[8] endorses the WHO Safer initiative of evidence-based strategies to tackle alcohol-related harm[9] and includes actions related to putting the voices of children and young people at the heart of alcohol preventative measure development; reducing alcohol consumption through affordability; supporting families and communities, keeping the licensing system and statutory guidance under review and consulting on marketing restrictions. In 2021, the Scottish Government launched a national mission to improve and save lives, at the core of which is ensuring that every individual is able to access the treatment and recovery they choose.

The Scottish Government is working on initiatives that will support communities across Scotland to address harmful and hazardous alcohol consumption. These include piloting an innovative Managed Alcohol Programme in Glasgow in partnership with Simon Community Scotland, commissioning Public Health Scotland to conduct a review of alcohol brief interventions in Scotland, consulting on a range of potential alcohol marketing restrictions in Scotland, and supporting the UK Government on reviewing and updating clinical guidelines for alcohol treatment.

The National Mission on Drug Deaths was announced in January 2021 by the First Minister. The National Mission reviewed and learned from best practice at home and internationally and concluded that a public health approach to drugs is the most effective way forward. Its aim is to reduce drug deaths and improve the lives of those impacted by drugs. This will be done by preventing people from developing drug use; reducing harms from the consumption of drugs; getting more people into treatment; addressing the needs of people with multiple and complex needs and supporting families and communities affected by problem drug use.

It sits alongside the Scottish Government's wider commitments to improving population health and requires a whole system approach, working in partnership across the Scottish Government, local authorities and the third sector. This challenge is complex and multi layered and involves tackling deep rooted societal and economic challenges that existed for decades. The approaches, which are all well evidenced, include an **emergency response** – addressing the immediate harms and preventing overdose from becoming fatal; **reducing risk** through improving the accessibility and quality of treatment; and **reducing vulnerability** by addressing the complex needs of people with drug problems.

8.1.2 Reporting on harmful alcohol and drug use in the Scottish Health Survey

This chapter reports weekly alcohol consumption and problem drinking trends and figures for 2021 for adults. It also reports adult drug use and problems with drug use. In addition, drug use is reported by mental wellbeing (WEMWBS).

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 and drug use, problem alcohol and drug use and mental wellbeing, please refer to Chapter 2 of the Scottish Health Survey 2021- volume 2: technical report.

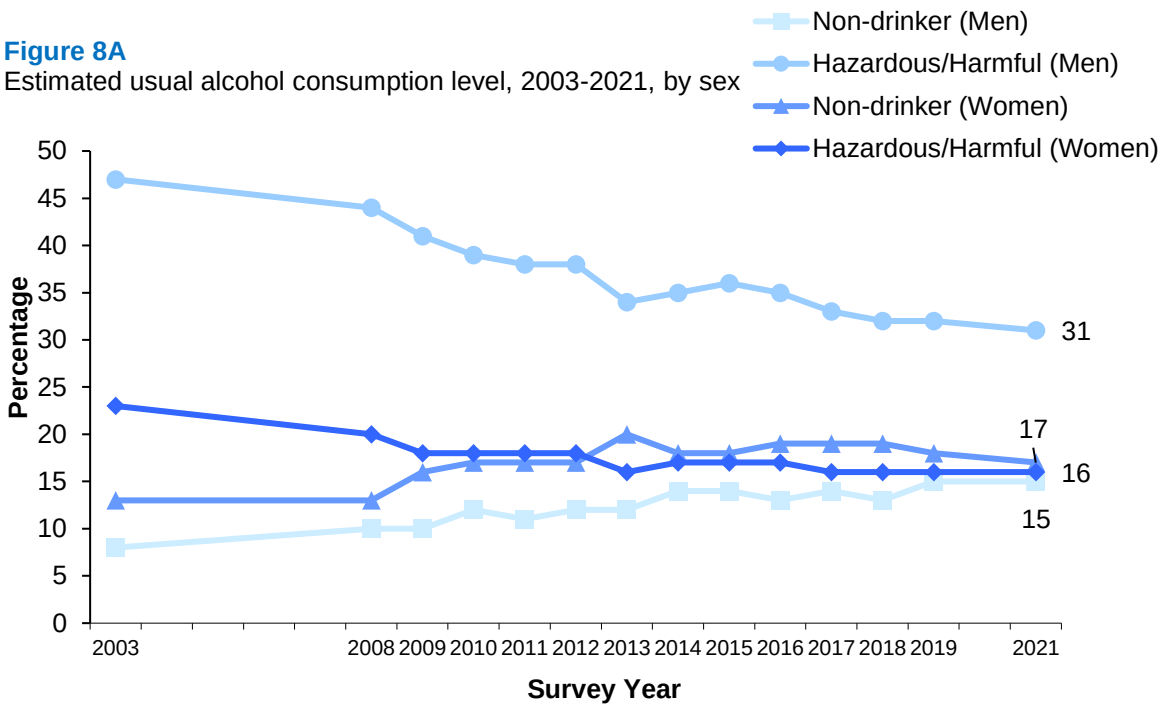
Supplementary tables on alcohol and drug use are also published on the Scottish Government website: Scottish Health Survey.

8.2 ALCOHOL AND DRUGS

8.2.1 Estimated usual weekly alcohol consumption level, 2003 to 2021, by sex

The prevalence of hazardous or harmful drinking levels for all adults significantly decreased from 34% in 2003 to 25% in 2013. Since 2014, levels have remained in the range 23% - 26%, with the 2021 figure of 23% the lowest in the time series. The prevalence of hazardous or harmful drinking by sex has followed a similar pattern over time, with levels consistently around twice as high for men compared with women across the time series (31% for men and 16% for women in 2021).

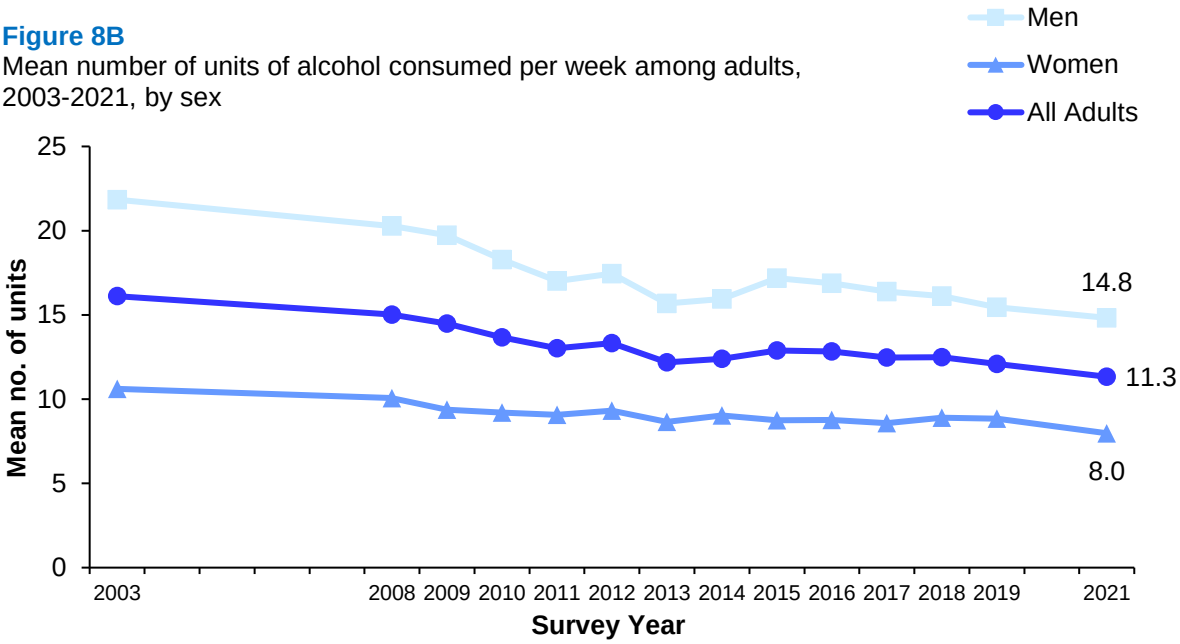
Figure 8A
Estimated usual alcohol consumption level, 2003-2021, by sex



Among all adults an increase in the proportion of non-drinkers was recorded between 2003 and 2013, with prevalence rising from 11% in 2003 to 16% in 2013. Levels have since remained between 16% and 17% (16% in 2021). Across the time series, the prevalence of non-drinkers by sex have shown similar patterns, peaking at 15% in 2019 and 2021 among men and 20% in 2013 among women. Since 2014 levels for both have been relatively stable, in the range 13% - 15% among men and 17% - 19% among women. **Figure 8A, Table 8.1**

A decrease in the mean number of units of alcohol consumed per week by all adult drinkers has been recorded over time, decreasing from 16.1 units in 2003 to 12.2 units in 2013. The mean number of units consumed per week remained between 12.1 and 12.9 between 2014 and 2019 before decreasing to 11.3 in 2021, the lowest point in the time series.

Figure 8B
Mean number of units of alcohol consumed per week among adults, 2003-2021, by sex

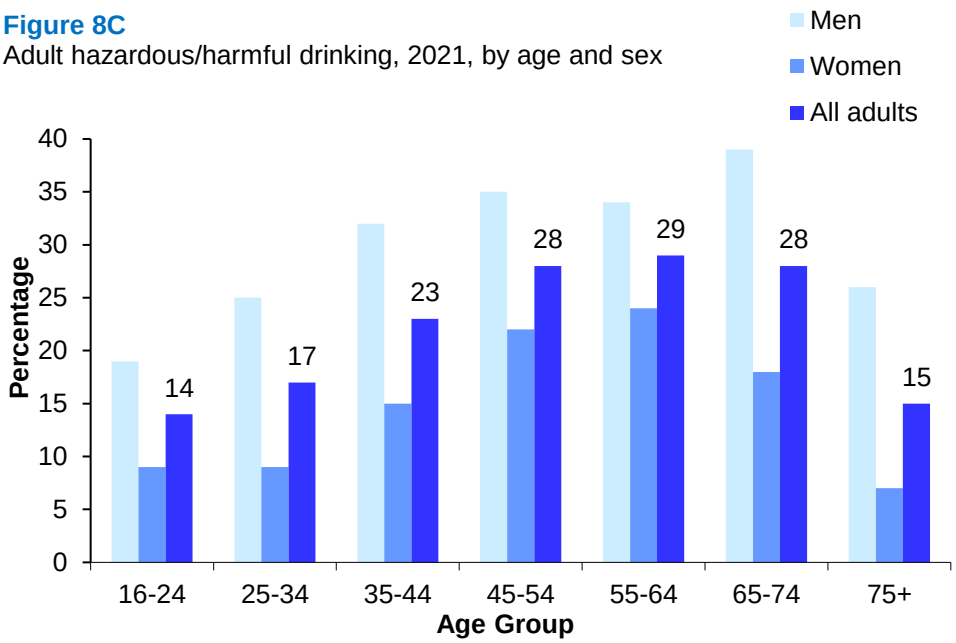


Across the time series, the mean number of units of alcohol consumed per week has been approximately twice as high for men than for women. However, between 2003 and 2021, the decrease in consumption was greater among men compared with women. Among men, the mean number of units consumed per week decreased from 21.8 to 14.8, compared with 10.6 to 8.0 among women over the same time period. **Figure 8B, Table 8.1**

8.2.2 Estimated usual weekly alcohol consumption level, 2021, by age and sex

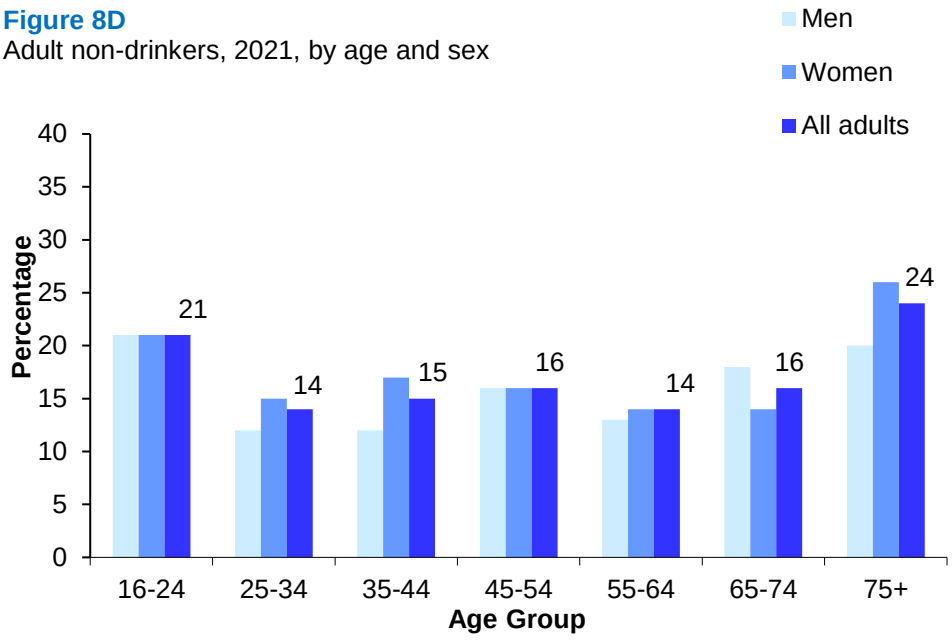
The prevalence of hazardous or harmful drinking levels varied by age, increasing from 14% among those aged 16-24 to 29% among those aged 55-64, before falling to 15% among adults aged 75 and over. Levels of hazardous or harmful drinking were significantly higher among men compared with women across all age groups. Among men, those aged 65-74 recorded the highest prevalence (39%), whilst the lowest was recorded among men aged 16-24 (19%). Among women, prevalence of hazardous or harmful drinking peaked among those aged 55-64 (24%), with the lowest prevalence found among those in the youngest and oldest age groups (9% among those aged 16-34 and 7% among those aged 75 and over).

Figure 8C
Adult hazardous/harmful drinking, 2021, by age and sex



Among all adults in 2021, the proportion of non-drinkers was highest among those aged 75 and above (24%) compared with a range of 14% - 16% among those between the ages of 25 and 74. There were no significant differences by sex between the age groups.

Figure 8D
Adult non-drinkers, 2021, by age and sex



Figures 8C and 8D, Table 8.2

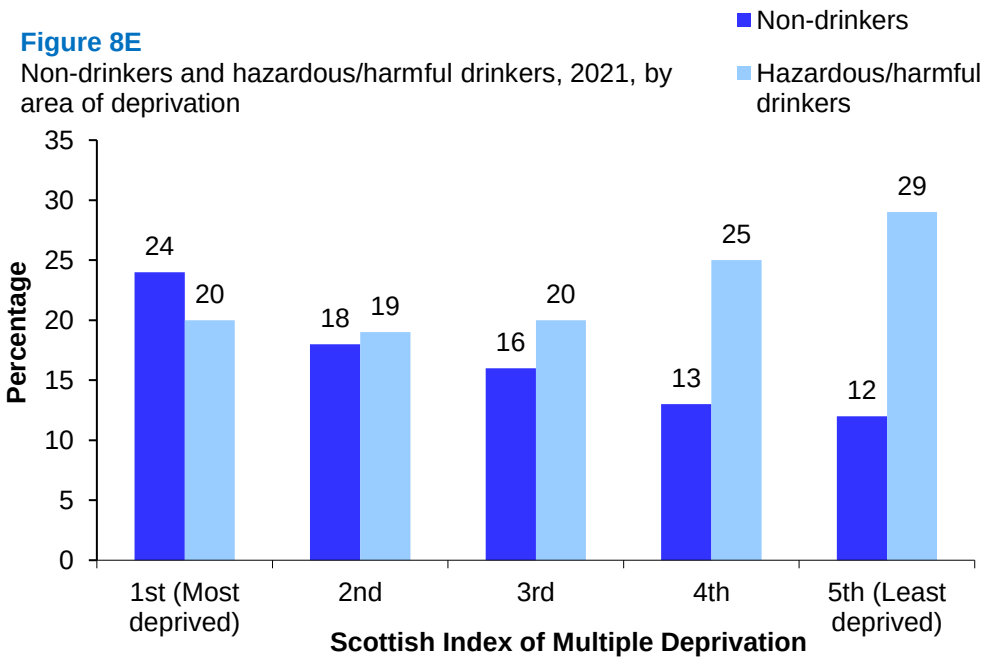
8.2.3 Estimated usual weekly alcohol consumption level (age-standardised), 2021, by area deprivation and sex

As in previous years, the estimated levels of age-standardised weekly alcohol consumption varied by area deprivation in 2021. Among all adults, the prevalence of hazardous or harmful drinking levels was lowest among those living in the most deprived areas (19% - 20%

among those living in the three most deprived SIMD quintiles) and highest among those living in the least deprived areas (25% among those living in quintile 4, and 29% among those living in quintile 5). Similar patterns were recorded by sex.

There continued to be a significant association between area deprivation and non-drinking prevalence in 2021, with the highest proportion of non-drinkers living in the most deprived areas (24%) and lowest proportion living in the least deprived areas (12%). This pattern was recorded amongst both men and women.

Figure 8E
Non-drinkers and hazardous/harmful drinkers, 2021, 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 (in the range 10.4 – 12.1 units). Across all deprivation quintiles, a higher mean number of units of alcohol were consumed per week amongst men compared with women, with the greatest difference found between sexes in quintile 1, the most deprived area (17.8 units for men and 6.3 units for women). **Figure 8E, Table 8.3**

Figure 8F
Mean number of units of alcohol consumed per week among adults, 2021, by area deprivation and sex

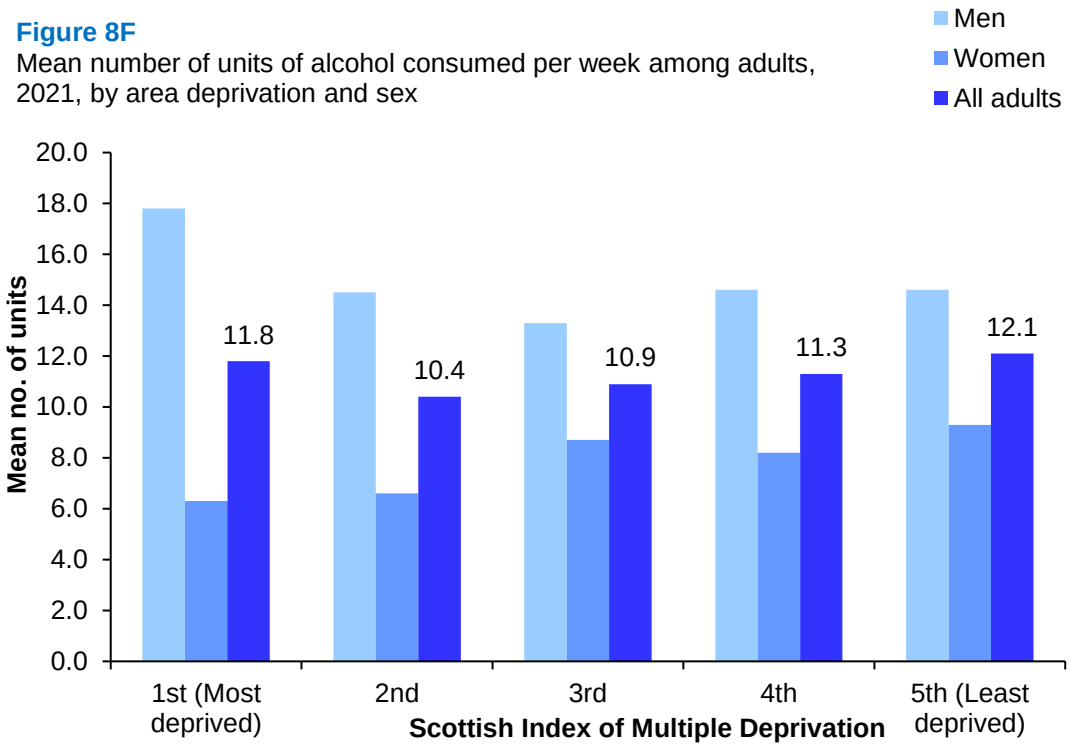


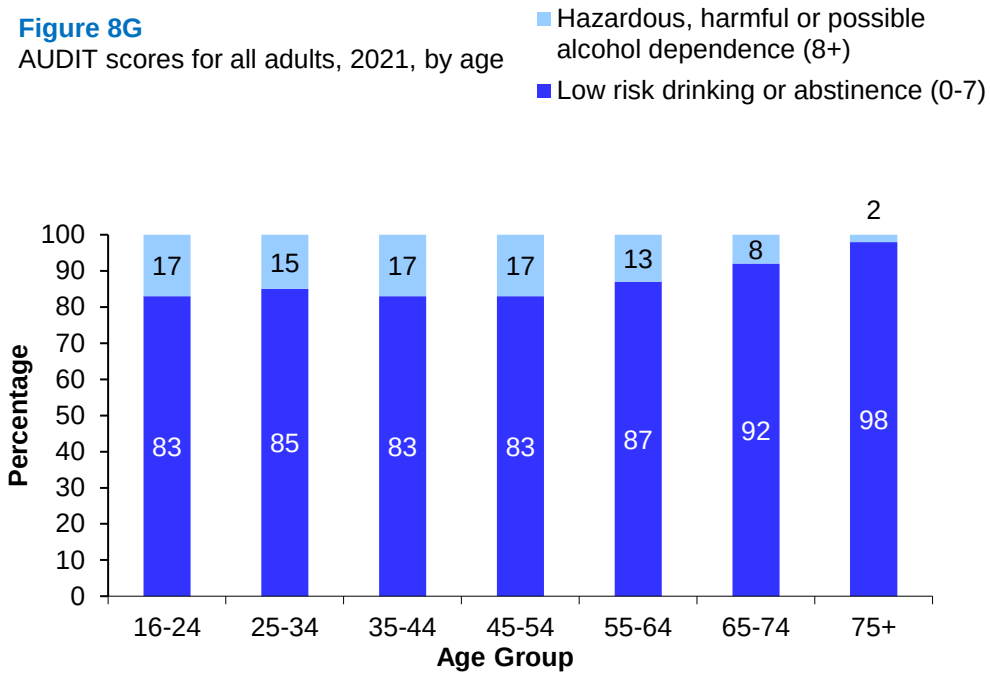
Figure 8F, Table 8.3

8.2.4 AUDIT scores, 2021, by age and sex

AUDIT scores are used to determine alcohol dependency or high-risk use. In 2021, 86% of all adults were abstinent or had low-risk alcohol consumption habits (AUDIT scores of 0-7). As in previous years, women were more likely than men to be abstinent or to drink in a way that conferred low risk (91% compared to 82% respectively).

The prevalence of hazardous, harmful or possibly dependent drinking behaviour (AUDIT scores of 8 or more) among all adults was 14% in 2021, with the proportion recorded amongst men (18%) double that recorded for women (9%). Just 1% of all adults had an AUDIT score of 16+, indicating harmful or possibly dependent consumption levels, with no variation by sex.

Figure 8G
AUDIT scores for all adults, 2021, by age



In 2021, abstinence or low-risk drinking (an AUDIT score of 0-7) was higher among the oldest age groups, 92% among those aged 65-74 and 98% among those aged 75 and over, while for younger groups this was in the range 83% - 87%. The prevalence of hazardous, harmful or possible alcohol dependence (AUDIT scores of 8 or more) decreased with age, from 15% - 17% of those aged 16-54 to 2% of those aged 75 and over.

Similar patterns were recorded for men and women with regards to the proportions who were abstinent or low-risk drinkers and the proportions of hazardous, harmful or possible alcohol dependent drinkers.

Figure 8G, Table 8.4

8.2.5 AUDIT scores (age-standardised), 2021, by area deprivation and sex

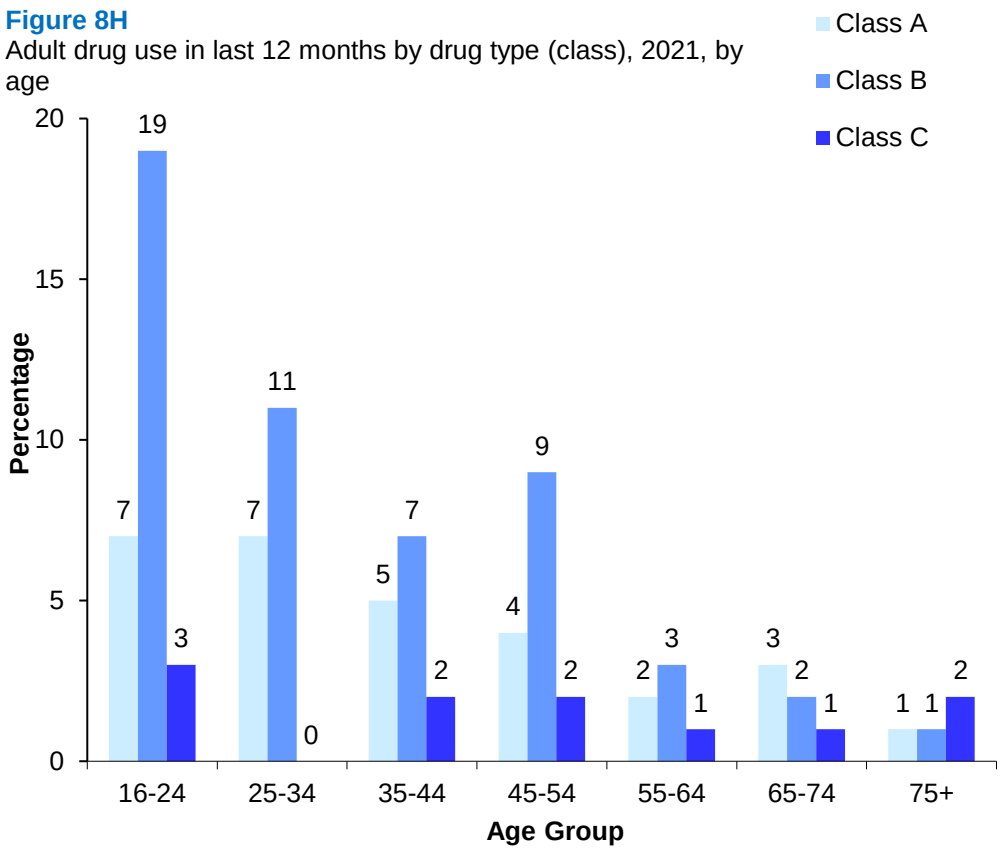
There was no clear association between area deprivation and the age-standardised prevalence of hazardous, harmful or possibly dependent drinking behaviour among all adults or by sex. The greatest proportion of adults with an AUDIT score above 8 was found among those living in the most deprived area (17%), however this was not significantly higher than other groups, which were all in the range 12% - 14%. Similar patterns were recorded by sex. **Table 8.5**

8.2.6 Adult drug use in the last 12 months by drug type[10], 2021, by age and sex

In 2021, just over one in ten adults had used any of the drugs included in the survey in the last 12 months (12%), with similar proportions recorded amongst men (14%) and women (11%). Among all adults in 2021, 4% had used Class A drugs in the last year, 7% had used Class B drugs and 2% had used Class C drugs, with similar patterns recorded by sex.

Adults reporting having used any drug in the previous 12 months decreased with age in 2021, from 22% among those aged 16-24 to 4% among those aged 75 and over. The overall pattern of decreasing drug use by age was evident for both Class A and Class B drugs. The proportions reporting use of these drugs in the last 12 months decreased from 7% among those aged 16-34 to 1% among those aged 75 and above for Class A drugs and from 19% to 1% respectively for Class B drugs. Class C drug use was low across all age categories (in the range 0% - 3%). These patterns were similar for men and women.

Figure 8H
Adult drug use in last 12 months by drug type (class), 2021, by age



In 2021, cannabis was the drug with the highest reported use (6%) amongst all adults, followed by cocaine (3%), poppers (2%) and prescription drugs not prescribed to them (2%).

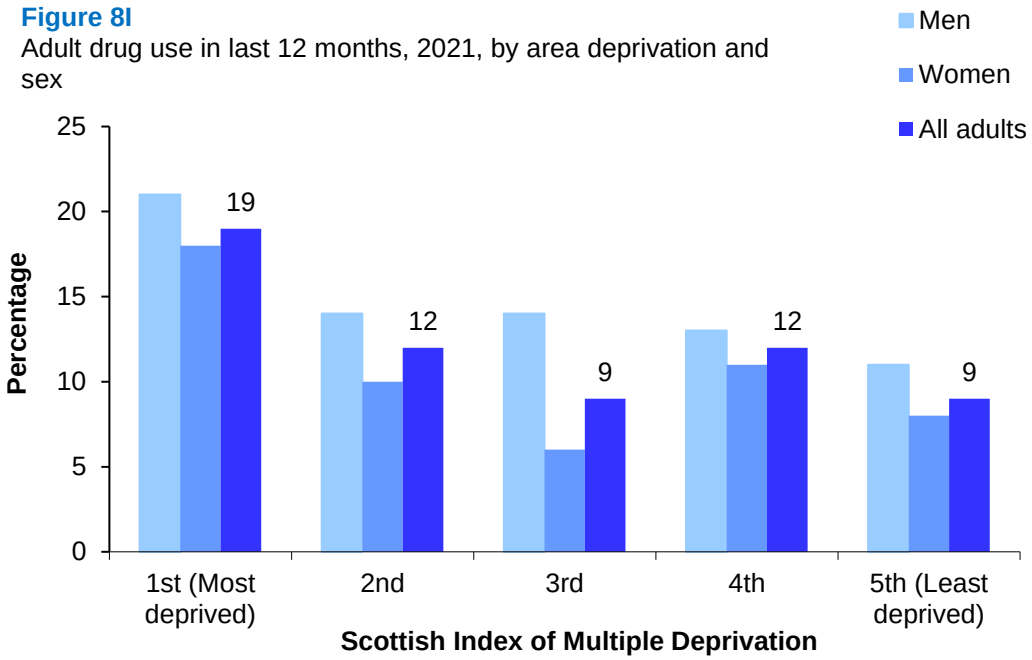
A higher proportion of men in 2021 reported having used cannabis in the past 12 months compared with women (8% compared with 5% respectively). Reported cannabis use among all adults in 2021 was higher among those aged 16-24 (18%) compared with those in other age groups (in the range 1% - 9%). **Figure 8H, Table 8.6**

8.2.7 Adult drug use in the last 12 months by drug type (age-standardised), 2021, by area deprivation and sex

In 2021, the age-standardised prevalence of any drug use in the past 12 months for all adults was highest amongst those living in the most deprived areas (19%), with prevalence ranging between 9% - 12%

amongst those living in the other four quintiles. Similar overall patterns were recorded by sex, although there were some non-significant variations recorded.

Figure 8I
Adult drug use in last 12 months, 2021, by area deprivation and sex



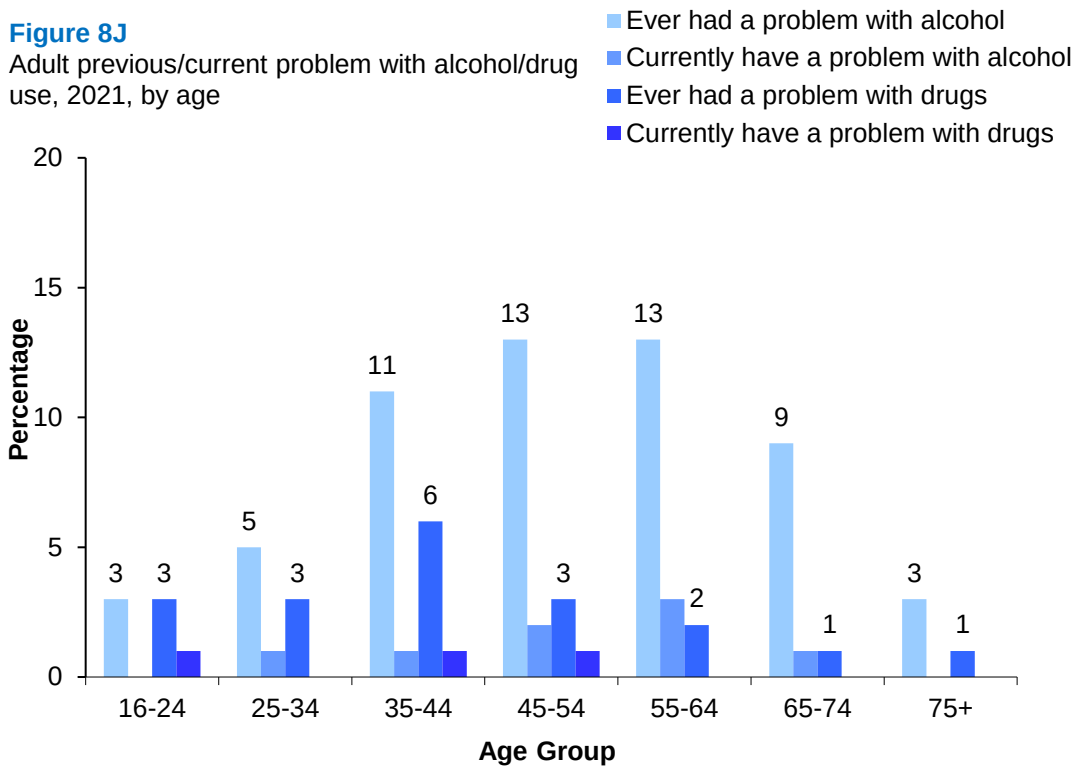
In 2021, the age-standardised prevalence of Class B drugs taken in the last 12 months varied by area deprivation, with a significantly higher prevalence recorded among those living in the most deprived areas (13%) compared to those living in the other four quintiles (ranging from 4% - 7%). A similar but non-significant pattern was recorded for Class A drug use, while low proportions across all areas reported using Class C drugs in the last 12 months. **Figure 8I, Table 8.7**

8.2.8 Previous and current problem with alcohol and drug use, 2021, by age and sex

In 2021, 9% of all adults reported ever having had a problem with alcohol and 3% reported ever having had a problem with drugs. A small proportion of adults reported a current problem with alcohol (1%), while less than 1% reported having a current problem with drugs. There was no significant difference for those who reported ever having had a problem with alcohol by sex, while there was a significant difference for those who reported ever having had a problem with drug use (4% among men and 2% among women).

Among all adults in 2021, 1% reported ever having had a problem with both alcohol and drugs, with no significant difference between sexes, and less than 1% reported that they currently had a problem with both.

Figure 8J
Adult previous/current problem with alcohol/drug use, 2021, by age



The prevalence of having ever had a problem with alcohol in 2021 was highest among those aged 35-64 (in the range 11% - 13%), with lower proportions recorded among those aged 16-34 (3% - 5%) and those aged 75 and above (3%).

The prevalence of having ever had a problem with drugs ranged from 1% among those aged 65 and above to 3% - 6% among those aged 16-64. **Figure 8J, Table 8.8**

8.2.9 Adult WEMWBS mean score, 2021, by drug use and sex

In 2021, adults who had used drugs in the previous 12 months reported lower mental wellbeing scores on average than those who had not used drugs (mean WEMWBS scores of 45.4 and 49.1 respectively). Similar patterns were recorded among both men (45.0 and 49.5 respectively) and women (45.8 and 48.6 respectively).

Figure 8K
Adult WEMWBS mean score, 2021, by drug use in the last 12 months and sex

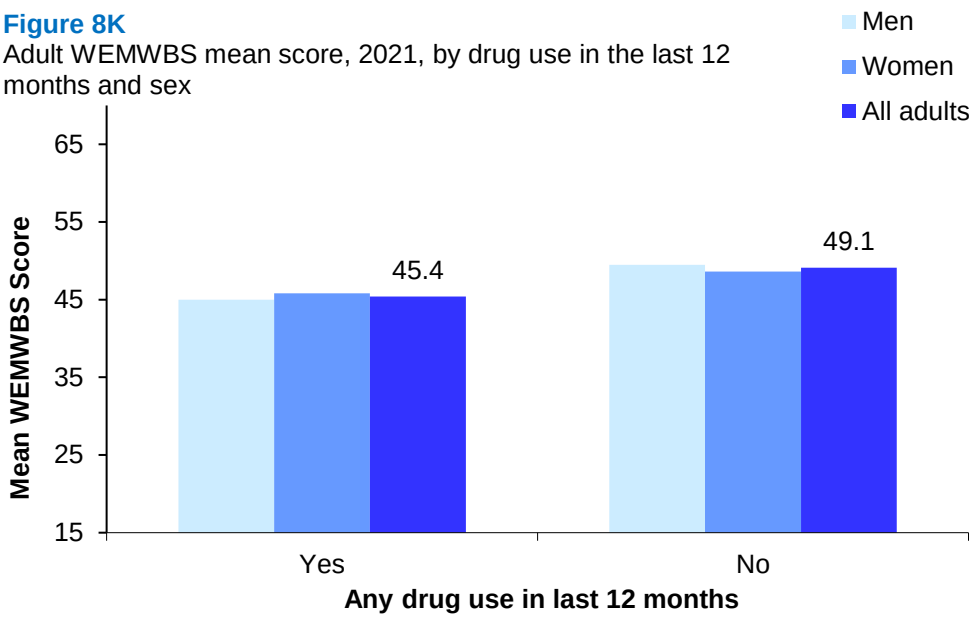


Figure 8K, Table 8.9

Table list

The tables can be found on the main report page under supporting files:
https://www.gov.scot/publications/scottish-health-survey-2021-volume-1-main-report/

References and notes

1 World Health Organization (2018) Alcohol Fact Sheet. Available at: Alcohol (who.int)

2 Alcohol-specific deaths | National Records of Scotland

3 Monitoring and Evaluating Scotlands Alcohol Strategy (MESAS), 2022

4 See: www.isdscotland.org/Health-Topics/Drugs-and-Alcohol-Misuse/Publications/2019-03-05/2019-03-05-Drug-Prevalence-2015-16-Report.pdf

5 Giles, L and Richardson, E. (2021). Monitoring and Evaluating Scotland's Alcohol Strategy: Monitoring Report 2021. Edinburgh: Public Health Scotland. Available at: https://www.publichealthscotland.scot/media/8090/mesas-monitoring-report-2021.pdf

6 Katikireddi SV, Whitley E, Lewsey J, Gray L and Leyland AH (2017). Socioeconomic status as an effect modifier of alcohol consumption and harm: analysis of linked cohort data. Lancet Public Health; 2: 267–76.

7 https://www.gov.scot/publications/rights-respect-recovery/pages/4/

8 Scottish Government. (2018). Alcohol Framework 2018: Preventing Harm. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2018/11/alcohol-framework-2018-preventing-harm-next-steps-changing-relationship-alcohol/documents/alcohol-framework-2018-preventing-harm-next-steps-changing-relationship-alcohol/alcohol-framework-2018-preventing-harm-next-steps-changing-relationship-alcohol/govscot%3Adocument/00543214.pdf

9 World Health Organization (2018) SAFER initiative. Available at: SAFER - alcohol control initiative (who.int)

10 For more information on the drugs included in the survey, see Chapter 2 of the Scottish Health Survey 2021- volume 2: technical report

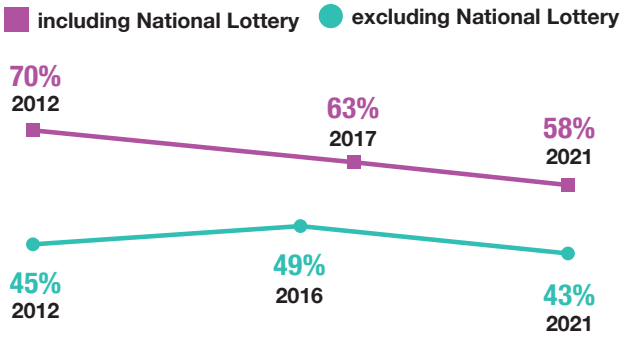
Chapter 9

Gambling

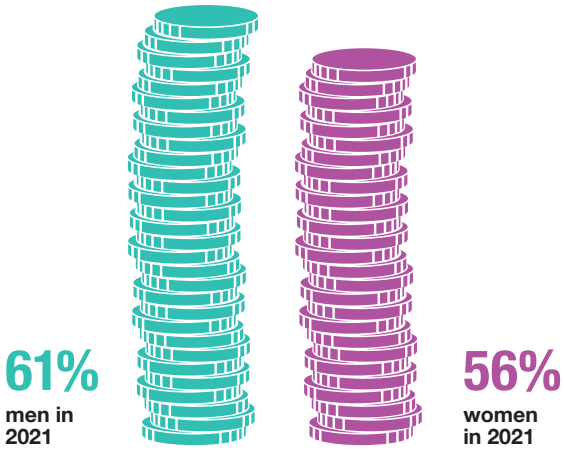
CHAPTER 9

Gambling

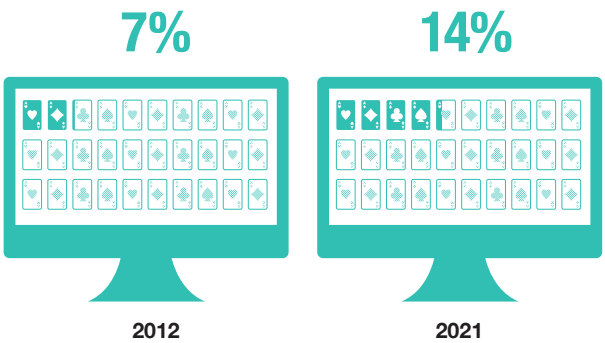
The proportion of adults undertaking any gambling activities in 2021 has decreased significantly since 2012, whilst prevalence of adult gambling activity excluding the National Lottery has changed to a lesser extent.



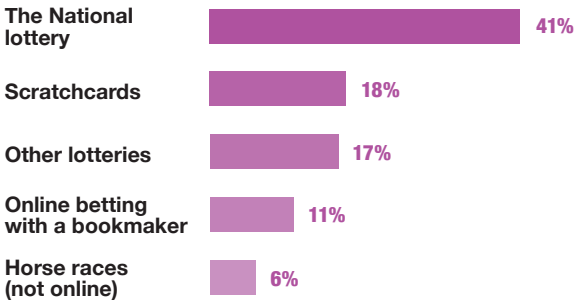
Men have consistently been more likely to gamble than women since 2012.



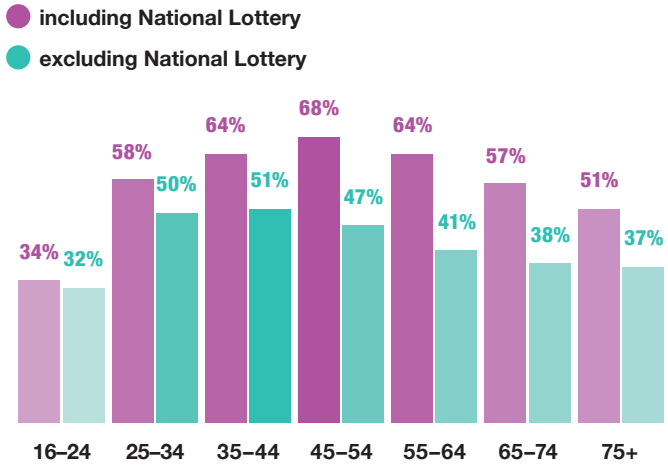
Online gambling participation has doubled since 2012.



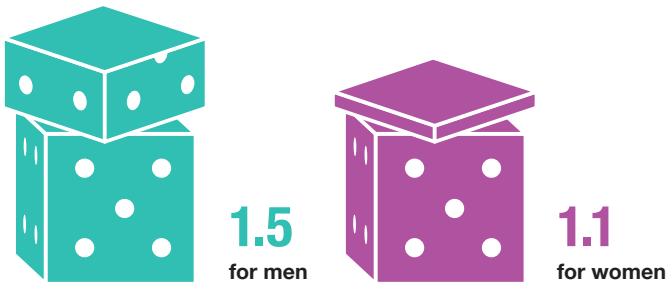
The five most popular forms of gambling activity in 2021 were:



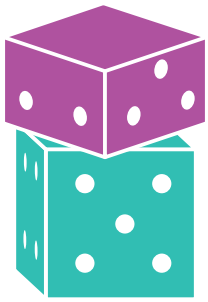
In 2021, gambling activity in the last 12 months varied by age, with the lowest prevalence amongst those aged 16-24 and highest for those aged 45-54 (35-44 when the National Lottery is excluded).



In 2021, men had taken part in more different gambling activities than women in the past 12 months on average.

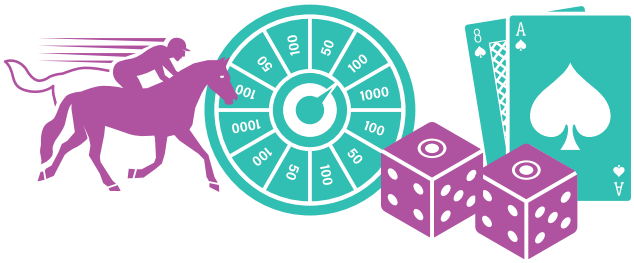


Those aged 25-44 took part in the highest number of different gambling activities in 2021.

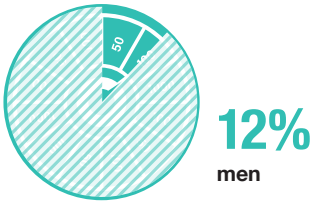


1.6
on average

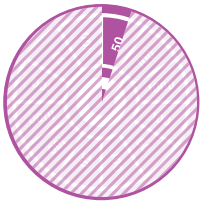
In 2021, 8% of adults participated in four or more gambling activities in the last year.



More than double the amount of men participated in four or more gambling activities in the last year than women in 2021.

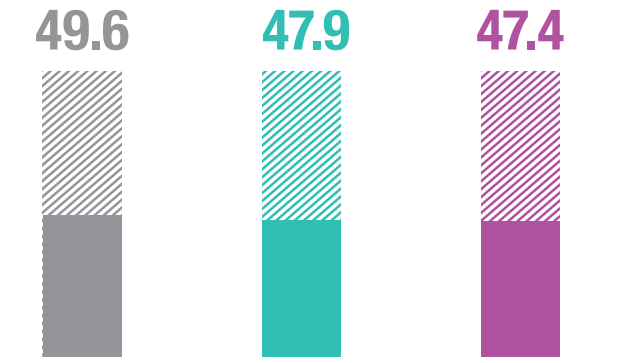


12%
men



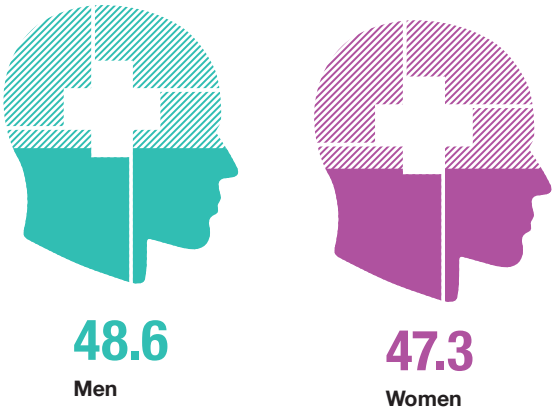
5%
women

In 2021, adults who did not participate in gambling in the past 12 months had, on average, higher levels of mental wellbeing as measured by WEMWBS[1] than those that did. After excluding the National Lottery, this difference increases.



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

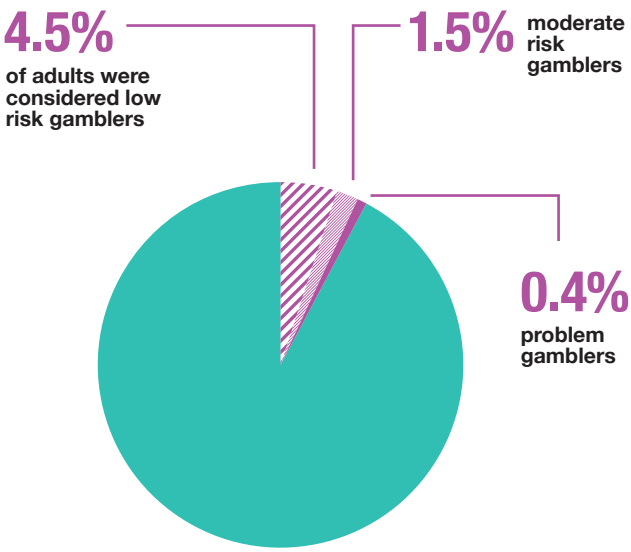
Women who gambled in 2021 had lower mental wellbeing than men who gambled.



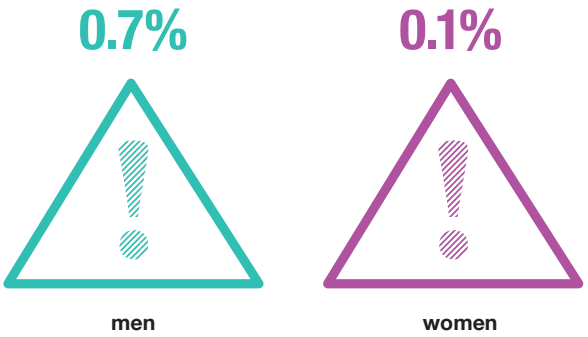
48.6
Men

47.3
Women

In 2021, according to PGSI[2] scores:



Men were more likely than women to have a PGSI score that indicated they were a problem gambler in 2021.



[2] The Problem Gambling Severity Index (PGSI). The scale runs from 0 to 27: a score of eight or over represents problem gambling. Scores between three and seven are indicative of 'moderate risk' gambling and scores of one or two are indicative of 'low risk' gambling.

9 GAMBLING

Erin Deakin

9.1 INTRODUCTION

Gambling behaviour is increasingly a subject of public health and policy interest in Britain. In the past decade, the gambling landscape in Britain has changed significantly. The public now has access to an unprecedented variety of gambling apps, websites, online games and lotteries and online gambling behaviour is constantly evolving, for example, individuals can now follow gambling companies on social media[1]. Gambling can have adverse impacts on the health and wellbeing of individuals, families, communities and society, such as loss of employment, debt, deterioration of physical and mental health and this can lead to increased risk of suicide among individuals affected by problem gambling[2].

9.1.1 Policy background

Gambling legislation in Scotland is covered by the UK Gambling Act (2005)[3], which covers all forms of gambling, with policy responsibility held by the UK Department for Digital, Culture, Media and Sport. While gambling policy is a reserved matter, the Scotland Act 2016 gave Scottish Ministers limited powers to legislate on the number of Fixed Odds Betting Terminals in new betting shops only, but with the reduction of the maximum stake to £2, those very limited powers will effectively become null and void[4].

The Gambling Act (2005)[3], which came into force in 2007, overhauled the way commercial gambling is licensed, advertised and regulated in the UK. It includes three core licensing objectives to:

- prevent gambling from being a source of crime or disorder, being associated with crime or disorder or being used to support crime,
- ensure that gambling is conducted in a fair and open way, and
- protect children and other vulnerable persons from being harmed or exploited by gambling[5].

The Gambling Act 2005 is currently under review by the UK Government, following the increasing incidence of online gambling. Figures published by the Gambling Commission show an increase in online gambling from 18% in the year to June 2018 to 26% in the year to June 2022[6].

9.1.2 Reporting on gambling in the Scottish Health Survey

This chapter presents estimates of past year participation in all forms of gambling in Scotland followed by estimates of problem

and at-risk gambling according to the Problem Gambling Severity Index (PGSI)[7].

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 gambling, please refer to Chapter 2 of the Scottish Health Survey 2021- volume 2: technical report.

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

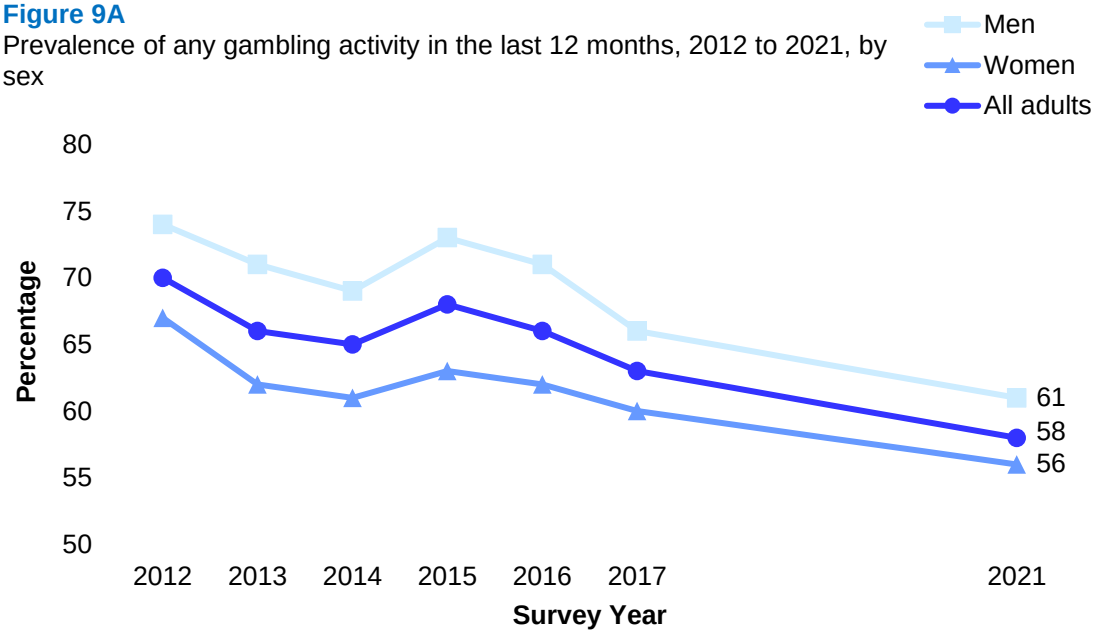
9.2 GAMBLING

9.2.1 Gambling activities in the last 12 months, 2012 to 2017, 2021, by sex

In 2021, more than half of adults reported taking part in any gambling activity in the previous year (58%), the lowest proportion since 2012 (70%), with levels ranging from 63% to 68% in the intervening years. While the National Lottery remained the specific form of gambling with the highest proportion, participation in this form of gambling decreased from 58% in 2012 to 41% in 2021.

While similar patterns in terms of an overall decrease were recorded by sex, gambling prevalence has consistently been higher amongst men compared with women since the start of data collection in 2012, with a gap ranging between five and ten percentage points recorded over the survey years.

Figure 9A
Prevalence of any gambling activity in the last 12 months, 2012 to 2021, by sex



The trend for any adult gambling activity excluding the National Lottery has not been linear, with the highest levels of this type of gambling participation recorded in 2015 and 2016 (both 49%).

However, the level in 2021 (43%) was the lowest level of participation since 2012 (45%).

While participation in any gambling activity has decreased over time, online gambling participation has risen overall from 7% in 2012 to 14% in 2021. However, this has remained at a relatively consistent level in recent years, ranging from 12% - 14% between 2015 and 2021. Similar patterns were recorded for both men and women. **Figure 9A, Table 9.1**

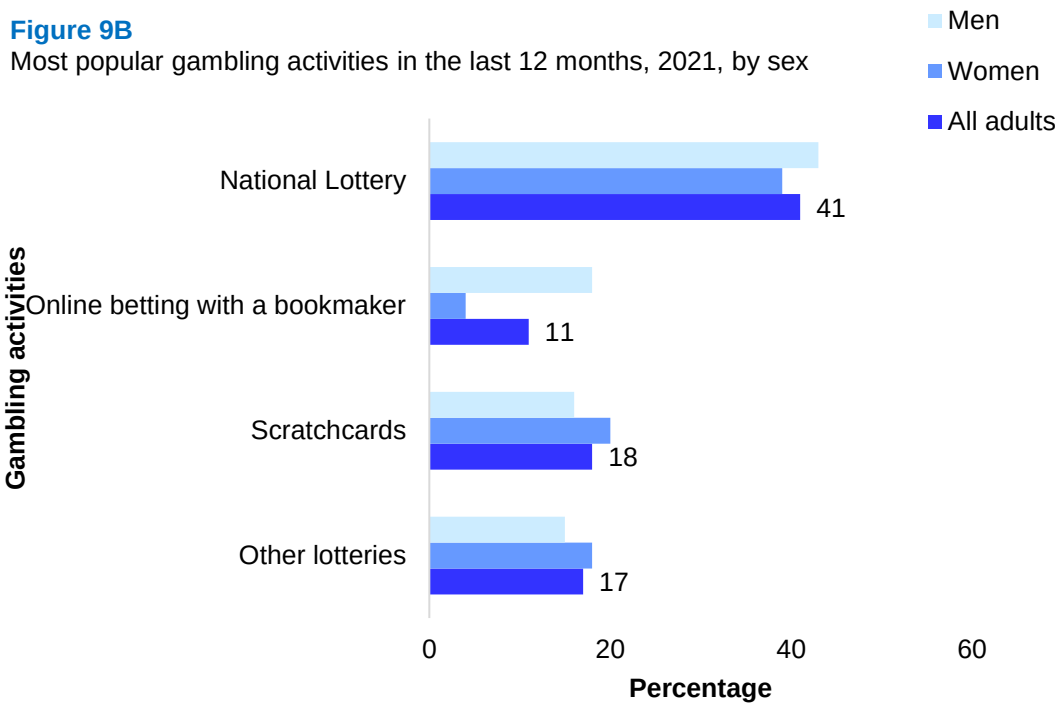
9.2.2 Gambling activities in last 12 months, 2021, by age and sex

The most popular gambling activity among all adults was purchasing tickets for the National Lottery draw (41%). This was followed by buying scratchcards (18%), other lotteries (17%), online betting with a bookmaker (11%) and horse races (not online) (6%). Each of the other gambling activities asked about in the survey had a prevalence of 5% or less.

The National Lottery was the most popular gambling activity amongst women in 2021, with nearly four in ten (39%) women having bought tickets in the last year. This was followed by purchasing scratchcards (20%), other lotteries (18%), bingo (not online) (5%) and online gambling on slots, casino or bingo games (5%). Each of the other gambling activities asked about in the survey had a prevalence of 4% or less amongst women.

Overall, a wider range of gambling activities were undertaken by men than women. The National Lottery (43%) and online betting with a bookmaker (18%) were the most popular gambling activities for men in 2021, followed by scratchcards (16%), other lotteries (15%), horse races (not online) (9%), football pools (7%) and sports events (not online) (7%). The remaining gambling activities had a prevalence of 5% or less amongst men.

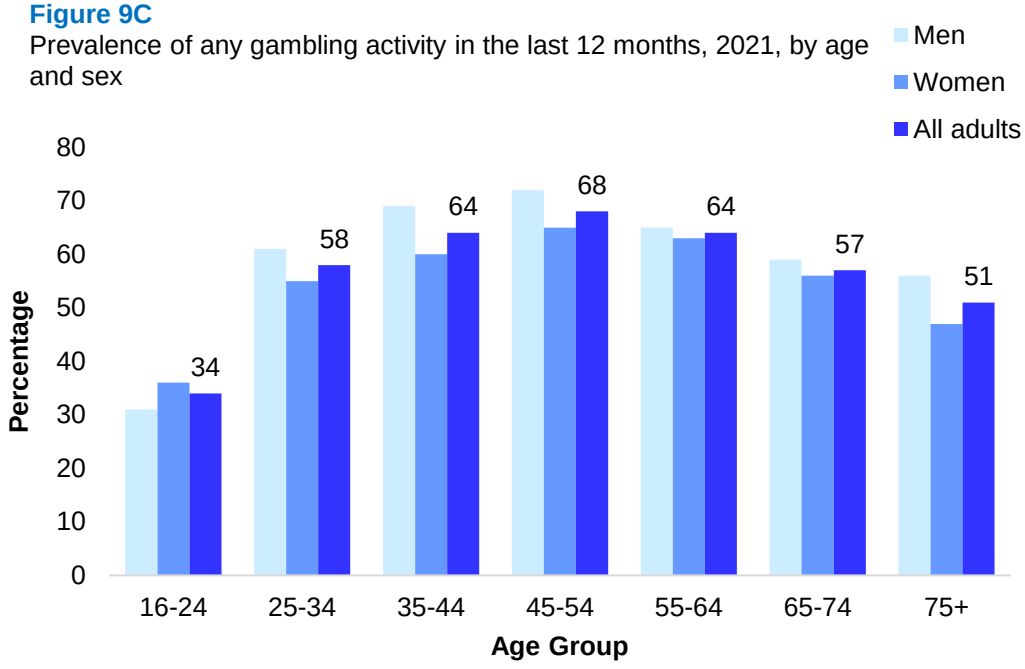
Figure 9B
Most popular gambling activities in the last 12 months, 2021, by sex



Men were more likely to have gambled online (excluding National Lottery) than women (20% and 9% respectively). Online betting with a bookmaker was the second most popular activity amongst men (18%) and sixth most popular amongst women (4%).

Participation in any gambling activity in the past 12 months varied by age, with the lowest participation rates recorded among the youngest and oldest age groups (34% of those aged 16-24 and 51% of those aged 75 and over), and the highest participation rates recorded amongst those aged 45-54 (68%). Men and women displayed similar age-related patterns of gambling participation.

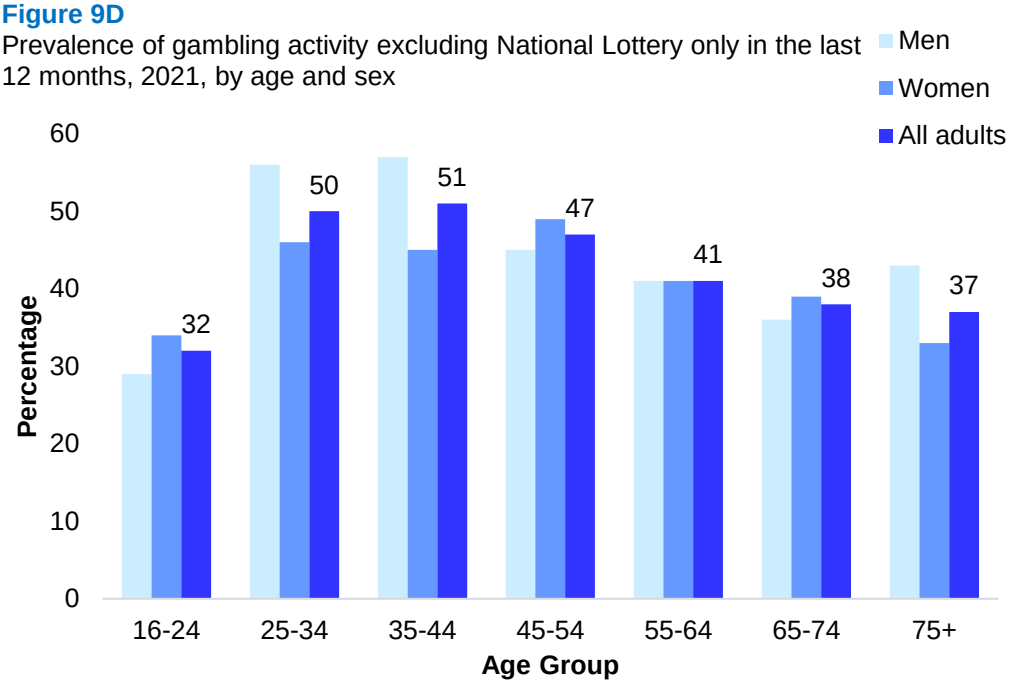
Figure 9C
Prevalence of any gambling activity in the last 12 months, 2021, by age and sex



A different pattern by age was recorded for gambling participation excluding the National Lottery only. Prevalence of this type of gambling was highest among those aged 25-44 (50% - 51%) before gradually decreasing to 37% among those aged 75 and over. The lowest proportion for gambling activity excluding National Lottery only was recorded amongst those aged 16-24 (32%).

Figure 9D

Prevalence of gambling activity excluding National Lottery only in the last 12 months, 2021, by age and sex



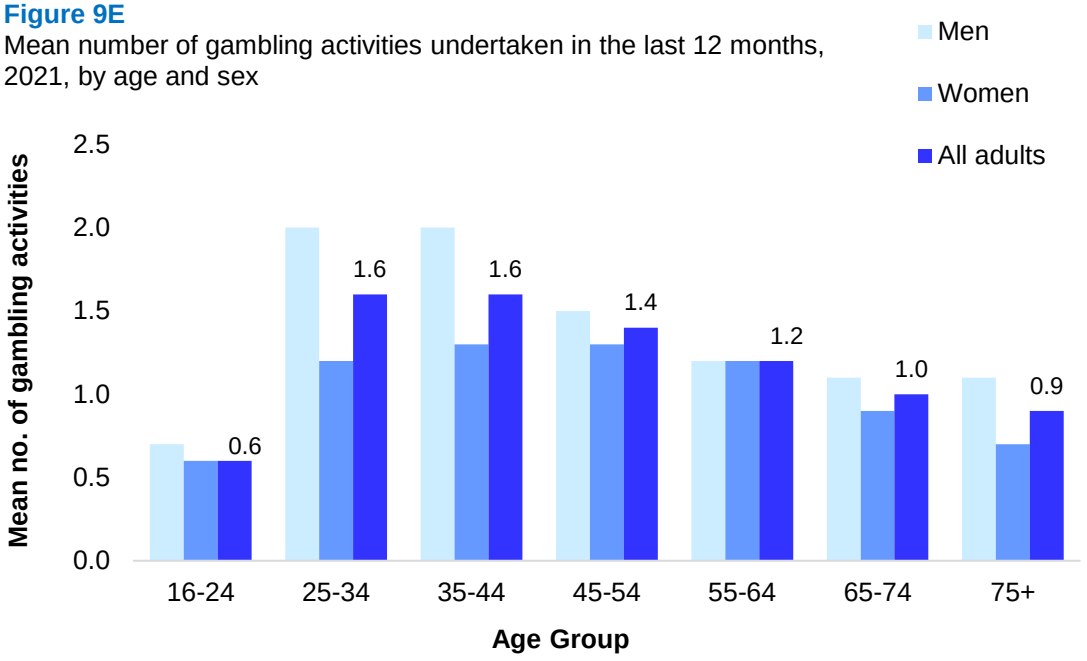
Different age-related gambling (excluding National Lottery only) patterns were recorded for men and women. This type of gambling activity peaked for men among those aged 35-44 (57%) whilst for women it was highest among those aged 45-54 (49%).

Figures 9B, 9C and 9D, Table 9.2

9.2.3 Number of different gambling activities in last 12 months, 2021, by age and sex

On average, adults in 2021 took part in 1.3 gambling activities, with men (1.5) taking part in more activities than women (1.1). The mean number of gambling activities undertaken by all adults was highest amongst those aged 25-44 (1.6) while those aged 16-24 were least likely to have gambled at all (34%) and had taken part in the lowest number of activities (0.6).

Figure 9E
Mean number of gambling activities undertaken in the last 12 months, 2021, by age and sex



Men aged 25-44 recorded a higher mean number of gambling activities than women in the same age range (2.0 and 1.2 – 1.3 respectively). The difference in the number of gambling activities undertaken between men and women was narrower amongst older age groups.

Overall, 8% of adults participated in four or more different types of gambling activity in the last year with men more likely to do so (12%) compared with women (5%). **Figure 9E, Table 9.3**

9.2.4 Adult WEMWBS mean score, 2021, by gambling activities and sex

Overall, adults who did not participate in any gambling in the past year reported higher mental wellbeing scores on average compared with those who participated in any gambling activity and those who took part in any gambling excluding National Lottery only (mean WEMWBS scores of 49.6, 47.9 and 47.4 respectively).

Men who had taken part in any gambling activity had an average WEMWBS score of 48.6 compared with 47.3 amongst women who had taken part in any gambling activity. The WEMWBS score amongst men who took part in any gambling activity (excluding National Lottery) (48.1) was higher than amongst women who participated in this type of gambling activity (46.7). There were no significant differences recorded between men and women with regards to an absence of gambling activity participation or amongst those who took part in no gambling activity other than the National Lottery. **Table 9.4**

9.2.5 PGSI scores for gambling in the last year, 2021, by age and sex

In 2021, 0.4% of all adults recorded a PGSI score which indicated that they were a problem gambler. A higher proportion of men than women recorded a problem gambling score (0.7% for men, 0.1% for women)[8].

According to the PGSI scores, the prevalence of problem gambling varied by age but not significantly, ranging from 0% among those aged 65 and over to 1.0% among those aged 25-34 (1.9% of men in this age group).

Using PGSI scoring, in 2021, 4.5% of all adults were low risk gamblers and 1.5% moderate risk gamblers. Men were more likely than women to be low or moderate risk gamblers (5.5% and 2.1% respectively for men compared with 3.6% and 1.0% respectively for women). The highest proportion of moderate risk gambling was amongst men aged 25-34 (7.2%). **Table 9.5**

Table list

The tables can be found on the main report page under supporting files: https://www.gov.scot/publications/scottish-health-survey-2021-volume-1-main-report/

References and notes

[1] Gambling Commission (2018) *Gambling Participation in 2017: behaviour, awareness and attitudes.* Available from: https://qna.files.parliament.uk/qna-attachments/980131/original/Gambling-participation-in-2017-behaviour-awareness-and-attitudes.pdf

[2] Gambling Commission (2019) *National Strategy to Reduce Gambling Harms.* Available from: https://assets.ctfassets.net/j16ev64qyf6l/6Eupf9uXRQxBMPPvPP66QO/bb233acf9afd18c3169dc244557c0ad3/national-strategy-to-reduce-gambling-harms__2_.pdf

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[5] For further information see: http://www.opsi.gov.uk/Acts/acts2005/ukpga_20050019_en_2

[6] Gambling Commission (2022) *Statistics on participation and problem gambling for the year to June 2022*. Available from: https://www.gamblingcommission.gov.uk/statistics-and-research/publication/statistics-on-participation-and-problem-gambling-for-the-year-to-june-2022

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[8] In 2021, it was not possible to calculate a PGSI score for a small proportion of adults (1%) due to 'refused' or 'don't know' answers. This proportion excludes those for whom the gambling questions weren't answered at all (either on CAWI or by paper). This should be borne in mind when reviewing these results.

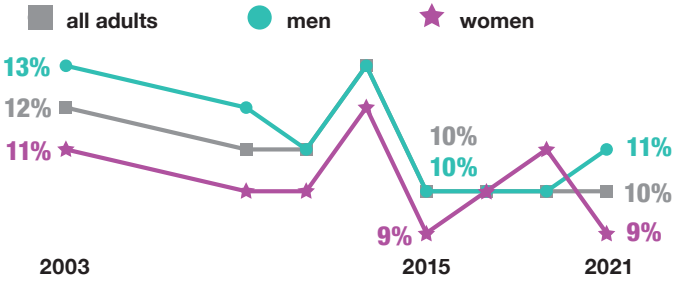
Chapter 10

Injuries/Accidents

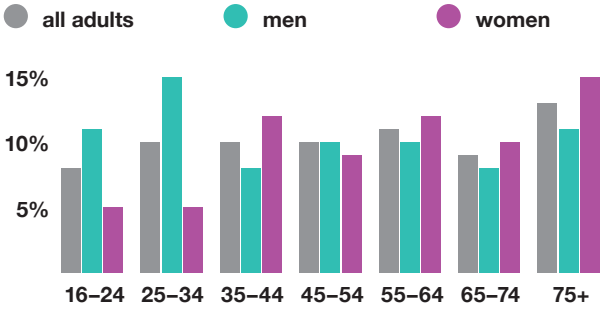
CHAPTER 10

Accidents

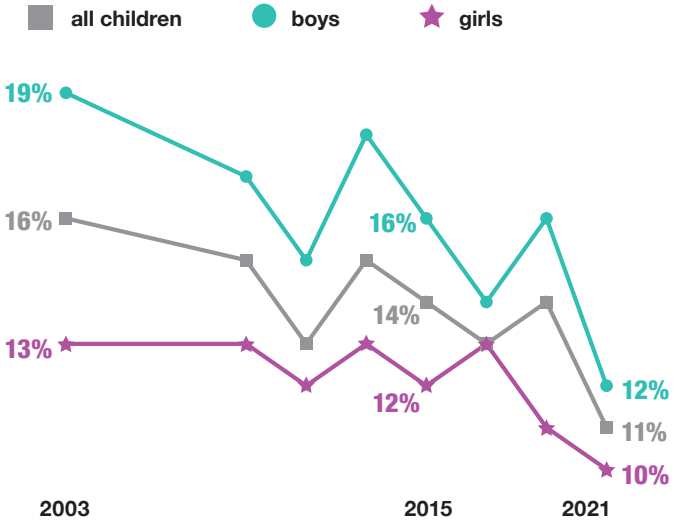
In 2021, the proportion of adults who reported having at least one accident in the previous 12 months has not changed since 2015.



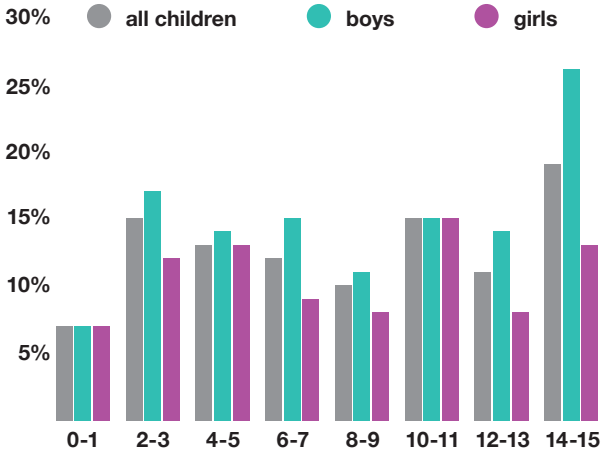
In 2019/2021 combined, men in the younger age groups were more likely than women to have had an accident in the previous 12 months.



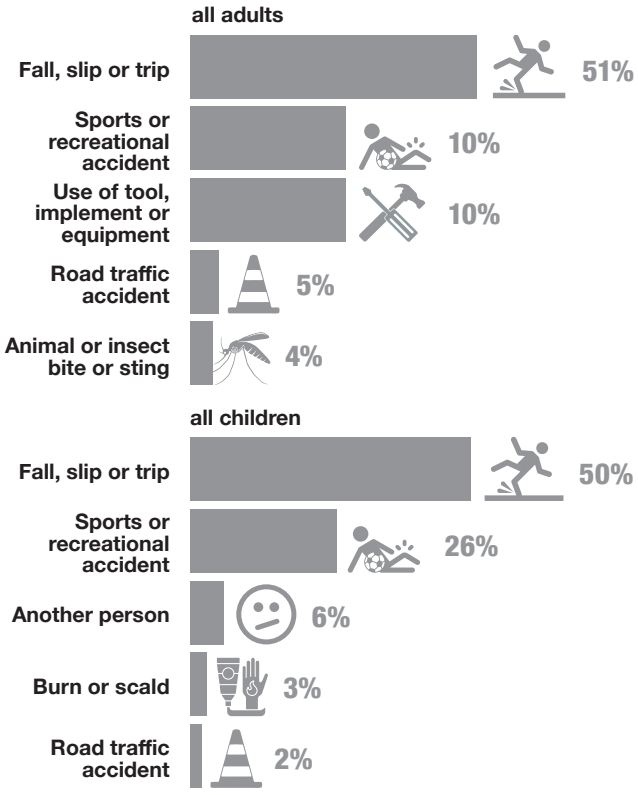
The proportion of children reporting one or more accidents during the previous 12 months in 2021 was lower than in previous years.



In 2019/2021 combined, accidents were most common among 14 to 15 year old children, with boys more likely to have had an accident in the last 12 months than girls.



In 2019/2021 combined, the most common cause of accident was a fall, slip or trip for both adults and children who had one or more accidents in the last 12 months. Below are the top five reasons for accidents.



10 INJURIES / ACCIDENTS

Rachel Whitford

10.1 INTRODUCTION

Injuries are a common cause of death among the Scottish population: approximately 1 in 23 adult and 1 in 13 child deaths in 2020 were caused by unintentional injury[1]. Emergency hospital admissions are frequently caused by unintentional injuries among both adults and children and while these can happen to people of any age, the elderly and children tend to be more vulnerable to these[2].

The risk of death and severe injury is particularly high in such diverse areas as the home, leisure activities and sports, road transportation, the workplace and in connection with consumer products and services[3].

10.1.1 Policy Background

The **Scottish Plan for Action on Health and Safety[4]** published in 2016 promotes good health and safety practice in Scotland with the goal of an integrated occupational health and safety system across Scottish workplaces. **Scotland's Road Safety Framework to 2030[5]** was published in 2021 with the vision for Scotland to have the best road safety performance in the world with targets for a 50% reduction in people killed or seriously injured. Fire safety is also a key area of policy focus[6].

Accidental injuries can have a serious impact for injured persons and also for their families, colleagues and wider society, including the NHS. In recognition of this, the Scottish Government provides financial assistance and wider support to organisations such as the Royal Society for the Prevention of Accidents and Child Accident Prevention Trust, which seek to reduce the incidence of such events through evidence-based programmes of education and awareness-raising. These wide-ranging programmes address a range of settings and risks, with a particular focus on home safety.

Additionally, the Scottish Government has been assisting Public Health Scotland in their reform of the Healthy Working Lives Programme. This programme provides guidance and support to employers in how to protect and support the health of their employees and is being adapted to be more receptive to post-pandemic needs.

10.1.2 Reporting on accidents in the Scottish Health Survey

This chapter reports trends for prevalence of accidental events that resulted in injury or physical harm for adults and children and figures by age and sex for 2019/2021 combined. Causes of accidents among both adults and children by age and sex are also reported using combined 2019/2021 data, in both cases to increase the sample sizes available.

As many of the figures are based only on those who had an accident, to increase the sample size available for analysis data from the 2019 and 2021 surveys have been combined to enable more robust estimates to be presented.

For a detailed description of terminology used in this chapter and for further details on the data collection methods for accidents, please refer to Chapter 2, of the Scottish Health Survey 2021- volume 2: technical report.

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

10.2 INJURIES/ACCIDENTS

10.2.1 Prevalence of accidents among adults and children, 2003 to 2021, by sex

Adults

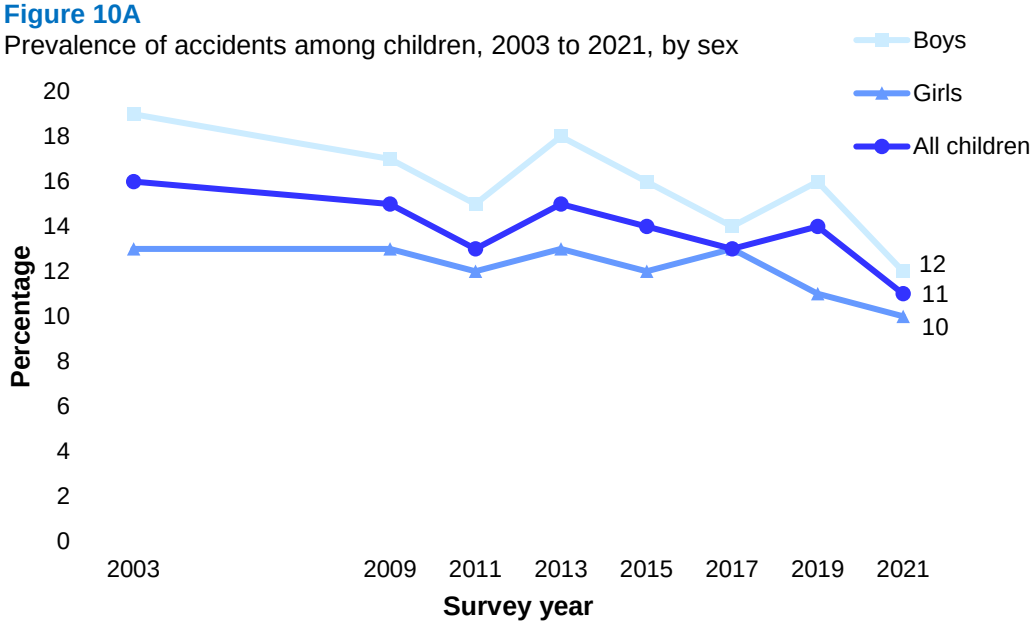
The prevalence of adults aged 16 and over experiencing one or more accidents in the past 12 months has remained stable between 2015 and 2021 at 10% each survey year. Prior to 2015, the prevalence rate was slightly higher, fluctuating between 11% and 13% since 2003.

In 2021, 11% of men had one or more accidents during the previous 12 months, compared with 9% of women but this difference was not significant. Over time, prevalence rate of accidents among adults between the sexes did not vary significantly.

Children

In 2021, the proportion of children who had had one or more accidents in the previous 12 months was 11%. This was the lowest prevalence of accidents among children since the time series began and was three percentage points lower than the previous survey year in 2019 (14%). In 2021, the prevalence of accidents among boys and girls was not significantly different (12% and 10% respectively). However, over time the gap in the prevalence of accidents between boys and girls has fluctuated, with prevalence tending to be slightly higher for boys than for girls. **Figure 10A, Table 10.1**

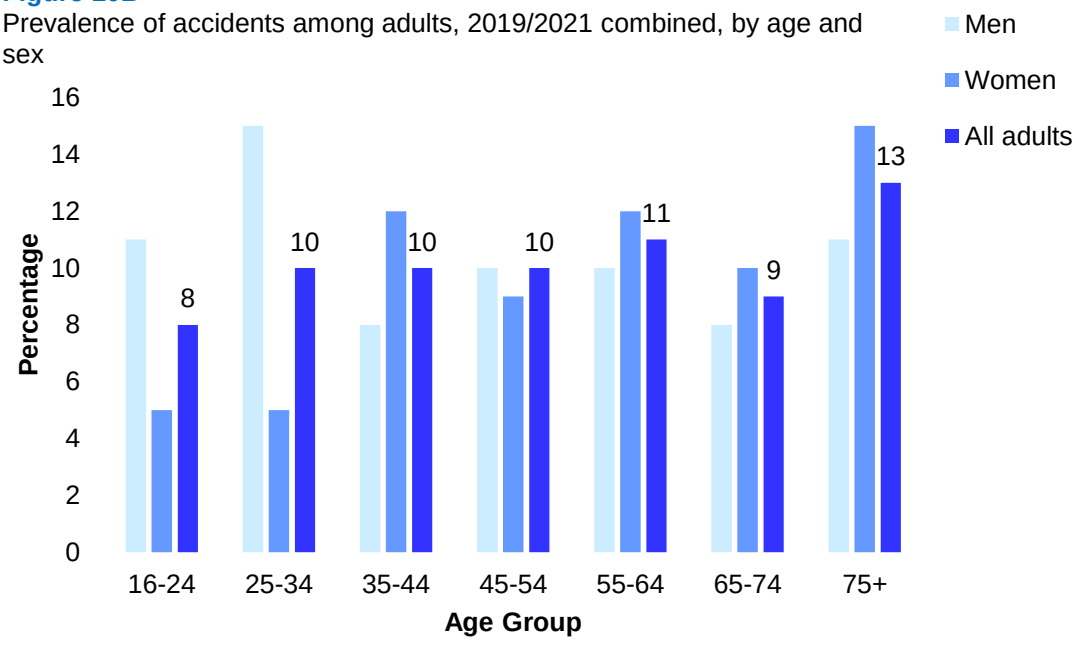
Figure 10A
Prevalence of accidents among children, 2003 to 2021, by sex



10.2.2 Prevalence of accidents among adults, 2019/2021 combined, by age and sex

In 2019/2021 combined, the proportion of adults who had one or more accidents during the previous 12 months did not vary significantly between age groups (lying between 8% and 13% for all age groups). However, the relationship between having one or more accidents in the past 12 months and age varied when examined by sex. In the younger age groups, men were more likely than women to have had an accident in the previous 12 months, most notably men aged 25-34 were more likely than women of the same age to have had an accident (15% and 5%, respectively). **Figure 10B, Table 10.2**

Figure 10B
Prevalence of accidents among adults, 2019/2021 combined, by age and sex



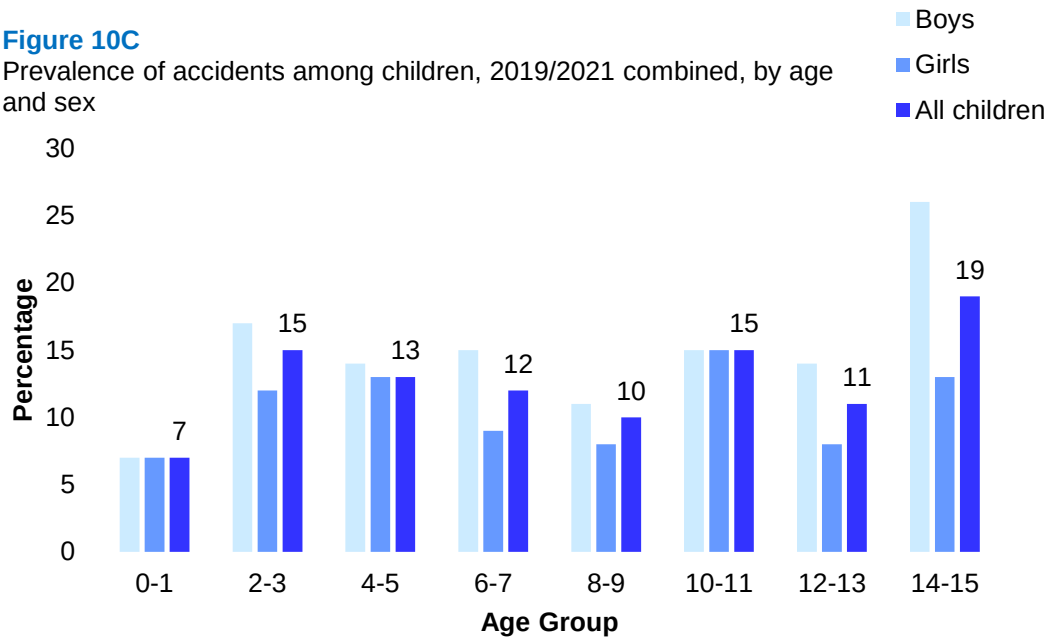
10.2.3 Prevalence of accidents among children, 2019/2021 combined, by age and sex

In 2019/2021 combined, the prevalence among children aged 0-15 of having one or more accidents in the previous 12 months varied significantly by age with children aged 14-15 (19%) significantly more likely than children aged 0-1 (7%) to have had an accident.

A significant difference was recorded by sex among those aged 14-15 with 26% of boys in this age group having had an accident in the last 12 months compared with 13% of girls of the same age.

Figure 10C, Table 10.3

Figure 10C
Prevalence of accidents among children, 2019/2021 combined, by age and sex



10.2.4 Causes of accidents, 2019/2021 combined, by age and sex

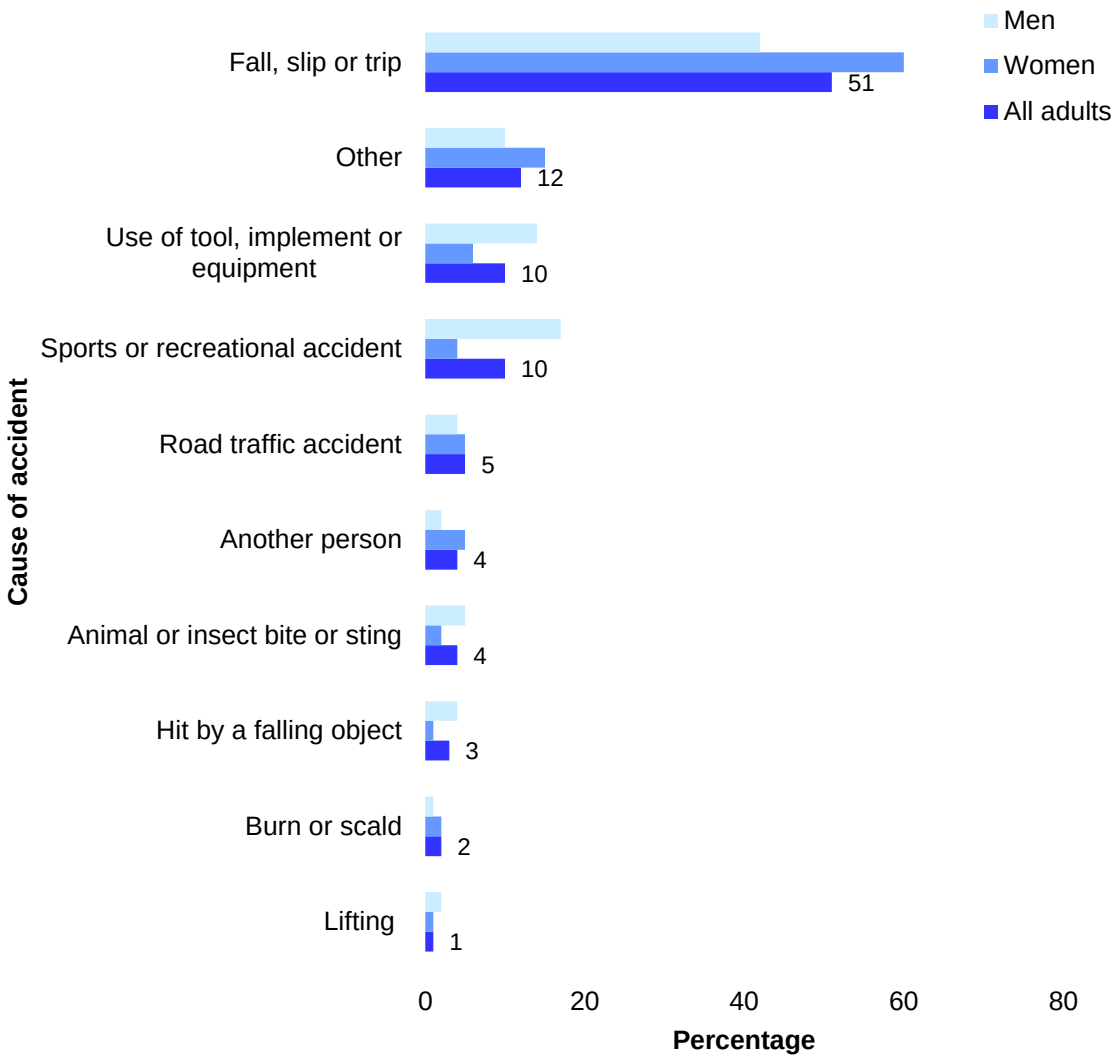
Adults

In 2019/2021 combined, the most common cause of accidents for all adults who had one or more accidents in the last 12 months was a fall, slip or trip (51%), followed by a sports or recreational accident (10%) and an accident caused by a tool, implement or equipment (10%). Smaller proportions reported that they had been involved in a road traffic accident (5%), an accident caused by another person (4%), an accident caused by an animal or insect bite or sting (4%), had been hit by a falling object (3%), had suffered a burn or scald (2%), or had had an accident caused by lifting (1%), while 12% reported other causes.

The most common cause of accidents among both women and men was a fall, slip or trip, however there was a higher prevalence rate among women than among men (60% compared with 42%, respectively). Men were more likely than women to have a sports or recreational accident, with 17% of males who had an accident in the last 12 months reporting this compared with 4% of females. This was

also the case for adults who had an accident involving a tool, implement or equipment (14% of men who had an accident in the past 12 months compared with 6% of women). **Figure 10D, Table 10.4**

Figure 10D
Causes of accidents, 2019/2021 combined, by sex



Children

As with adults, the most common cause of accidents among children (aged 0-15) in 2019/2021 was a fall, trip or slip, which was experienced by half of those (50%) who had one or more accidents in the past 12 months. The second most common cause of accidents was from a sport or recreational activity, which was the case for around a quarter (26%) of all children who had an accident, followed by an accident caused by another person (6%).

Similarly to adults, girls were more likely to have experienced a fall, trip or slip (57% of girls compared with 46% of boys), while boys were more likely to have had a sport or recreational accident (29% of boys and 21% of girls). Boys were also more likely than girls to have had an

accident caused by another person, with 8% of boys who had an accident reporting this as the cause compared with 2% of girls.

By age

In 2019/21, out of all people (those aged 0+) who had had one or more accidents involving a fall, slip or trip in the last 12 months, the highest proportions were among the highest and youngest age groups (75% of those aged 65+ and 66% of those aged 0-7). Of those who had an accident caused by a sport or recreational activity, the prevalence rate was highest among those aged 8-15 (39%), followed by those aged 16-44 (19%). **Table 10.4**

Table list

The tables can be found on the main report page under supporting files:
https://www.gov.scot/publications/scottish-health-survey-2021-volume-1-main-report/

References

1 See: https://www.publichealthscotland.scot/media/9854/2021-10-26-ui-2021-report.pdf

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3 See: www.scotpho.org.uk/health-wellbeing-and-disease/injuries/introduction

4 Scottish Government (2016). A Scottish Plan for Action on Safety and Health: 2016 and beyond. Available from: https://www.hse.gov.uk/scotland/pdf/scottish-plan-health-safety2016.pdf

5 Transport Scotland (2021). Scotland's Road Safety Framework to 2030. Available from: https://www.transport.gov.scot/media/49893/scotlands-road-safety-framework-to-2030.pdf

6 See: https://www.gov.scot/publications/fire-rescue-framework-scotland-2022/documents/

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

Designation can be interpreted to mean that the statistics: meet identified user needs; are produced, managed and disseminated to high standards; and are explained well.

Correspondence and enquiries

For enquiries about this publication please contact:
Julie Landsberg
Population Health Team, Health and Social Care Analysis
DG Health and Social Care
Telephone: 0131 244 2368
e-mail: scottishealthsurvey@gov.scot

For general enquiries about Scottish Government statistics please contact:
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The data collected for the Scottish Health Survey:
☒ are made available via the UK Data Service

☒ may be made available on request, subject to consideration of legal and ethical factors. Please contact scottishealthsurvey@gov.scot for further information.

Further breakdowns of the data:
☒ are available via the Scottish Health Survey website
https://www.gov.scot/collections/scottish-health-survey

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