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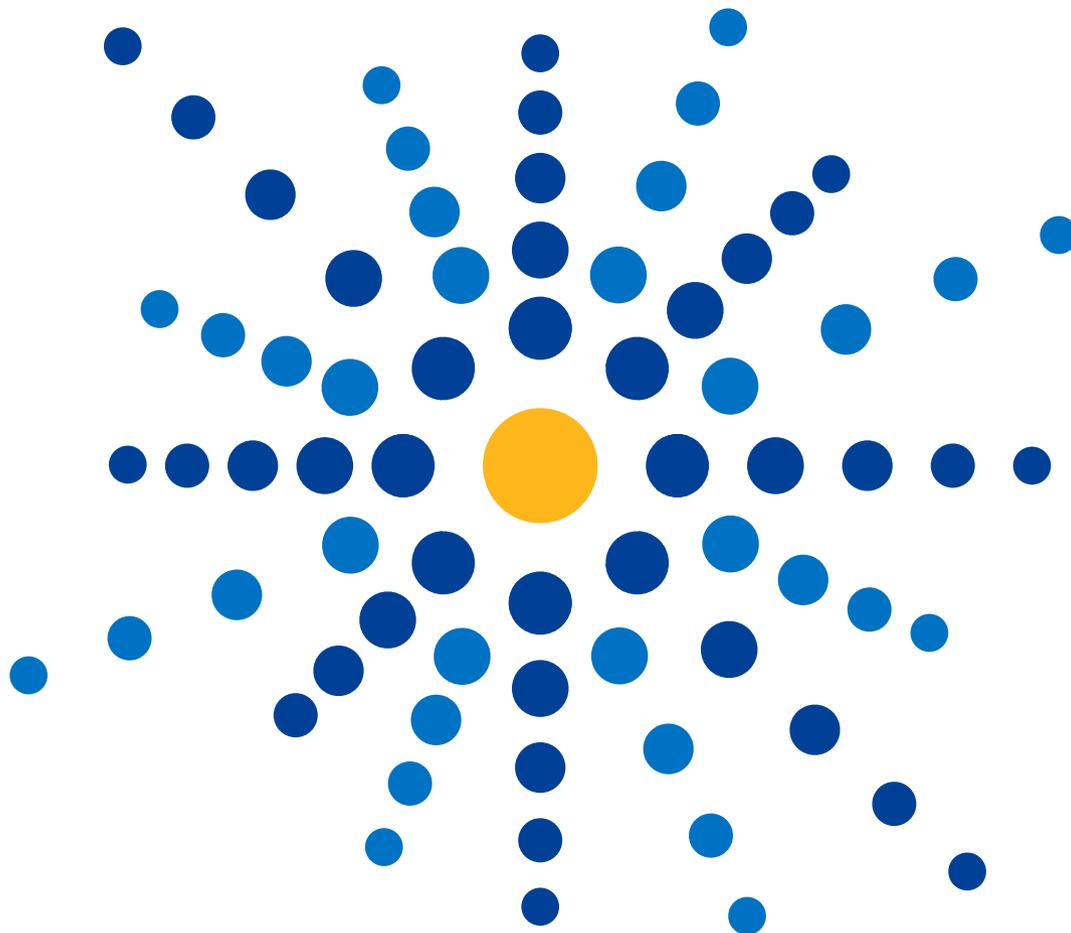
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# Mental Health and Wellbeing in England

## Adult Psychiatric Morbidity Survey 2014

A survey carried out for NHS Digital by NatCen Social Research and the Department of Health Sciences, University of Leicester

## Authors and contributors

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Statistics relating to autism in this report are experimental. Experimental statistics are official statistics which are published in order to involve users and stakeholders in their development and as a means to build in quality at an early stage. It is important that users understand that limitations may apply to the interpretation of this data. More details are given in the autism chapter of this report.

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An error was found in the original report affecting medication rates. Affected tables have been rerun and the text in this version of the report has been corrected accordingly.

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## Editors' acknowledgements

First of all, we want to thank all the people who so generously gave their time to participate in this survey. The interview was long and covered sensitive topics.

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Professor Traolach Brugha, University of Leicester, led the second phase of the survey. Zoe Morgan, Freya Tyrer, and Jane Smith ran this and coordinated a committed team of clinical interviewers: Andrew Leaver, Caroline Lovett, Fiona French and Heather Humphries. Zeibun Patel, Lead Pharmacist at the Leicestershire Partnership NHS Trust Prescribing Group, advised on the classification of medications covered on the survey. Susan Purdon, Bryson Purdon Social Research, designed the phase two sampling.

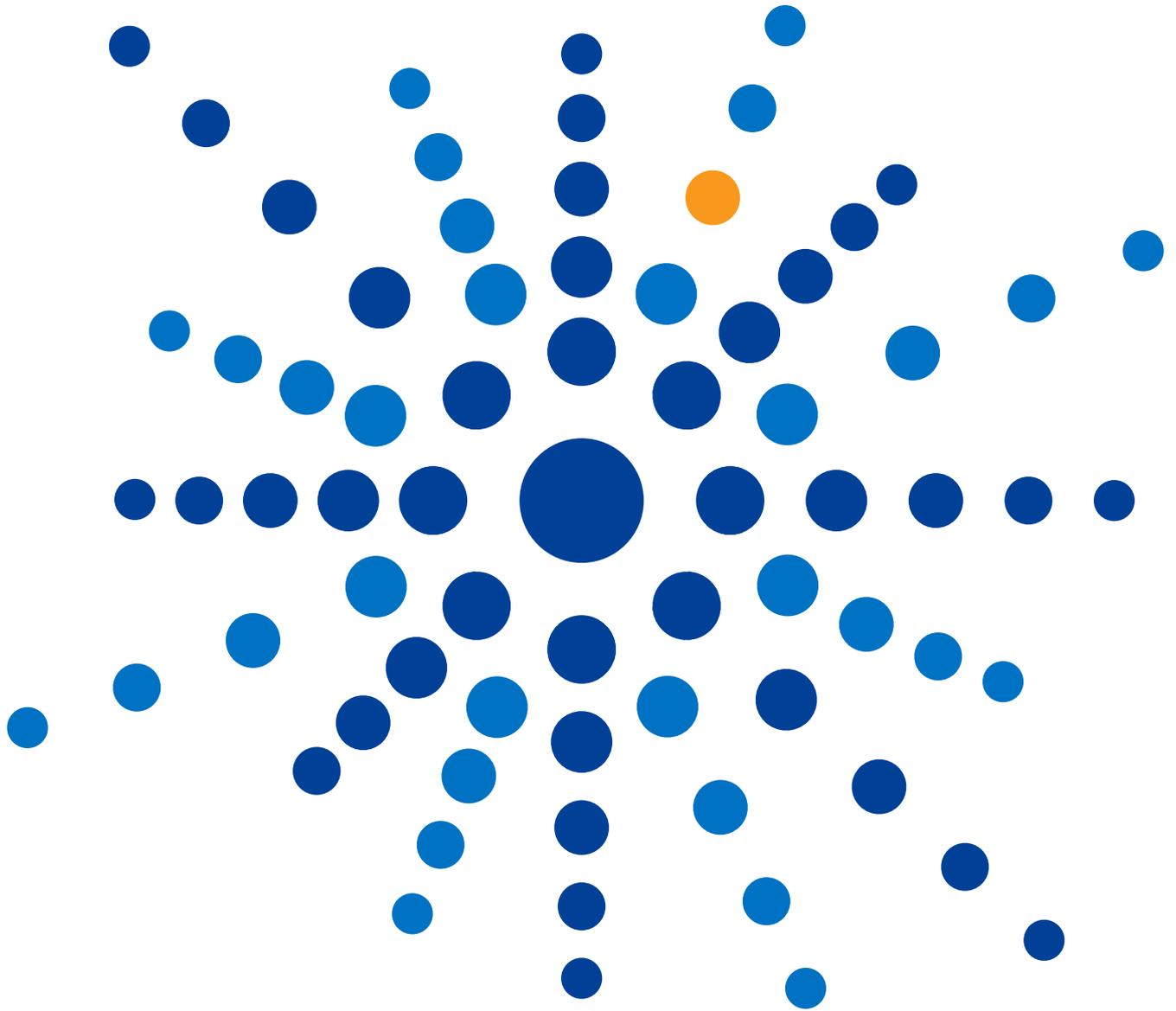
We are indebted to academic collaborators for guidance throughout the project: Louis Appleby, Philip Asherson, Leonie Brose, Charlotte Clark, Jeremy Coid, Claudia Cooper, Colin Drummond, Nicola Fear, Angela Hassiotis, Stephani Hatch, Louise Howard, Michael King, Sian Lunt, Orla McBride, Steven Marwaha, Paul Moran, Bob Palmer, Dheeraj Rai, Stephen Stansfeld, Robert Stewart, John Strang, André Strydom, Peter Tyrer, Scott Weich, and Simon Wessely.

NHS Digital commissions the survey series. We are particularly grateful to Victoria Cooper, Clare McConnell, Bethan Thomas, Patricia McKay, Dan Collinson, Glenda Fozzard and Netta Hollings for their thoughtful engagement. David Clarke and Richard Layard advised on links with the Improving Access to Psychological Therapies programme. Sharmilla Kaduskar and Kathy Smethurst brought links with Department of Health, and Gregor Henderson and Seamus Watson represented Public Health England.

*Sally McManus, Paul Bebbington, Rachel Jenkins, Traolach Brugha*

## Notes on the data

1. The data used in the report have been weighted. The weighting is described in Chapter 14. Unweighted sample sizes are shown at the foot of each table. The tables can all be downloaded as separate spreadsheets.
2. Where trends are presented, data from the 1993 and 2000 surveys have been rerun on participants living in England only, to be comparable in scope with the 2007 and 2014 surveys.
3. 'Missing values' occur for several reasons, including refusal or inability to answer a particular question; refusal to complete an entire section of the survey (such as the self-completion questionnaire); and cases where the question is not applicable to the participant. In general, missing values have been omitted from tables and analyses.
4. The estimated prevalence of the disorders and behaviours in this report are presented as percentages to one decimal place, which is equivalent to reporting rates per thousand.
5. The term 'significant' is used in this report to refer to statistical significance and is not intended to imply substantive importance. Unless otherwise stated, differences mentioned in the text have been found to be statistically significant at the 95% confidence level. Standard errors that reflect the complex sampling design and weighting procedures used in the survey have been calculated and used in tests of statistical significance. Tables giving the standard errors for and confidence intervals around key estimates are provided in Chapter 14.



# Mental health and wellbeing in England

Sally McManus | Paul Bebbington | Rachel Jenkins | Terry Brugha

ADULT PSYCHIATRIC MORBIDITY SURVEY 2014 EXECUTIVE SUMMARY

# Key findings from the fourth in a series of surveys of the mental health of people living in England

## Trends in mental illness

- One adult in six had a common mental disorder (CMD): about one woman in five and one man in eight. Since 2000, overall rates of CMD in England steadily increased in women and remained largely stable in men.
- Reported rates of self-harming increased in men and women and across age groups since 2007. However, much of this increase in reporting may have been due to greater awareness about the behaviour.
- Young women have emerged as a high-risk group, with high rates of CMD, self-harm, and positive screens for posttraumatic stress disorder (PTSD) and bipolar disorder. The gap between young women and young men increased.
- Most mental disorders were more common in people living alone, in poor physical health, and not employed. Claimants of Employment and Support Allowance (ESA), a benefit aimed at those unable to work due to poor health or disability, experienced particularly high rates of all the disorders assessed.

## Trends in treatment and service use

- One person in three with CMD reported current use of mental health treatment in 2014, an increase from the one in four who reported this in 2000 and 2007. This was driven by steep increases in reported use of psychotropic medication. Increased use of psychological therapies was also evident among people with more severe CMD symptoms.
- There were demographic inequalities in who received treatment. After controlling for level of need, people who were White British, female, or in mid-life (especially aged 35 to 54) were more likely to receive treatment. People in the Black ethnic group had particularly low treatment rates.
- Socioeconomic inequalities in treatment use were less evident, although people living in lower income households were more likely to have requested but not received a particular mental health treatment.
- Since 2007, people with CMD had become more likely to use community services and more likely to discuss their mental health with a GP.

## About the survey

*Every seven years a rigorous assessment of the nation's mental health is carried out. England has the longest running programme using consistent methods in the world.*

The Adult Psychiatric Morbidity Survey (APMS) provides England's National Statistics for the monitoring of mental illness and treatment access in the household population. The data series is unique and valuable because:

- A range of mental disorders, substance disorders and self-harm behaviours is covered.
- High quality screening and assessment tools are used and undiagnosed conditions identified. A two phase design is used.
- Surveys have been carried out in 1993, 2000, 2007 and 2014 using comparable methods so trends can be examined.
- A large representative sample of the household population was interviewed, 7,500 people aged 16 or more, including those who do not access services.

**As with all surveys, it should be acknowledged that prevalence rates are only estimates.** If everyone in the population had been assessed the rate found may be higher or lower than the survey estimate. 95% confidence intervals (CIs) are given for key estimates in the individual chapters and Chapter 14 (Methods). For low prevalence disorders, relatively few positive cases were identified. Particular attention should be given to uncertainty around these estimates and to subgroup analysis based on these small samples. Comparisons made in the text have been tested and only statistically significant differences are described.

This latest survey, with fieldwork carried out in 2014 and 2015, presents the most reliable profile available of mental health in England. It was commissioned by NHS Digital, funded by the Department of Health, and carried out by NatCen Social Research and the University of Leicester. The survey includes data on mental health not available from any other source, and complements the range of statistics routinely published by NHS Digital. Reports on the use of Psychological Therapies

can be found at [www.digital.nhs.uk/iaptreports](http://www.digital.nhs.uk/iaptreports). Reports on the use of specialist Mental Health and Learning Disability health services can be found at [www.digital.nhs.uk/mhldsreports](http://www.digital.nhs.uk/mhldsreports).

## Context

***Changes in the economy and models of mental health service delivery mean that the context of mental health in England has evolved since the last survey.***

- Since the 2007, society has experienced changes in technology and media and the onset of recession.
- Treatment services have undergone change, including the introduction of the Improving Access to Psychological Therapy (IAPT) programme.
- The cross-government strategy *No Health without Mental Health* has sought to mainstream mental health and give it parity with physical health (DH 2011).

The APMS series is made up of cross-sectional surveys. While it cannot tell us whether these changes have impacted on mental health, it does provide us with a recent profile of mental health in England.

## Extent of mental illness in England

***One adult in six had a CMD: one in five women and one in eight men.***

The presence of CMD in the past week was assessed using the revised Clinical Interview Schedule (CIS-R). Disorders such as depression and generalised anxiety disorder (GAD) were identified, and a severity score produced. A score of 12 or more indicated symptoms warranting clinical recognition, a score of 18 or more is considered severe and requiring intervention.

One adult in six (17.0%) had a CMD. Throughout the survey series, rates have been higher in women than men: one woman in five had CMD (20.7%) compared with about one man in eight (13.2%).

Other disorders were rarer, for example psychotic disorder and autism each affected about one adult in a hundred. Bipolar disorder was covered for the first time in the survey series in 2014, the Mood Disorder Questionnaire identified traits in about one adult in fifty. Signs of drug dependence were evident in one adult in thirty, with a similar level found for probable alcohol dependence (an AUDIT score of 16 or more). Both types of substance dependence were twice as likely in men as women.

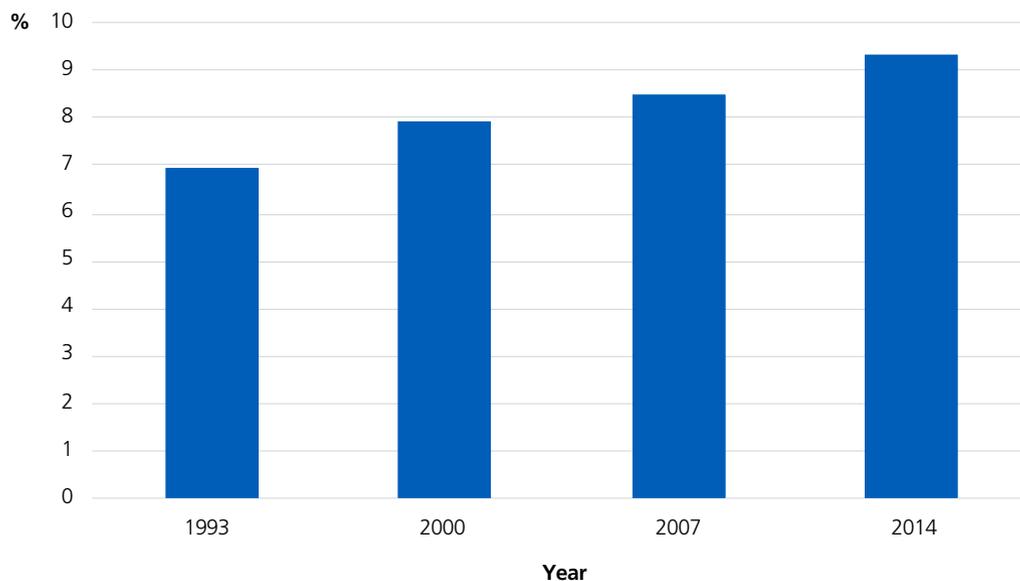
## Trends in mental illness

### *Mental illness has increased in women, and remained largely stable in men.*

The proportion of people with severe CMD symptoms (CIS-R score of 18+) did not change significantly between 2007 and 2014. However, the longer term trend has been one of steady increase (6.9% of 16 to 64 year olds in 1993, 7.9% in 2000; 8.5% in 2007; 9.3% in 2014).<sup>1</sup>

### **Severe CMD symptoms in past week (CIS-R score 18+), 1993 to 2014**

*Base: adults aged 16–64*

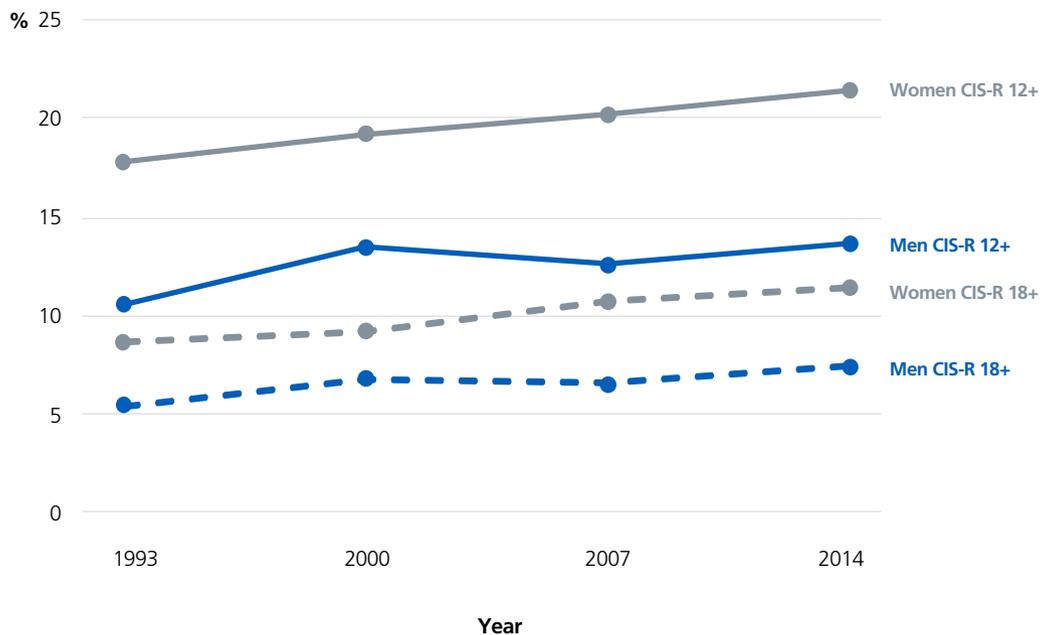


<sup>1</sup> Trends are based on people aged 16–64, as this age-group has been covered by every survey in the series.

Increases in CMD symptoms were driven by rises in women; the prevalence of CMD symptoms in men had remained broadly stable since 2000. Reports of self-harming doubled in men and women and across age groups between 2007 and 2014. This increase in reporting may be due (at least in part) to changes in reporting behaviour, that minor self-injury which people had not included as self-harm in previous surveys had started to be labelled as such. It is also likely that people felt more able to disclose self-harm. This might have happened if self-harming had become more normalised and less stigmatised. Finally, it is possible that increased reporting of self-harm reflects a real increase in the behaviour. A combination of these factors was probably at play.

### CMD symptoms in past week (CIS-R score 12+ and 18+) by sex: 1993 to 2014

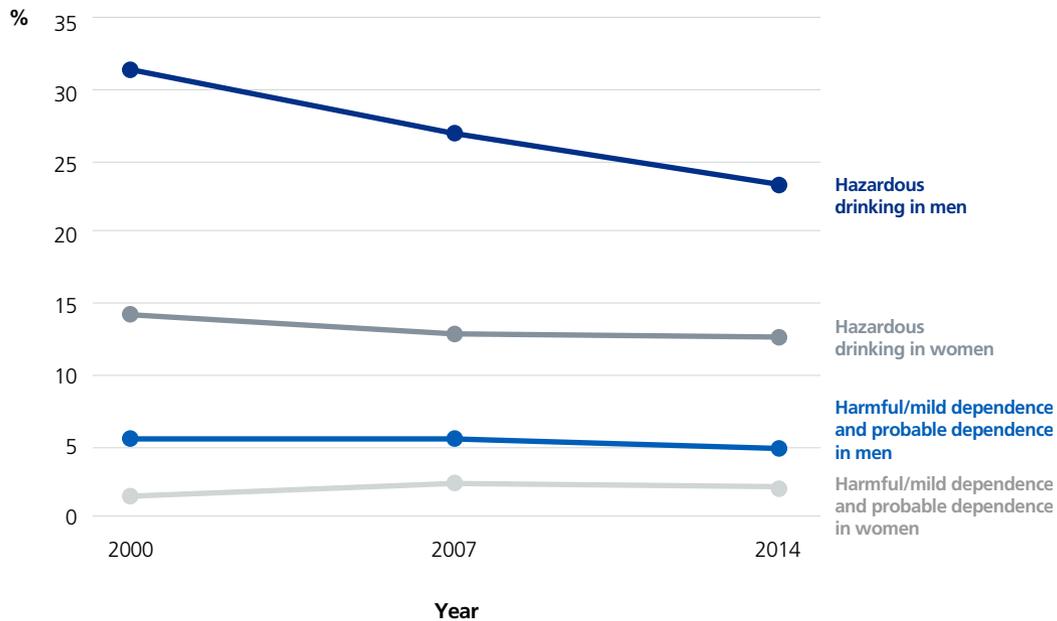
Base: adults aged 16–64



Since 2000, rates of hazardous drinking (AUDIT scores 8–15) declined in men and remained (at a lower level) stable in women. Levels of harmful or dependent drinking (AUDIT 16+) had not experienced a corresponding fall.

### Hazardous and harmful/dependent drinking (AUDIT score 8+ and 16+) in past year by sex: 2000, 2007 and 2014

Base: adults aged 16–74



## Inequalities and high risk groups

A key objective of the *No Health Without Mental Health Strategy* is tackling inequalities in mental illness; APMS provides data for monitoring progress towards this.

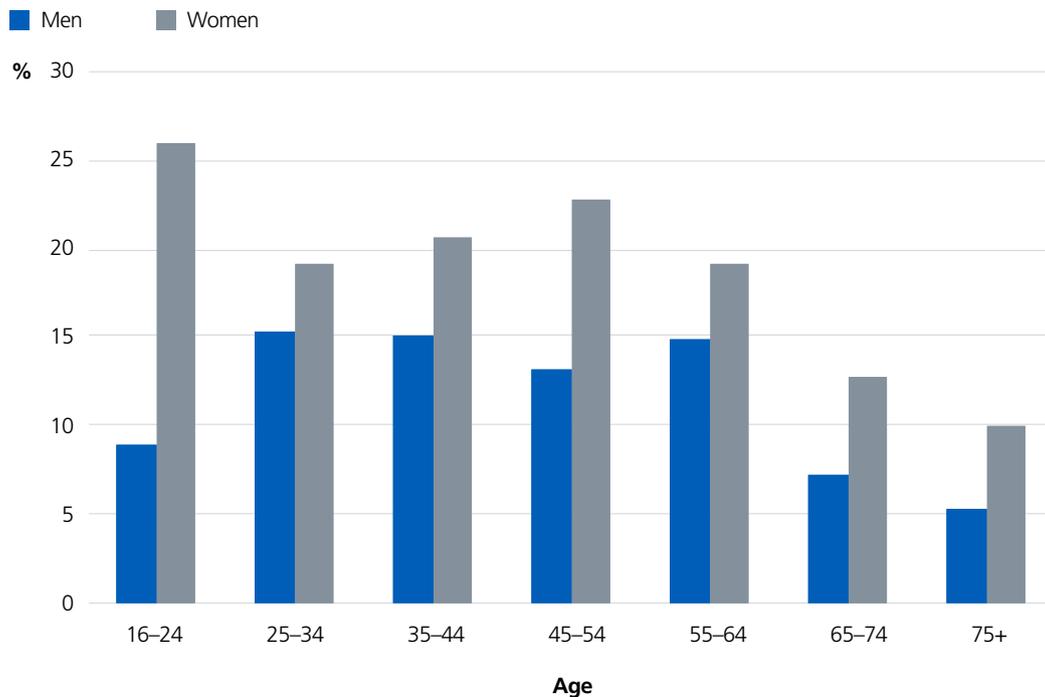
### *Young women have become a key high risk group.*

The gender gap in mental illness had become most pronounced in young people, and there is evidence that this gap has widened in recent years. Due to small base sizes, caution is needed with interpretation of results for age-by-sex

subgroups. However, the pattern here is consistent with other recent data sources (Knudsen 2016; The Children's Society 2016; Lessof et al. 2016).

### **CMD symptoms in past week (CIS-R score 12+), by age and sex**

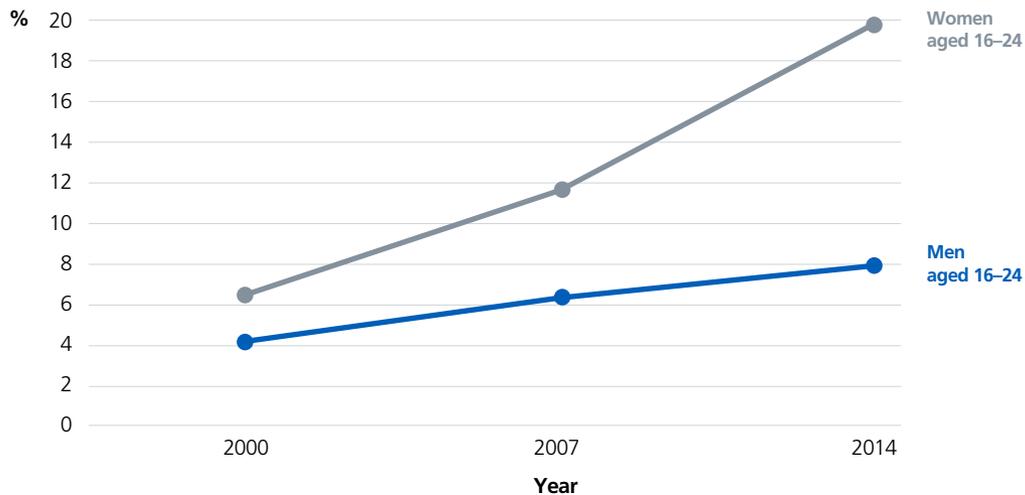
*Base: all adults*



In 2014, one in five 16 to 24 year old women reported having self-harmed at some point in her life when asked face-to-face and one in four reported this in the self-completion section of the survey. Most of the young people who reported self-harming did not seek professional help afterwards. Individuals who start to self-harm when young might adopt the behaviour as a long-term strategy for coping; there is a risk that the behaviour will spread to others; and also that greater engagement with the behaviour may lead in time to a higher suicide rate.

## Self-harm ever (reported face-to-face) in 16–24 year olds, by sex: 2000, 2007 and 2014

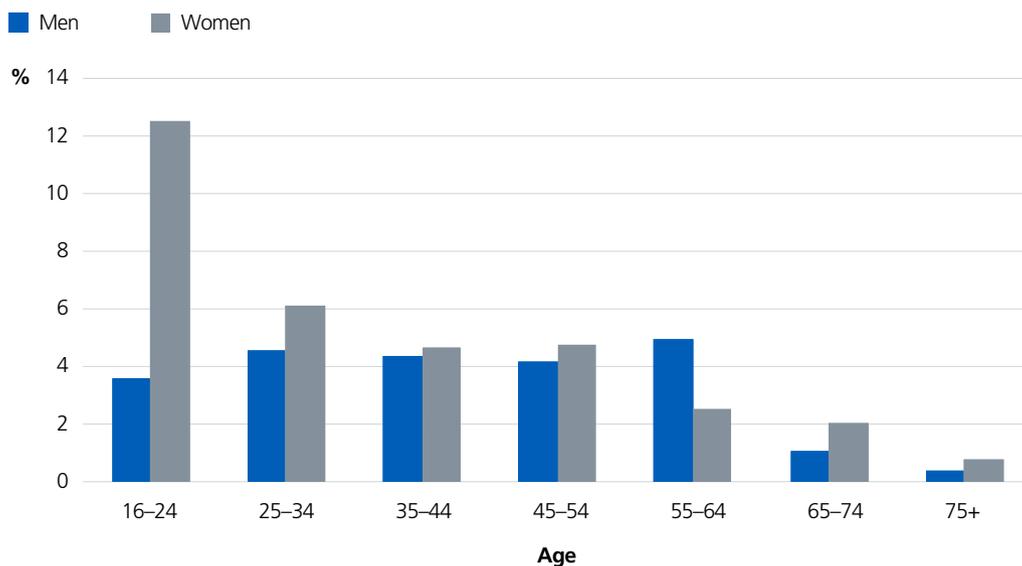
Base: adults aged 16–24 and living in England



Young women had high rates of screening positive for posttraumatic stress disorder (PTSD) (12.6% compared with 3.6% of men of the same age).

## Screening positive for posttraumatic stress disorder (PTSD), by age and sex

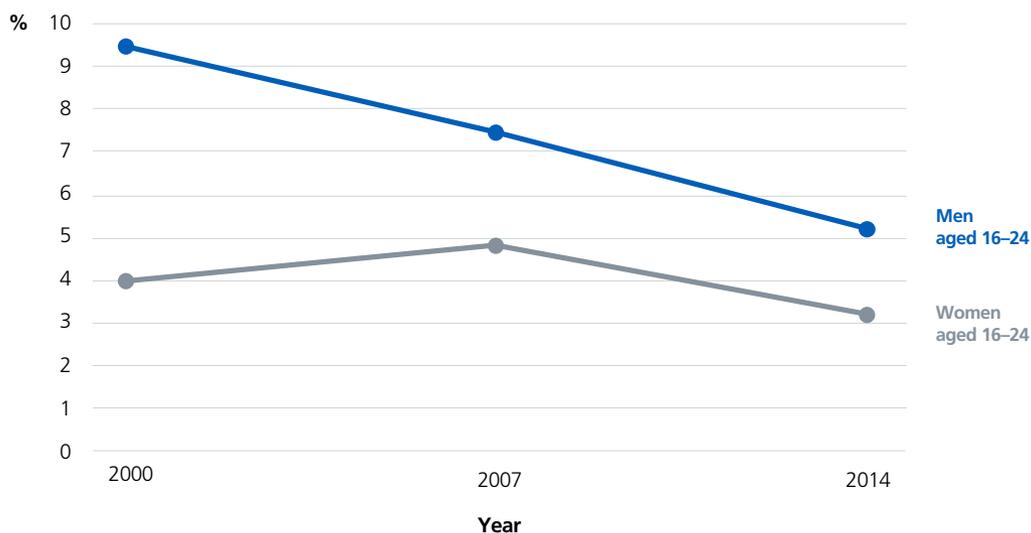
Base: all adults



While a decline in rates of harmful and probable dependent drinking since 2000 is clear in young men, such improvements are less evident in young women. Survey data on drug dependence trends in young people are likely to be incomplete, due to changes in the types of drugs becoming available, in particular the emergence of new psychoactive substances (NPS) which are challenging to research and regulate.

### **Harmful/dependent drinking in past year (AUDIT score 16+) in 16 to 24 year olds by sex: 2000, 2007 and 2014**

*Base: adults aged 16–24*

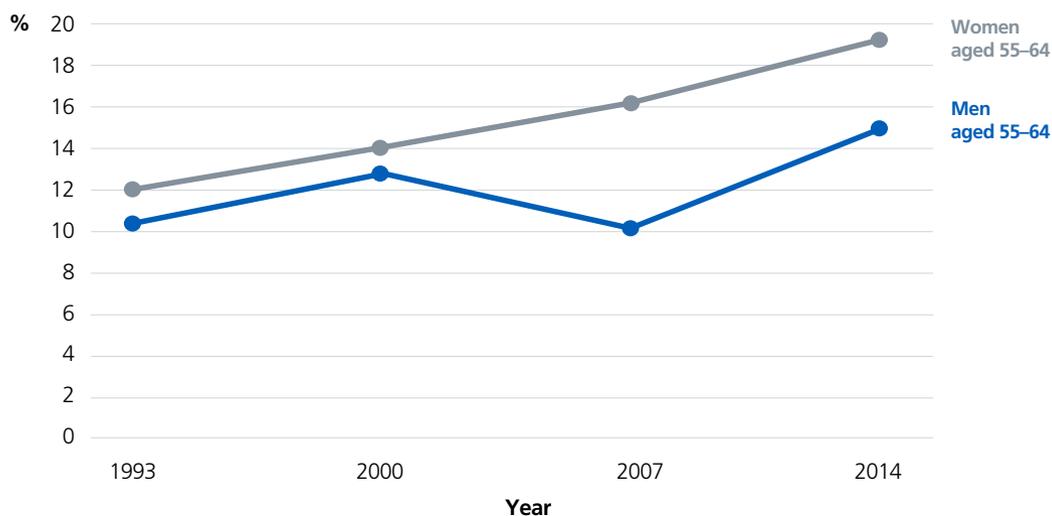


### ***Rates of mental illness increased in men and women aged 55 to 64.***

Since 2007, there had been increases in CMD symptoms in late midlife men and women (aged 55 to 64). This continued an upward trend in CMD in midlife women since 1993 (the longer term trend in men is less clear). Like young people, those in late life had also seen a steep increase in rates of reported lifetime self-harm. Men in this age-group have the highest rates of registered suicide, and have been identified as a priority group in England's National Suicide Prevention Strategy (DH 2015).

## CMD symptoms in past week (CIS-R score 12+) in 55 to 64 year olds by sex: 1993 to 2014

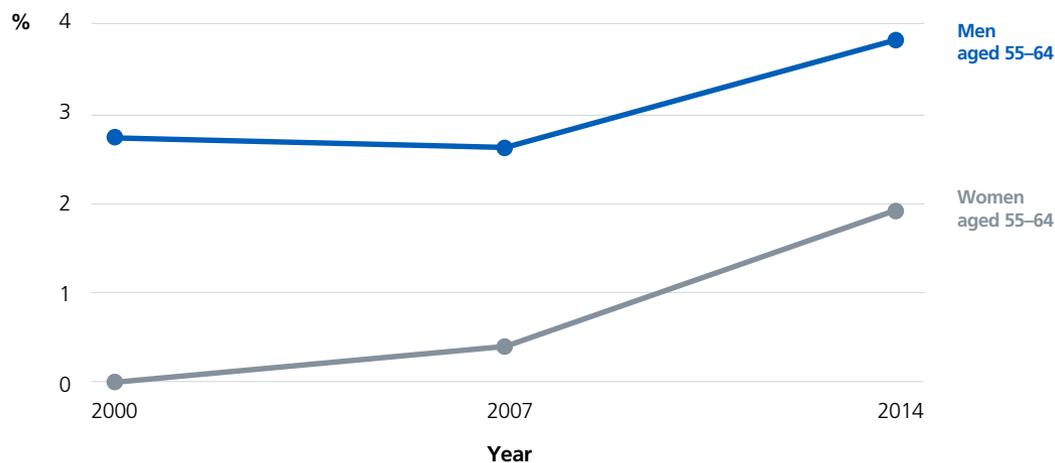
Base: adults aged 55–64



In contrast with the decline in rates of probable alcohol dependence in young men since 2000, there was no evidence of any decline in alcohol dependence rates in men and women aged 55 to 64.

## Harmful/dependent drinking in the past year (AUDIT score 16+) in 55 to 64 year olds by sex: 2000, 2007 and 2014

Base: adults aged 55–64



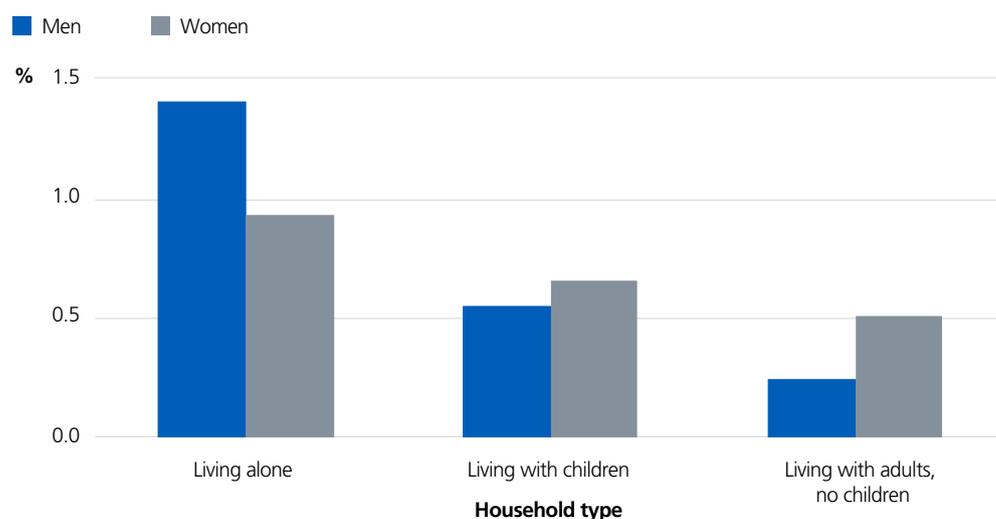
## Mental illness in context

### Living alone

Links between mental illness and social context are well established, for example rates tend to be higher in people who are single or divorced. Increasingly people live alone. Those that do live alone were identified in APMS 2014 as having experienced higher rates of most different mental disorders, including CMD, PTSD, psychotic disorder, personality disorder, and bipolar disorder.<sup>2</sup>

### Psychotic disorder in the past year (2007 and 2014 combined), by household type and sex

Base: all adults



### Living in socioeconomic adversity

Links between mental illness and socioeconomic context are also well-established, and APMS 2014 findings are consistent with this.

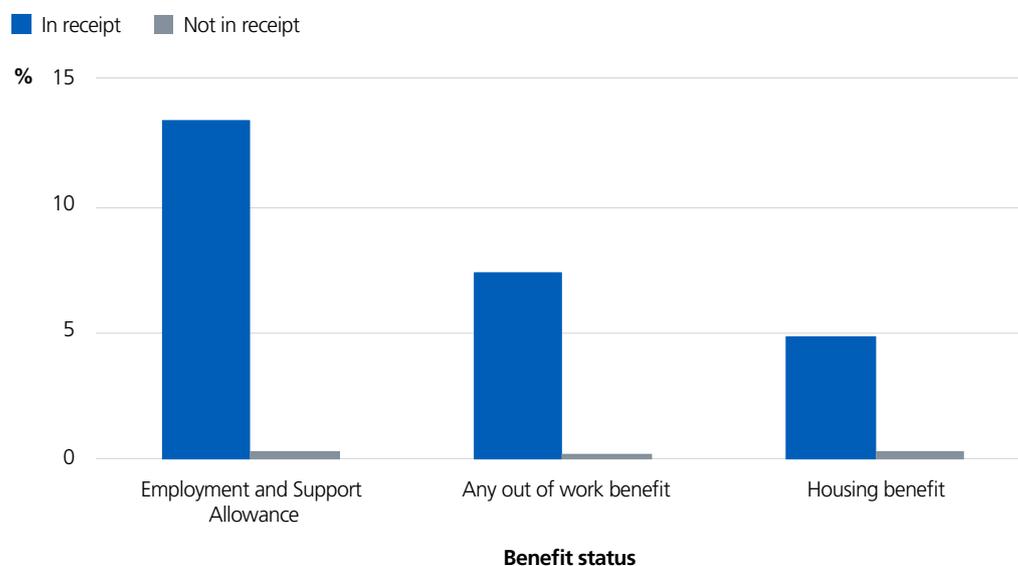
In the APMS 2014 data, it emerged that people in receipt of Employment and Support Allowance (ESA), a benefit aimed at those unable to work due to poor health or disability, were a particularly vulnerable group. While many will have

<sup>2</sup> APMS is a cross-sectional survey, capturing one moment in time, and cannot confirm whether living alone contributes to people having worse mental health or if people with poor mental health are more likely to choose to or end up living alone.

received ESA primarily for a physical health reason the great majority of this group had very high levels of psychiatric comorbidity. People in receipt of ESA experienced particularly high rates of most disorders: one in eight screened positive for bipolar disorder, a third for attention-deficit/hyperactivity disorder (ADHD), and approaching half had made a suicide attempt at some point.

### Psychotic disorder in the past year (2014), by benefit status

Base: 16–64 years (out of work benefits); all adults (housing benefit)



### Comorbidity with chronic physical conditions, low mental wellbeing and intellectual impairment

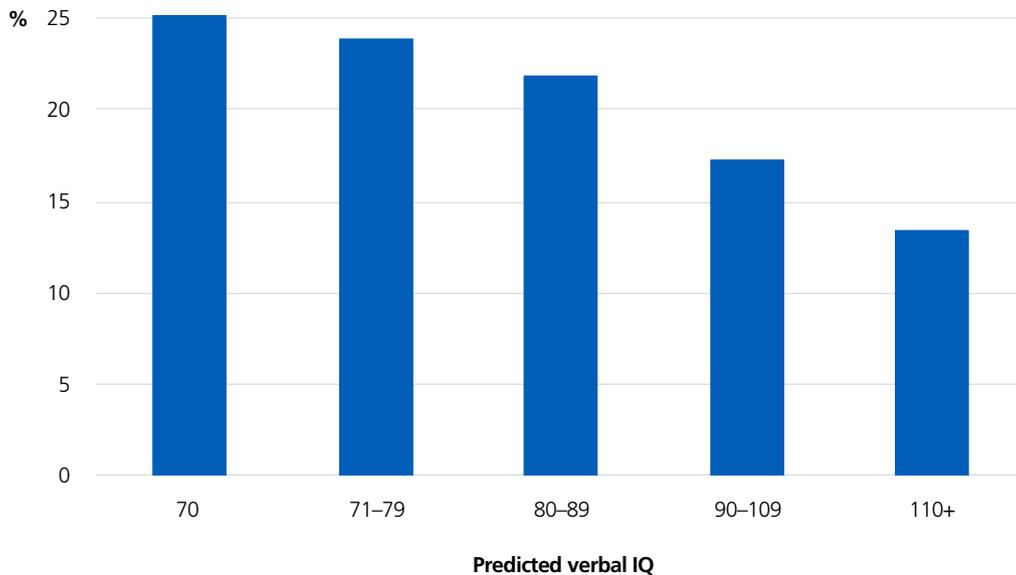
- APMS data can be used to examine comorbidity between physical and mental illnesses. The report focuses on five chronic physical conditions: asthma, cancer, diabetes, epilepsy, and high blood pressure. All had some association with at least one mental disorder. Even subthreshold levels of CMD symptoms were associated with higher rates of chronic physical conditions.
- Mental wellbeing was assessed using the Warwick Edinburgh Mental Wellbeing Scale (WEMWBS). Low mental wellbeing was associated with presence of chronic physical conditions, but links with mental disorders were far stronger.

- Predicted verbal IQ was estimated using the National Adult Reading Test (NART). Those with a lower score, indicating borderline intelligence of a level where assistance with functioning may be needed, had higher rates of most of the mental disorders assessed on the survey.

These associations support the need for treatment and health service delivery in a general setting, addressing physical and mental health needs together.

### **Presence of any CMD, by predicted verbal IQ score (based on the National Adult Reading Test)**

*Base: all adults*



## **Use of mental health treatment**

***More than one person in three with CMD was in receipt of treatment.***

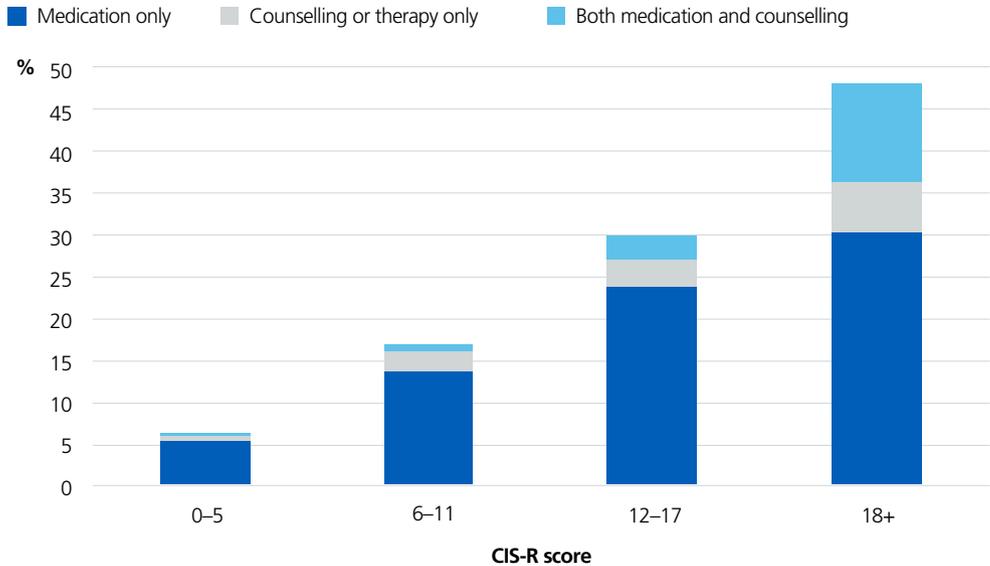
Treatment was defined as current receipt of psychotropic medication and/or counselling or other psychological therapy.<sup>3</sup>

<sup>3</sup> It was not established who provided the treatment, it could have been NHS or private.

The more severe people’s current symptoms of CMD were, the more likely it was that they were using treatment. Treatment rates were higher for some disorders than others. The majority of people identified with psychotic disorder were in treatment, and around half of those with depression, obsessive compulsive disorder (OCD), phobias, GAD, a positive screen for PTSD, or signs of dependence on drugs other than cannabis. Very few people with autism were in receipt of mental health treatment, despite high levels of psychiatric comorbidity in this group.

**Current use of mental health treatment, by CIS-R score**

Base: all adults

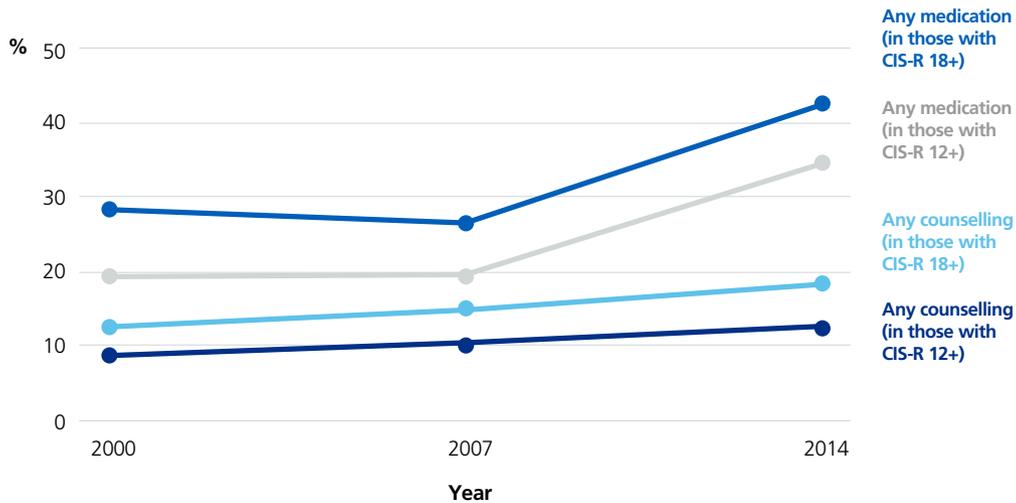


***The proportion of people with CMD using treatment increased.***

People with CMD were more likely to use treatment in 2014 than at any time in the survey series. This was driven by steep increases in the use of psychotropic medication since 2007. Increased use of psychological therapies was also evident among people with more severe symptoms.

## Current use of treatment in adults with CIS-R score 12+ and 18+: 2000, 2007, 2014

Base: 16–74 year olds with CIS-R score of 12+/18+



Changes in data collection methodology could have played a part in this increased reporting of medication. However, this is unlikely to account for all of the rise. Furthermore, this increase is consistent with other data sources, for example analyses of prescribing data (Spence et al. 2014).

Alongside increases in receipt of treatment, the use of primary and community care for a mental health reason also increased over time. People with CMD became more likely to discuss their mental health with a GP, and since 2000 there had been a slight – but steady – increase in the proportion of adults with CMD using community and day care services.

## Inequalities in mental health treatment

***Among people with CMD, those who were female, White British, or in midlife were more likely than others to receive treatment.***

There were demographic inequalities in who received treatment. After accounting for differences in level of need between groups, people who were White British,

female or in mid-life (especially aged 35 to 54) were more likely to receive treatment than others. People in the Black/ Black British group had particularly low treatment rates. After an episode of self-harm, older people were more likely than younger people to seek professional help.

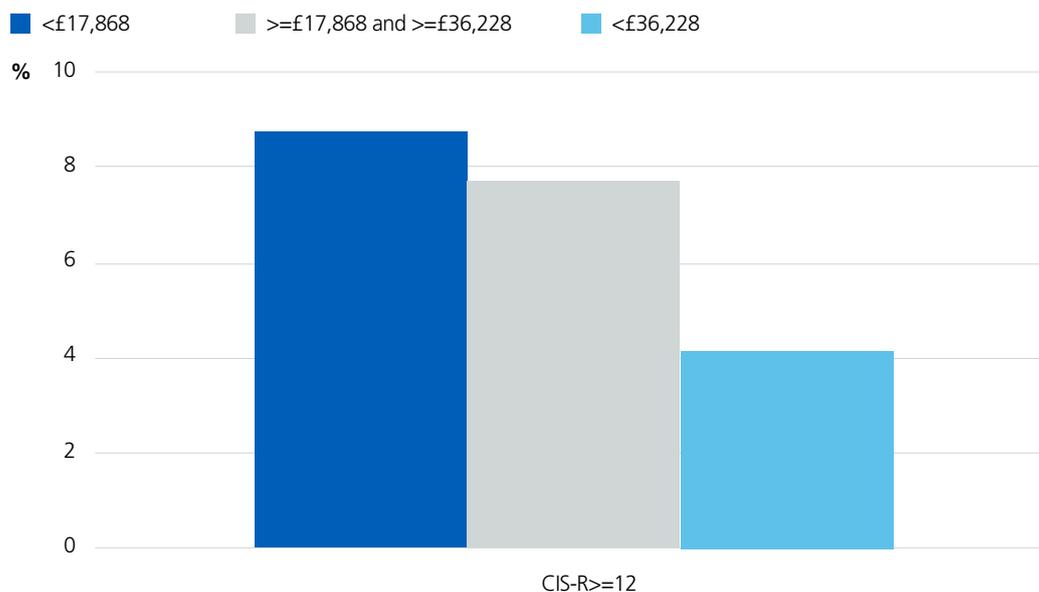
Autism was the only condition where people with the condition were no more likely to use treatment than the rest of the population, suggesting that this group may not be having their needs met by existing service provision.

***One adult in ten with severe CMD symptoms (CIS-R 18+) asked for a particular mental health treatment in the past 12 months but did not receive it.***

Among people with CMD, those who were young and those living in a low income household were particularly likely to have unmet treatment requests. About half of people with CMD and an unmet treatment request were not receiving any other type of treatment at the time of the interview.

**Requested but not received particular mental health treatment in past 12 months in adults with CIS-R score 12+, by equivalised household income**

*Base: all adults*



## Further information

### Limitations

All surveys are subject to bias. Some people, for example those who live in an institution, could not have been selected to take part. Non-response means that some selected households or individuals could either not be contacted or declined to take part. Others may not have been well enough or lacked the cognitive capabilities to complete a long survey interview. Social desirability biases may mean some people, especially in the face-to-face section of the interview, did not answer fully or honestly. Survey screening and assessment tools should also not be considered the equivalent of an assessment conducted by a psychiatrist or other trained professional over a number of sessions. These limitations, while ameliorated to some extent with use of validated measures, self-completion data entry, weights, understanding of the population they relate to and how the data should appropriately be applied, should be acknowledged.

### Coverage and data access: the survey report includes the following chapters:

1. Introduction to the survey series
2. Common mental disorders (CMD)
3. Mental health treatment and service use
4. Posttraumatic stress disorder (PTSD)
5. Psychotic disorder
6. Autism
7. Personality disorder
8. Attention-deficit/hyperactivity disorder (ADHD)
9. Bipolar disorder
10. Alcohol misuse and dependence
11. Drug misuse and dependence
12. Suicidal thoughts, suicide attempts and self-harm
13. Comorbidity in mental and physical illness
14. Methodology

The long interview, carried out in people's own homes, covered a wealth of other topics. Researchers can access the data for free from the UK Data Service. It can take three months from the date of report publication for the data to be released.

The full survey report can be accessed: [www.digital.nhs.uk/pubs/apmsurvey14](http://www.digital.nhs.uk/pubs/apmsurvey14)

Survey website with information about how the data has been used:  
[www.mentalhealthsurveys.org](http://www.mentalhealthsurveys.org)

In case of questions please contact: [enquiries@nhsdigital.nhs.uk](mailto:enquiries@nhsdigital.nhs.uk)

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# Introduction

Sally McManus | Paul Bebbington | Rachel Jenkins | Traolach Brugha

## 1.1 Policy context

Poor mental health has enormous economic and social impact. Mental illness is one of the largest single causes of disability (OECD 2014) and sickness absence in the UK (CMH 2010), accounting for 70 million sick days in 2007 (CMH 2007). On average, people with mental illness die 15 to 20 years earlier than those without (Thornicroft 2013; DH 2015). Yet while mental illness accounts for 28% of the national disease burden in England, only 13% of NHS spending is on mental health care (DH 2013).

In recent years there has been a strong policy narrative, with cross-party support, calling for a 'parity of esteem' in health service response to physical and mental illness. The Chief Medical Officer's 2013 report, *Public Mental Health: Investing in the Evidence*, states that despite a welcome policy focus on mental illness, there has been a real-terms fall in investment (DH 2014). Previous APMS data has tended to find that, at any one time, about three-quarters of people with mental illness are in receipt of no treatment at all.

In key aspects, such as community outreach and early intervention, the provision of mental health services in England has been identified as among the best in Europe (WHO 2008). However, the independent Mental Health Taskforce to the NHS has highlighted that people living with mental health problems still experience stigma and discrimination, many people struggle to get the right help at the right time, and evidence-based care is significantly underfunded (2016). There is a need for prevention efforts and for closer working between primary care, social and occupational health services (GOS 2008). Furthermore, it is also recognised that little is known specifically of the prevalence and effects in adulthood of disorders better recognised in children, including attention-deficit/hyperactivity disorder (ADHD) and autism.

*No Health without Mental Health* is a cross-government mental health outcomes strategy for people of all ages (DH 2011a). It was launched in 2011 and aimed to 'mainstream mental health'. It highlighted six overarching objectives:

- More people will have good mental health
- More people with mental health problems will recover

- More people with mental health problems will have good physical health
- More people will have positive experiences of care and support
- Fewer people will suffer avoidable harm
- Fewer people will experience stigma and discrimination.

The strategy highlights the role of Improving Access to Psychological Therapies (IAPT) (DH 2011b) in improving outcomes in mental health. It also re-states the Government's commitment to removing inequalities in access to services and to improving the lives of people with mental illness.

## 1.2 Survey background

The Psychiatric Morbidity Survey series provides key context for understanding mental illness in England and for informing initiatives in this area. The survey series has run since the early 1990s and covered a range of general population groups, including:

- Adults living in private households: aged 16 to 64 in 1993 (Meltzer et al. 1995), aged 16 to 74 in 2000 (Singleton et al. 2001), and 16 and over in 2007 (McManus et al. 2009)
- Residents of institutions providing care and support to people with mental health problems (Meltzer et al. 1996)
- Homeless adults (Gill et al. 1996; Kershaw et al. 2000)
- Adults with a psychotic disorder (Forster et al. 1996; Singleton and Lewis 2003)
- Prisoners and young offenders (Melzer et al. 2000; O'Brien et al. 2001; Lader et al. 2000)
- Young people in local authority care (Meltzer et al. 2004)
- Children and adolescents (Green et al. 2005; Clements et al. 2008) (with a new survey of children from age 2 to 19 currently being planned), and
- Carers (Singleton et al. 2002).

The 2014 Adult Psychiatric Morbidity Survey (APMS) is the fourth survey of psychiatric morbidity in adults living in private households. It was carried out by NatCen Social Research in collaboration with the University of Leicester, and was commissioned by NHS Digital (formerly the Health and Social Care Information Centre, HSCIC). The survey series is supported by psychiatrists and epidemiologists working in a number of UK universities.

APMS 2014 retains the same core questionnaire content and methodological approach as the 1993, 2000 and 2007 surveys to enable the examination of trends. The latest survey also included some new topics to reflect emerging policy priorities. In summary, the distinguishing attributes of the most recent two household surveys (2007 and 2014) were that they:

- Were conducted in England only
- Had no upper age limit for participation
- Were in the field over the course of a whole year, and
- Included additional conditions (such as bipolar disorder) and risk factors (such as experience of childhood neglect).

See Chapter 14, Methods, for details of topic coverage and a list of the differences across the surveys series. The full phase one questionnaire is in Appendix D.

### 1.3 Survey aims

The main aim of the survey series is to collect data on poor mental health among adults (aged 16 and over) living in private households in England. The specific objectives include:

- To estimate the prevalence of psychiatric morbidity according to diagnostic category in the adult household population of England. The survey includes assessment of common mental disorders, psychosis, autism, substance misuse and dependency, and suicidal thoughts, attempts and self-harm.
- To screen for attention-deficit/hyperactivity disorder (ADHD), posttraumatic stress disorder (PTSD), bipolar disorder and personality disorders.

- To examine trends in the psychiatric disorders that were included in previous survey years (1993, 2000, and 2007).
- To identify the nature and extent of social disadvantage associated with mental illness.
- To gauge the level and nature of treatment and service use in relation to mental health problems, with an emphasis on primary care.
- To collect data on key current and lifetime factors that might be associated with mental health problems, such as the experience of stressful life events, abusive relationships, and work stress.
- To collect data on factors that might protect against poor mental health, such as social support networks and neighbourhood cohesion.

## 1.4 Overview of the survey design

Fieldwork was carried out between May 2014 and September 2015. As with the preceding surveys, a two-phase approach was used for the assessment of several disorders.

The first phase interviews were carried out by NatCen Social Research interviewers. These included structured assessments and screening instruments for mental disorders, as well as questions about other topics, such as general health, service use, risk factors and demographics. These interviews lasted about an hour and a half on average.

The second phase interviews were carried out by clinically-trained research interviewers employed by the University of Leicester. A sub-sample of phase one respondents were invited to take part in the second phase interview to permit assessment of psychotic disorder, attention-deficit/hyperactivity disorder and autism. The assessment of these conditions requires a more detailed and flexible interview than was possible at the first phase, and the use of clinical judgement in establishing a diagnosis.

## 1.5 Summary of strengths and limitations

Details of and rationale for the sample design and methods are provided in Chapter 14. In summary, benefits of this study design include that:

- *By sampling from the general population rather than from lists of patients, APMS data can be used to examine the 'treatment gap'.*
- *The use of validated mental disorder screens and assessments allows for identification of people with sub-threshold symptoms and those with an undiagnosed disorder.*
- *The questionnaire collects details of social and economic circumstances, information which does not tend to be collected in a consistent or comprehensive way in administrative datasets.*
- *The use of a computer assisted self-completion module to cover the most sensitive topics means that the survey includes information that some participants may have never disclosed before.*
- *At the end of the survey a question is asked about permission for follow-up and data linkage. The study therefore presents an opportunity for longitudinal data collection and a sampling frame that allows a random sample of people with very specific experiences, who may not otherwise have been identifiable, to be invited for further research.*
- *The APMS dataset is being deposited at the UK Data Service and is designed to be suitable for extensive further analysis. There is only scope for a small part of the data collected to be covered in this report.*

Surveys such as APMS, however, are subject to a number of limitations. These include:

- *The sampling frame covers only those living in private households. Those living in institutional settings such as care homes, offender institutions, prisons, or in temporary housing or sleeping rough, would not have had a chance to be selected. People living in such settings are likely to have worse mental health than those living in private households.*

- *Some people selected could not be contacted or refused to take part.* Adults with severe mental health problems who do live in private households may be less available or willing to respond to surveys.
- *Some people selected were not able to take part in a long interview.* These include those with serious physical health conditions or who were staying in hospital, and those whose mental capability may be impaired.
- *Survey assessments of mental illness are not as reliable as a clinical interview.* In a clinical interview, a trained psychologist or psychiatrist may take many sessions and clinical judgement to reach a diagnosis. In the context of a questionnaire administered by a lay interviewer, this is not possible. However, the assessments used have been validated and are among the best available for the purpose in hand. Rather than focus on the prevalence estimated for each disorder, the greater value of the survey is being able to examine how rates vary over time and between groups in the population.
- *For low prevalence disorders, the number of positive cases in the sample is small* which limits the scope for subgroup analysis. Confidence intervals for key estimates are provided in the methods chapter (Chapter 14).

## 1.6 Coverage of this report

Each of the main disorders and behaviours covered by APMS 2014 is discussed in a separate chapter. The chapters compare disorder rates by age, sex, ethnicity, employment and benefit status, region, household composition, and the level and nature of mental health treatment and service use. Where disorders were also covered in the 1993, 2000 and/or 2007 surveys, changes in rates are also considered. The tables for each chapter are provided in a separate spreadsheet. Further analyses of the data are planned.

Publications based on data collected in the previous surveys in the series are listed in Appendix A.

## 1.7 Access to the data

A copy of the anonymised 2014 APMS dataset will be deposited at the UK Data Service, and made available for specific research projects. The dataset will be accompanied with guidance on its use. Information on data access is available at the Data Service website. A list of the derived variables used in this report can be found in Appendix C.

## 1.8 Ethical clearance

Ethical approval for APMS 2014 was obtained from the West London National Research Ethics Committee.<sup>1</sup>

## 1.9 Further information

Further information about the adult psychiatric morbidity survey series is obtainable from a range of websites:

- NHS Digital – <http://content.digital.nhs.uk/catalogue/PUB21748>
- NatCen – [www.natcen.ac.uk/our-research/research/adult-psychiatric-morbidity-survey/](http://www.natcen.ac.uk/our-research/research/adult-psychiatric-morbidity-survey/)
- UK Data Service – <https://discover.ukdataservice.ac.uk/series/?sn=2000044>
- Academic – <https://mentalhealthsurveys.org>

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# Common mental disorders

Stephen Stansfeld | Charlotte Clark | Paul Bebbington | Michael King |  
Rachel Jenkins | Stephen Hinchliffe

## Summary

- Common mental disorders (CMDs) comprise different types of depression and anxiety. They cause marked emotional distress and interfere with daily function, but do not usually affect insight or cognition. Although usually less disabling than major psychiatric disorders, their higher prevalence means the cumulative cost of CMDs to society is great.
- The revised Clinical Interview Schedule (CIS-R) has been used on each Adult Psychiatric Morbidity Survey (APMS) in the series to assess six types of CMD: depression, generalised anxiety disorder (GAD), panic disorder, phobias, obsessive compulsive disorder (OCD), and CMD not otherwise specified (CMD-NOS). Many people meet the criteria for more than one CMD. The CIS-R is also used to produce a score that reflects overall severity of CMD symptoms.
- Since 2000, there has been a slight but steady increase in the proportion of women with CMD symptoms (as indicated by a CIS-R score of 12 or more), but overall stability at this level among men. The increase in prevalence was evident mostly at the more severe end of the scale (CIS-R score 18 or more).
- Since the last survey (2007), increases in CMD have also been evident among late midlife men and women (aged 55 to 64), and approached significance in young women (aged 16 to 24).
- The gap in rates of CMD symptoms between young men and women appears to have grown. In 1993, 16 to 24 year old women (19.2%) were twice as likely as 16 to 24 year old men (8.4%) to have symptoms of CMD (CIS-R score 12 or more). In 2014, CMD symptoms were about three times more common in women of that age (26.0%) than men (9.1%).
- CMDs were more prevalent in certain groups of the population. These included Black women, adults under the age of 60 who lived alone, women who lived in large households, adults not in employment, those in receipt of benefits and those who smoked cigarettes. These associations are in keeping with increased social disadvantage and poverty being associated with higher risk of CMD.

- Most people identified by the CIS-R with a CMD also perceived themselves to have a CMD. This was not the case for most of the other disorders assessed in the APMS.
- While most of these people had been diagnosed with a mental disorder by a professional, the disorders they reported having been diagnosed with tended to be 'depression' or 'panic attacks'. However, the disorder most commonly identified by the CIS-R was GAD. This difference may reflect the language and terminology used by people when discussing their mental health with a professional.

## 2.1 Introduction

Reducing the prevalence of common mental disorders such as depression and anxiety is a major public health challenge (Davies 2014). CMDs range in severity from mild to severe and are often associated with physical and social problems (Goldberg and Huxley 1992). They can result in physical impairment and problems with social and occupational functioning, and are a significant source of distress to individuals and those around them. Both anxiety and depression often remain undiagnosed (Kessler et al. 2002) and sometimes individuals do not seek or receive treatment. If left untreated, CMDs are more likely to lead to long term physical, social and occupational disability and premature mortality (Zivin et al. 2015). Although evidence exists for effective treatment of depression and anxiety (NICE 2004), this seems to have had little impact on the prevalence of these disorders. This may be because CMDs are relapsing conditions that can recur many years after an earlier episode, because the stressors that cause them endure, and because people with CMD do not always adhere to or seek treatment (Weich et al. 2007; Cooper et al. 2007). In the case of depression, relapse ten years from first presentation frequently occurs (Thornicroft and Sartorius 1993).

Although poverty and unemployment tend to increase the duration of episodes of CMD, it is not clear whether or not they cause the onset of an episode. Debt and financial strain are certainly associated with depression and anxiety, and increasingly the evidence is suggestive of a causal association (Meltzer et al. 2013;

Mind 2008). There are a wide range of other known associations, including: being female (Weich et al. 1998); work stress (Stansfeld et al. 1999); social isolation (Bruce and Hoff 1994); being a member of some ethnic groups (Weich et al. 2004); poor housing and fuel poverty (Harris et al. 2010; Hills 2012); negative life events (such as bullying, violence, bereavement, job loss); childhood adversity including emotional neglect, physical and sexual abuse (Fryers and Brugha 2013); institutional care, low birth weight (Loret de Mola et al. 2014); poor physical health; a family history of depression (Angst et al. 2003); poor interpersonal and family relationships, a partner in poor health, being a carer (Stansfeld et al. 2014); and problems with alcohol and illicit drugs (Salokangas and Poutanen 1998). Development of effective strategies for prevention of CMD has been limited by a lack of evidence on how risk factors act in combination (Clark et al. 2012). However, multifactorial risk algorithms for predicting major depression and anxiety disorders have been published (King et al. 2011a; King et al. 2011b) and are already influencing prevention efforts in primary care (Bellón et al. 2016).

Although usually less disabling than major psychiatric disorders such as psychotic disorder, the higher prevalence of CMDs mean that their cumulative cost to society is great (Zivin et al. 2015). These costs are even higher if CMD co-occurs with a personality disorder (Rendu et al. 2002). Mixed anxiety and depression (referred to here as 'CMD not otherwise specified' (NOS)) has been estimated to cause one fifth of days lost from work in Britain (Das-Munshi et al. 2008). In the United Kingdom, every year mental illness, largely CMD, costs the economy an estimated £70 billion (equivalent to 4.5% of GDP) (OECD 2014). Mental illness is the leading cause of UK sickness absence, accounting for 70 million sick days in 2013 (ONS 2014). In 2013, 41% of people receiving Employment and Support Allowance (ESA) had a 'mental or behavioural disorder' coded as their primary condition (OECD 2014). See Chapter 3 for use of treatment in people with CMD and Chapter 13 for comorbidity with CMD.

## 2.2 Definition and assessment

### Common mental disorders (CMDs)

CMDs, also known as neurotic disorders, cause marked emotional distress and interfere with daily function, although they do not usually affect insight or cognition. CMDs comprise different types of depression and anxiety. Symptoms of depressive episodes include low mood and a loss of interest and enjoyment in ordinary things and experiences. They impair emotional and physical wellbeing and behaviour. Anxiety disorders include generalised anxiety disorder (GAD), panic disorder, phobias, and obsessive compulsive disorder (OCD). Symptoms of depression and anxiety frequently co-exist, with the result that many people meet criteria for more than one CMD. OCD is characterised by a combination of obsessive thoughts and compulsive behaviours. Obsessions are defined as recurrent and persistent thoughts, impulses or images that are experienced as intrusive and inappropriate, are resisted, and cause marked anxiety or distress. Compulsions are repetitive, purposeful and ritualistic behaviours or mental acts, performed in response to obsessive intrusion and to a set of rigidly prescribed rules (NICE 2006).

### The Clinical Interview Schedule – Revised (CIS-R)

Specific CMDs and symptoms of CMD were assessed in the first phase interview using the Clinical Interview Schedule – Revised (CIS-R). The CIS-R is an interviewer administered structured interview schedule covering the presence of non-psychotic symptoms in the week prior to interview. It can be used to provide prevalence estimates for 14 types of CMD symptoms and six types of CMD, together with a continuous scale that reflects the overall severity of CMD psychopathology (Lewis et al. 1992).

Each section of the CIS-R assesses one type of CMD symptom. These are:

- Somatic symptoms
- Fatigue
- Concentration and forgetfulness
- Sleep problems
- Irritability
- Worry about physical health

- Depression
- Depressive ideas
- Worry
- Anxiety
- Phobias
- Panic
- Compulsions
- Obsessions

Each section starts with two filter questions to establish the presence of the particular symptom in the past month. A positive response leads to further questions enabling a more detailed assessment of the symptom in the past week including frequency, duration, severity, and time since onset. Answers to these questions determine the scores for each symptom. Symptom scores range from zero to four, except for depressive ideas, which has a maximum score of five. Descriptions of the items that make up the scores for each of the symptoms measured by the CIS-R can be found in Appendix B. Data on the symptom scores are not presented in this chapter, but are available in the archived dataset.

The scores for each section are summed to produce a total CIS-R score, which is an indication of the overall severity of symptoms.

- *CIS-R score of 12 or more* is the threshold applied to indicate that a level of CMD symptoms is present such that primary care recognition is warranted. In this chapter, 'presence of CMD symptoms' includes all participants with a CIS-R score of 12 or more (including those with a score of 18 and above).
- *CIS-R score of 18 or more* denotes more severe or pervasive symptoms of a level very likely to warrant intervention such as medication or psychological therapy. In this chapter 'severe CMD symptoms' is used to indicate those with a CIS-R score of 18 or more.

The participants' answers to the CIS-R were used to generate 10th International Classification of Disease (ICD-10) diagnoses of CMD using the computer algorithms described in Appendix B (WHO 1992). These ICD-10 diagnoses were then amalgamated to produce the six categories of disorder used in this report:

- Generalised anxiety disorder (GAD)
- Depression (including mild, moderate and severe)
- Phobias
- Obsessive compulsive disorder (OCD)
- Panic disorder
- CMD not otherwise specified (CMD-NOS, referred to in previous surveys in the APMS series as 'mixed-anxiety and depression').

It should be noted that 'CMD-NOS' was defined as having a CIS-R score of 12 or more but falling short of the criteria for any specific CMD. By definition, participants with this diagnosis therefore could not be classed as having any other CMD measured by the CIS-R. For the other five ICD-10 disorders, participants could be classed in more than one category (although phobias and panic disorder have diagnostic criteria that are mutually exclusive).

The CIS-R was also used to assess CMDs in the 1993, 2000 and 2007 APMS. The schedule was administered using computer assisted interviewing in the 2000, 2007 and 2014 surveys, and by paper in 1993. The approach has otherwise remained consistent and the data are comparable across survey years. The comparisons between survey years reported in this chapter are limited to participants aged 16–64 years and living in England (the first two surveys also covered Scotland and Wales). This age range was used because the 1993 survey did not sample adults aged 65 and over.

### **Self-diagnosis and professional diagnosis**

In the 2014 survey, new questions were added. Participants were presented with a show card listing different mental disorders and were asked: a) which they thought they had had at some point in their life; b) whether this had also been diagnosed by a professional; and c) whether a diagnosed disorder had been present in the past 12 months. It should be noted that the rates presented are estimates based entirely on self-reports, and have not been checked against health records.

## 2.3 Results

### Prevalence of CMD symptoms, by age and sex

Around one adult in six (15.7%) were identified with symptoms of CMD (as indicated by a CIS-R score of 12 or more). See Table 14.6 for 95% confidence intervals around some of these estimates. It is likely that if all adults in the population had been assessed using the CIS-R, the proportion scoring 12 or more would be between 14.7% and 16.7%. One in twelve (8.1%) had severe symptoms of CMD (CIS-R score of 18 or more, 95% CI: 7.4% to 8.9%).

Women were more likely than men to be affected. One in five (19.1%) women had CMD symptoms, compared with one in eight men (12.2%). Women were also more likely than men to have severe symptoms of CMD (9.8% of women scored 18 or more on the CIS-R, compared with 6.4% of men).

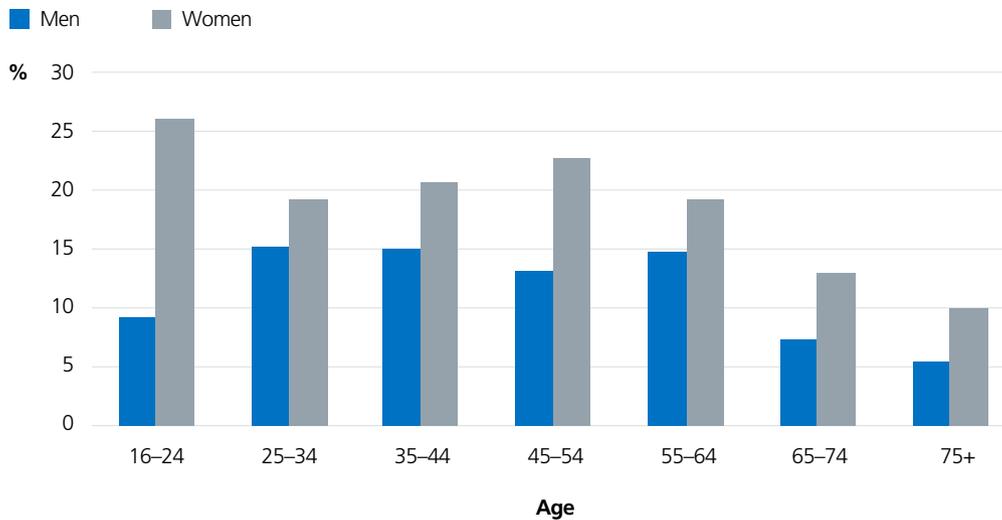
CMD symptoms were associated with age. Overall, working-age people were around twice as likely to have symptoms of CMD as those aged 65 and over. Between 16 and 64, the proportion with CMD symptoms remained around 17%–18%. But among those aged 65 and over the rate was much lower (10.2% of 65 to 74 year olds and 8.1% of those aged 75 and over). A similar pattern was observed for severe symptoms of CMD.<sup>1</sup>

The pattern of association between age and CMD symptoms was different for men and women. In women, rates of CMD symptoms peaked in the youngest group (26.0% of 16 to 24 year olds). This was three times the rate for 16 to 24 year old men (9.1%). In men the rate of CMD symptoms remained quite stable between the ages of 25 and 64, while in women a second (less-pronounced) peak was evident around midlife (45 to 54 year olds). Both men and women experienced a tailing off of CMD symptoms in later life. This pattern was similar, although even more pronounced, in rates of severe symptoms (a CIS-R score of 18 or more). [Table 2.1](#)

<sup>1</sup> Around 8% to 10% of people in age groups in the 16 to 64 range scored 18 or more on the CIS-R, compared with 4.2% of those aged 65 to 74 and 3.3% of those aged 75 and over.

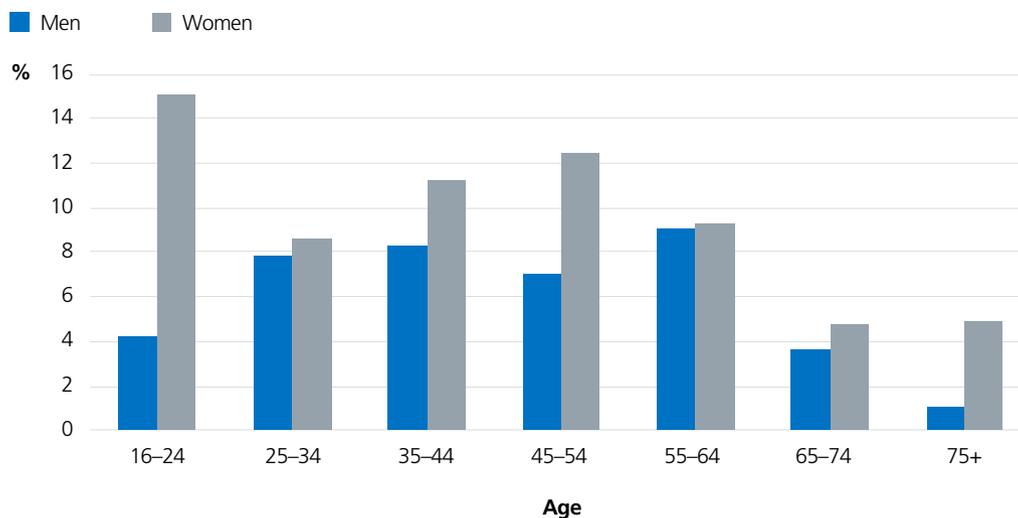
**Figure 2A: CIS-R score of 12 or more, by age and sex**

*Base: all adults*



**Figure 2B: CIS-R score of 18 or more, by age and sex**

*Base: all adults*

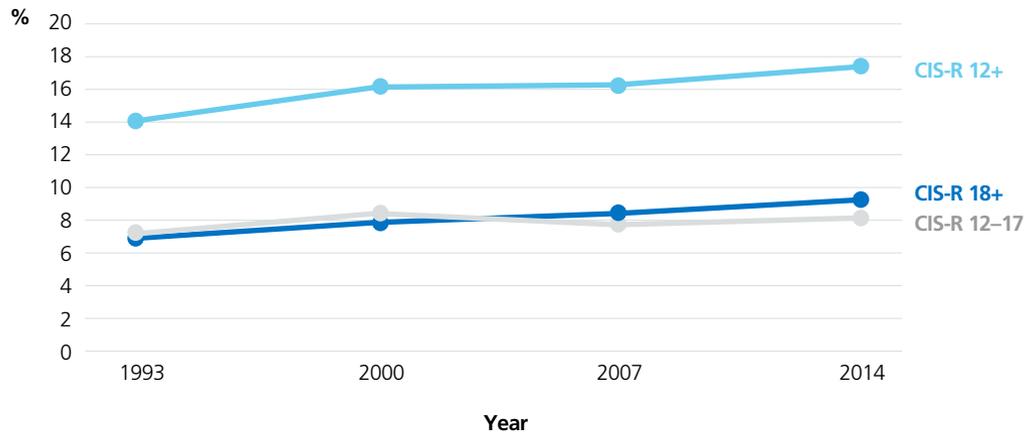


### Trends in CMD symptoms, 1993 to 2014

There was an increase in CMD symptoms (CIS-R score of 12 or more) in 16–64 year olds between 1993 (14.1%) and 2000 (16.3%), but since then there has been stability in the proportion with a CIS-R score of 12 or more. In 2014, 17.5% of working-age adults had symptoms of CMD.

**Figure 2C: CIS-R score, 1993 to 2014**

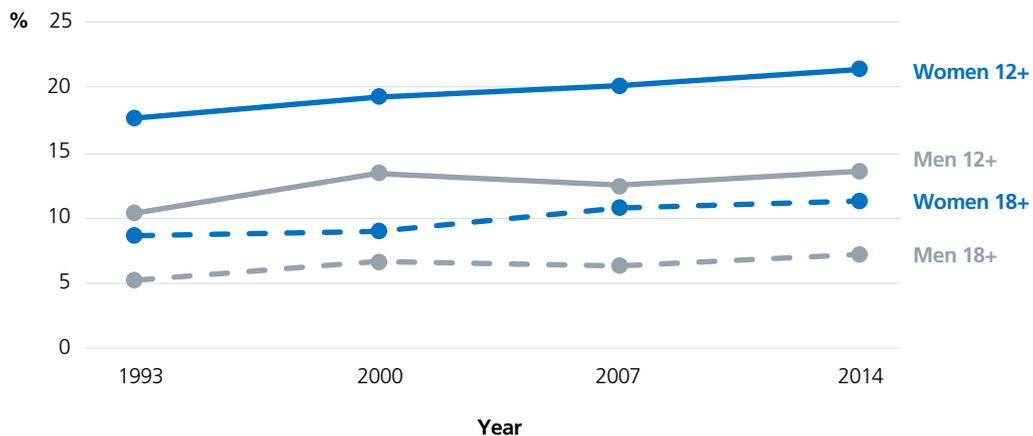
Base: adults aged 16–64



While the overall prevalence of symptoms of CMD (CIS-R score 12 or more) remained stable between 2000 and 2014, the proportion with severe CMD symptoms (CIS-R score of 18 or more) increased (7.9% in 2000; 8.5% in 2007; 9.3% in 2014). While rates of severe symptoms of CMD did not significantly differ between 2007 and 2014, the trend since 1993 has been one of slow but steady increase (from 6.9% to 9.3%). No equivalent trend is evident for rates of less severe symptoms (CIS-R 12–17), which have remained remarkably stable over time (Figure 2C). [Table 2.2](#)

**Figure 2D: CIS-R score of 12 or more and 18 or more by sex, 1993 to 2014**

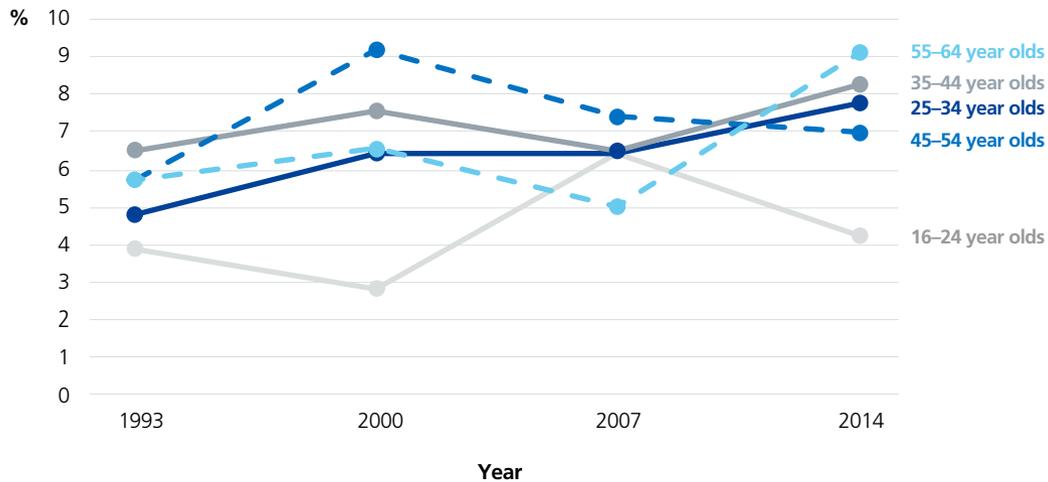
Base: adults aged 16–64



There is evidence of different patterns of change over time in different age groups and in men and women. These trends need to be treated with some caution as the base sizes for some age by sex combinations are small. However, it seems that in women, increases in rates over time have been steady and evident across different age groups, while the trends for men are less clear. [Table 2.2](#)

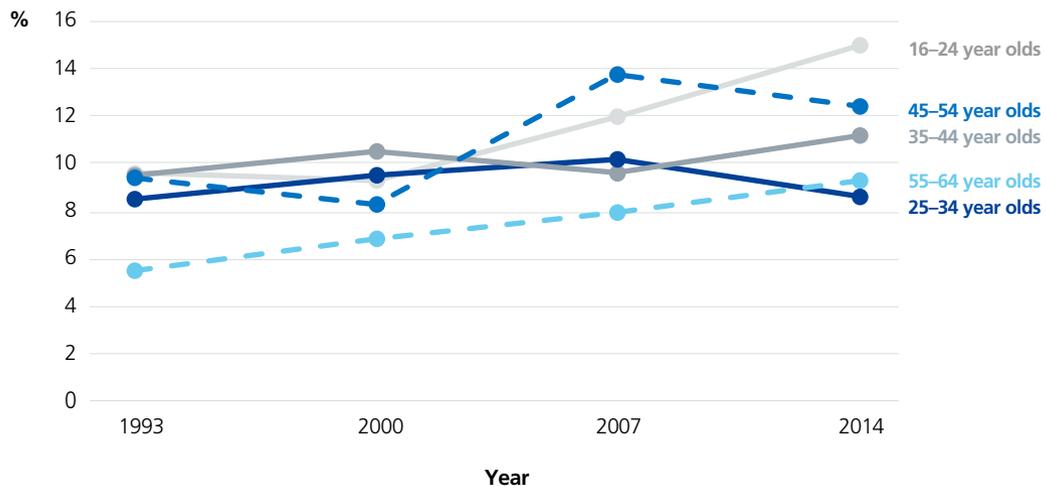
**Figure 2E: Severe CMD symptoms (CIS-R 18+) in men, 1993 to 2014**

*Base: men aged 16–64*



**Figure 2F: Severe CMD symptoms (CIS-R 18+) in women, 1993 to 2014**

*Base: women aged 16–64*



Increases in rates of severe CMD symptoms were most pronounced in women aged 16 to 24 (from 9.6% in 1993 to 15.1% in 2014) and 55 to 64 (from 5.5% to 9.3%),

and for men aged 55 to 64 (from 5.7% to 9.1%). Overall, and for men, the recent change in rates of severe CMD symptoms between 2007 and 2014 in 55 to 64 year olds was statistically significant. This increase may relate to people of this age being particularly vulnerable at time of economic recession (Frasquilho et al. 2015). The apparent increase in rate among young women does not quite meet statistical significance at the 95% level, and so should be treated with caution unless corroborated by other data sources.

The gap in rates of CMD symptoms between young men and women has grown. In 1993, 16 to 24 year old women (19.2%) were twice as likely as 16 to 24 year old men (8.4%) to have symptoms of CMD. By 2014, CMD symptoms were almost three times more common in women of that age (26.0%) than men (9.1%).

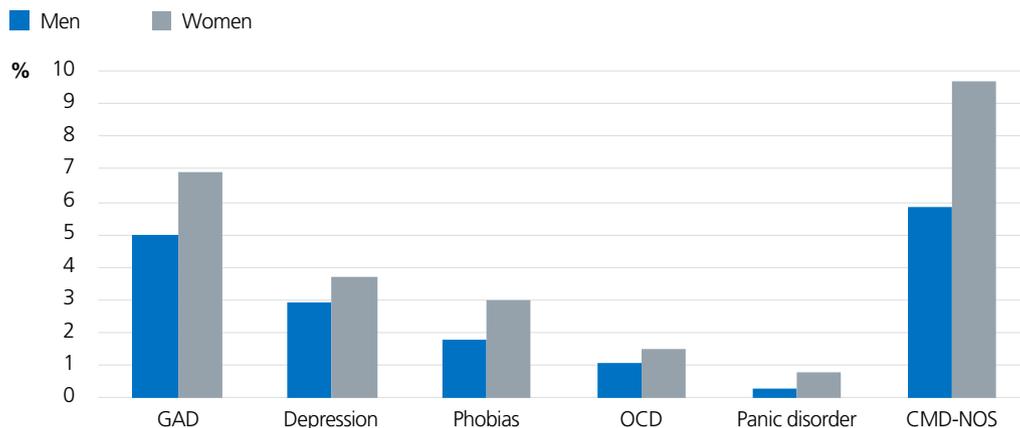
**Table 2.2**

### Prevalence of CMDs, by age and sex

One in six (17.0%) people (aged 16 and over) were identified with a CMD in the week before interview. The largest category of CMD, as in previous years of the survey, was CMD-NOS (7.8%). GAD remained the next most commonly identified CMD (5.9%), followed by depression (3.3%), phobias (2.4%), OCD (1.3%) and panic disorder (0.6%). All types of CMD were more prevalent in women than in men, with differences by sex reaching statistical significance for GAD, phobias, panic disorder and CMD-NOS. [Table 2.3](#)

**Figure 2G: Prevalence of common mental disorders (CMDs), by sex**

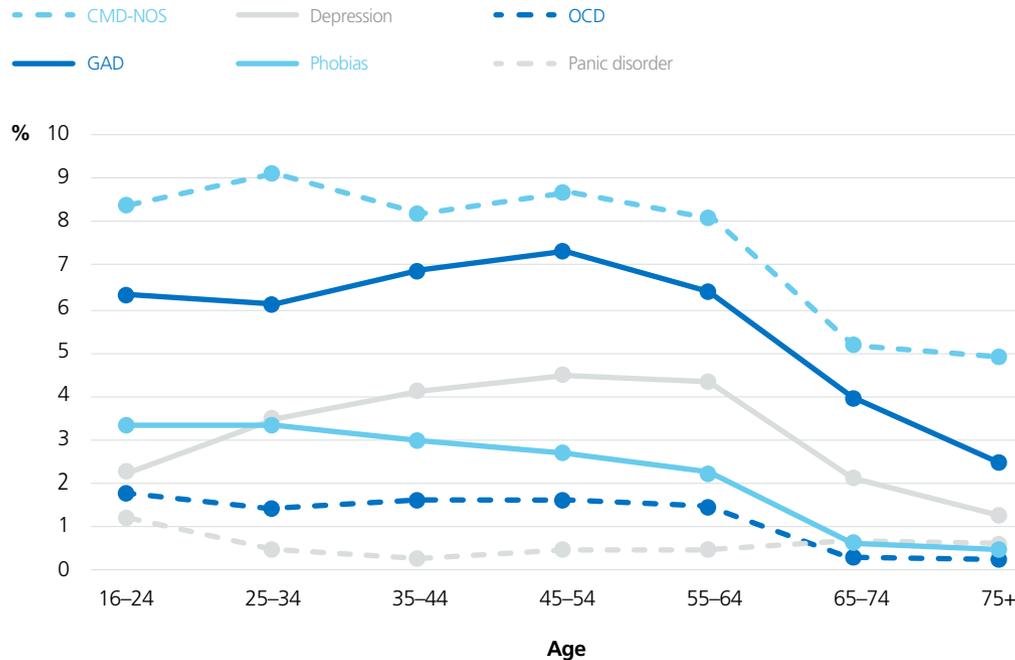
Base: all adults



With the exception of panic disorder (which had a low prevalence), each type of CMD was more common in people of working age (aged 16 to 64) than in those aged 65 and above.

**Figure 2H: Prevalence of common mental disorders (CMDs), by age**

Base: all adults



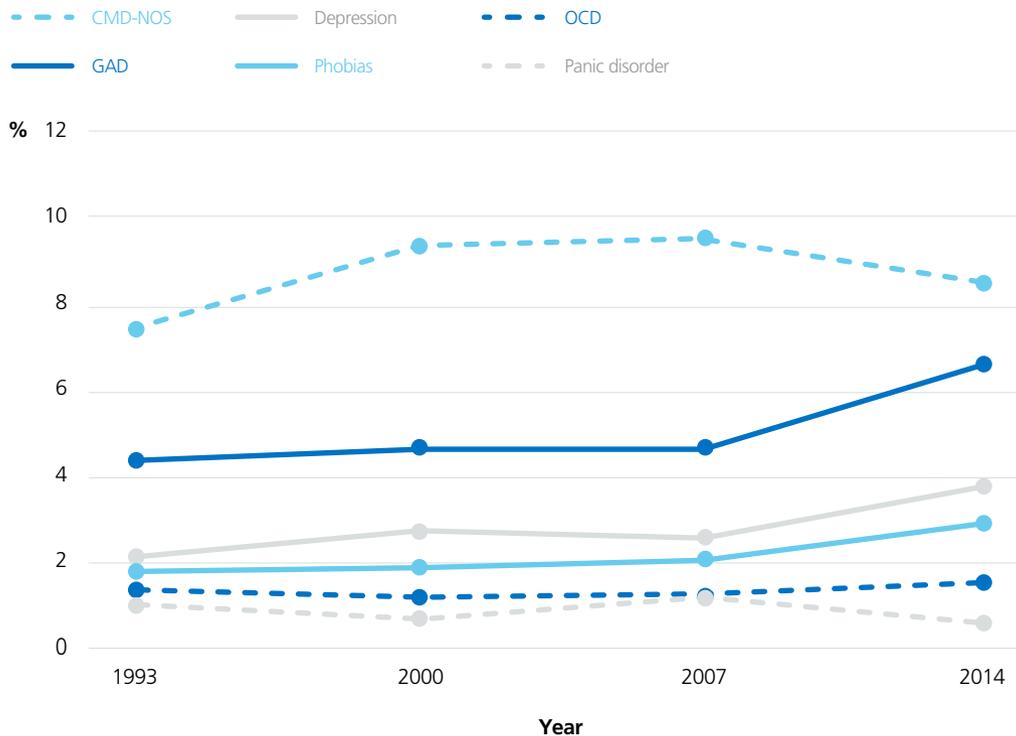
Anxiety disorders were more common among young women aged 16 to 24 (GAD 9.0%; phobias 5.4%; OCD 2.4%; and panic disorder 2.2%) than in other age-sex groups. [Table 2.3](#)

### Trends in CMDs, 1993 to 2014

GAD, depression, and phobias were more common in people aged 16 to 64 in 2014 than in previous years of the survey, while rates of OCD, panic disorder and CMD-NOS remained more stable. The prevalence of GAD increased from 4.7% in 2007 (and 4.4% in 1993) to 6.6% in 2014 and depression rose from 2.6% in 2007 (and 2.2% in 1993) to 3.8% in 2014. Phobias increased from 2.1% in 2007 (and 1.8% in 1993) to 2.9% in 2014. These increases were apparent in both men and women, except in the phobia rate which remained unchanged in men. [Table 2.4](#)

**Figure 2I: Prevalence of common mental disorders (CMDs), 1993 to 2014**

Base: adults aged 16–64



### CMD, by CIS-R score

Having a high symptom score on the CIS-R does not necessarily mean that the criteria for a specific diagnosis are fulfilled. Conversely, some adults who receive a diagnosis do not necessarily score 12 or more on the CIS-R. CIS-R scores of 12 and above are conventionally taken to indicate a CMD. All participants with such a score who did not meet the criteria for any of the specific disorders assessed on the survey were categorised with CMD-NOS. Participants with a CIS-R score of 11 or less might nevertheless meet criteria for one of the specific CMDs. Hence all of those with a CIS-R score of 12 or above were classed as having a CMD in the previous week, compared with only 0.4% of those with a score of 5 or below, and 6.4% of those with a score of between 6 and 11. Most of those with a specific CMD who scored below 12 were classed as having GAD.

Around three quarters of people with a CIS-R score of between 12 and 17 (73.3%) were identified with CMD-NOS. For adults with a CIS-R score of 18 or above, most met the criteria for a specific disorder and only a quarter (27.2%) were classed as having CMD-NOS. Nearly half of those with a CIS-R score of 18 or more (46.3%) were identified with GAD, a third (35.0%) with depression, and a quarter (24.0%) with phobias (it was possible to be identified with more than one CMD). [Table 2.5](#)

### **Self-diagnosed and professional diagnosed CMD, by CMD in past week**

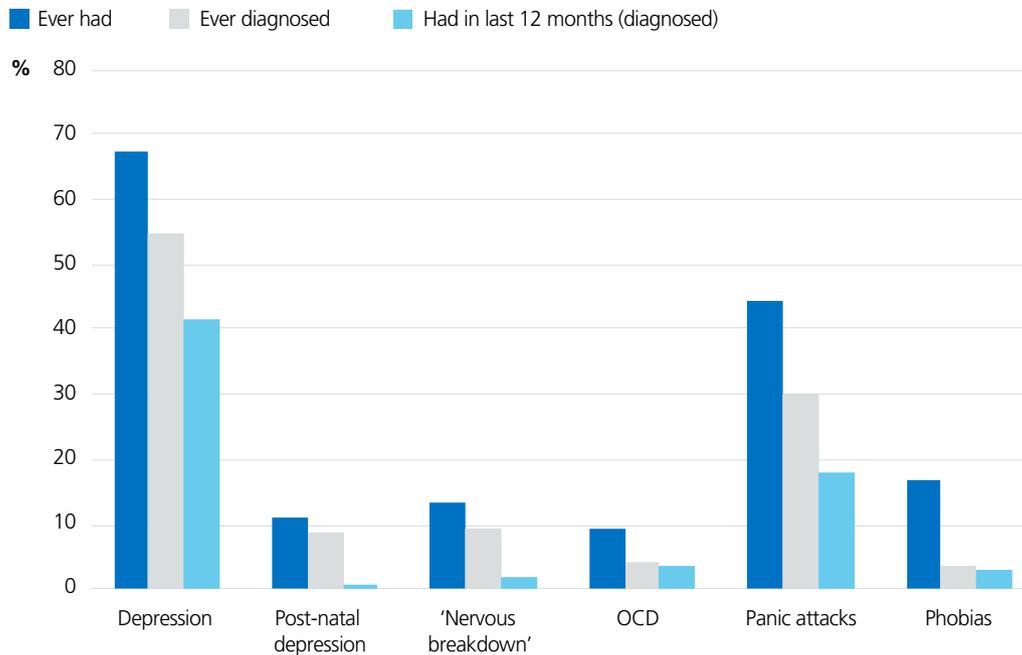
Nearly half of adults (43.4%) think that they have had at least one of eight common mental disorders at some point, 35.1% of men and 51.2% of women. A fifth of men (20.0%) and a third of women (34.5%) have also had diagnoses confirmed by a professional. 13.7% of adults reported presence of a diagnosed mental disorder in the past 12 months.

Most participants identified by the CIS-R interview as having CMD already thought that they had CMD, and in many cases they had also been so diagnosed by a professional. Of those identified with CMD symptoms in the week before interview, 82.1% reported that they had had at least one of eight common mental disorders at some point, and 64.4% had been given this diagnosis by a professional. The corollary of this is that a third (35.6%) of people identified by the survey as currently having a CMD had never been diagnosed with one. About half (48.5%) reported having a diagnosed CMD in the last year.

Of those identified by the CIS-R with CMD, two thirds (67.2%) reported that they had had depression at some point. This included 54.8% who reported being diagnosed by a professional. Of those with CMD, 44.6% mentioned having 'panic attacks': 30.2% reported that this had been diagnosed by a professional, 18.0% within the last year. Other CMDs were mentioned less frequently. [Table 2.6](#)

**Figure 2J: Self-diagnosed CMD, professional diagnosed CMD and presence of diagnosed CMD in past year, among adults with CMD in the past week**

Base: all adults with a CMD as identified by CIS-R



Whatever the type of disorder identified by the CIS-R assessment, the most common professional diagnosis (as reported by survey participants) was depression, ranging from 43.8% of those identified with panic disorder (albeit a very small sample) to 83.0% of those with OCD. People identified as having OCD in the CIS-R assessment rarely reported being diagnosed as such by a professional (in only 13.2% of cases). There was an even greater apparent mismatch among those identified as having some form of phobia, of whom only 7.2% reported having a professional diagnosis of phobia. [Table 2.6](#)

### Professional diagnosed CMD, by CMD in past week (as identified by CIS-R)

	CMD in past week, as identified by CIS-R			
	Depression	Phobias	OCD	Panic disorder
<b>Ever diagnosed with CMD by professional (self-reported)</b>	%	%	%	%
Depression	70.0	72.1	83.0	43.8
Phobia	5.9	7.2	6.0	–
OCD	7.1	7.9	13.2	–
Panic attacks	42.7	45.5	41.9	22.3
<i>Bases</i>	<i>284</i>	<i>201</i>	<i>103</i>	<i>43<sup>a</sup></i>

<sup>a</sup> Note small base for panic disorder.

### Variation in CMDs by other characteristics

#### *Ethnic group*

In men, prevalence of CMD did not vary significantly by ethnic group, whereas it did in women. Using age-standardised figures, non-British White women were less likely than White British women to have a CMD (15.6%, compared with 20.9% respectively), while CMDs were more common in Black and Black British women (29.3%).

Perhaps because of small sample sizes, differences between ethnic groups in rates of specific disorders were not statistically significant. However, depression appeared to be more prevalent among Black women, while panic disorder appeared to be more prevalent among women in Black, Asian and mixed or other ethnic groups. Conclusions about any apparent but non-significant differences in rates should not be made without further evidence. [Table 2.7](#)

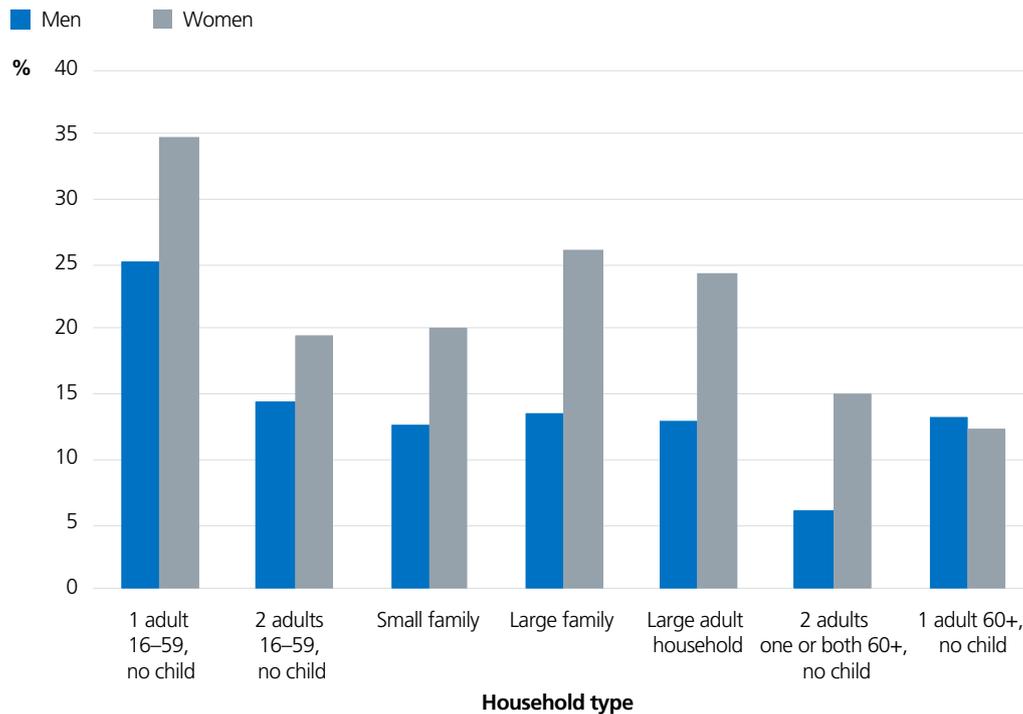
### Household type

Adults aged between 16 and 59 who lived alone were significantly more likely to have CMD than people who lived with others. A quarter of men (25.5%) and a third of women (35.0%) aged less than 60 who lived alone were assessed as having a CMD, compared with 13.2% of all men and 20.7% of all women.

Differences between the sexes in the prevalence of CMD were most noticeable in large family households, large adult households, and older couple households. The overall prevalence of CMD in women who lived in large family households was 26.4%, compared with 13.7% of men who lived in such households; in large adult households it was 24.6% of women and 13.1% of men; and in older couple households it was 15.1% of women and 6.1% of men. [Table 2.8](#)

**Figure 2K: Prevalence of common mental disorder (CMD), by household type and sex**

Base: all adults



### Employment status

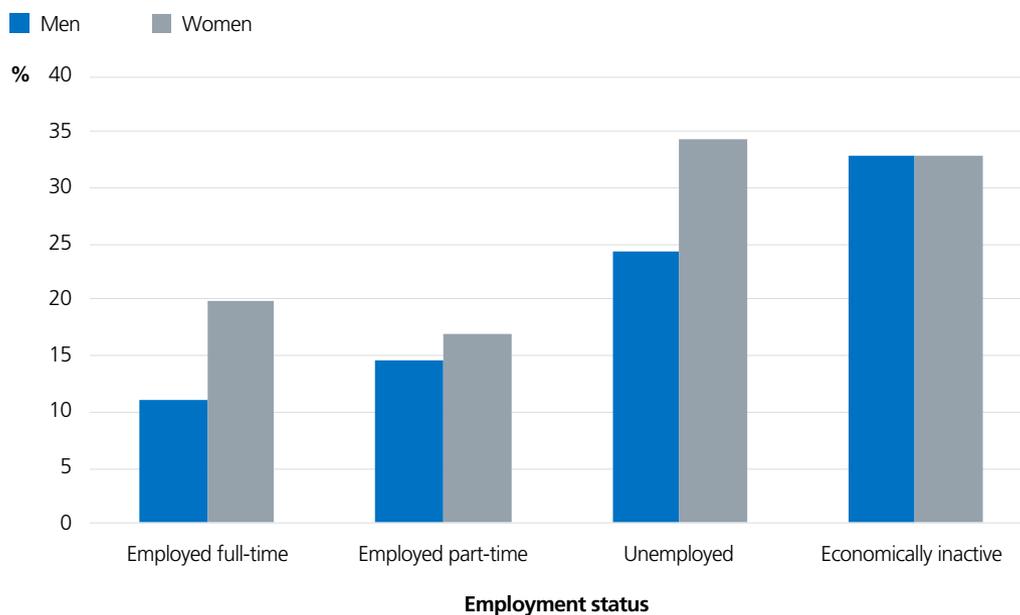
Employed adults were less likely to have a CMD than those who were economically inactive or unemployed. There was no difference in the overall prevalence of CMDs between those in full-time and in part-time employment.

Using age-standardised figures, the CMD rate in employed people aged 16 to 64 was half that of their non-employed counterparts (14.1% of those in full-time employment and 16.3% of those in part-time employment, compared with 28.8% of unemployed people looking for work, and 33.1% of the economically inactive).

Women in full-time employment were twice as likely to have CMD as full-time employed men (age-standardised 19.8%, compared with 10.9% respectively). Unemployed women were also more likely to have CMD than unemployed men (34.6% of women and 24.5% of men). However, there was no significant difference in prevalence between men and women employed part-time (14.7% and 16.9% respectively), nor was there a difference between economically inactive men and women (33.1% and 33.0% respectively). [Table 2.9](#)

**Figure 2L: Prevalence of common mental disorder (CMD), by employment status (age-standardised) and sex**

*Base: adults aged 16–64*



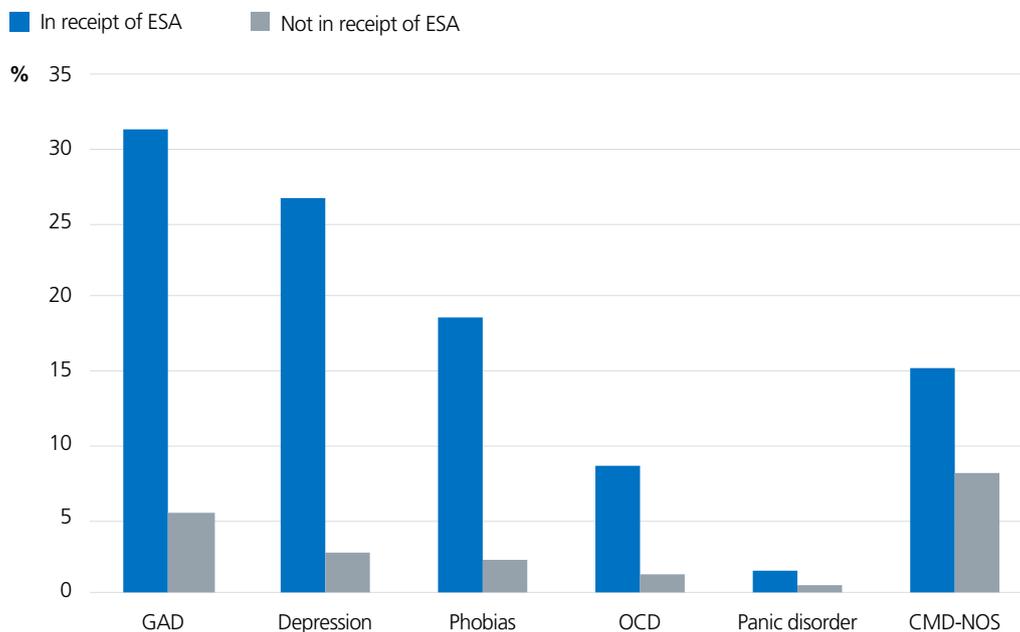
### Benefit status

There were very large differences in the prevalence of CMD between those in receipt of particular benefits and those who were not. This was true for all types of CMD. Patterns of prevalence were similar for men and women and are discussed below in terms of their age-standardised rates.

Two-thirds of adults aged 16 to 64 in receipt of Employment and Support Allowance (ESA, a disability-related out-of-work benefit) had a CMD (66.1%), compared with one in six adults not in receipt of this benefit (16.9%). More than four in five women in receipt of ESA had a CMD (81.0%), compared with one in five (21.1%) of those not in receipt. GAD (41.1%), phobias (31.2%) and depression (28.5%) were all particularly prevalent among female ESA recipients, as were GAD (24.3%) and depression (25.3%) for men. [Table 2.10](#)

**Figure 2M: Prevalence of common mental disorders (CMDs), by receipt of Employment and Support Allowance (age-standardised)**

*Base: adults aged 16–64*



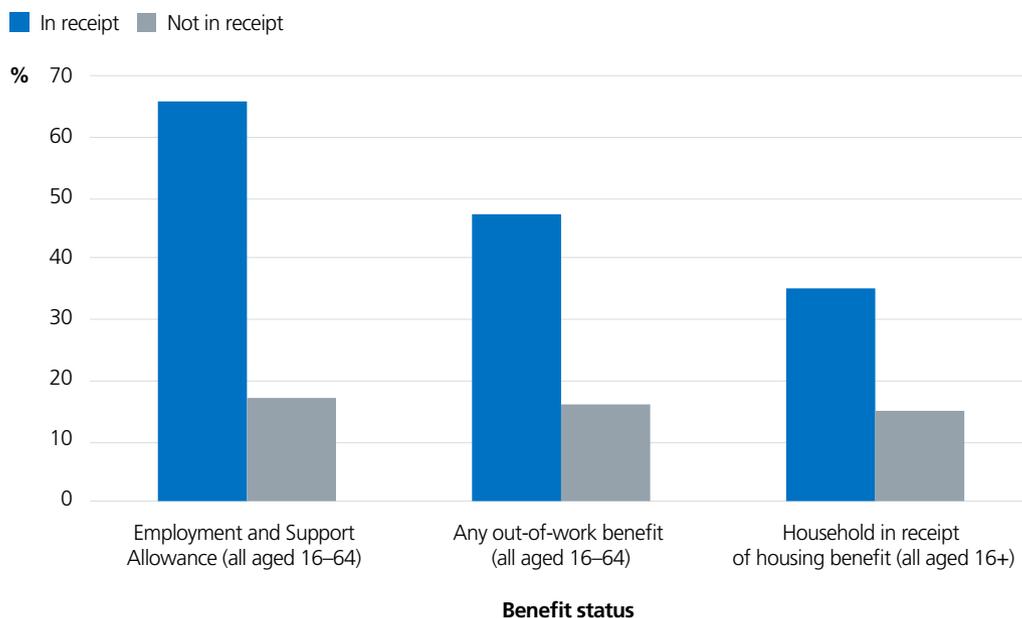
Out-of-work benefits include those aimed at people who are unemployed and looking for work, such as Jobseeker’s Allowance, as well as those aimed at people who are out of work for reasons of illness or disability, such as ESA. Hence figures for those in receipt of any out-of-work benefit reflect a combination of those shown in Table 2.9 for unemployed adults and those in Table 2.10 for adults in receipt of ESA.

Almost half of adults aged 16 to 64 in receipt of some kind of out-of-work benefit were identified as having a CMD (age-standardised 47.4%, compared with 15.8% of those not in receipt of such benefits). Differences in prevalence between those in receipt and those not in receipt of out-of-work benefits were statistically significant for each of the six types of CMD.

Housing benefit is available to certain low-income households to help with rent payments. It is not restricted to those of working age. The prevalence of CMD among those in receipt of housing benefit was more than twice that among those not in receipt of it (age-standardised 35.1%, compared with 14.9% of those not in receipt). [Table 2.10](#)

**Figure 2N: Prevalence of common mental disorder (CMD), by receipt of benefits (age-standardised)**

*Base: adults aged 16–64/all adults*



### *Region*

CMDs were more prevalent in certain regions of England. This was driven partly by differences in the prevalence of the less common disorders, OCD and panic disorder, as well as by CMD-NOS. Rates of CMD were highest in the South West of England (age-standardised 20.9%), North West (19.0%), West Midlands (18.4%) and London (18.0%). They were lowest in the South East (13.6%) and East of England (14.4%).

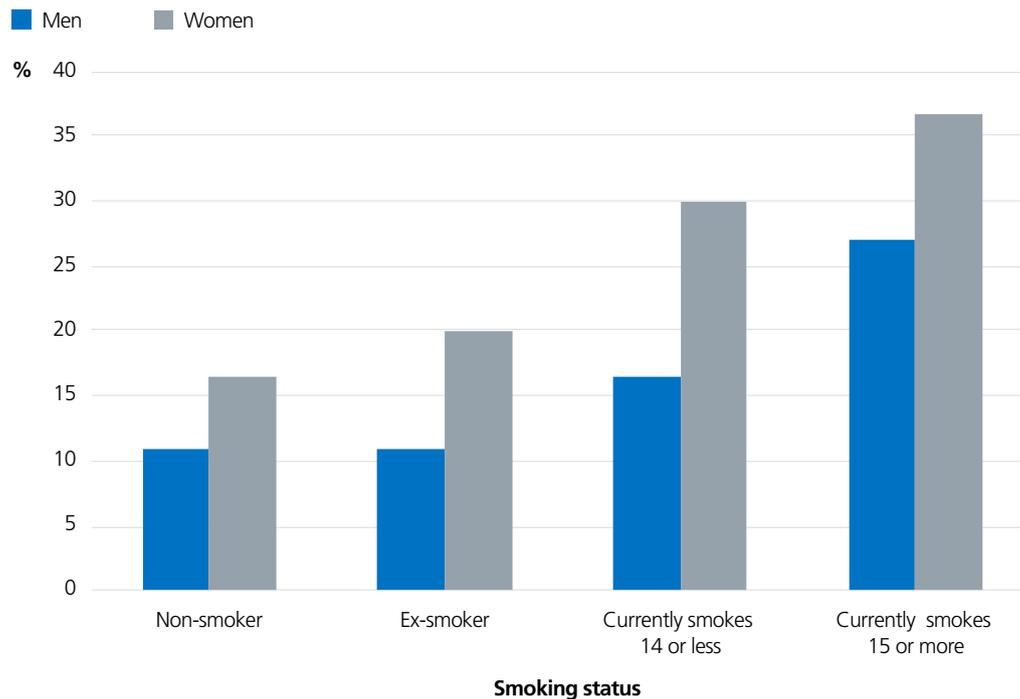
The prevalence of panic disorder was 1.3% in the North West, 0.9% in the South West, 0.8% in London, and 0.5% or less in other regions (age-standardised figures). OCD was particularly prevalent among women in the East Midlands, compared with other areas (age-standardised 4.4% in the East Midlands, 2.5% in the South West, and 1.6% or less in other regions). CMD-NOS were most common in the South West (age-standardised 9.8%) and the West Midlands (9.3%), and least common in the South East (5.4%), the East of England (5.6%) and the North East (5.9%). [Table 2.11](#)

### *Cigarette smoking status*

Smokers were significantly more likely than non-smokers to have a CMD. Among smokers, those smoking 15 or more cigarettes a day were more likely to have a CMD than those who smoked fewer (age-standardised prevalence: 14.1% of those who had never smoked and 15.2% of ex-smokers had a CMD, compared with 23.3% of those smoking fewer than 15 cigarettes a day and 31.3% of those smoking 15 or more). A similar pattern among smokers and non-smokers was present when looking at the prevalence of each type of CMD (although not all differences were significant). [Table 2.12](#)

**Figure 2O: Prevalence of common mental disorder (CMD), by smoking status (age-standardised)**

*Base: all adults*



## 2.4 Discussion

CMDs are among the most prevalent health conditions affecting people in the UK. The one week prevalence rates reported in this chapter suggest around one in six adults in England has a CMD at any one time. Around half of these have symptoms severe enough to warrant active intervention, and the rest would likely benefit at least from clinical recognition. The most prevalent of the CMDs was CMD-NOS, identified in 7.8% of adults, followed by generalised anxiety disorder (GAD) (5.9%), depression (3.3%), phobias (2.4%), obsessive compulsive disorder (OCD) (1.3%) and panic disorder (0.6%).

As in previous studies, rates of CMD were higher in women than men. Prevalence was also higher for both men and women in 2014 than in 1993. However, while prevalence remained broadly stable between 2000 and 2014 for men, there has been a steady increase among women. 20.4% of women were identified with CMD in 2000, 21.5% in 2007, and 23.1% in 2014. This could represent an increased likelihood for women to report symptoms compared to men, or an increase in risk factors for CMD in women such as exposure to domestic violence (Trevillion et al. 2012), increased work and home stressors such as caring (Pinquart and Sörensen 2006), financial problems, unemployment or social isolation (Clark et al. 2012). There is evidence that the onset of recession around 2008 in the US and Europe led to increasing rates of mental disorder (Riumallo-Herl et al. 2014) and suicide (Chang et al. 2013). This is an area which requires further research (Payne and Doyal 2010).

All types of CMD (with the exception of panic disorder, which had a very low prevalence) were more common in adults of working age than in those aged 65 and above. Below the age of 65, overall rates of CMD were fairly constant, at around 18% to 19%. Prevalence among those aged 75 and above was half this rate (8.8%). Although this was similar to the findings in the 2007 survey, it is striking that older people suffer much lower rates of mental disorder than their younger counterparts (Streiner et al. 2006), despite the increasing social isolation and poorer physical health that ageing may bring (Luanaigh and Lawlor 2008). Rates of dementia complicate the picture of mental health in this older group. Nevertheless, this relatively lower level of CMD is reassuring, given that older adults with mental health problems incur greater disability than those with physical illness alone (Bartels and Naslund 2013).

Compared with previous years, CMD rates in those aged 55 to 64 have increased (Spiers et al. 2011). One interpretation of this may be that the recession, which began in 2008, has had more of an impact on the mental health of adults approaching retirement than of those who had already reached retirement age. Those currently aged less than 65 also face different uncertainties about the future in relation to extended working lives. Various chapters show evidence of a cohort effect, with those currently aged 55 to 64 reporting levels of disorder potentially higher than that of 55 to 64 year olds in previous surveys in the APMS series.

This chapter also presents data that suggests a recent increase in prevalence of CMD among young women, from 22.2% in 2007 to 28.2% in 2014. The sample size for this subgroup was small, and the apparent change in rate did not quite reach statistical significance, however it is consistent with trends reported elsewhere and warrants more detailed investigation (Knudsen 2016; Lessof et al. 2016). This is the first cohort to come of age in the context of social media. There is some limited evidence on links between mental illness and social media exposure (Primack et al. 2009) and that excessive use of computers and mobile phones may be linked to a higher risk of mental disorder in young women, possibly mediated by sleep loss (Thomé et al. 2012). There is also some research on use of the Internet and mental distress in women (Derbyshire et al. 2013), but this is an area that needs further research.

CMDs were more prevalent in certain groups of the population. These included Black women, adults under the age of 60 living alone, women living in large households, adults who were not in employment or who were in receipt of benefits and those who smoked cigarettes. These associations are in keeping with increased social disadvantage and poverty being associated with increased risks of CMD (Cooper 2011; Gabbay et al. 2015). There is scope for further research and social intervention here (WHO 2014). Although we confirmed the well-known association between lack of paid employment and CMD, we found no significant association with part-time working. There has been some concern in the UK in recent years about part-time and zero hours contracts. However, our evidence would suggest that less than full-time working is not necessarily a risk factor for poor mental health. This is notable given other UK evidence that poor mental health may induce people to work fewer hours (Dawson et al. 2015). What may matter even more is working excessive hours (Kleiner et al. 2015).

Most of the participants identified with CMD using the survey assessment recognised that they had a CMD. Just under two-thirds also said that they had, at some point, been diagnosed with a CMD by a professional. This adds weight to the use of diagnostic measures of mental health and suggests that surveys such as this are using criteria that accord with participants' experiences.

Nevertheless, the symptoms identified by the survey instrument did not always match the diagnoses participants reported being given by professionals. Most of those reporting some kind of professional CMD diagnosis said that they had been diagnosed with depression or panic attacks. It is likely that this reflects the language used by people when discussing their mental health with professionals, and reflects people's understanding of their own experiences of mental illness. When doctors and patients talk about mental health, it is likely that they use widely understood terms and symptoms such as 'depression' and 'panic attacks'. That is to say, any differences between disorders identified by the CIS-R and disorders that people report having been diagnosed with, does not necessarily mean that people have been misdiagnosed.

## 2.5 Tables

### Prevalence and trends

Table 2.1	Severity of symptoms of common mental disorder (CMD), by age and sex
Table 2.2	Severity of CMD symptoms (CIS-R score) in 1993, 2000, 2007 and 2014, by age and sex
Table 2.3	CMD in past week, by age and sex
Table 2.4	CMD in past week in 1993, 2000, 2007 and 2014, by age and sex
Table 2.5	CMD in past week, by CIS-R score
Table 2.6	Self-diagnosed CMD, professional diagnosed CMD, and presence of professional diagnosed CMD in past 12 months, by CMD in past week

### Characteristics

Table 2.7	CMD in past week (observed and age-standardised), by ethnic group and sex
Table 2.8	CMD in past week, by household type and sex

- Table 2.9 CMD in past week (observed and age-standardised), by employment status and sex
- Table 2.10 CMD in past week (observed and age-standardised), by benefit status and sex
- Table 2.11 CMD in past week (observed and age-standardised), by region and sex
- Table 2.12 CMD in past week (observed and age-standardised), by cigarette consumption and sex

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# Mental health treatment and service use

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## Summary

- In this chapter reported use of psychotropic medication and psychological therapy are examined, as well as the extent of use of health care services for a mental health reason (GP, inpatient and outpatient health care) and day and community service use. It should be noted that rates presented are based on participant self-reports, not health records. Misclassifications of type of treatment or service are possible, and which was the providing organisation was not established.
- Overall, one adult in eight (13.1%) reported being in receipt of mental health treatment (psychotropic medication, psychological therapy or both) at the time of interview. Medication was the most commonly used type of treatment.
- This chapter focuses mainly on rates of treatment and service use among people with symptoms of common mental disorder (CMD), as measured by the revised Clinical Interview Schedule (CIS-R). Treatment rates for other disorders are covered in the relevant chapters. Treatment use was strongly associated with severity of CMD symptoms; ranging from one person in twenty (6.2%) among those with few or no current symptoms (CIS-R score 0 to 5), to nearly half (47.9%) of those with severe symptoms (CIS-R score 18+).
- The proportion of people with CMD using mental health treatment has increased. Around one person in four aged 16–74 with CMD symptoms (CIS-R score 12+) was receiving some kind of mental health treatment in 2000 (23.1%) and 2007 (24.4%). By 2014, this had increased to more than one in three (39.4%).
- The increase in treatment since 2007 was mainly driven by a steep rise in the use of psychotropic medication. However, there has also been an increase in the proportion of people with severe CMD symptoms (CIS-R 18+) in receipt of psychological therapy.
- The use of primary and community care for a mental health reason has also increased over time. People have become more likely to discuss their mental health with a GP, and since 2000 there has been a slight – but steady – increase in the proportion of adults with CMD using community and day care services. Service contact was highest in people with depression, phobia and OCD.

- Demographic inequalities in mental health treatment are apparent in the APMS data. After controlling for differences in level of CMD symptoms, those most likely to report use of treatment were female, White British, and in midlife (especially aged between 35 and 54).
- Socioeconomic inequalities in who receives treatment were less evident and more mixed. Employed people with CMD were *less* likely to receive treatment than those who were economically inactive. People with CMD living in lower income households were more likely to have an unmet treatment request than those living in higher income households.
- Overall, one in ten (10.3%) adults with severe CMD symptoms (CIS-R 18+) had an unmet treatment request in the previous 12 months. The people who reported requesting but not getting a particular treatment were overwhelmingly those with symptoms of CMD, suggesting that such requests tended to be made by people who might have benefited from treatment. Almost half of people (46.8%) with an unmet treatment request were not receiving any other mental health treatment at the time of the interview.

### 3.1 Introduction

A central objective of the Adult Psychiatric Morbidity Surveys (APMS) since 1993 has been to describe patterns in the use of treatment and services by people with symptoms of common mental disorder (CMD) (Singleton et al. 2001; McManus et al. 2009).

A case has been made that over the last two decades beneficial changes in the delivery of mental health services have taken place (Torjesen 2016). Examples include increased availability of specialist community services, improved transition between children's services and adult mental health services, and more complete implementation of clinical guidelines. These have been paralleled by significant reductions from 1997 to 2012 in suicide rates in people cared for by mental health services (Kapur et al. 2016).

**Level of unmet need:** The relationship between people and services is described by the concepts of *demand*, *need*, and *utilisation* (Brewin et al. 1987). Demand

is the subjective perception of the requirement for services and treatments as viewed by clients or carers, and is based on personal experience and lay knowledge of disorder and treatment. Need has been defined as the requirement for services and treatments identified from the professional perspective. It presupposes the identification of problems for which there are potentially effective interventions (Brewin et al. 1987; Bebbington 1990). It is therefore a technical concept, although it often corresponds with the demand perspective. Finally, utilisation is the actual take-up of services and adherence to treatments. It is shaped by the availability of services, the attitude of people to their health, and their perception of the accessibility and utility of services on offer. Inadequate treatment may therefore arise because clients and service providers do not recognise needs, and/or because of inadequate provision of treatment resources. Over-treatment is also possible, defined as utilisation without need.

In APMS, need was not assessed directly. However, it is possible to estimate this by assuming that people with a particular level of symptoms of disorder are likely to benefit from treatment. The level of 'unmet need' in the population is then the proportion of people with symptoms who do not receive treatment. Unmet needs will be greater if the provision of treatments is insufficient, inappropriate, or inaccessible, or where service uptake is poor.

There are limitations to this approach to estimating unmet need. The APMS definition of common mental disorder (CMD) is broad: it thus conflates milder, potentially self-limiting conditions (i.e. those that will remit in the absence of treatment) with conditions that are more likely to persist and need treatment, including some that are severe and enduring. The interventions defined as treatment include a range of psychological therapies and medications, but exclude general support, for example, from a GP or community organisation. The findings are also based on cross-sectional data, and therefore include only those individuals with symptoms present at the time of assessment. Some of those classified as not receiving treatment may have had this in the past, or may have sought help shortly after taking part in the survey. Since psychological therapies tend to be of shorter duration than pharmacological treatments, this approach may underestimate provision and uptake of the former in particular. Furthermore, we cannot evaluate the effectiveness of treatment or recovery trajectories using cross-sectional data.

Finally, some people without current CMD symptoms may have recovered, perhaps as a result of treatments they are still receiving, or were receiving treatment for another type of mental disorder. Thus it cannot be assumed that such circumstances represent over-treatment.

Despite these limitations, a population-based survey like APMS provides unique insight. APMS measures symptoms of mental disorder in people with and without diagnosed conditions, independent of any help-seeking or treatment. These surveys collect information from people in contact with services, but also from those who are not, some of whom may not even be registered with a GP.

Headline findings from APMS 2000 and APMS 2007 were that only one-quarter of adults with CMD were receiving psychotropic (mental health) medication or psychological therapy. Thus three-quarters of people who might have benefited from treatment were not receiving this at the time of interview. 'One in four' represented the proportion of people assessed by those surveys as having a CMD and who reported that they were receiving treatment. These findings are consistent with the two-thirds to three-quarters of people identified in other epidemiological surveys as meeting criteria for mental disorder and who are not receiving treatment.

**Trends in receipt of treatment and services:** Analyses of the first three APMS surveys (1993, 2000 and 2007) found that the proportion of adults with CMD in receipt of any psychotropic medication increased between 1993 and 2000, and remained stable between 2000 and 2007 (Spiers et al. 2016; Alonso et al. 2007).

Analyses focused on reported use of hypnotics in the same surveys found a similar trend, with prevalence of hypnotic use double in 2000 (0.8%) compared to 1993 (0.4%); with no further evidence of an increase between 2000 and 2007 (Calem et al. 2012). A recent report using national prescribing data found very similar trends in relation to antidepressant prescribing, with increases in the 1990s and initially stability post-2000 (Spence et al. 2014). This was followed by steep increases in antidepressant prescribing from 2008, which the authors attributed in part to the effects of the financial crisis in that year and the subsequent global recession. This coincided with the introduction of the Improving Access to Psychological Therapies (IAPT) programme in 2007/8 (DH 2012). It might be expected that the onset of recession would have led to an increase in mental

disorder in the population, while recent changes in the development and delivery of services would result in a greater proportion of affected people receiving treatment. The first of these hypotheses is addressed in Chapter 2 (with some support for this position). The second hypothesis is considered in this chapter.

**Inequalities in receipt of treatment and services:** As well as comparing treatment rates over time, APMS data can also be used to examine whether particular groups are more (or less) likely to receive treatment after controlling for differences in levels of symptoms (Bebbington et al. 2000). Analyses of APMS 2007 data indicated that white people were the ethnic group most likely to receive mental health treatment (Cooper et al. 2013) and that people of working age were more likely than older people to get appropriate treatment, especially psychological therapy (Cooper et al. 2010). APMS 2014 allowed us to examine whether these inequalities have persisted, and (due to the introduction of a new question in 2014) whether some groups of people are more likely to have requested mental health treatment but not received it than other groups.

This chapter presents findings on:

- **The extent of unmet needs** (the proportion of the population with a treatable disorder who do not receive treatment or services), and how this has changed over time.
- **Inequalities in treatment use** (whether, after taking account of levels of need, people from certain demographic or socioeconomic groups are less likely to use medications or psychological therapies, or more likely to have their treatment requests refused).

These are covered in the following sections:

- 3.2 Definition and assessment
- 3.3 Results: Trends in mental health treatment and service use
- 3.4 Results: Inequalities in mental health treatment and service use
- 3.5 Results: Inequalities in unmet treatment requests
- 3.6 Discussion.

## 3.2 Definition and assessment

### Measuring mental health treatment

Participants were asked about any treatments they were receiving for a mental or emotional problem around the time of the interview. These included different types of psychotropic medication and counselling and other psychological therapies.

Trends in treatment presented in this chapter draw on the broadly comparable data from APMS 2000, 2007 and 2014; where there have been changes in data collection these are described in the sections below. Trends are based on those aged 16 to 74, as the 2000 survey did not interview people aged 75 and over. In the 1993 survey, receipt of psychological therapies was only asked of a sub-sample of participants. Consequently, no comparable 'any treatment' measure was available for the whole 1993 sample.

### Measuring psychotropic medications

There have been changes between the surveys in how medication data have been collected. In 2000, interviewers asked about and coded all prescribed drugs, including non-psychotropic medications. In 2007, a show card prompt list of psychotropic medications was used instead. People were also asked to show interviewers the packaging for each psychotropic medication reported, so that the interviewer could check it was correctly coded. The 2000 and 2007 surveys found similar rates of use of psychotropic medication, and this stability is consistent with prescribing data as well. This suggests that the change in method did not affect comparability.

A show card approach was also used in 2014. However, rather than listing drug brand names first, followed by the generic name (the approach taken in 2007), the generic name was listed first on the show card prompt. This change was made because a) a number of widely prescribed brand medications were approaching the end of their license; and b) there had been a shift in practice towards prescribing generic medications when available. More medications were asked about on the 2014 showcards than in 2007. This was due to the increased range of licensed and available psychotropic medications in 2014. Furthermore, in 2014, medications used in the treatment of bipolar disorder, epilepsy, dementia, and substance misuse were also asked about, although only the first of these was included in the 'any

psychotropic medication' derived variable used for trend analysis. The participants in 2014 who reported taking bipolar disorder medications usually also reported other psychotropic medication as well, and so their inclusion should not have had a significant impact on trends.

See the Glossary for a full list of the medications asked about and how they were grouped together. Groupings relate to the main reasons that medications are commonly prescribed, but they may have been prescribed to individuals for different reasons. Several medications were listed in more than one group.

### **Measuring psychological therapies**

Psychological therapies were asked about in broadly comparable ways in each survey. The main analyses of trends in their use are based on endorsement of an initial stem question, the wording of which has not changed between surveys:

*'Are you currently having any counselling or therapy listed on this card for a mental, nervous or emotional problem?'*

Follow-up questions established the types of therapy, and this list has changed slightly each survey year, reflecting the nature of current provision and terminology. For example, mindfulness therapy was added to the list in 2014, while 'marital therapy' was replaced with 'couple and family therapy'.

Survey development piloting work has found that participants are generally unable to state reliably which services provided treatments such as psychological therapies. Therefore, APMS data cannot be used to describe shifts between primary and specialist services in the source of such treatments.

### **Measuring health service use for a mental health reason**

Health service contact records were not examined in the survey. Health service use for a mental health reason was recorded if a survey participant reported any of the following:

- Having spoken with GP about being anxious, depressed, or about a mental, nervous or emotional problem in the past two weeks or past year;
- Being an inpatient for a mental, nervous or emotional reason in the past quarter; or

- Being an outpatient or day patient for a mental, nervous or emotional reason in the past quarter.

Although the reference periods varied between different types of health service, this approach was consistent with that used in previous years of the survey and so was retained to allow for trend analysis.

### **Measuring community and day care service use**

Survey participants were also asked questions on use of community and day-care services in the past year. To ensure comparability with previous surveys in the series, changes to items and terminology were minimal. The different types asked about are listed in the Glossary.

### **Measuring unmet treatment requests**

In APMS 2014, participants were asked a question that had not been included on previous surveys in the series:

*'In the past 12 months, have you asked for any type of counselling or mental health related medication, but not received it?'*

If the participant answered yes, follow-up questions were asked about what type of treatment had been requested and whether or not the participant was on a waiting list for it at the time of the interview.

### **Measuring treatment need**

The revised Clinical Interview Schedule (CIS-R) has been used in every wave of APMS to measure CMD symptoms and to identify people meeting CMD diagnostic criteria. This chapter focuses on differences in treatment rate by CMD. Treatment and service use among people with other types of mental disorder is addressed in the disorder-specific chapters.

#### *CMD symptoms*

The CIS-R score provides an indication of overall non-psychotic symptom severity, and is used in the analyses in this chapter to indicate level of mental health service required.

- **CIS-R score of 12 or more:** is used to indicate the presence of clinically significant symptoms of CMD, and identifies people with ‘symptoms of CMD’ sufficient to warrant recognition.
- **CIS-R score of 18 or more:** is also a threshold applied in this chapter and is used to indicate the presence of ‘severe symptoms of CMD’, sufficient to warrant intervention.

### *CMDs*

An algorithm applied to the responses on the CIS-R can also be used to identify likely presence of six different types of CMD. These were depression, generalised anxiety disorder (GAD), phobias, obsessive compulsive disorder (OCD), panic disorder, and CMD not otherwise specified (CMD-NOS).<sup>1</sup> The CIS-R cannot clinically diagnose CMD, as that would require detailed assessment by a trained professional. In this chapter those identified with ‘any CMD’ are considered, as well as those meeting the diagnostic criteria for particular CMDs. Everyone with a CIS-R score of 12 or more was classified with at least one type of CMD. However, it was possible to be identified with certain CMDs without having a score of 12 or more. The CIS-R and the individual CMDs are described more fully in Chapter 2 and the Glossary.

### **Measuring inequalities in use of mental health treatment**

APMS data can be used to examine whether particular groups are more (or less) likely to receive mental health treatment after controlling for differences in levels of symptoms (Bebbington et al. 2000). For example, analyses of APMS 2007 data found that white people were the ethnic group most likely to receive mental health treatment (Cooper et al. 2013) and that people of working-age were more likely than older people to get appropriate treatment, especially psychological therapy (Cooper et al. 2010). APMS 2014 allowed us to examine whether these inequalities have persisted, and (due to the introduction of a new question in 2014) whether some groups of people are more likely than others to have requested mental health treatment but not received it.

<sup>1</sup> Previously in the APMS series ‘CMD-NOS’ was referred to as ‘mixed anxiety and depression’.

For this chapter, multiple logistic regression modelling has been carried out to examine whether there are inequalities in mental health treatment use.<sup>2</sup> Without controlling for differences in the level of mental health symptoms, variation in treatment rate between groups might simply (and appropriately) reflect differences in level of need. In order to determine what characteristics independently predict use of mental health treatment after controlling for CMD symptoms, a range of variables were included in the final regression modelling. In summary, the multiple logistic regression analysis consisted of the following steps:

**Step 1:** Unadjusted analyses: a wide range of health and social factors were tested for association with use of mental health treatment using univariate logistic regressions. This step was necessary to estimate the unadjusted odds ratios (ORs) of receiving mental health treatment for each subgroup, to allow comparisons with the results of the next steps (e.g. after adjusting for presence and severity of CMD).

**Step 2:** Grouped CIS-R score was added to all the models from step 1 to control for differences in the level of mental health symptoms. Grouped CIS-R score was used, rather than a continuous score, to allow for comparison with treatment rates.

**Step 3:** Self-assessed general health was included in models from step 3 to control for differences in how people view their health in general.

**Step 4:** All health and social factors considered in previous steps were included as independent variables in the final multiple regression model.<sup>3</sup> For the full list of variables considered, see [Table 3.15](#).

This final step allowed us to identify the factors independently associated with mental health treatment use after controlling for other factors. The final results, in the form of adjusted ORs, are compared with unadjusted ORs (from step 1) and treatment rates for the groups found to be at elevated risk of not getting treatment.

- 2 Logistic regression, also known as logit regression, is a statistical model used to estimate the probability of an event occurring given certain information. The final model presented in this chapter was used to estimate whether people who share a particular characteristic (for example, age group) are more or less likely to receive treatment than those in a reference age group, when the other characteristics in the model are held constant. If the value is greater than one, the odds of the outcome occurring are greater for the given group compared to the reference group. Conversely, a value less than one indicates the odds of the outcome occurring are lower for the given group compared with the reference category.
- 3 The F-adjusted mean residual goodness-of-fit test was applied and suggested no evidence of lack of fit of the model (F-adjusted test statistic: 0.656; prob >F= 0.749).

### 3.3 Results: Mental health treatment and service use

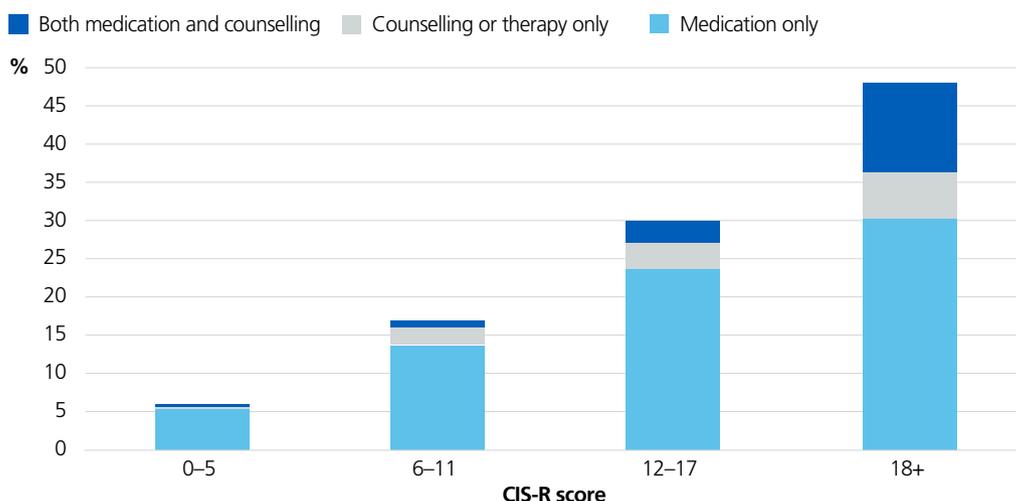
#### Mental health treatment use, by CIS-R score

Overall, 13.1% of participants reported receiving mental health treatment (psychotropic medication and/or psychological therapy) at the time of the APMS 2014 interview.<sup>4</sup> Reported treatment use was strongly associated with severity of mental health symptoms, ranging from one person in twenty (6.2%) among those with few or no current symptoms (CIS-R score 0 to 5), to nearly one-half (47.9%) of those with severe symptoms (CIS-R score 18+). Treatment use among those without CMD symptoms is not necessarily unwarranted, but could indicate, for example, recovery or an intermittent condition.

Medication was the most common form of mental health treatment, reported by 11.6% of people, compared with 3.0% who reported receiving psychological therapy. Medication was more common than psychological therapy both in those with current symptoms of CMD and in those without current symptoms. A small proportion of people (1.5%) reported receiving both medication and psychological therapy, and this figure was also higher among those with the most severe symptoms (11.7%), and for men (14.7%) compared with women (9.8%). [Table 3.1](#)

**Figure 3A: Current use of mental health treatment, by CIS-R score**

Base: all adults



<sup>4</sup> In this chapter rates of treatment and service use for a mental health reason are presented for the whole population, and by severity of mental health symptoms (as indicated by CIS-R score) and type of common mental disorder (CMD). Where numbers allow, rates are also broken down by sex.

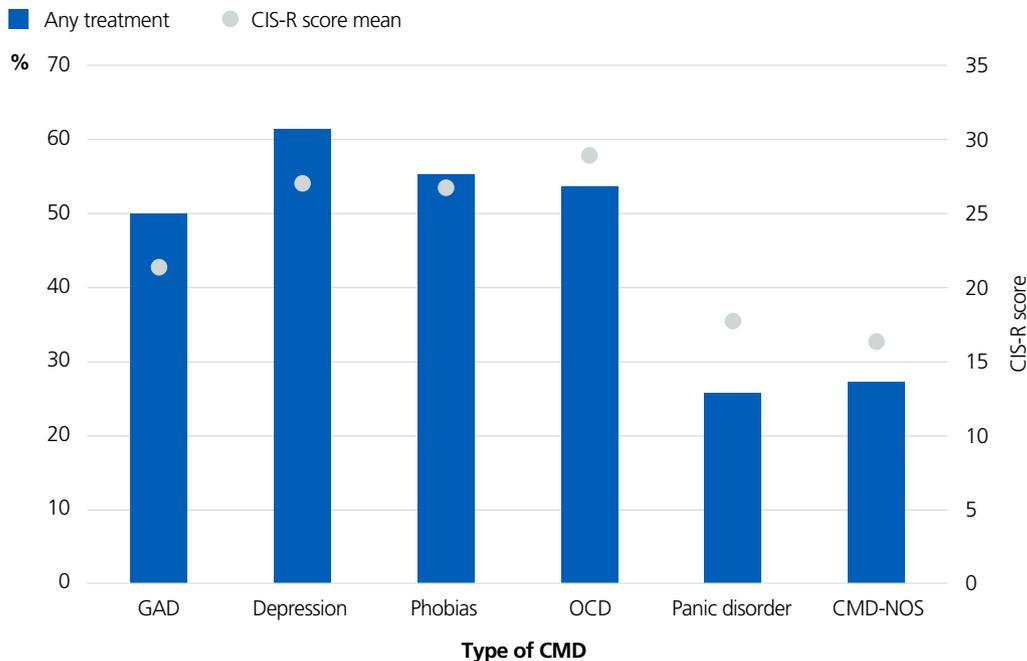
## Mental health treatment use, by type of CMD

About one-third (38.5%) of people meeting the diagnostic criteria for at least one CMD (mean CIS-R score 18.9) were receiving treatment at the time of the survey, compared with 7.9% of those without CMD (mean CIS-R score 2.5). The true figure for the wider population with CMD, the proportion receiving treatment would be likely to be between 35.8% and 41.3% (95% confidence interval).

Treatment rates varied by type of CMD, and were highest in those with depression (61.3%), phobias (55.2%), OCD (53.6%) and GAD (49.9%). In contrast, a quarter (27.2%) of people with CMD-NOS and a fifth (25.7%) of those with panic disorder were receiving treatment.<sup>5</sup> These CMD classifications, however, averaged lower levels of symptom severity: the mean CIS-R score for people with CMD-NOS was 16.2, compared with 26.8 for those with depression and 28.9 for people with OCD. It should also be noted that for disorders other than CMD-NOS, it was possible for more than one CMD to be present.

**Figure 3B: Current use of mental health treatment, by type of CMD**

Base: all adults



<sup>5</sup> Note small base size for those with panic disorder (43 participants) means that analyses by this group should be treated with caution.

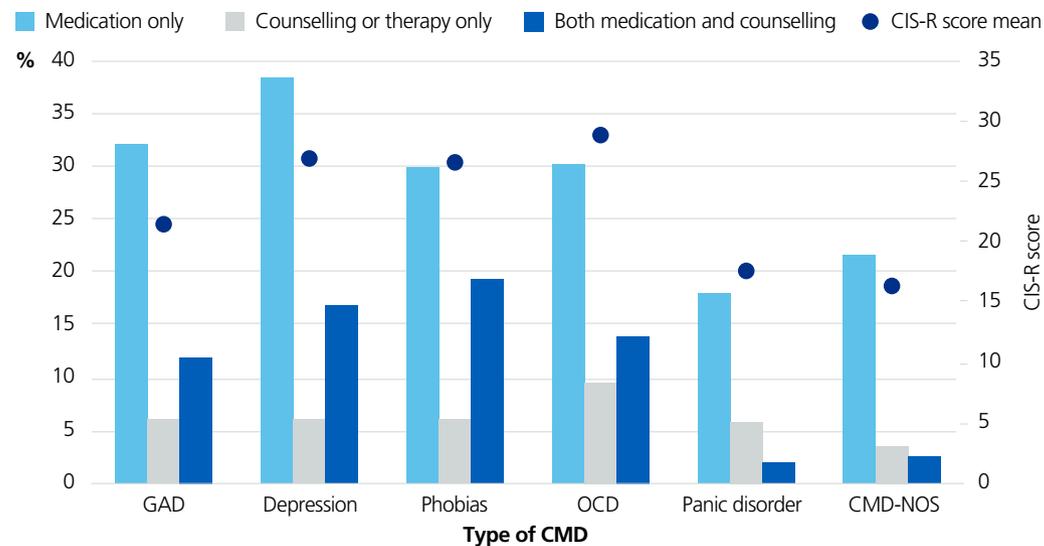
Medication was the most commonly reported treatment for people with each type of CMD. Its prevalence ranged from around one in two (55.3%) people with depression to one in four (24.1%) of those with CMD-NOS and one in five (19.9%) with panic disorder (note that small base numbers mean figures for this group should be treated with caution).

Medication combined with psychological therapy was the second most common treatment among those with the most severe types of CMD (mean CIS-R score of 18 or more): reported by 19.3% of those with phobias and 16.8% of those with depression. Combined medication and psychological therapy was rare among those with panic disorder (1.9%) or CMD-NOS (2.5%) (mean CIS-R scores below 18).

**Tables 3.2, 3.4**

**Figure 3C: Type of mental health treatment, by type of CMD**

Base: all adults



**Psychotropic medication use, by CIS-R score**

The most commonly reported psychotropic medications were those used primarily in the treatment of anxiety and depression.<sup>6</sup> Each was reported by one in ten

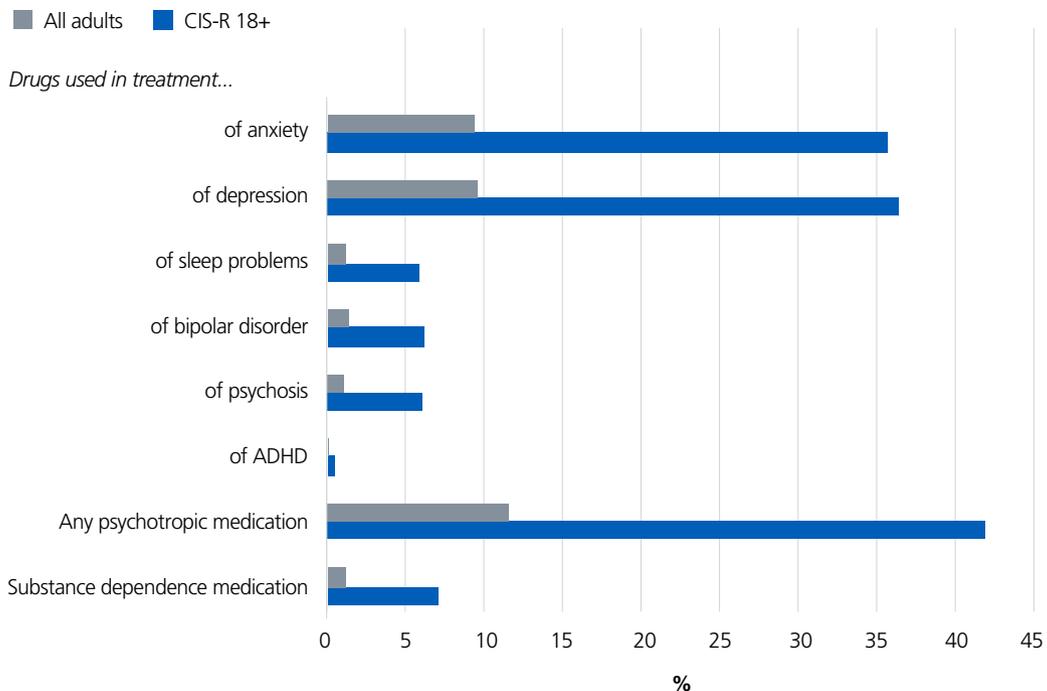
<sup>6</sup> See the Glossary for a list of how different medications were grouped together. Some medications were in more than one grouping. Note that medications can be prescribed for a range of symptoms, and their use does not indicate that particular symptoms are present. For example, antipsychotics (medications commonly used in the treatment of psychosis) are commonly used to augment antidepressants in the absence of psychotic symptoms.

adults overall (9.4% used medication to treat anxiety; 9.6% used medication to treat depression). Medications commonly used in the treatment of psychosis, sleep problems, and bipolar disorder were taken by around 1% of the population overall (1.1%, 1.2% and 1.4% respectively), and in about 6% of those with a CIS-R score of 18 or more (6.1%, 6.2% and 6.2% respectively).

As well as different types of medication used in the treatment of mental disorders, drugs used in the treatment of substance dependence were also asked about. Overall, 1.0% of participants reported using substance dependence medication at the time of the interview. This was also strongly linked with severity of CMD symptoms; 7.1% of people with a CIS-R score of 18 or more were using medications used to treat substance dependence. Their use was associated with each type of CMD, although the highest rates were among those with depression (12.3%) and phobias (12.4%). [Tables 3.3, 3.4](#)

**Figure 3D: Type of psychotropic medication used, overall and in adults with a CIS-R score of 18 or more**

*Base: all adults*



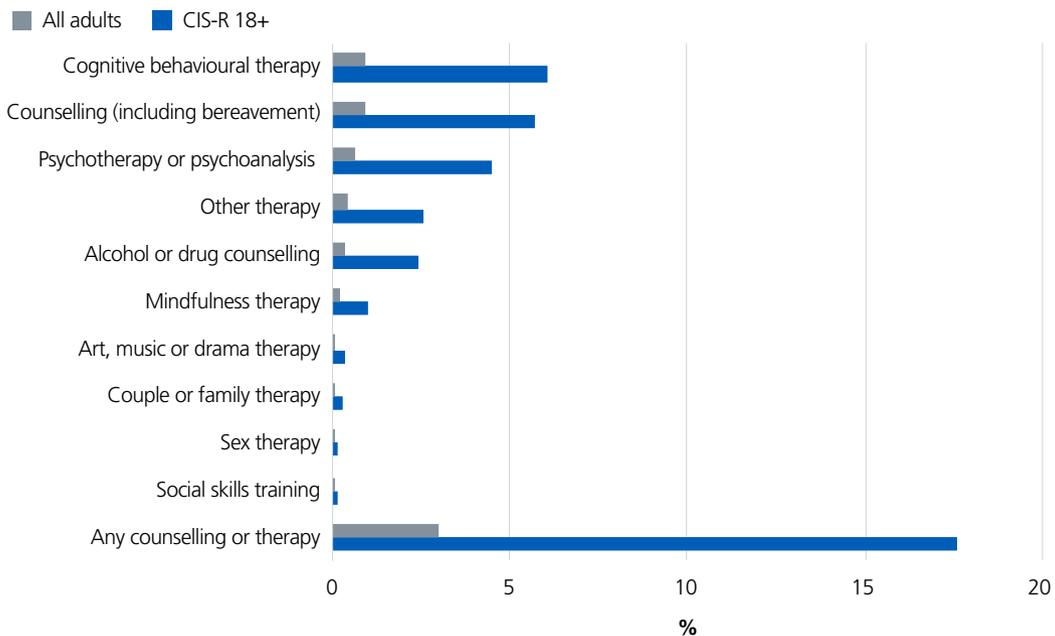
### Psychological therapy use, by CIS-R score

Overall, 3.0% of adults reported receiving psychological therapy around the time of the interview. Again, this was strongly associated with the severity of CMD symptoms. About one person in a hundred (0.9%) with few or no CMD symptoms (CIS-R score 0–5) reported psychological therapy, compared with one in six (17.6%) with the most severe symptoms (CIS-R score 18+).

Cognitive behavioural therapy (CBT) and counselling (including bereavement counselling) were the most common types of psychological therapy used, each reported by about 6% of people with a CIS-R score of 18 or more. Psychotherapy or psychoanalysis was mentioned by 0.7% of people, and by 4.5% of those with severe CMD symptoms (CIS-R 18+). [Table 3.5](#)

**Figure 3E: Type of psychological therapy used, overall and in adults with a CIS-R score of 18 or more**

Base: all adults



### Psychological therapy use, by type of CMD

Overall, 11.8% of people with CMD reported being in receipt of psychological therapy. This was reported most commonly by people with a phobia (25.4%), OCD (23.4%), and depression (22.9%). Rates were lower in people with CMD-NOS (5.6%), panic disorder (7.7%) and GAD (17.9%). [Table 3.6](#)

### Health service use, by CIS-R score

The use of health services for a mental or emotional problem included attending hospital in the last quarter, either as an inpatient or outpatient, for a mental health reason or speaking with a GP about a mental health problem (in the past year). Overall, 12.5% of adults reported discussing their mental health with a GP in the past year. All measures of health service use for a mental health reason were more common in those with the most severe symptoms. 56.2% of people with a CIS-R score of 18 or more had discussed their mental health with a GP in the past year, and 15.8% had done so in the last two weeks. 4.0% of people with a CIS-R score of 18 or more had been an outpatient, and 1.8% had been an inpatient, in the last quarter for a mental health reason. [Table 3.7](#)

### Health service use, by type of CMD

Nearly a half (44.1%) of people with a CMD reported discussing their mental health with a GP in the past year, compared with 6.0% of people without CMD. Service contact was most frequent in people with OCD (65.4%), phobia (65.4%), depression (66.1%) and GAD (54.8%). The same groups were also the most likely to have been hospital patients for mental health reasons. Rates of health service use for a mental health reason were lower in people with CMD-NOS (33.2%). [Table 3.8](#)

### Community and day care services use, by CIS-R score

The reported use of community and day care services ranged from 4.3% of people with few or no symptoms (CIS-R score 0–5), up to 27.8% of those with a CIS-R score of 18 or more. Among people scoring 18 or more on the CIS-R, usage rates were similar for seeing a psychiatrist (6.8%), a community psychiatric nurse (5.4%), an outreach/family support worker (5.4%), a social worker (5.2%), and self-help/support group (4.8%). [Table 3.9](#)

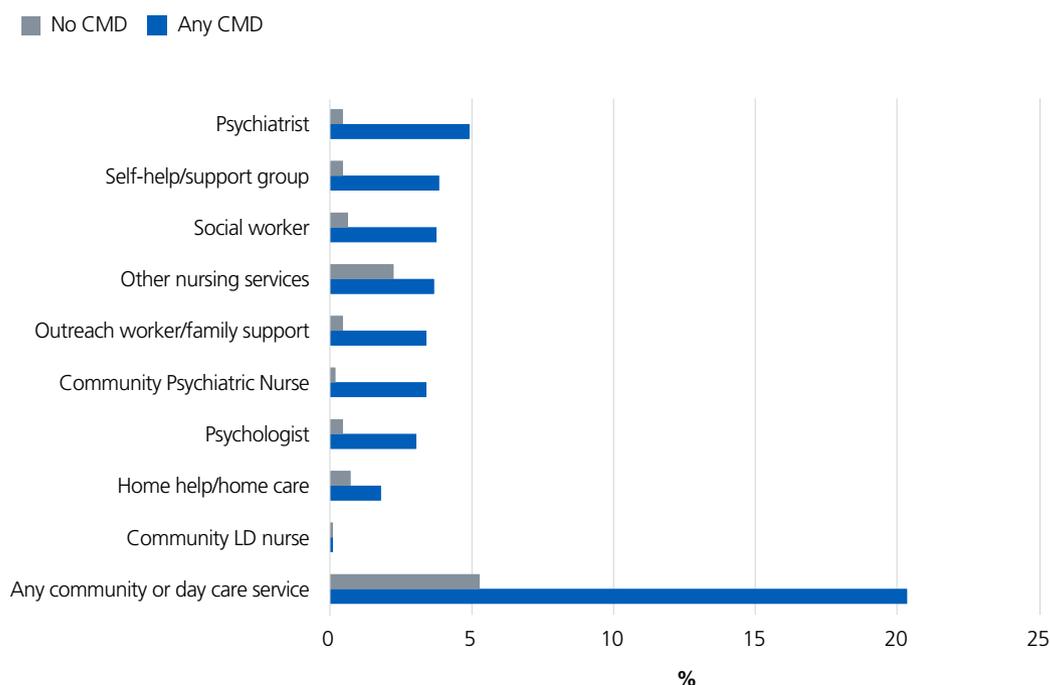
### Community and day care services use, by type of CMD

Consultation with a psychiatrist was reported most commonly by people with OCD (18.5%) or with phobia (14.3%). Other nursing services (not including the community psychiatric nurse (CPN) or community learning disability nurse) was the community and day care service used most by people without CMD (2.2%).

[Table 3.10](#)

### Figure 3F: Community and day care services used in past year in people with and without CMD

Base: all adults



### Trends in treatment in adults with CMD symptoms

Mental health treatment use was defined as reported receipt of psychotropic medication or psychological therapy at the time of interview. Trends are based on those aged 16–74, as the 2000 survey did not interview people aged 75 or more.

#### Any treatment: 2000, 2007 and 2014

The overall treatment rate in people aged 16–74 with CMD symptoms (CIS-R 12+) was relatively stable at around one in four between 2000 (23.1%) and 2007 (24.4%), and then increased sharply by 2014 to more than one in three (39.4%).

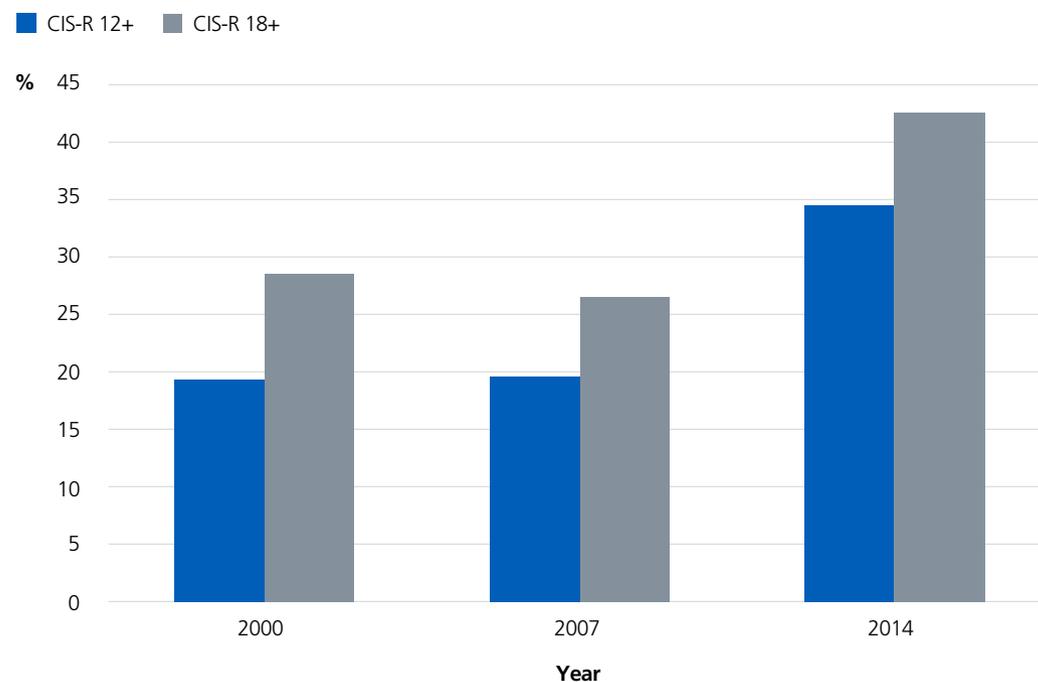
The same pattern was also evident among those with severe CMD symptoms (CIS-R 18+): one in three reported mental health treatment in 2000 (32.8%) and 2007 (32.4%), increasing to nearly a half in 2014 (48.8%). Both men and women were more likely to receive mental health treatment in 2014 than in 2007. [Table 3.11](#)

### Any psychotropic medication: 2000, 2007 and 2014

Much of this increase in treatment use is accounted for by a steep rise in reported use of psychotropic medication. One in five adults aged 16–74 with CMD symptoms (CIS-R 12+) reported psychotropic medication use in 2000 (19.3%) and 2007 (19.6%), compared with one in three in 2014 (34.5%). While methodological changes to the survey cannot be ruled out as explaining some of this increase, the trend is also corroborated by trends in prescribing data.<sup>7</sup> Higher rates of psychotropic prescribing may be linked to the increase also observed in people with CMD who discussed their mental health with a GP. The increased rate of medication was evident in both men and women, as well as in people with severe CMD symptoms (28.5%, 26.5% and 42.6% of 16–74 year olds with CIS-R score of 18+ reported psychotropic medication in 2000, 2007 and 2014 respectively). [Table 3.11](#)

**Figure 3G: Psychotropic medication use in adults with CIS-R score 12+ and 18+, 2000, 2007, 2014**

Base: all aged 16–74 with CIS-R score of 12+



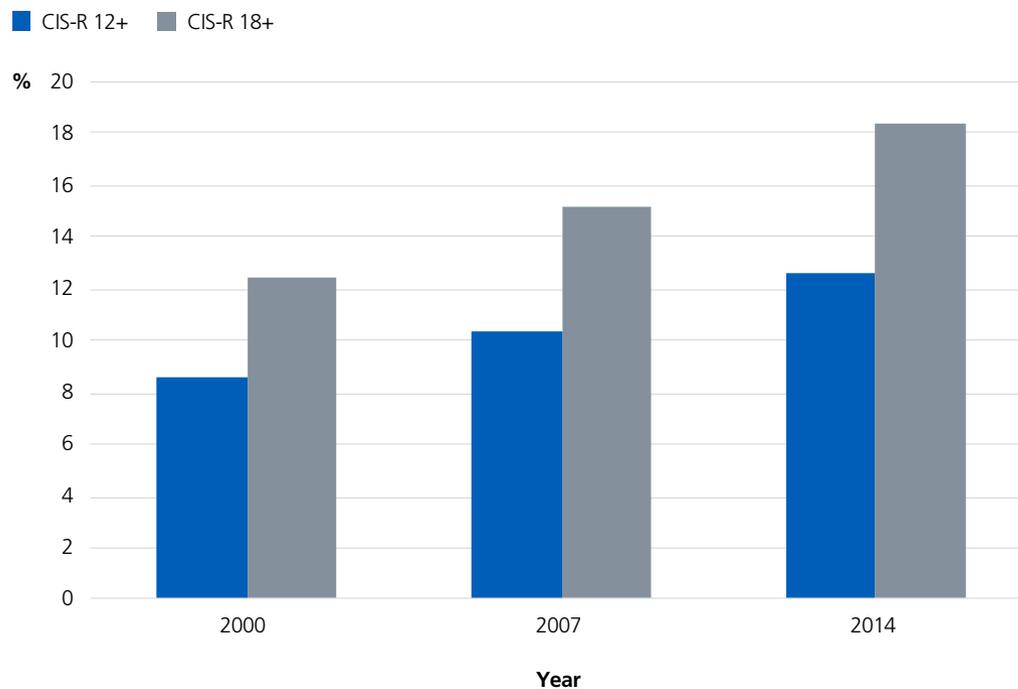
7 For example, the increase in prescribing presented here corresponds closely to trends identified in national antidepressant prescribing data for 1997 to 2012 (Spence et al. 2014).

### Any psychological therapy: 2000, 2007 and 2014

There were also increases in reported receipt of psychological therapy among adults with CMD symptoms. However, rather than the steep increase between 2007 and 2014 evident for medication, use of psychological therapies has risen more steadily since 2000 (12.5%, 15.2% and 18.4% of 16–74 year olds with CIS-R score of 18 or more reported use of psychological therapies in 2000, 2007 and 2014 respectively). [Table 3.11](#)

### Figure 3H: Psychological therapy use in adults with CIS-R score 12+ and 18+, 2000, 2007, 2014

Base: all aged 16–74 with CIS-R score of 12+



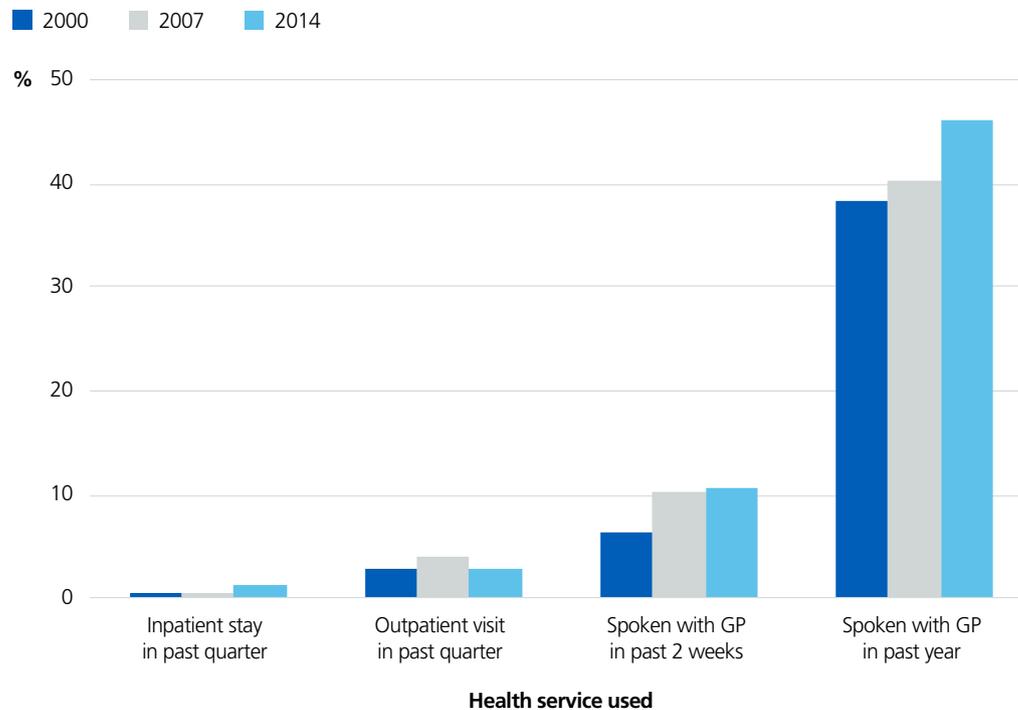
### Trends in health service use in adults with CMD symptoms

Among the types of health services used for a mental health reason covered by APMS, only use of primary care changed significantly over time. In 2000, 6.3% of 16–74 year olds with CMD symptoms reported discussing their mental health with a GP in the 2 weeks preceding interview. This increased to 10.1% in 2007 and stayed at this level in 2014 (10.6%). The proportion who had spoken to their

GP about their mental health in the past year increased from 38.2% in 2000 to 46.4% in 2014 (although in this case the increase occurred between 2007 and 2014). [Table 3.12](#)

**Figure 3I: Health services used for a mental health reason in people with a CIS-R score of 12 or more, 2000, 2007, 2014**

*Base: all aged 16–74 with CIS-R score of 12+*

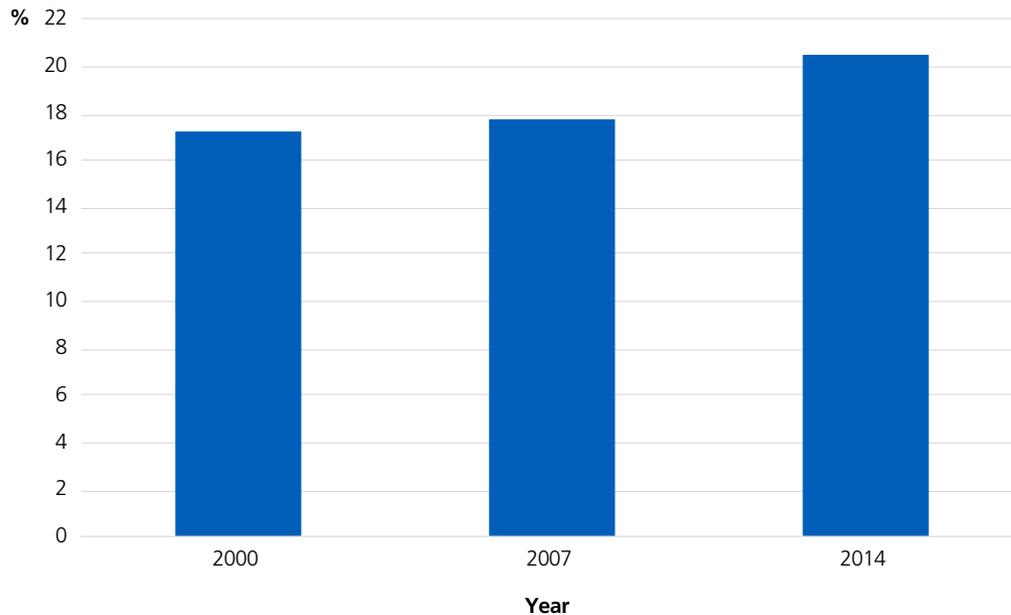


**Trends in community and day care services use in adults with CMD symptoms**

The proportion of 16–74 year olds with CMD symptoms (CIS-R score 12+) using any type of community or day care service appeared to increase (from 17.2% in 2000 to 20.6% in 2014), although this did not reach statistical significance ( $p=0.08$ ). There were no significant differences between men and women. [Table 3.13](#)

**Figure 3J: Community and day care service use in people with a CIS-R score of 12 or more, 2000, 2007, 2014**

*Base: all aged 16–74 with CIS-R score of 12+*



## 3.4 Results: Inequalities in use of mental health treatment

### Summary

In this section, groups in the population who were less likely to be in receipt of mental health treatment are identified. Treatment rates for different groups are presented first. However, without controlling for mental health symptoms, differences in treatment between groups might simply, and appropriately, reflect differences in level of need. Logistic regression therefore was also used to examine whether some groups were more likely than others to receive mental health treatment after controlling for CMD and other factors. For details of the methodology used see Section 3.2.

The results are presented in the form of ORs, which here indicate the relative odds of receiving mental health treatment for one group compared to another. They are compared to treatment rates for a given group, and with ORs coming from logistic

regression analysis that did not take account of other factors (Table 3.14, model 1). This helped us identify what factors explain the differences in rates of treatment between different groups.

We found that while CIS-R score was the strongest predictor of whether or not someone was in receipt of treatment, it did not fully explain the differences in treatment rates between groups (Table 3.14, model 2). When all factors were taken into account, the following remained significant predictors of treatment receipt (Table 3.14, model 4: final model):

- Sex
- Age group
- Ethnic group
- Employment status
- General health
- CIS-R score.

Treatment rates, and the unadjusted and adjusted regression analysis results, are discussed for each of these significant factors below.<sup>8</sup> The non-significant factors were retained in the final model and can be found in Table 3.15. [Tables 3.14, 3.15](#)

### **Variation in receipt of mental health treatment, by sex**

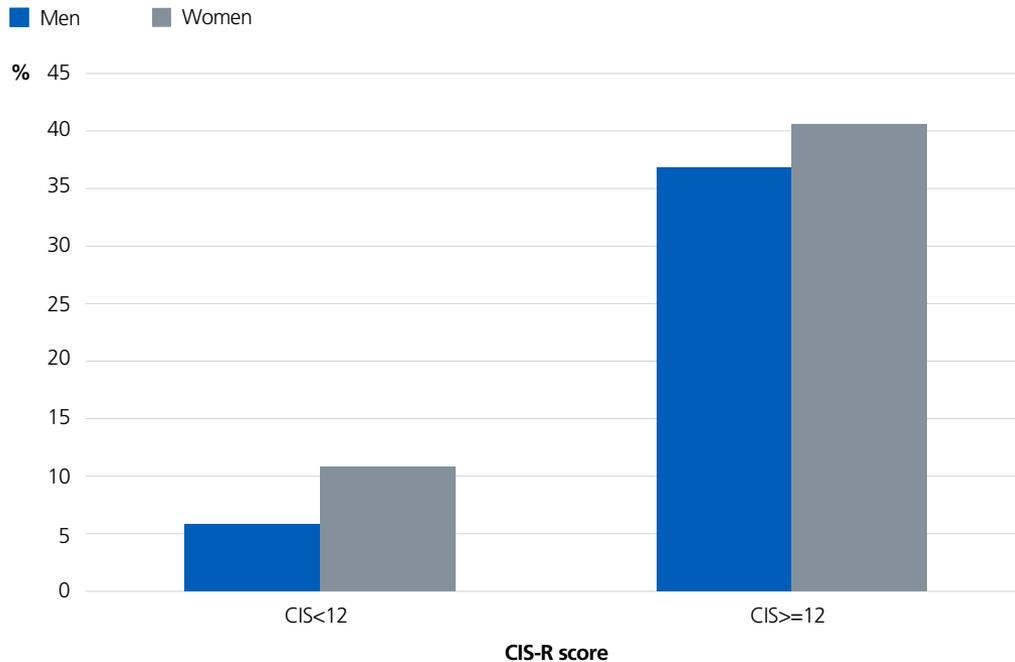
In unadjusted analysis, women in the population were more likely to report mental health treatment than men. This was true both for medication and for psychological therapy. Overall, 16.5% of women and 9.6% of men received treatment of some sort. The mean CIS-R score in women was 1.8 points higher than that in men. The treatment gap was, however, more evident among those with fewer CMD symptoms (CIS-R 11 or less). After controlling for differences in CIS-R, women remained significantly more likely to get treatment than men

<sup>8</sup> If the factor is significant (that is, if the overall p-value for a variable less than 0.05) we then looked at the p-values for each of the categories within the factor. If the p-value for a category is less than 0.05 then the category is significantly different from the reference category.

(OR 1.58, 95% CI 1.32 to 1.89, compared to unadjusted OR 1.80, 95% CI 1.53 to 2.12).<sup>9</sup> [Tables 3.14, 3.15, 3.16, 3.17](#)

### Figure 3K: Current use of mental health treatment, by sex and CIS-R score

Base: all adults



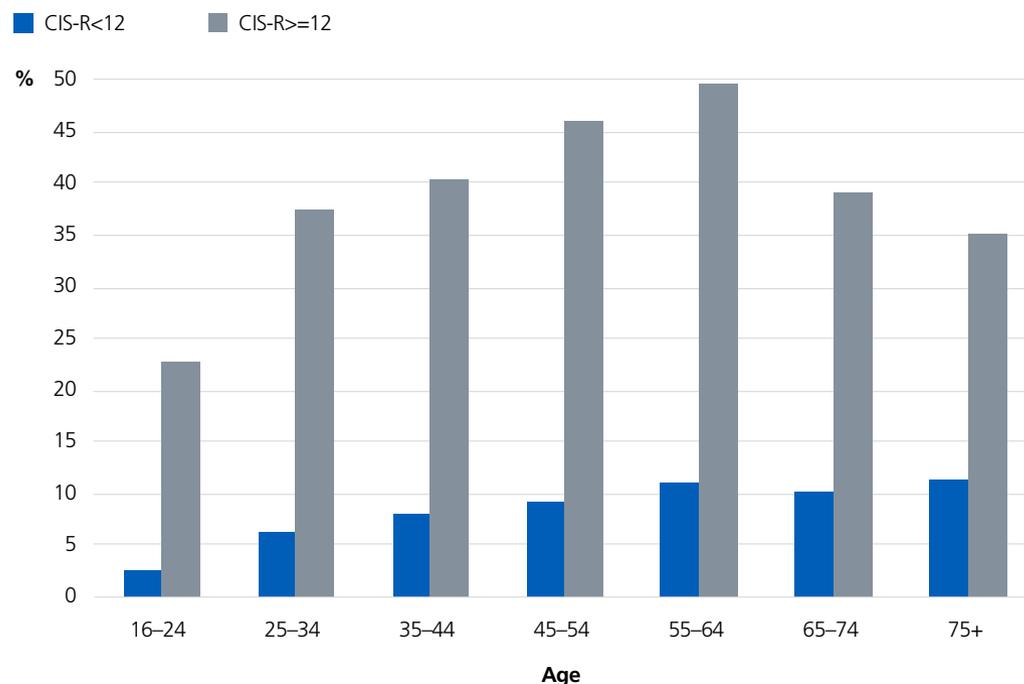
### Variation in receipt of mental health treatment, by age

In unadjusted analysis, receipt of mental health treatment varied with age. The proportion of people using treatment ranged from 6.1% of 16 to 24 year olds to 17.6% of those aged 55 to 64. The same pattern was evident both for people with and without CMD, and for men and women. [Tables 3.16, 3.17](#)

<sup>9</sup> Confidence intervals (CI) at the 95% level mean that if the same population is sampled on numerous occasions and interval estimates are made on each occasion, the resulting intervals would bracket the true population rate in approximately 95% of the cases. A CI includes information about the uncertainty associated with an estimate.

**Figure 3L: Current use of mental health treatment, by age and CIS-R score**

Base: all adults



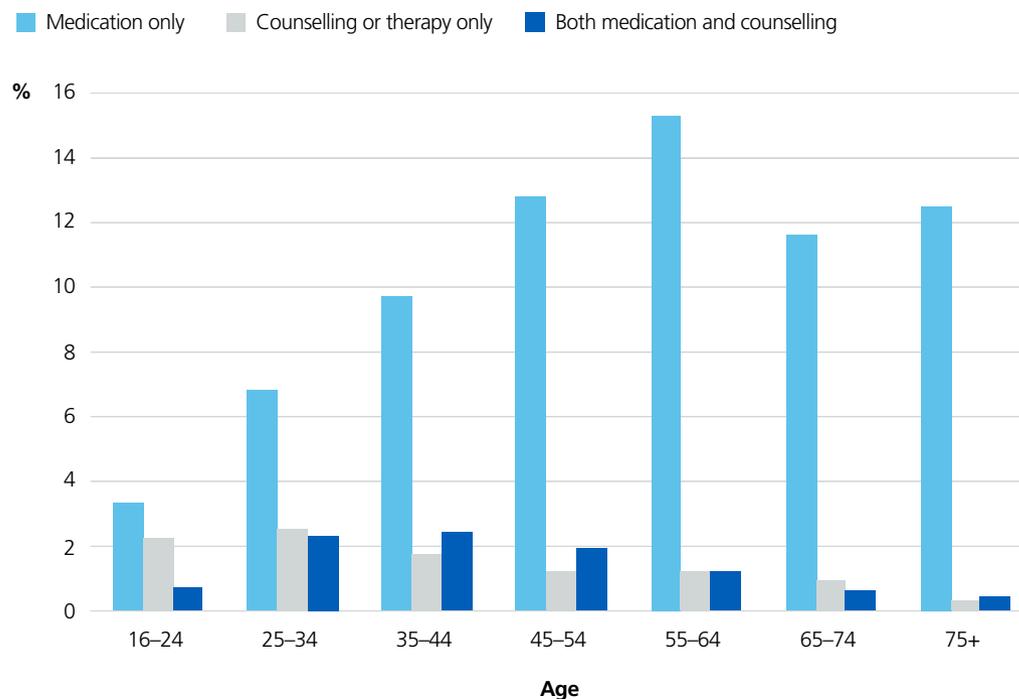
After controlling for CIS-R score, the youngest age group were even less likely to receive treatment than other age groups. Those aged 35 to 54 had the highest odds of receiving treatment (OR 3.11 for 35 to 44 year olds, OR 3.10 for 45 to 54 year olds). Except for those aged 75 or more, all age groups had significantly higher odds of receiving treatment than the youngest age-group (16 to 24 year olds).

**Table 3.14**

In terms of type of treatment, those aged 16–24 were the least likely to use psychotropic medication, while those aged 75 or more had the lowest rates of psychological therapy. Despite being more at risk due to medication side effects, those aged 75 or more were ten times more likely to receive medication than psychological therapy. [Table 3.16](#)

**Figure 3M: Types of mental health treatment currently used, by age**

Base: all adults



### Variation in receipt of mental health treatment, by ethnic group

Treatment rates varied by ethnic group, despite the fact that mean CIS-R score did not vary between ethnic groups. White British people were the ethnic group most likely to report receiving treatment; 14.5% reported this compared with around 7% of people in minority ethnic groups (including White non-British). Black adults had the lowest treatment rate (6.5%). [Table 3.18](#)

After further controlling for other factors in the final model, people in the Black/Black British group had the lowest odds of being in receipt of treatment (OR 0.27, compared with the White British group). Analysis by ethnic group should be treated with some caution due to small sample sizes, although these findings are consistent with results from APMS 2007 (Cooper et al. 2013). [Tables 3.14, 3.15](#)

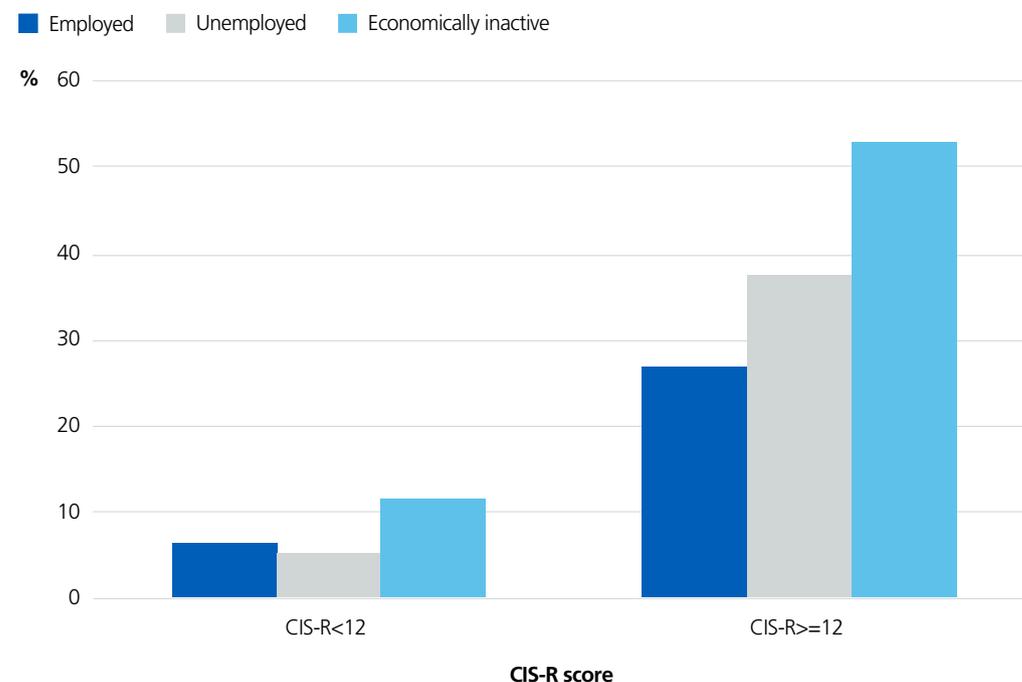
### Variation in receipt of mental health treatment, by employment status

Analysis that did not control for other factors shows that economically inactive people have higher rates of treatment: 19.5% compared with 13.3% of unemployed people and 9.1% of employed people. This pattern held true both for men and women.

After controlling for other factors, including CIS-R score, the difference in likelihood of treatment was no longer significant between unemployed and employed people. However, those who were economically inactive remained significantly more likely, with twice the odds of being in treatment than those who were employed (OR 2.04, 95% CI 1.64 to 2.54). [Tables 3.14, 3.19, 3.20](#)

**Figure 3N: Current use of treatment, by employment status and CIS-R score**

Base: all adults



With respect to type of treatment, among economically inactive people with CMD (who were the employment status group most likely to report treatment in general) combined medication and psychological therapy was not uncommon; 11.5% reported this compared with 5.6% of unemployed people and 3.8% of people in employment.

### Independent predictors of treatment receipt

In summary, as outlined above, after controlling for other factors the following were all associated with higher likelihood of mental health treatment use:

- **Female** (OR 1.58 compared with male, 95% CI 1.32 to 1.89)
- **White British** ethnicity as opposed to any other ethnic group (particularly Black, with OR 0.27 compared with White British, 95% CI 0.14 to 0.49)
- **25 to 74 years old**, especially 35 to 44 (OR 3.11 compared with 16–24 year olds, 95% CI 2.03 to 4.76) and 45–54 (OR 3.10, 95% CI 1.98 to 4.84)
- **Economically inactive** (OR 2.04 compared to employed, 95% CI 1.64 to 2.54)
- **Poor general health** (OR 3.28, 95% CI 2.59 to 4.15)
- **Poor mental health**, especially CIS-R score 18+ (OR 7.66 compared with CIS-R score 0–5, 95% CI 5.87 to 9.98). [Table 3.15](#)

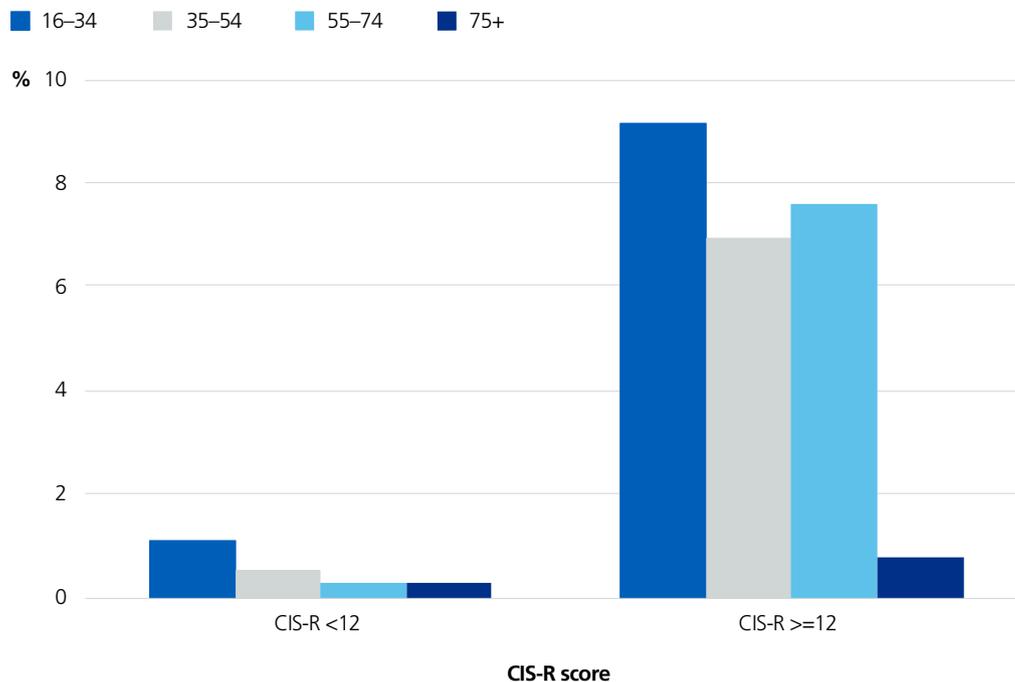
## 3.5 Results: Inequalities in unmet treatment requests

Overall, 1.7% of people reported having asked for, but not received, a particular mental health treatment in the past 12 months. This was strongly associated with CMD symptoms. One in ten (10.3%) adults with severe CMD symptoms (CIS-R 18+) had an unmet treatment request in the previous 12 months, compared with just 0.3% of people with very few or no CMD symptoms (CIS-R score 0–5). The people who had asked for but not received treatment were overwhelmingly those with symptoms of CMD, suggesting that such requests tended to be made by people who might have benefited from treatment. Almost half of people (46.8%) with an unmet treatment request were not receiving any other mental health treatment at the time of the interview. [Tables 3.22, 3.25](#)

Unmet treatment requests were most likely to be reported by people aged 16–34 (2.5%), and were hardly ever reported by those aged 75 and over (0.3%). A similar pattern by age was observed in people with CMD. [Table 3.23](#)

**Figure 30: Requested but not received treatment in the past 12 months, by age and CIS-R score**

Base: all adults

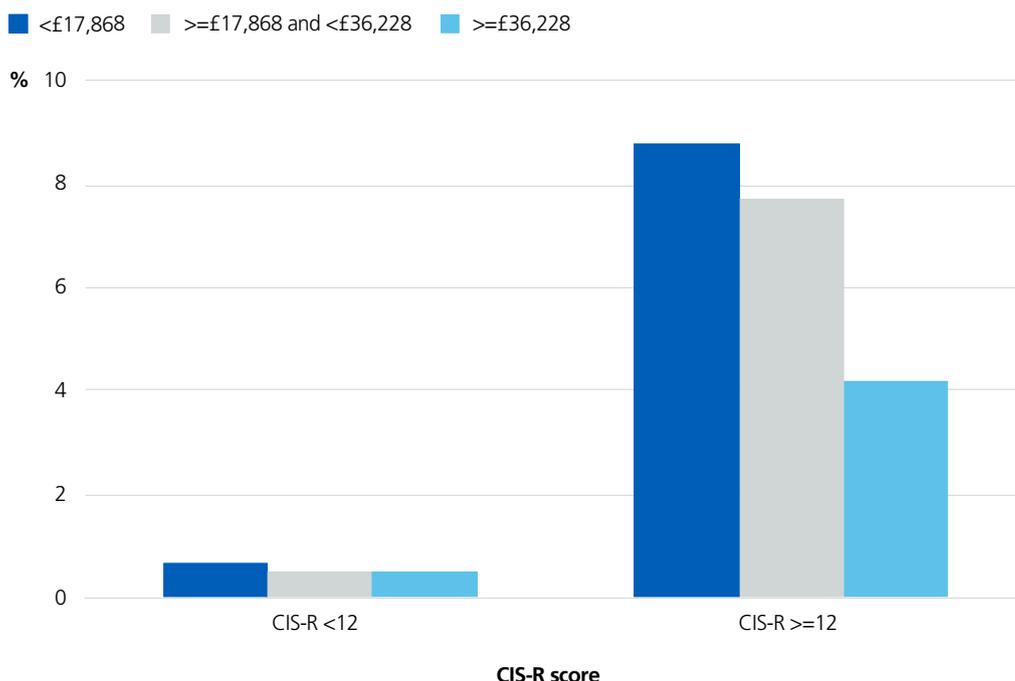


The proportion of people who reported an unmet treatment request varied by household income tertile. 8.8% of people with CMD living in households in the lowest income tertile reported requesting but not getting a particular mental health treatment in the past 12 months, compared with 4.2% of those with CMD living in the highest income households.<sup>10</sup> [Table 3.24](#)

<sup>10</sup> These results should be treated with caution due to the relatively small size of the CMD group and because the reported rates of unmet treatment requests are low.

**Figure 3P: Requested but not received particular treatment in the past 12 months, by equivalised income tertiles and CIS-R score**

*Base: adults providing information about income*



## 3.6 Discussion

This chapter presents information on trends and inequalities in treatment and service use, drawing on data collected in APMS 2000, 2007 and 2014. The survey series relies on self-report data and it should be noted that participants in such studies are not always aware themselves precisely what treatments and services they are using. Misclassifications, under-reporting, and even over-reporting are all possible. The checking of participants' medication packaging for drug names will have helped, but there was little that could be done to verify the classification of types of psychological therapy as health records were not checked. The survey series has also never sought to establish who provided each type of treatment or service, for example whether NHS or private.

It is also important to note that while there has been much consistency in how the data has been collected, a number of changes might have affected the trends presented. Surveys like APMS have to balance the consistent collection of information across the series, with ensuring that questions reflect current context and terminology. For example, between the 2007 and 2014 surveys several key psychotropic medications became available in generic form, while NICE guidelines to health professionals encouraged the prescription of generic medications (NICE 2016a). To reflect these changes in prescribing practice, the 2014 survey prioritised the listing of generic medication names, given these may become increasingly familiar to the public, and asked about a wider range of medications. More types of psychological therapy were also asked about, although the positioning of these questions at the start of the relevant section should have safeguarded against any impact on trend data.

These methodological limitations are important to highlight, as they may account for some of the steep increase in reported treatment rates between the 2007 and 2014 surveys. In 2007, one person in four with a CIS-R score of 12 or more reported receiving treatment. Seven years later this figure has risen to more than one in three. The increase is most pronounced for psychotropic medication, closely reflecting trends found in recent analyses of antidepressant prescribing data (Spence et al. 2014). This trend may indicate a material improvement in treatment access, but should also be considered in the context of NICE guidelines (2009/2011) not to offer antidepressants routinely for mild depression (NICE 2016b).

The increase in treatment was evident (among those with more severe CMD symptoms) for psychological therapies as well. This is also what might have been expected given the roll-out of the *Improving Access to Psychological Therapy* (IAPT) programme since the last survey took place. In addition it should be noted that lower intensity IAPT therapies such as computerised cognitive behaviour therapy and self-directed learning might not always have been captured by the survey questions.

While the figure of 'one-in-three' adults with CMD symptoms being in receipt of mental health treatment represents a major increase since the last survey, it is still

the case that a majority of people with symptoms are not receiving treatment. However, the threshold taken to indicate presence of CMD symptoms – a CIS-R score of 12 or more – might be considered quite low. Among those with more severe symptoms – the 8% of the population with a CIS-R score of 18 or more – closer to half reported receipt of mental health treatment of some kind.

This chapter has presented crucial evidence on inequalities in treatment access that remain after controlling for differences in levels of mental illness between groups. Surveys are ideally placed to examine treatment gaps, as data are collected both from people in treatment and from those who are not, and assessment tools enable undiagnosed conditions to be identified.

While demographic inequalities were sharply evident, socioeconomic inequalities were much less so. No significant associations were found between treatment rates and area level deprivation after controlling for level of symptoms, nor were there associations with several measures of material deprivation. There were indications that people with CMD living in lower income households were more likely to have unmet need in terms of requesting but not receiving a particular psychiatric treatment. But there were also indications that people with CMD who were employed, especially men, may struggle to access treatment, a finding with particular relevance for policy around the accessibility of services. Overall, there was relatively little evidence that treatment use was determined by socioeconomic factors. The APMS survey did, however, exclude some of the most vulnerable by drawing its participants from those living in private households, excluding, for example, people who are homeless.

The most pronounced inequalities in use of treatment related to age, sex and ethnic group. People with CMD who were Black, Asian, non-British White, or of mixed or other ethnicity were less likely to obtain treatment than those in the white British group. In terms of age, those in midlife had three times the odds of treatment use compared with the youngest. Younger people with CMD were less likely to get psychotropic medication than other age groups and were also the most likely to have their treatment requests unmet. Older people with CMD had the lowest rates of psychological therapy, but also the lowest rates of unmet treatment requests – suggesting that they may not be asking for what they need, or may not even be aware of what is available. It may also be the case that men with CMD are less

likely than women to be using treatment, in part due to longstanding stigma or reluctance to talk about mental health or to seek help from health professionals.

It is very striking how the proportion of people who had discussed their mental health with a GP increased since the 2007 survey. Increases over this same time frame in psychotropic medication prescribing may in part be explained by this change in the nature and extent of GP contact. Alongside this, Chapter 2 highlighted that there has been an increase in the prevalence of CMD in the population (specifically in women). It is possible that as the population has become more unwell, and as those who are unwell become more likely to be treated, much of the additional burden is falling on primary rather than secondary care. Resource allocations for primary care may need to reflect these changes in demand.

## 3.7 Tables

### Prevalence of and trends in treatment and service use

- 3.1 Treatment currently received for a mental or emotional problem, by severity of common mental disorder (CMD) symptoms
- 3.2 Treatment currently received for a mental or emotional problem, by CMD in past week
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- 3.4 Types of psychotropic medication currently taken, by CMD in past week
- 3.5 Current counselling or therapy for a mental or emotional problem, by severity of CMD symptoms
- 3.6 Current counselling or therapy for a mental or emotional problem, by CMD in past week
- 3.7 Health care services used for a mental or emotional problem, by severity of CMD symptoms
- 3.8 Health care services used for a mental or emotional problem, by CMD in past week

- 3.9 Community and day care services used in past year, by severity of CMD symptoms
- 3.10 Community and day care services used in past year, by CMD in past week
- 3.11 Treatment for mental or emotional problem in 2000, 2007 and 2014, among people with CMD symptoms (CIS-R 12+ and 18+)
- 3.12 Health care services used for mental or emotional problem in 2000, 2007 and 2014, among people with CMD symptoms (CIS-R 12+)
- 3.13 Community and day care services used in 2000, 2007 and 2014, among people with CMD symptoms (CIS-R 12+)

### **Inequalities in use of mental health treatment**

- 3.14 Logistic regression models identifying factors that predict whether or not someone is in receipt of mental health treatment
- 3.15 Results of final multiple logistic regression model (controlling for all factors) predicting receipt of treatment
- 3.16 Treatment for mental or emotional problem, by age and sex
- 3.17 Treatment for mental or emotional problem, by age, sex and CMD symptoms
- 3.18 Treatment for mental or emotional problem, by ethnic group
- 3.19 Treatment for mental or emotional problem, by employment status, sex and severity of mental health
- 3.20 Treatment for mental or emotional problem, by employment status and age
- 3.21 Treatment for mental or emotional problem, by equivalised household income tertiles and severity of CMD symptoms

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- 3.22 Requested but not received a particular mental health treatment in the past 12 months, by severity of CMD symptoms and sex

- 3.23 Requested but not received a particular mental health treatment in the past 12 months, by age, by severity of CMD symptoms
- 3.24 Requested but not received a particular mental health treatment in the past 12 months, by equivalised household income tertiles and severity of CMD symptoms
- 3.25 Requested but not received a particular mental health treatment in past 12 months, by current receipt of any mental health treatment and severity of CMD symptoms

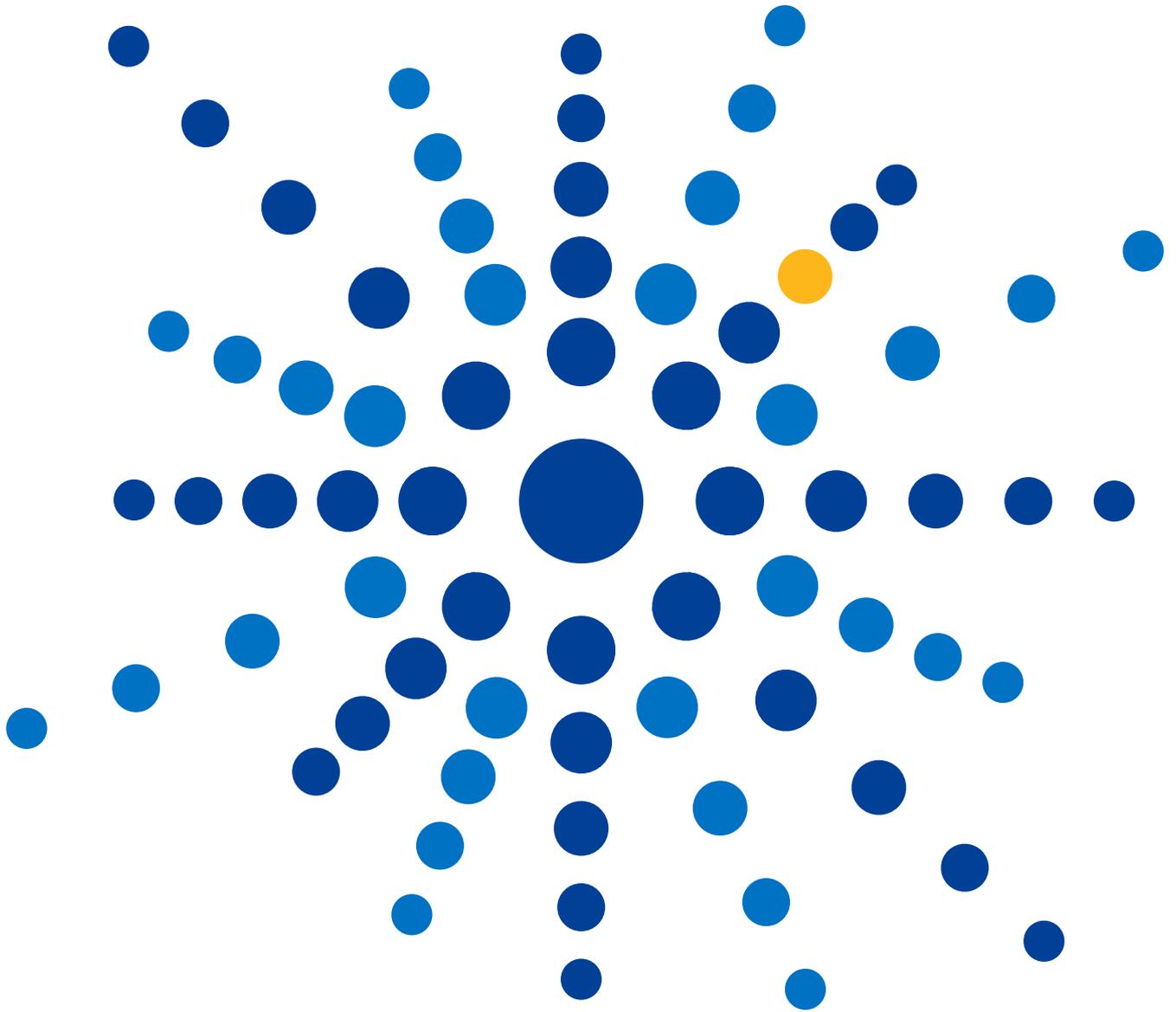
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# Posttraumatic stress disorder

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## Summary

- This chapter presents findings about the extent of trauma and of screening positive for posttraumatic stress disorder (PTSD) in the general population.
- Traumatic events were defined as experiences that either put a person – or someone close to them – at risk of serious harm or death, like a major natural disaster, a serious car accident, being raped, or a loved one dying by murder or suicide. About a third (31.4%) of adults in England report having experienced at least one traumatic event.
- Individuals who experience such trauma may go on to develop PTSD. PTSD is a severe and disabling condition, characterised by flashbacks, nightmares, avoidance, numbing and hypervigilance. While effective treatments exist, many with the condition delay seeking help or are not identified by health services.
- Participants completed the 17-item PTSD Checklist – Civilian (PCL-C) in the self-completion part of the interview. Those with a score of 50 or more and meeting Diagnostic Statistical Manual (DSM) criteria for PTSD were identified as screening positive for PTSD. A positive screen did not mean that a disorder was necessarily present, only that there were sufficient symptoms to warrant further investigation.
- Overall, about one participant in twenty (4.4%) screened positive for PTSD in the past month, with similar rates for men and women. Among women, the likelihood of screening positive for PTSD was particularly high among 16–24 year olds (12.6%) and then declined sharply with age. In men, the rate remained quite stable between the ages of 16 and 64, only declining in much later life.
- Screening positive for PTSD was higher in households where one person aged 60 or under lived alone, among those not in work (either unemployed or economically inactive), and among benefit recipients (especially those in receipt of an out-of-work benefit related to disability).
- Overall, 3.3% of people believed that they have had PTSD, and 1.9% had also been diagnosed by a professional. Of those screening positive for PTSD, one in eight (12.8%) had already been diagnosed by a health professional.

- About half (50.9%) of people screening positive for PTSD were in receipt of mental health treatment: 43.6% were taking medication and 24.0% were having psychological therapy. People screening positive for PTSD were far more likely than the rest of the population to have requested – but not been given – particular treatment (16.1% compared with 1.0%).
- People screening positive for PTSD were about six times more likely to have recently used health care for a mental or emotional problem, than those who did not screen positive (60.5% compared with 10.4%). However, by no means all had done so: four in ten adults who screened positive for PTSD in the past month had not spoken with a GP about a mental or emotional problem in the last year (39.8%).

## 4.1 Introduction

During their lifetime many people will experience traumatic events, for example, road traffic accidents, assaults or natural disasters. During and immediately after such trauma, they will commonly feel distressed, experiencing (for example) symptoms of insomnia and anxiety. These symptoms usually dissipate with time. Although this is the usual response, symptoms may sometimes persist, and some individuals go on to develop posttraumatic stress disorder (PTSD) (RCPsych 2013). This can be a severe and disabling condition, characterised by flashbacks, nightmares, avoidance, numbing and hypervigilance. PTSD is often comorbid with other mental health disorders, including depression (Rytwinski et al. 2013) and substance misuse (Debdell et al. 2014).

Effective treatments for PTSD do exist (National Institute for Health and Clinical Excellence, NICE 2005). However, due to the stigma associated with help seeking and delayed recognition of symptoms, treatment is often delayed for many years, reducing its effectiveness. NICE (2005) guidelines indicate the types of treatment suitable for those with established difficulties due to PTSD. These guidelines remind us that ‘a number of sufferers with PTSD may recover with no or limited interventions. However, without effective treatment, many people may develop chronic problems over many years.’ Recommended treatments include psychological interventions, whereas there is limited evidence for the use of medication.

PTSD was first included in the third edition of the Diagnostic and Statistical Manual for Mental Disorders (DSM) (APA 1980). However, it had been known for some time previously that trauma was associated with mental health consequences, and terms like shell shock, nervous shock and combat fatigue were in common usage. The inclusion of PTSD in DSM-III was mainly because the mental health consequences seen in US Vietnam veterans had encouraged a more thorough examination of the disorder. PTSD was defined as a stress disorder consequent on many different types of stressors occurring in both combat and civilian contexts. This traumatic event must be sufficiently severe to make individuals fear for their own – or their loved ones' – lives or safety.

Traumatic events are not randomly distributed among the general population. Certain groups or individuals are at higher risk of exposure (Breslau et al. 2008), including military personnel, emergency service workers, refugees and those living in inner city (or deprived) areas. However, not everyone exposed to trauma develops PTSD. A number of risk and protective factors have been reported, such as sex, age, ethnicity and income (Brewin et al. 2000). In addition, research has shown that subjective appraisal of threat is more important for the development and maintenance of PTSD than objective trauma severity (Elhers and Clarke 2000).

The prevalence of PTSD in the general community has been shown to vary considerably across (and within) nations (Kessler et al. 2005; Darves-Bornoz et al. 2008; Van Ameringen et al. 2008; Frissa et al. 2013; Dorrington et al. 2014). Some of this variation is likely to be due to the method of data collection (for example, face-to-face interviews versus self-reported questionnaire measures), the instrument used to measure PTSD (clinician administered tools versus screening questionnaires), and underlying cultural differences.

Epidemiological studies of PTSD typically rely on a subjective assessment by the participant as to whether a particular event was sufficiently severe to justify being a trauma and self-reported assessment of their symptoms – raising the possibility of reporting bias (Roemer et al. 1998). In the Adult Psychiatric Morbidity Survey (APMS) 2014, questions have been asked of everyone irrespective of whether or not they report trauma.

In this chapter, the prevalence of exposure to trauma and screening positive for PTSD are reported, overall and in relation to a variety of socio-demographic factors. Levels of service use and treatment for a mental health reason are also presented. Comorbidity with PTSD is examined in Chapter 13.

## 4.2 Definition and assessment

### PTSD

Individuals responding to a traumatic event may develop PTSD. This involves having experienced, witnessed, or been confronted with an event or events involving actual or threatened death or serious injury, or a threat to the physical integrity of self or others. Moreover, their response must have involved intense fear, helplessness, or horror. Symptoms can develop within weeks but according to the 10th Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) (WHO 2010) onset is almost always within six months. It may take months or even years for individuals to present to services. Delayed presentation is common but there is also some evidence that PTSD may have a delayed onset (Andrews et al. 2007).

According to DSM-IV (APA 1994) the symptoms are grouped into three clusters<sup>1</sup>:

- Re-experiencing (including recurrent distressing images, thoughts, dreams or perceptions of the event)
- Avoidance and numbing (avoiding thoughts, feelings, activities or conversations associated with the trauma; diminished interest or participation in activities, feelings of detachment or estrangement from others)
- Hyperarousal (including difficulty falling or staying asleep, irritability or outbursts of anger, difficulty concentrating, hypervigilance and an exaggerated startle response).

<sup>1</sup> DSM5 identifies four symptom clusters to PTSD, the PTSD Checklist draws on the original three clusters ([www.dsm5.org/Documents/PTSD%20Fact%20Sheet.pdf](http://www.dsm5.org/Documents/PTSD%20Fact%20Sheet.pdf)).

For a diagnosis of PTSD, symptoms must have been evident for more than one month and must cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

### PCL-C

The PTSD Checklist (PCL) is a 17-item self-report measure reflecting DSM-IV symptoms of PTSD (Blanchard et al. 1996). The PCL has a variety of clinical and research purposes, including:

- Testing individuals for possible PTSD
- Aiding in diagnostic assessment of PTSD
- Monitoring change in PTSD symptoms.

The PCL-C (civilian) asks about symptoms in relation to generic “stressful experiences” and can be used with any population. This version simplifies assessment based on multiple traumas because symptoms are not attributed to a specific event.

The response options are: not at all (scored 1), a little bit (2), moderately (3), quite a bit (4), and extremely (5). A total symptom severity score (range = 17–85) can be obtained by summing the scores from each of the 17 items listed below. There are a number of ways of scoring the PCL. For this report, a positive screen was defined as a score of 50 or more, together with endorsement of the DSM-IV criteria, identified as positive responses to at least one B item (questions 1–5 on re-experiencing symptoms), three C items (questions 6–12 on avoidance and numbing), and two D items (questions 13–17 on hyperarousal symptoms). Where a participant missed two or more items, for example due to responding ‘don’t know’ or refusing to answer, no score was derived. This only applied in 15 cases.

The PCL-C is referred to in this chapter as a screen for reasons of convention although it is not currently recommended as part of an official screening programme in England. A positive screen for PTSD does not mean that someone necessarily has the disorder; instead it indicates that someone has sufficient symptoms to warrant a clinical assessment.

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## The PTSD Checklist Civilian version (PCL-C)

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Below is a list of problems and complaints that individuals sometimes have in response to stressful life experiences. Please read each one carefully, and indicate how much you have been bothered by that problem in the last month:

1. Repeated, disturbing memories, thoughts, or images of a stressful experience from the past
  2. Repeated, disturbing dreams of a stressful experience from the past
  3. Suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it)
  4. Feeling very upset when something reminded you of a stressful experience from the past
  5. Having physical reactions (e.g., heart pounding, trouble breathing, or sweating) when something reminded you of a stressful experience from the past
  6. Avoid thinking about or talking about a stressful experience from the past or avoid having feelings related to it
  7. Avoid activities or situations because they remind you of a stressful experience from the past
  8. Trouble remembering important parts of a stressful experience from the past
  9. Loss of interest in things that you used to enjoy
  10. Feeling distant or cut off from other people
  11. Feeling emotionally numb or being unable to have loving feelings for those close to you
  12. Feeling as if your future will somehow be cut short
  13. Trouble falling or staying asleep
  14. Feeling irritable or having angry outbursts
  15. Having difficulty concentrating
  16. Being "super alert" or watchful on guard
  17. Feeling jumpy or easily startled
-

## Exposure to trauma

Irrespective of how participants scored on the PCL-C, all were asked after completing the PCL-C whether a traumatic event or experience had happened to them at any time in their life. To clarify the nature and severity of traumatic stressor that should be included, the following was stated:

'The term traumatic event or experience means something like a major natural disaster, a serious automobile accident, being raped, seeing someone killed or seriously injured, having a loved one die by murder or suicide, or any other experience that either put you or someone close to you at risk of serious harm or death.'

Participants were not asked to specify the nature or number of events experienced.

## 4.3 Results

### Prevalence of trauma, by age and sex

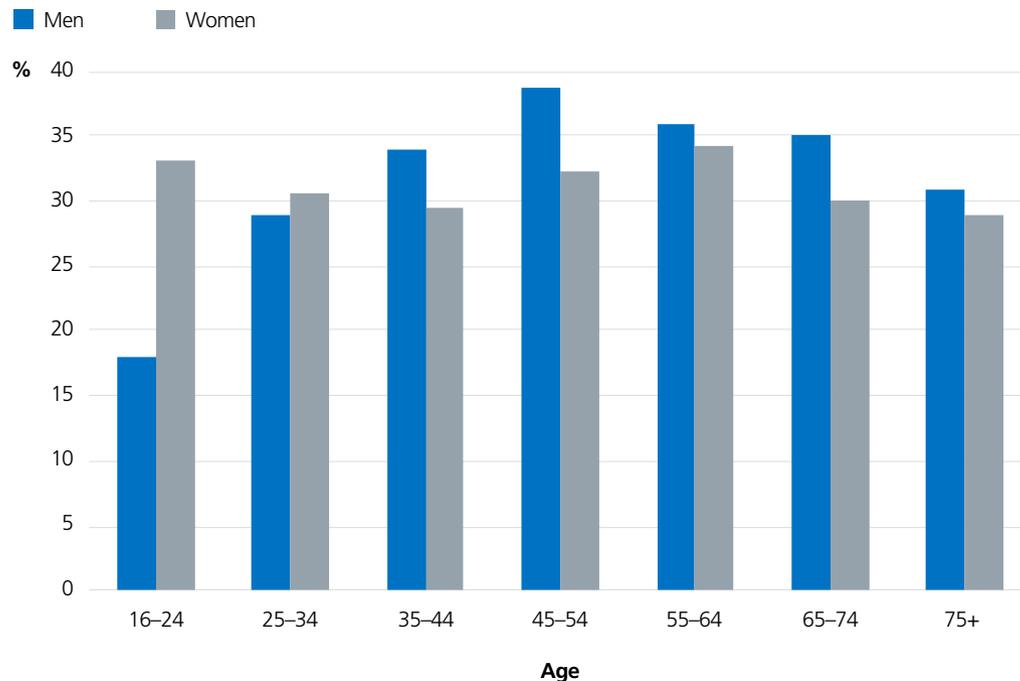
#### *Lifetime experience of trauma*

In 2014, all participants were asked whether they had experienced a traumatic event. About a third (31.4%) reported having experienced at least one major trauma in their lifetime. If all adults in the population had been asked this, it is likely (95% confidence interval) that the proportion to report having experienced a trauma would be between 30.0% and 32.7%. Rates were very similar for men and women (31.5% and 31.2% respectively). However, there was a statistically significant interaction between the effects of sex and current age on reporting of traumatic experience. While reporting of lifetime experience of trauma did not vary with age among women, reporting of lifetime traumatic experience among men peaked in midlife (45 to 54 year olds) and was lowest among 16 to 24 year olds.

#### **Table 4.1**

## Figure 4A: Whether experienced trauma, by age and sex

Base: all adults



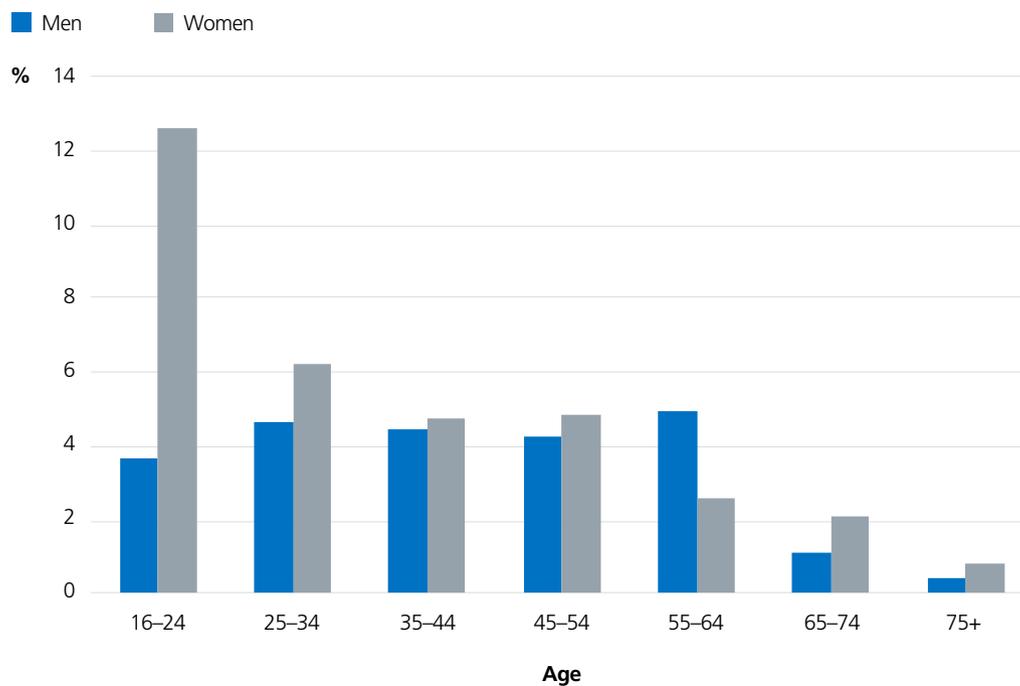
### Screening positive for PTSD in past month, by age and sex

Rates of PTSD were considerably lower than the experience of traumatic events. Overall, 4.4% of adults screened positive for PTSD in the last month (95% confidence interval: 3.8% to 5.0%).

Screening positive for PTSD did not vary by sex, but did vary with age, with younger people more likely to do so than older people (8.0% of 16 to 24 year olds screened positive for PTSD in the last month compared with 0.6% of those aged 75 and over). However, the pattern of association by age was different for men and women. Among women, the likelihood of screening positive for PTSD was particularly high among 16–24 year olds (12.6%), and then declined sharply with age (to 0.8% of women aged 75 and over). In men, the rate remained quite stable between the ages of 16 and 64 (between 3.6% and 5.0%), only declining in later life (to 1.1% of those aged 65–74 and 0.4% of those aged 75 and over). [Table 4.1](#)

**Figure 4B: Screen positive for PTSD, by age and sex**

Base: all adults



### Experience of PTSD symptoms, by age and sex

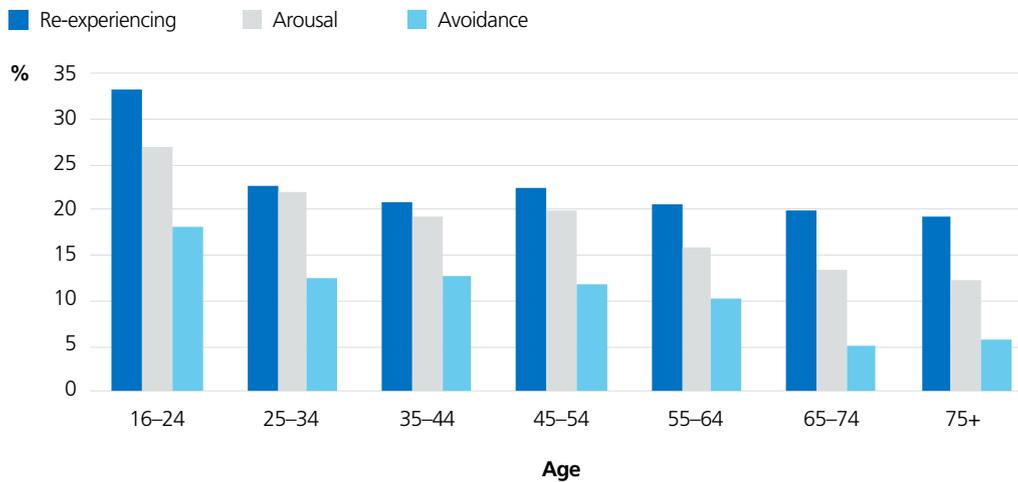
All adults were asked whether they had experienced a number of symptoms relating to PTSD in the last month. The most common symptom was re-experiencing, mentioned by around one in five adults (22.9%). A similar proportion (19.1%) had experienced arousal, while fewer mentioned avoidance (11.3%).

Women were more likely than men to report the re-experiencing symptom in the last month (25.5% of women, compared with 20.2% of men). There was no difference by sex in the presence of the arousal and avoidance symptoms.

The prevalence of individual PTSD symptoms varied significantly by age. For all symptoms, prevalence was highest in younger people and decreased with age. For example, the re-experiencing symptom was present in 33.3% of 16 to 24 year olds, and decreased with age to 19.2% of those aged 75 and over. [Table 4.1](#)

**Figure 4C: Experience of PTSD symptoms, by age**

Base: all adults



### Variation in screening positive for PTSD by other characteristics

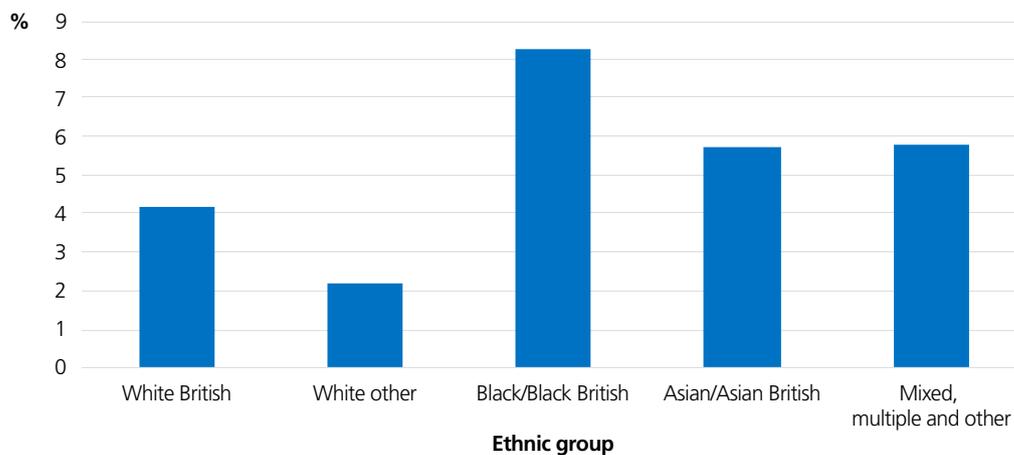
#### Ethnic group

The age-standardised rate of trauma in adulthood did not vary significantly by ethnic group.

Variation by ethnic group in the rate of screening positive for PTSD, however, did approach significance (95% confidence). 8.3% of Black/Black British adults screened positive for PTSD (age-standardised) compared with 4.2% of their White British counterparts. [Table 4.2](#)

**Figure 4D: Screen positive for PTSD, by ethnic group (age-standardised)**

Base: all adults



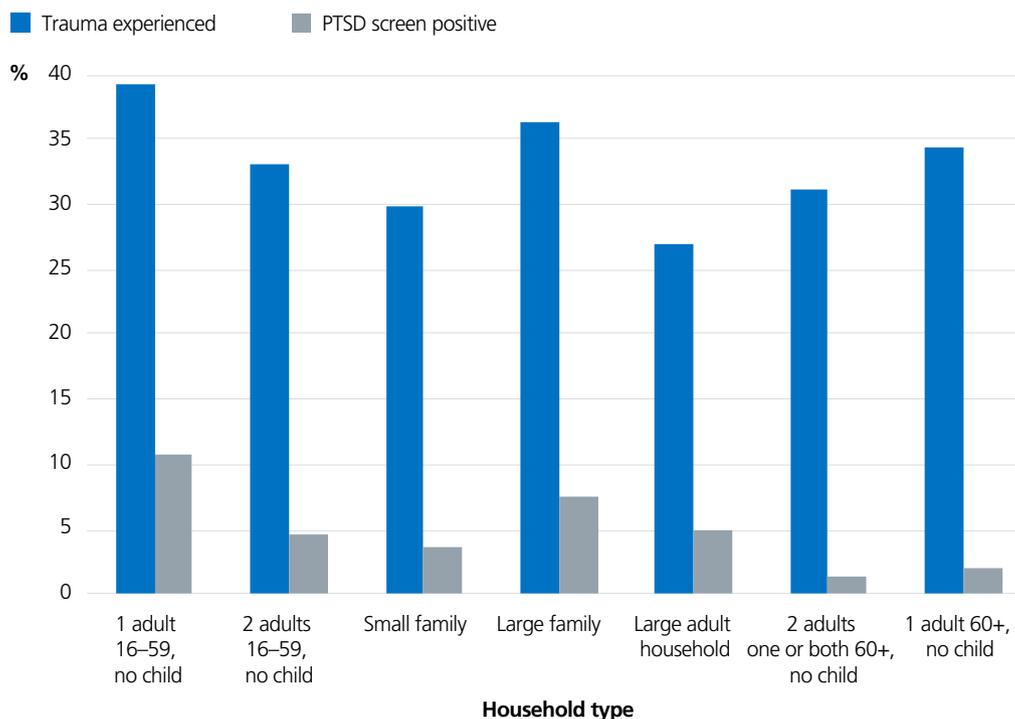
### Household type

Traumatic experience was associated with living in certain types of household, being highest in households containing a lone adult under the age of 60 with no children (39.2%). The experience of trauma was lowest in people living in large adult households, where 27.0% reported a major traumatic event.

This pattern was similar to the distribution of people screening positive for PTSD, with those living in households containing a single adult under the age of 60 being the most likely to screen positive for PTSD (10.8%). Analysis by household type could not be age-standardised. For this reason, the younger age profile of those living in households of one adult under the age of 60 may account for some of this association. [Table 4.3](#)

**Figure 4E: Experience of trauma and screen positive for PTSD, by household type**

Base: all adults

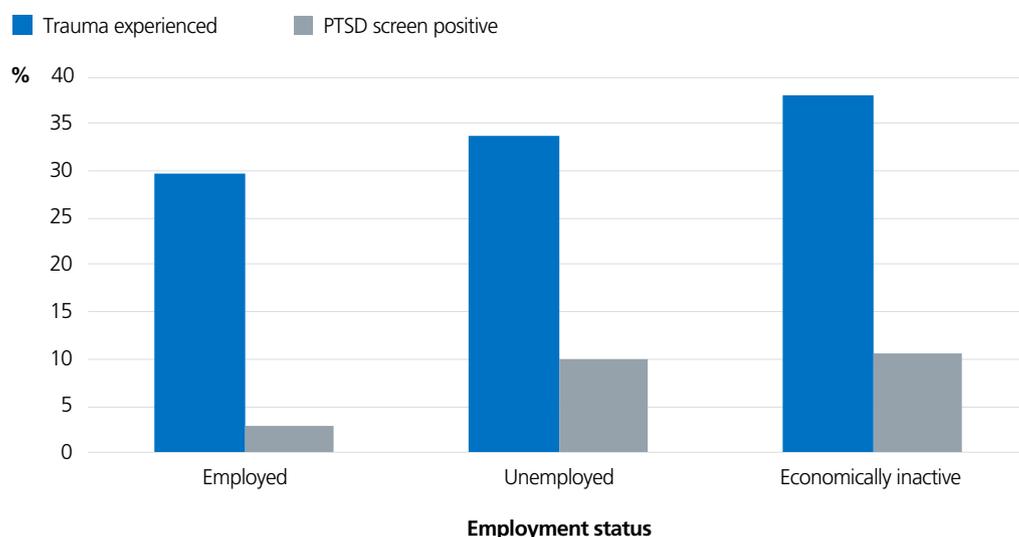


### Employment status

Employment status was associated with both experience of trauma and likelihood of screening positive for PTSD. Of economically inactive people of working age, almost four in ten adults (38.2%) reported a major trauma at some point in their lives, compared to three in ten (29.7%) of those in employment. Similarly, economically inactive people were more likely to screen positive for PTSD (10.5%) than their employed counterparts (2.7%). [Table 4.4](#)

**Figure 4F: Experience of trauma and screen positive for PTSD, by employment status (age-standardised)**

Base: adults aged 16–64



### Benefit status

Benefit status was looked at in relation to three groupings: being in receipt of any out-of-work benefit (including Jobseeker's Allowance and Employment and Support Allowance (ESA)), receiving an out-of-work benefit specifically related to disability (almost always ESA), and living in a household that received housing benefit support with rent. These categories are further described in the Glossary.

Screening positive for PTSD was higher in those who received benefits than in those who did not. The strength of association was greatest among those receiving ESA (the out-of-work benefit related to disability). One in three people in this group (25.2% of men and 45.9% of women) screened positive for PTSD, compared with

one in twenty (3.6% of men and 4.9% of women) not receiving an out-of-work disability benefit. Note that some of these bases sizes were small, so the findings should be treated with caution. [Table 4.5](#)

### Region

There were no regional differences in levels of trauma exposure or screening positive for PTSD. Variation in trauma exposure, however, did approach significance (95% confidence) : with people living in the West Midlands the most likely to report trauma (34.3%), and those living in Yorkshire and the Humber least (25.6%). [Table 4.6](#)

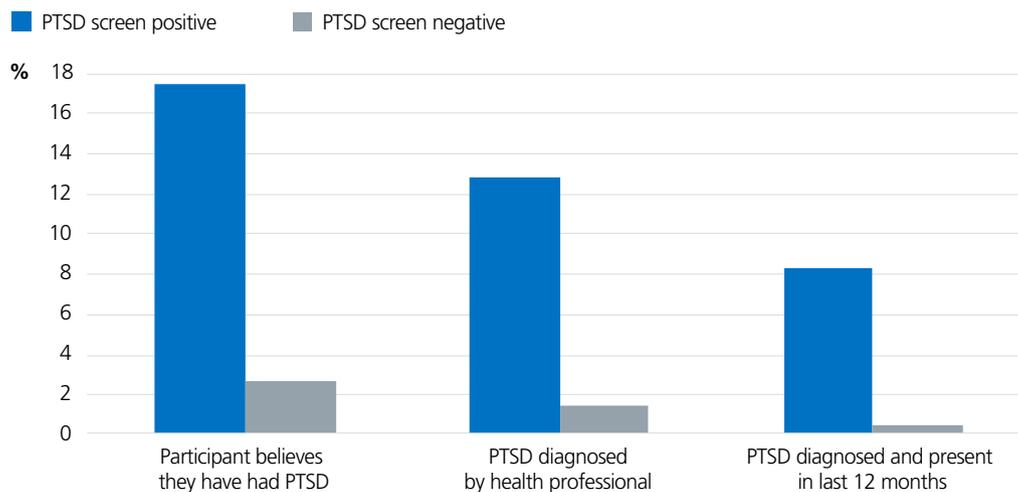
### Self diagnosis and professional diagnosis

Participants were asked whether they thought they had ever had PTSD and, if so, whether this had been diagnosed by a professional and if they felt that the disorder had been present in the last 12 months.

Overall, 3.3% of adults believed that they have had PTSD at some point and 1.9% had also had this diagnosed by a professional. Of those who screened positive for PTSD on the PCL-C, about one in six (17.4%) believed that they had had PTSD, and one in eight (12.8%) had been diagnosed with PTSD by a professional. 8.2% of adults who screened positive for PTSD had a diagnosis and experienced symptoms of PTSD within the last 12 months. [Table 4.7](#)

**Figure 4G: Self-diagnosed, professional diagnosis and recent symptoms of PTSD, by PTSD screen**

Base: all adults

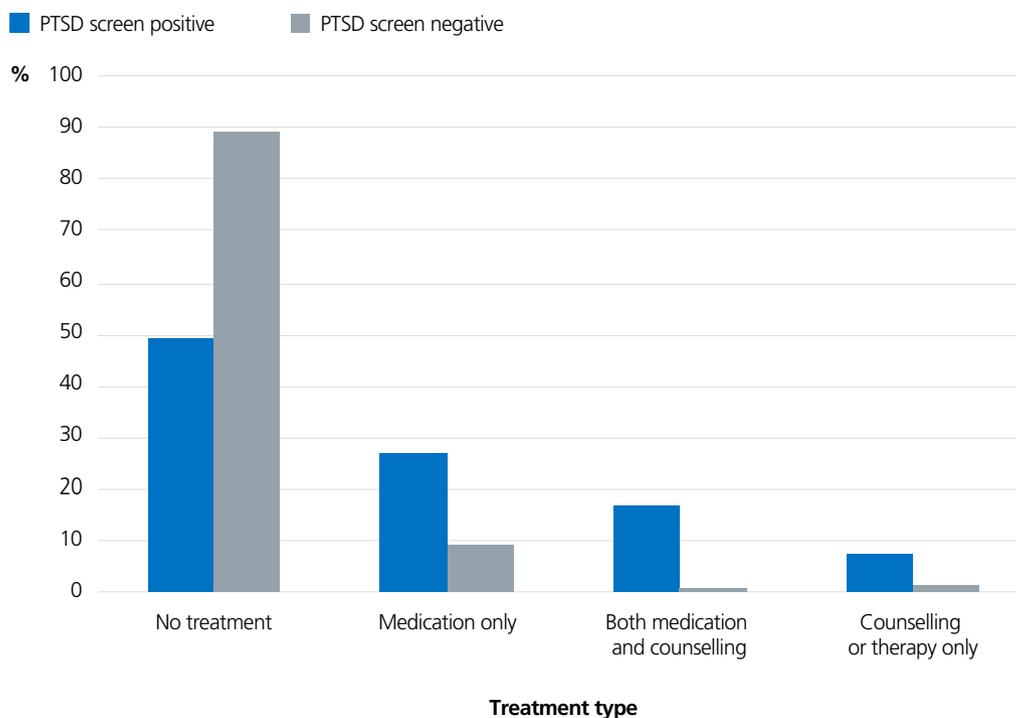


## Treatment

Around half of those who screened positive for PTSD (50.9%) were currently receiving treatment for a mental or emotional problem. The most common form of treatment was psychotropic (mental health) medication, either on its own (26.9% of those who screened positive for PTSD), or in combination with psychological therapy (16.7%). Psychological therapy without medication was the least common form of treatment (7.3%). [Table 4.8](#)

### Figure 4H: Screen outcome for PTSD, by treatment type

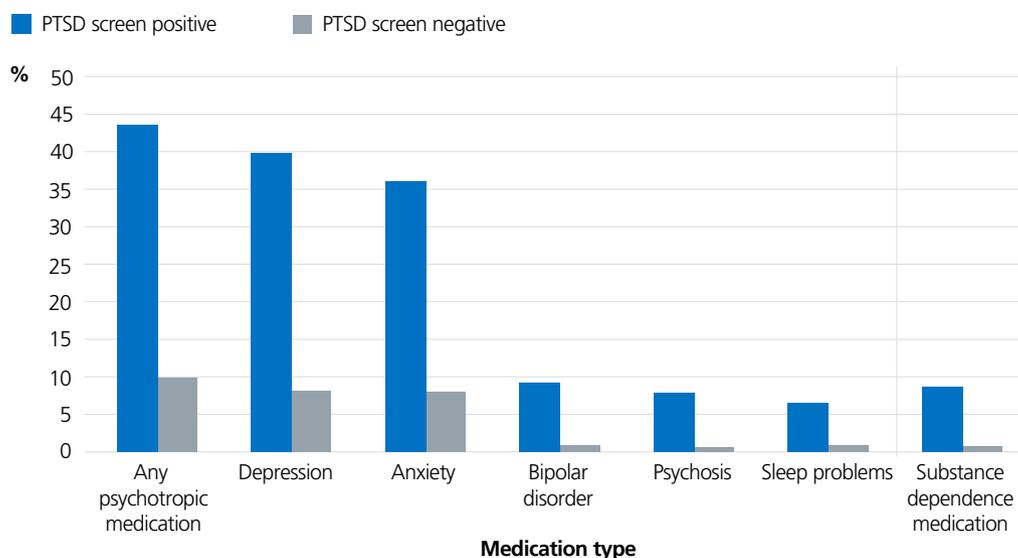
Base: all adults



Four in ten participants who screened positive for PTSD (43.6%) were currently taking psychotropic medication. The most common types were those primarily used for the treatment of depression (39.8%) or anxiety (36.0%). In addition, 8.7% were taking medication used in the treatment of substance misuse disorders. [Table 4.9](#)

**Figure 4I: Screen outcome for PTSD, by medication type**

Base: all adults

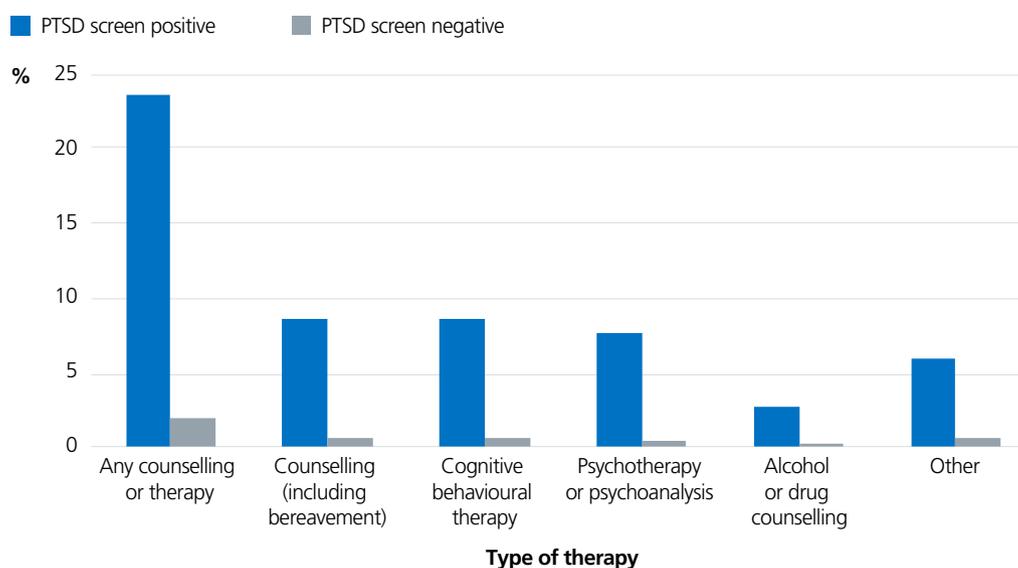


One in four of those who screened positive for PTSD (24.0%) were currently having psychological therapy such as counselling. The most common types were cognitive behavioural therapy (8.6%), counselling (8.6%) and psychotherapy or psychoanalysis (7.6%). Smaller proportions were receiving other types of therapy.

**Table 4.10**

**Figure 4J: Screen outcome for PTSD, by type of therapy currently used**

Base: all adults



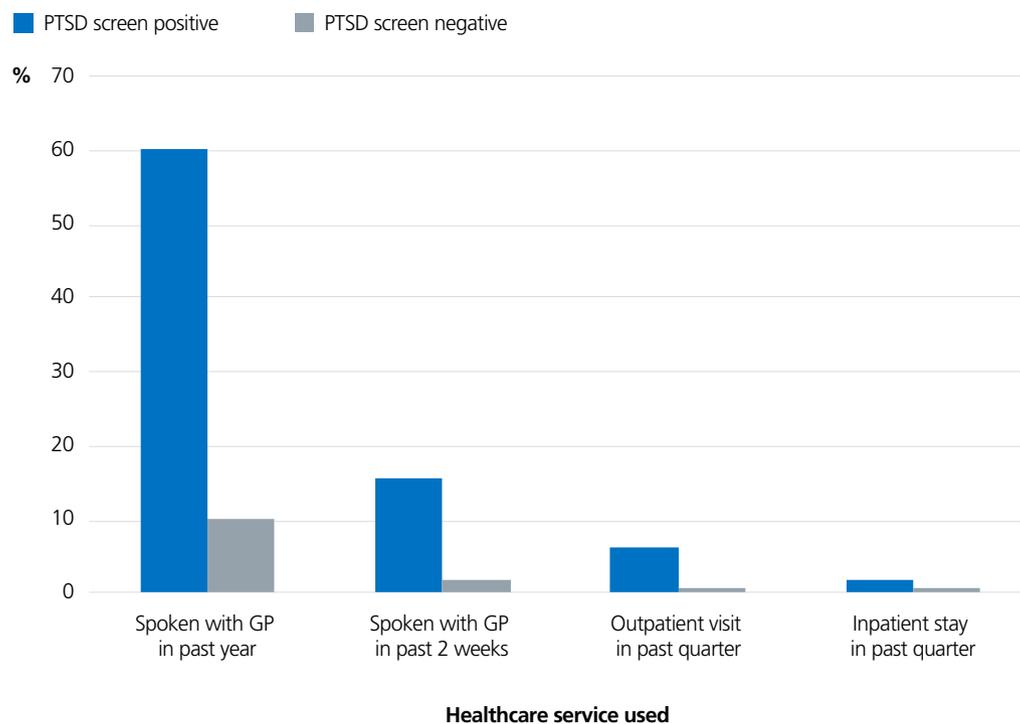
Participants were also asked if, in the past 12 months, they had asked for any kind of mental health treatment but had not received it. Those who screened positive for PTSD were about 16 times more likely than those who screened negative to have requested treatment unsuccessfully (16.1% compared with 1.0%). [Table 4.13](#)

### Service use

People screening positive for PTSD were about six times more likely than those who screened negative to have used a healthcare service in the last year for a mental or emotional problem (60.5% compared with 10.4%). The most common was primary care. However, four in ten adults who screened positive for PTSD had not spoken with a GP about a mental or emotional problem in the last year (39.8%). [Table 4.11](#)

**Figure 4K: Screen outcome for PTSD, by type of healthcare used for a mental or emotional problem**

Base: all adults



People who screened positive for PTSD were almost five times more likely than those who screened negative to have used a community or day care service in the last year (30.0% compared with 6.4%). The most commonly used services were a psychiatrist (10.5%), community day care centre (9.7%) and a community psychiatric nurse (7.8%). [Table 4.12](#)

## 4.4 Discussion

Epidemiological studies on PTSD in the general population are relatively rare, as most studies have focussed on groups at high risk of exposure to trauma, notably military personnel (Fear et al. 2010), other occupational groups (Bennett et al. 2004; Carlier et al. 1997; Meyer et al. 2012) or populations exposed to natural disasters (Galea et al. 2007) and war (Weine et al. 1995). This chapter presents the prevalence of lifetime trauma and screening positive for PTSD based on a general population sample of adults living in England, both overall and broken down by age, sex, ethnicity, household structure, employment status and region. This is the first time the PCL-C has been used in this population, and the use of this measure allows direct comparisons with other population groups.

Around a third of all adults experienced a major trauma in their lifetime. Overall, there was no difference between men and women, though in the youngest age group a lifetime trauma was reported more frequently by women than by men. The rates reported here are much lower than those from a community sample of individuals living in South East London, which used a similar but not directly comparable measure (72.1%) (Frissa et al. 2016). However, less than half of those who reported a trauma in that study felt that the trauma had placed themselves or others at risk of severe harm, while this was specified in the APMS question.

Overall, 4.4% of adults screened positive for PTSD in the last month, this did not vary significantly by sex. Examination of the PTSD symptom clusters showed that the most frequently reported were re-experiencing symptoms, rather more frequently in women than in men. Screening positive for PTSD did vary by age, with the presence of symptoms highest among younger participants.

The adult prevalence of PTSD was reported for the first time in APMS 2007 (McManus et al. 2009), with 3.0% of participants screening positive for current PTSD using the Trauma Screening Questionnaire, while 42.2% reported at least one lifetime trauma. Rates of PTSD using these different measures are not comparable, although the proportion of adults reporting a lifetime trauma declined.

Although the highest rates of PTSD were observed in Black/Black British participants, the ethnic differences fell short of conventional levels of statistical significance. This corresponds with the findings in the 2007 APMS (McManus et al. 2009). The prevalence of trauma by ethnicity did not vary significantly, though the rates were highest among those of mixed and other ethnic groups, and lowest among Asian/Asian British adults.

Examination of the data by household type showed that the highest rates of trauma and PTSD occurred in adults living in households containing only one adult (aged less than 60) and no children. The social circumstances of individuals exposed to trauma may act as a protective factor. Social support has been associated with lower PTSD risk in the general population (Brewin et al. 2000), military (Iversen et al. 2008) and other occupational settings (Carlier et al. 1997). It is likely to help individuals cope with potentially traumatic experiences because close-knit social environments promote support, advice and feedback (Cohen and Willis 1985).

Employment status was associated with both exposure to trauma and PTSD. Economically inactive participants reported higher rates of trauma exposure and PTSD than those in employment. Unemployment is known to be associated with a range of mental health problems but due to the cross-sectional nature of these data it is not possible to determine causality.

NICE guidelines have been developed regarding treatment for people with PTSD (NICE 2005). Psychological interventions are the most effective treatment, while evidence to support the use of medications is limited. Data presented in this chapter show that about half of those screening positive for PTSD were not receiving any treatment. The proportion receiving treatment was substantially higher than in the 2007 APMS (28%), however, the results are not directly comparable as the previous survey used a different measure of PTSD (McManus et al. 2009). In the current study, of those screening positive for PTSD and were receiving treatment,

about half were receiving some form of counselling or therapy either on its own (the NICE recommended treatment for PTSD) or in combination with medication. The rest were generally receiving antidepressants and/or anxiolytics (medication to treat anxiety).

We did not collect or link to other sources of information on service utilisation, so we are therefore unable to ascertain the validity of the self-report methodology used. However, other work has shown this to be a relatively accurate method of obtaining service use data (Beebe et al. 2006).

There was a lack of recognition of symptoms among those screening positive for PTSD, with 3.3% reporting that they thought they have had PTSD at some point in their life and 4.4% screening positive for PTSD in the past month. This may be due to an individual's poor recognition of the disorder, the stigma associated with seeking help or lack of awareness of treatment need. However, nearly two-thirds of those who screened positive had contacted some form of health service during the last year – with the vast majority speaking to their GP. Of concern is that 16.1% of those screening positive for PTSD had requested a particular type of mental health treatment which had not been provided.

Some of the comparisons reported in this chapter are based on small numbers and thus should be interpreted with caution. In addition, due to the cross-sectional nature of these data, the direction of cause and effect is unclear.

Although a third of adults living in England reported experiencing at least one lifetime trauma, only 4.4% screened positive for PTSD. The link between exposure to trauma and the development of symptoms of PTSD is not fully understood, and so the factors associated with resilience in the general population require investigation.

## 4.5 Tables

### Prevalence

Table 4.1 Domain, screen positive for PTSD in last month and whether experienced trauma, by age and sex

## Characteristics

- Table 4.2 Screen positive for probable PTSD in past month and whether experienced trauma (observed and age-standardised), by ethnic group and sex
- Table 4.3 Screen positive for probable PTSD in past month and whether experienced trauma, by household type and sex
- Table 4.4 Screen positive for probable PTSD in past month and whether experienced trauma (age-standardised), by employment status and sex
- Table 4.5 Screen positive for probable PTSD in past month and whether experienced trauma (age-standardised), by benefit status and sex
- Table 4.6 Screen positive for probable PTSD in past month and whether experienced trauma (observed and age-standardised), by region and sex

## Treatment and service use

- Table 4.7 Self diagnosed PTSD and professional diagnosis of PTSD, by screen positive for probable PTSD
- Table 4.8 Treatment currently received for a mental or emotional problem, among people with and without a positive probable PTSD screen
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# Psychotic disorder

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## Summary

- Psychotic disorders produce disturbances in thinking and perception that are severe enough to distort perception of reality. The main types are schizophrenia and affective psychosis. This chapter presents information on psychotic disorder in the adult general population. Because psychotic disorder has a low prevalence, data from APMS 2007 and 2014 have been combined to increase the number of positive cases for analysis.
- Participants were identified with 'psychotic disorder in the past year' only if they completed a phase two SCAN (Schedule for Clinical Assessment in Neuropsychiatry) interview and it was positive: weighting was used to adjust for those who screened positive for psychosis but did not do a SCAN.
- Overall, the prevalence of psychotic disorder in the past year has remained broadly stable at less than one adult in a hundred (0.4% in 2007, 0.7% in 2014). There were no significant differences in rate between men and women. Although the observed rate was highest in those aged 35–44, associations with age were not statistically significant for psychotic disorder in the last year.
- Psychotic disorder was associated with ethnic group, with rates found to be higher in black men (3.2%) than men from other ethnic groups. Psychotic disorder did not vary significantly in rate between ethnic groups among women.
- Socioeconomic factors were strongly linked with psychotic disorder, for example it was more common in those who are economically inactive and less so among people in employment. Associations with benefit status were particularly pronounced: about one in seven (13.4%) claimants of Employment and Support Allowance tested positive, although the small base size for this group means that this finding should be treated with caution.
- Psychotic disorder was more common in people who live alone, a finding consistent with wider evidence on links between mental illness, social isolation, and the challenges that people with psychotic disorder may face with maintenance of relationships.

- Overall, four-fifths of people identified with psychotic disorder were in receipt of treatment, almost all of whom were on medication; about half of people identified with psychosis combined medication with psychological therapy at the time of the interview. Very few were in counselling without medication. There were indications that the treatment rate for this group increased between 2007 and 2014, although the sample is too small for reliable trends. Among people with psychotic disorder, more than one in ten had an unmet treatment request.
- Survey identification of disorders can never be as reliable as a full clinical assessment conducted by a professional over a number of sessions. As with the data presented for all disorders in this report, figures should be treated as indicative of the proportion of the population affected by symptoms, and not a precise point estimate of the prevalence of the disorder.

## 5.1 Introduction

Psychotic disorders produce disturbances in thinking and perception severe enough to distort perception of reality. Symptoms include auditory hallucinations, delusional beliefs and disorganised thinking. These may be accompanied by unusual or bizarre behaviour and difficulties with social interaction and activities of daily living. People with a psychotic illness can make a full recovery, although a majority will have repeated psychotic episodes over their lifetime or some degree of persistent disability. Psychoses can be serious and debilitating conditions, associated with high rates of suicide (University of Manchester 2015) and early mortality (Saha et al 2007).

The Adult Psychiatric Morbidity Surveys (APMS) measured functional psychosis by assessing the presence of disorders such as schizophrenia, schizoaffective disorder, and affective psychosis (Singleton et al. 2001; McManus et al. 2009). Organic psychoses, such as those associated with dementia and Alzheimer's disease, are not discussed in this chapter.<sup>1</sup> It can be difficult to compare the community based

<sup>1</sup> APMS 2007 and 2014 included the TICS-M and the Animal Naming measures, which can be used to assess cognitive functioning and as proxy indicators of possible dementia. Diagnosed dementia and Alzheimer's disease can also be recorded at the general health section of the interview. These data will be available in the UK Data Service archive.

prevalence of psychotic disorder from different surveys because of variations in the diagnostic categories,<sup>2</sup> assessment methods,<sup>3</sup> and reference periods used.<sup>4</sup> A recent systematic review (Kirkbride et al. 2012) found that studies of the prevalence of all psychotic disorders showed considerable variation in methodology, quality, and results, which made them difficult to pool for meta-analyses. Overall, the studies suggested that around four people per 1000 had an active psychotic disorder in the past year (annual prevalence). The rate has remained steady over the last 60 years.

Despite being relatively uncommon, psychotic illness has been found to result in a high level of service and societal costs (Knapp 2003; NICE 2014). The World Health Organisation (WHO) calculates that the burden and human suffering associated with psychosis at the family level is exceeded only by dementia and quadriplegia (WHO 2001). People with a psychotic illness who live in the community have low rates of employment, and when employed are often in poorly paid and less secure jobs (Marwaha et al. 2007).

Treatment options include antipsychotic medication (also referred to as neuroleptics); early intervention, community care, hospitalisation; and cognitive behavioural and family therapy for the management of psychotic symptoms (Birchwood and Trower 2006; Haddock and Lewis 2005). One of the key priorities identified by the Department of Health in relation to psychotic disorder is the early delivery of intervention services to people experiencing their first psychotic episode (NHS Confederation 2011).

In this chapter we present estimates of the prevalence of past year psychotic disorder in the general population. Variation with factors such as age, sex, ethnicity and socioeconomic circumstance are discussed, as well as levels of treatment and service use. Early surveys in the psychiatric morbidity series covered the offender and homeless populations (which are not included in private household surveys like APMS) and found rates among these groups to be higher (Gill et al. 1996; Singleton et al. 1998). Comorbidity with psychotic disorder is described in Chapter 13.

- 2 Some studies focused on schizophrenia, others included all functional psychoses, and others combined functional and organic psychoses. For example, the Psychosis in Finland (PIF) study reported prevalence of all specific psychotic disorders (Perala et al 2007).
- 3 For example the Composite International Diagnostic Interview (CIDI) is used in the US National Comorbidity Survey Replication (Kessler et al. 2004) and the Norwegian Psychiatric Epidemiological Study (Kringlen et al. 2001).
- 4 APMS reports on psychotic episodes in the past year, some studies refer to current or lifetime experience (for example Perala et al 2007).

## 5.2 Definition and assessment

### Psychotic disorders

The disorders discussed in this chapter are based on the WHO International Classification of Diseases chapter on Mental and Behavioural Disorders Diagnostic Criteria for Research (ICD-10) (WHO 1992). They consist of two main types: schizophrenia and affective psychosis. The reference period for psychotic disorder was the year prior to interview.

### Case assessment

To produce estimates of psychotic disorder in adults living in private households in England, a two-phase approach was adopted consisting of a phase one screen followed by a phase two clinical assessment for a subset of participants.

#### *Phase one screen*

Participants with experiences or symptoms indicative of psychosis were identified by meeting one or more of the following screening criteria at the phase one interview:

- Currently taking any antipsychotic medication (orally or by injection).  
See the Glossary for a list of antipsychotic medications.
- Reporting an inpatient stay for a mental or emotional problem in the past three months, or having been admitted to a hospital or ward specialising in mental health problems at any time.
- A positive response to question 5a in the Psychosis Screening Questionnaire (PSQ) (Bebbington and Nayani 1995). The PSQ is a series of five probe and five secondary questions about mania, thought insertion, paranoia, strange experiences, and hallucinations in the past year. Question 5a refers to auditory hallucinations.
- Reporting symptoms suggestive of psychotic disorder (such as mood swings) and/or discussing such symptoms with a GP in the past year.
- A direct question was added to APMS 2014 about whether a participant thought that they had ever had any of a list of psychiatric disorders. Self-reported identification with psychotic disorder was included as a phase one psychosis screening criterion in APMS 2014 only.

### *Phase two assessment*

Overall, 6% of participants reported at least one screening criterion indicative of psychosis, and so were eligible for a phase two assessment. Not all, however, could be assessed at phase two. A fifth (20%) of phase one participants refused to be contacted for a phase two interview, and of those issued to phase two with at least one psychosis criterion, 27% refused and 6% were non-contacts. In addition, the study was designed so that phase two screen-in rates could be monitored quarterly: adjustments were made so that in the final quarter of fieldwork autism phase two selection criteria were prioritised. Because much was known about the characteristics of non-responders to phase two, a complex psychosis specific weighting strategy could be developed to address non-response bias. See Chapter 14 for discussion of this.

The phase two assessment of psychosis was made using the Schedule for Clinical Assessment in Neuropsychiatry (SCAN) version 2.1, a semi-structured interview that provides ICD-10 diagnoses of psychotic disorder (WHO 1999). Because SCAN involves interviewer judgement of whether symptoms are present (as opposed to reliance on self-reports), the interviews were conducted by clinically-trained interviewers from the University of Leicester. The presence of non-organic psychosis in the year before interview was established by applying ICD-10 diagnostic algorithms to the SCAN generated symptom ratings. Using combinations of phase one and phase two data, two differently calculated measures of psychotic illness were generated: 'psychotic disorder in the past year' and 'probable psychotic disorder'.

### *Measuring 'psychotic disorder in the past year'*

For the identification of psychotic disorder in the past year the following approach was used:

- For those who screened positive for psychosis at phase one and had a SCAN assessment, the results of the SCAN were used.
- For those who screened negative for psychosis at phase one, it was assumed that these were true negatives regardless of whether or not a SCAN assessment was completed.

- For those who screened positive for psychosis at phase one but did not have a SCAN assessment (e.g. due to refusal or non-contact) a weighting strategy was applied to take account of non-response. The weighting strategy meant that the SCAN results for the participants assessed at phase two were weighted to reflect the profile of all participants identified as eligible.

### *Measuring 'probable psychotic disorder'*

An additional variable has been produced which reduces missing data and avoids the need for specific psychosis weights to be used. A difference between the 'psychotic disorder in the past year' and the 'probable psychotic disorder' variables is the way in which non-response to phase two is accounted for. A positive diagnosis was only possible for 'psychotic disorder' if the participant had a positive SCAN; while a positive diagnosis of 'probable disorder' could also be made on the basis of phase one screening questions, where no SCAN interview was undertaken.

For the measure of probable psychotic disorder the following approach was used:

- For those who screened positive for psychotic disorder at phase one and had a SCAN assessment, the results of the SCAN were used.
- For those who screened negative for psychotic disorder at phase one, it was assumed that these were true negatives regardless of whether or not a SCAN assessment was completed.<sup>5</sup>
- For those who screened positive for psychotic disorder at phase one but did not have a SCAN assessment (e.g. due to refusal or non-contact) those meeting just one psychosis screen criterion at phase one were assigned a negative probable psychotic disorder outcome, and those meeting two or more psychosis screening criteria were assigned a positive outcome.

There have been changes to the psychosis screening criteria used in the 2000, 2007 and 2014 surveys.<sup>6</sup> Firstly, in APMS 2000 participants were asked to name all

<sup>5</sup> As for the 'psychotic disorder in the past year' measure, an additional version of this variable has been produced which gives those with a positive SCAN assessment but negative phase one screen a positive outcome. Because this identifies more positive cases it is useful for subgroup analysis.

<sup>6</sup> APMS 1993 used methods for identification of psychosis that were significantly different to those employed on the subsequent surveys in the series.

the medications that they were currently taking, whereas in APMS 2007 and 2014 prompt cards were used that listed psychotropic medications. This list was extended for the 2014 survey to reflect changes in prescribing practice. Secondly, in APMS 2000 full ICD-10 codings of all health conditions were collected, whereas in APMS 2007 and 2014 prompt cards were used, listing 22 categories of health condition (see the Glossary). Thirdly, an additional screening criterion was included in the 2014 survey (self-reported diagnosis).

These changes mean that the 'probable psychotic disorder' measure is less suitable for looking at trends over time than the 'psychotic disorder in the last year' measure.

### *Whether to use 'psychotic disorder in the last year' or 'probable psychotic disorder'*

The 'psychotic disorder in the past year' measure has been used as the main psychosis outcome in APMS 2007 and 2014. This minimises the risk of false positives because identification of disorder is based only on assessment, and not on screening criteria. There are concerns about the validity of assigning a positive assessment to those meeting two or more phase one screening criteria but not having a SCAN interview. For example, some of the psychosis screening criteria relate to events that happened long ago (such as having ever been admitted to a ward specialising in mental health, even if this was decades ago); to the presence of symptoms that could also be linked to different disorders (such as mood swings); or to taking particular medication (which while indicated as an antipsychotic, could also have been prescribed for other reasons). It is also likely to exclude those at an early stage of development (and thus not yet in contact with services). Using the probable psychotic disorder measure is likely to overestimate treatment and service use among people with psychotic illness in the past year, as several of the phase one screening criteria relate to access to services. The probable psychotic disorder outcome is likely to include people with a history of psychosis who are currently stable on treatment, even where there had been no symptoms in the past year. The 'psychotic disorder in the past year' variable does have drawbacks. It is likely to be an underestimate of the size of the population affected by psychosis, as the definition of psychotic disorder in the past year on the basis of the SCAN assessment is quite narrow (although appropriate for a study such as this). It requires a specific weighting variable and (due to non-response to phase two) the number of positive cases identified are small. Because of this, it was decided to

prioritise use of the 'psychotic disorder in the last year' measure in this chapter, but to present prevalence estimates, perform subgroup comparisons, and examine treatment rates for psychotic disorder using 2007 and 2014 data combined.

## 5.3 Results

### Prevalence of psychotic disorder in the past year, in 2007 and 2014

In both 2007 and 2014, less than one adult in a hundred was identified with a psychotic disorder in the past year. The estimate for 2007 was 0.4% and for 2014 it was 0.7%. While statistical tests indicate that this might be a significant increase, these figures are also consistent with a continued trend of broad stability in rates of psychosis. Any conclusions about trends should be treated with caution considering the numbers of confirmed cases were low (23 in 2007; 26 in 2014).

Pooling data from the 2007 and 2014 surveys creates a larger sample. Estimates drawing on the combined dataset should be considered the more robust and are used in the rest of this chapter. Using the combined dataset, overall prevalence of psychotic disorder in the past year was 0.5% of the adult general population. It is likely (95% confidence) that if everyone in the household population had been tested, the rate would be between 0.4% and 0.7%. [Table 5.1](#)

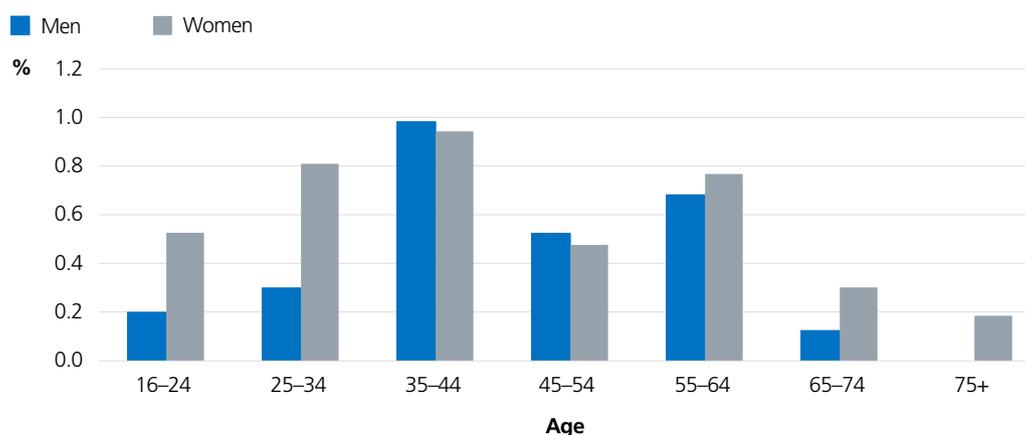
### Prevalence of psychotic disorder in the past year (2007 and 2014 combined), by age and sex

Using data pooled from the 2007 and 2014 surveys, no difference in rate was found between men and women (0.5% of men, 0.6% of women). In none of the survey years has a significant difference in rate between men and women been found.

In both men and women the highest prevalence was observed among those aged 35 to 44 years (1.0% and 0.9% respectively). This same pattern was also evident when using the probable psychosis measure in combined 2007 and 2014 data. Age, however, was not found to be significantly associated with psychotic disorder in the past year and for this reason, subsequent analyses using this variable are not age-standardised. While the presence of organic psychosis is known to increase with age, it is not covered in this report. [Table 5.2](#)

**Figure 5A: Psychotic disorder in the past year (2007 and 2014 combined), by age and sex**

Base: all adults



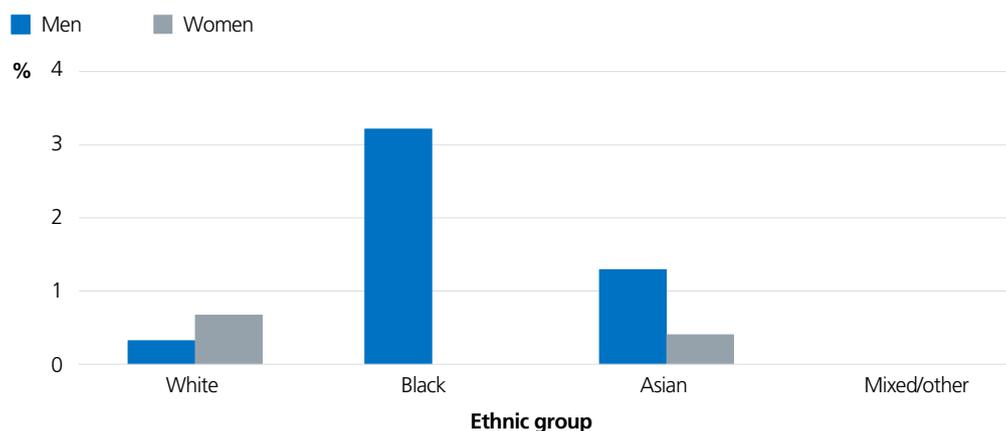
### Variation in psychotic disorder by other characteristics

#### Ethnic group

The prevalence of psychotic disorder in the past year (using combined 2007 and 2014 data) was higher among black men (3.2%) than men from other ethnic groups (0.3% of white men, 1.3% in the Asian group, and no cases were observed among those in the mixed/other ethnic groups). There was no significant variation by ethnic group among women. [Table 5.3](#)

**Figure 5B: Psychotic disorder in the past year (2007 and 2014 combined), by ethnic group and sex**

Base: all adults



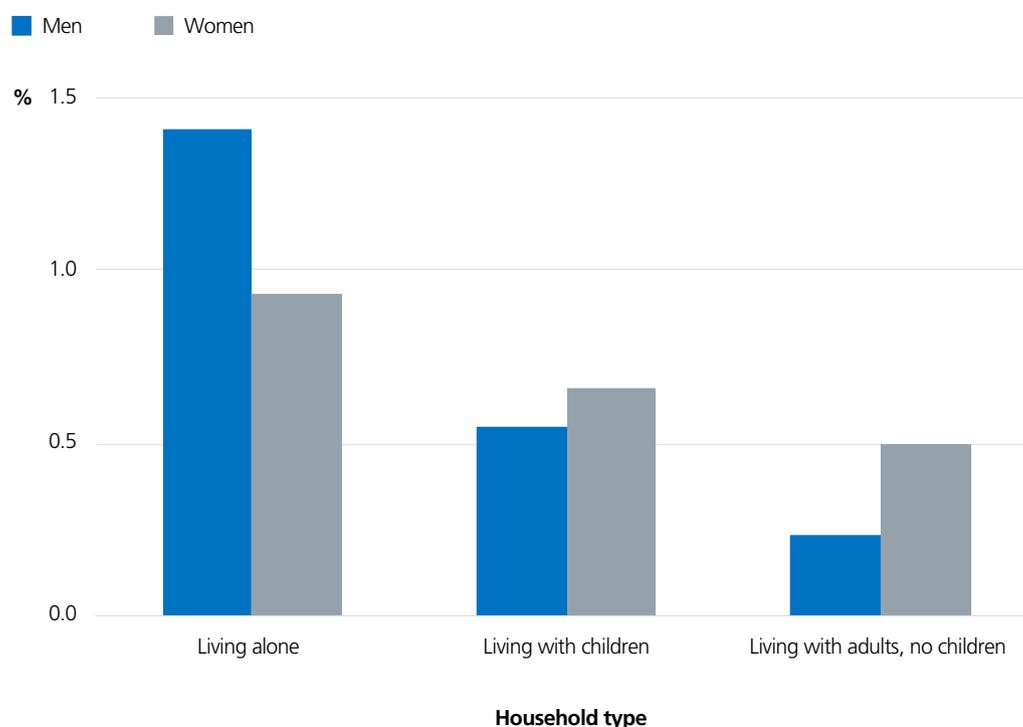
### Household type

Testing positive for psychotic disorder in the past year was strongly linked with people's current living arrangements. Rates were higher in those living alone (1.1%), and lower in people living with others (either with children (0.6%), or just with other adults (0.4%)). This pattern was evident both for men and women, and fits with that observed for the other disorders considered in this report.

**Table 5.4**

**Figure 5C: Psychotic disorder in the past year (2007 and 2014 combined), by household type and sex**

Base: all adults



### Region

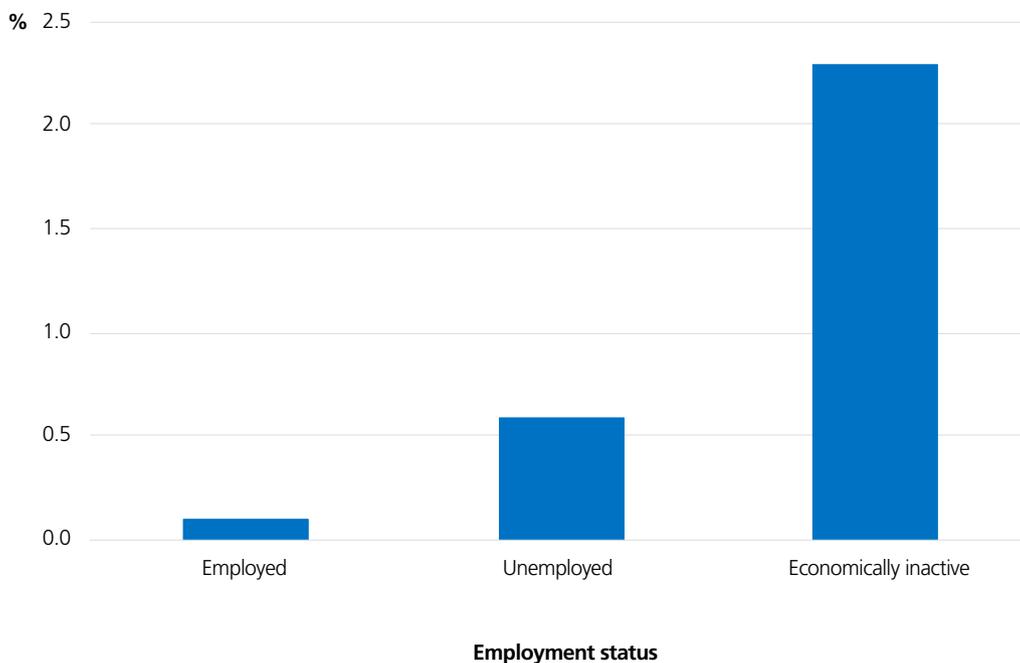
Cases of psychotic disorder were evident in all English regions, and the rate did not vary significantly across the country. [Table 5.5](#)

### Employment status

The prevalence of psychotic disorder among those aged 16 to 64 varied by employment status. Overall, economically inactive people were more likely to have psychotic disorder (2.3%) than those in employment (0.1%). [Table 5.6](#)

**Figure 5D: Psychotic disorder in the past year (2007 and 2014 combined), by employment status**

Base: aged 16–64



### Benefit status

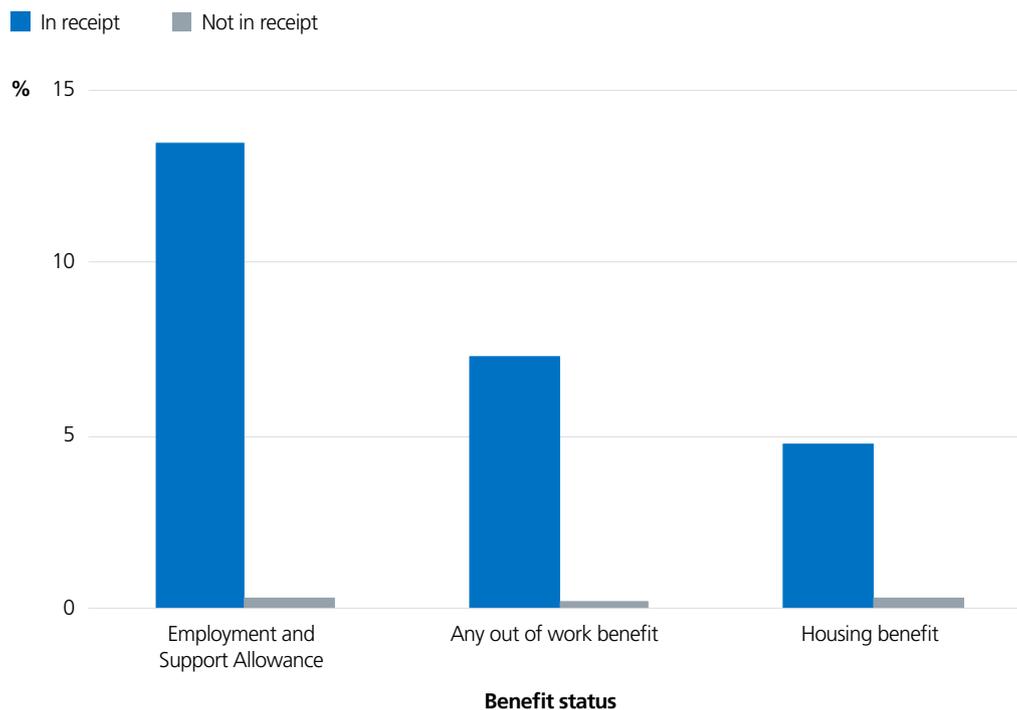
The prevalence of psychotic disorder varied markedly by whether or not adults were in receipt of particular benefits. Due to recent changes that have taken place in the benefit system since the last survey, these analyses are based only on the 2014 sample. The smaller sample size therefore means that these results should be treated with some caution.

Among 16 to 64 year olds in receipt of an out of work benefit such as Jobseeker's Allowance or Employment and Support Allowance (ESA), 7.3% were identified with psychotic disorder in the past year, compared with 0.2% of people of this age not in receipt of such benefits.

In 16 to 64 year olds specifically in receipt of ESA, one in seven (13.4%) tested positive for psychotic disorder in the past year. This pattern was evident both in male and female ESA claimants (14.2% and 12.4% respectively). [Table 5.7](#)

**Figure 5E: Psychotic disorder in the past year (2014), by benefit status**

*Base: 16–64 years (out of work benefits); all adults (housing benefit)*



**Treatment and services**

*Mental health treatment*

Looking at 2007 and 2014 data combined, four-fifths (82.4%) of adults with a psychotic disorder in the past year were receiving some form of treatment (psychotropic medication and/or psychological therapy) at the time of the interview (compared with 9.8% of those without a psychotic disorder).

There were indications that the treatment rate in adults with psychotic disorder might have increased between 2007 and 2014. However, due to the very small number of participants identified using the psychotic disorder in the last year measure (23 in 2007, 26 in 2014), this finding should be treated with great caution. [Tables 5.8, 5.9](#)

### Psychotropic medication

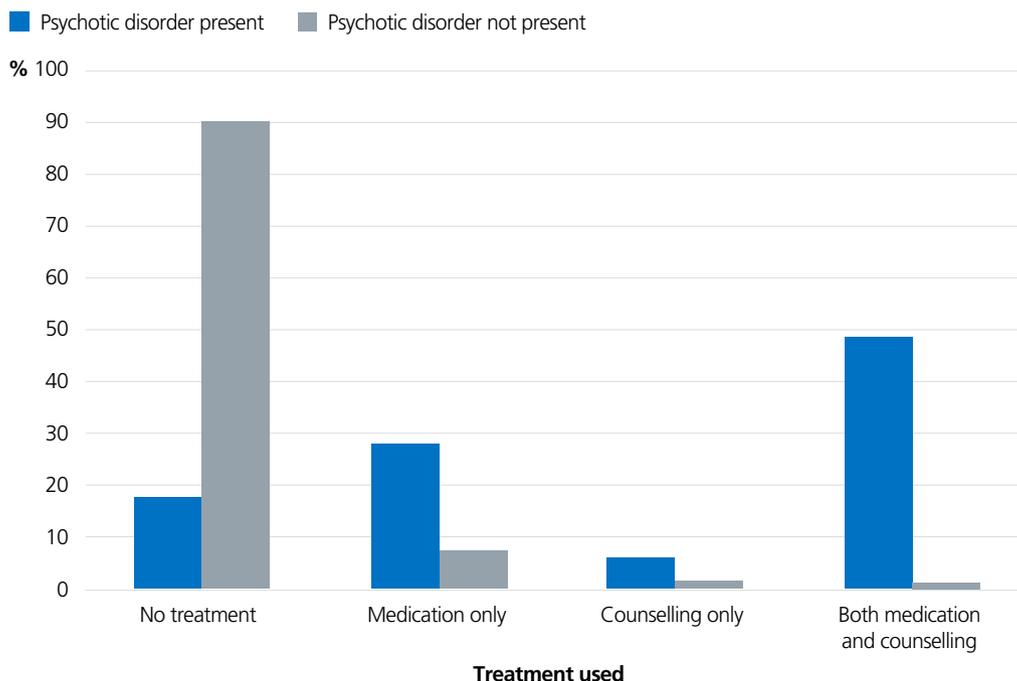
Almost all people with psychotic disorder who were in receipt of treatment were using psychotropic medication. Levels of medication use were 9 times higher in adults with psychotic disorder than in those without psychotic disorder (76.4% and 8.5% respectively).

The types of medication currently taken by people with a psychotic illness included antidepressants (53.9%), antipsychotics (including anti-mania medication) (45.7%), and drugs used in the treatment of bipolar disorder (50.3%),<sup>7</sup> anxiety (37.4%) and sleep problems (17.4%). Note that some individual drugs were assigned to more than one category (see the Glossary for details).

Medications used in the treatment of substance dependence were also asked about in the 2014 survey. These were being used by 14.6% of people identified with psychotic disorder in the past year, compared with 0.9% of the rest of the adult population. [Table 5.10](#)

**Figure 5F: Current treatment for a mental or emotional problem (2007 and 2014 combined), by psychotic disorder in the past year**

Base: all adults



<sup>7</sup> Bipolar disorder medications were additionally covered in the 2014 survey, with substance dependence also asked about (but not included in the 'any medication' summary variable).

### *Psychological therapy*

Half (54.4%) of adults with a psychotic disorder in the past year were in counselling or other psychological therapy at the time of the interview, compared with 2.6% without a psychotic disorder. Most of these people combined psychological therapy with psychotropic medication. Just 6.0% of people with psychotic disorder were using psychological therapy without also using medication as well. [Tables 5.9, 5.10](#)

### *Use of healthcare and community and day care services*

Of adults with psychotic disorder, nearly three quarters (71.3%) had made use of health care services for a mental health reason, either having spoken with a GP about a mental or emotional problem in the past year, and/or having had an inpatient or outpatient visit for a mental health reason in the previous three months. Nearly two-thirds (60.4%) had used community care services in the past year, and 40.0% had used day care service in the past year. See the Glossary for a list of the types of community and day care services covered. [Tables 5.9](#)

### *Unmet treatment request*

In the 2014 survey, participants were asked whether they had requested, but not received, a particular mental health treatment in the past 12 months. Unmet treatment requests were about seven times more likely among people with a psychotic disorder than in the rest of the population (12.2% of people with psychotic disorder, compared with 1.8% of those without). [Table 5.11](#)

### *Self-diagnosis and professional diagnosis*

Participants were asked which of the mental disorders listed on a show card they felt that they had ever had. For each one reported, participants were asked whether it had been diagnosed by a psychiatrist, doctor, or other health professional; and if it had, whether the disorder had been present in the past 12 months. Because these questions were new additions to the 2014 survey, these analyses are based on just 26 participants identified with psychotic disorder in the past year and so the results should be treated with caution.

Less than half of the participants identified during the survey with psychotic disorder reported that they thought that they have had 'psychosis or schizophrenia' at some

point in their life.<sup>8</sup> Because these questions were asked in the face to face section of the interview, it is possible that stigma – which is particularly pronounced for these conditions – might have contributed to underreporting (Dean and Phillips 2016).

All participants who believed that they have had a psychotic illness had also had this illness confirmed by a professional, suggesting that awareness of presence of this condition tends to come from a professional rather than being something people recognise first themselves. Of those who reported ever having had psychosis, nearly all reported that it had been present in the past 12 months. The fact that few participants reported having had the disorder in the past but not recently may indicate that for many with the disorder, the path to recovery is long. [Table 5.12](#)

## 5.4 Discussion

Psychotic illnesses – such as schizophrenia and affective psychosis – affect a very small proportion of the population: less than one adult in a hundred and probably closer to one in two hundred. APMS 2007 data placed the rate at around 0.4%, APMS 2014 found 0.7%. It is worth noting that those stable on treatment or in remission are probably not included in this figure and the rate is likely to be an underestimate. This approach to their measurement has been comparable over time. The figures for 2007 and 2014 are very similar and are consistent with rates being stable, but they also do not rule out there having been an increase in the proportion of the population affected. APMS data is underpowered to be definitive on this either way and needs to be interpreted in the wider context of other data. A further population survey of mental health in the future may provide a check on whether or not there is long-term stability (as there has been for many decades) or an upward trend.

The sample is also too small for robust examination of trends in treatment among people with psychotic disorder. While the figures do suggest that a higher proportion of people with psychotic illness were using psychotropic medication

<sup>8</sup> Others reported that they thought that they have had “bipolar disorder (or ‘manic depression’)”. This is considered separately in Chapter 9.

and psychological therapy in 2014 than in 2007, these rates are based on the experiences of just 26 and 23 participants respectively, and should therefore be treated with great caution.

None of the APMS surveys have found rates of psychotic disorder to vary significantly with sex. Other studies, however, have found a higher rate of lifetime psychosis in men than women. The APMS series consists of surveys of the general population, and is subject to response bias in terms of people's capacity and inclination to participate. One study found that women experiencing a psychotic episode tend to be able to maintain higher levels of social functioning than men experiencing a psychotic episode (Ochoa et al. 2012). This might suggest that of people living in private households, women with current psychosis may be more likely than men to take part in a survey or possibly that men may be more likely to be in an institutional setting (and therefore out of scope of the survey) while experiencing a psychotic episode (Thorup et al. 2007). It is possible that people experiencing a psychotic episode may be less likely to take part in a survey, although the impact of this is minimised to some extent by reporting on the past year rate rather than just current. The relatively rare and complex nature of psychosis makes it harder to recruit a representative sample of people with the disorder. Prevalence could also be underestimated since studies which have access to case notes as well as interview data, have been shown to ascertain more cases of psychotic disorder than studies using interview information alone (Kirkbride et al. 2012; Isohanni et al. 1997).

In terms of other characteristics APMS data has shown rates of psychosis across the population to be concentrated in particular groups. For example, a significantly higher rate of psychotic disorder was found in black men compared with other men of other ethnic groups. This is consistent with previous analyses of APMS 1993, 2000 and 2007 data (Qassem et al. 2015) as well as with findings from other surveys (King et al. 2005; Fearon et al. 2006). It suggests a need for increased mental health service resources in areas with high proportions of black inhabitants (Qassem et al. 2015).

The great majority of the participants identified with psychotic disorder were recipients of ESA, which indicates how disabling the condition is. ESA is a benefit

intended for people unable to work for reasons of illness or impairment and the threshold for eligibility is set high. About one ESA claimant in seven was identified with psychosis, compared with a rate of about one in a thousand among people in employment. This is consistent with previous analyses of APMS 2007, showing associations between psychotic disorder and low equivalised household income.

Analysis of APMS 2007 showed associations between psychotic disorder and marital status (McManus et al 2009). In this chapter, it was established that people with psychosis are also less likely to be living with another person at all. This indicates that they may lack social support, and help with recognition of the onset of symptoms and management of treatment at home. Over half of the participants identified with psychosis in the survey did not report that they thought that they had it. Nearly everyone who did report thinking they had psychosis had been given that diagnosis by a professional. The findings in this chapter provide context for a continued focus on improving community services including early intervention and support for people with a first episode (NHS Confederation 2011; De Girolamo et al. 2012).

## 5.5 Tables

### Prevalence and trends

Table 5.1 Psychotic disorder in past year in 2007 and 2014, by age and sex

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Table 5.12 Psychotic disorder in the past year, by self-diagnosis and professional diagnosis of psychotic disorder

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# Autism spectrum disorder

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## This chapter contains Experimental Statistics

Experimental statistics are official statistics which are published in order to involve users and stakeholders in their development and as a means to build in quality at an early stage. It is important that users understand that limitations may apply to the interpretation of this data.

These statistics have been labelled as experimental in order to allow for further work to be undertaken to assure users that these statistics meet the overall quality standards necessary to be designated as National Statistics. Information on how users should interpret these statistics are available throughout this chapter, in the Methods chapter of this publication, and in the accompanying Background Data Quality Statement.

NHS Digital will gather feedback to these statistics, their construction and interpretation from relevant experts, and following this announce details of how the assessment of these statistics will progress on the NHS Digital website during February 2017.

All official statistics should comply with the UK Statistics Authority's Code of Practice for Official Statistics which promotes the production and dissemination of official statistics that inform decision making.

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## Summary

- Autism spectrum disorders (ASDs), also referred to as autism, are developmental disorders characterised by impaired social interaction and communication, severely restricted interests, and highly repetitive behaviours.
- This chapter presents data on the profile of ASD among adults living in the English household population. This is the second time such data have been collected in England, after it was covered for the first time in the 2007 Adult Psychiatric Morbidity Survey (APMS).
- In the phase one interview ASD was screened for using the Autism Quotient (AQ-20). In the phase two interview, fuller assessments were carried out by clinically trained interviewers using the Autism Diagnostic Observation Schedule (ADOS) with a subset of participants with an AQ score of 4 or more. The results were weighted to generate a prevalence estimate for the population as a whole. This approach has been extensively validated. It should be recognised however that psychiatric diagnoses tend to be reached by professionals over multiple sessions involving probing and clinical judgement. Health surveys are a population research tool and should not be expected to provide the equivalent of a professional diagnosis. For further discussion of survey limitations see Chapter 14.
- The recommended threshold of a score of 10 or more (as well as meeting subdomain thresholds for ASD) on the phase two ADOS assessment was used to indicate a case.
- Data from the 2007 and 2014 surveys were combined to generate a larger sample for analysis. The APMS series has been designed so that samples can be combined in this way. Estimates based on the combined dataset are more robust than estimates based on the 2007 or the 2014 samples separately. 31 potential cases were identified in the combined phase two samples, which is small for subgroup analysis and means caution with interpretation is required. Had all participants completed a phase two interview (see above), we estimate that about 120 cases might have been identified in the sample as a whole.

- Using the combined sample, the prevalence of ASD was estimated to be around 0.8%. Survey estimates are always subject to sampling error. Given this, we estimate that if all adults in the population had been tested, the proportion identified with ASD would probably be between 0.5% and 1.3% (95% confidence interval (CI)). The size of this confidence interval is large, but similar to that for some other low prevalence disorders considered on APMS.
- Consistent with other research, estimated rates of ASD were higher in men (1.5%, 95% CI: 0.8% to 2.6%) than women (0.2%, 95% CI: 0.1% to 0.6%).
- ASD was associated with level of educational qualification, with rates being higher among people with no qualifications.
- People with ASD appeared to be no more likely than other adults to make use of treatment or services for mental or emotional problems.

## 6.1 Introduction

Autism spectrum disorders (ASDs) are developmental disorders characterised by widespread abnormalities of social interaction and communication, as well as severely restricted interests and highly repetitive behaviours (Wing 1997). As with other mental and behavioural disorders, they probably exist on a continuum. Presence of ASD can have a negative impact on learning and, at the more severe end of the spectrum, on the ability to live independently in adulthood (Howlin et al. 2004). Adults with the condition often experience isolation and adverse experiences such as being bullied and socially excluded (Brugha et al. 2014).

The cost of supporting an individual diagnosed with an ASD without intellectual disability is estimated as £0.92 million in the United Kingdom, with residential care, supportive living accommodation and individual productivity loss contributing the highest costs (Buescher et al. 2014). But quantifying a total cost of ASD is problematic because there have been no reliable estimates based on the number of adults in England with the condition with and without an autism diagnosis.

APMS 2007 was the first general population probability sample survey in any country to have assessed ASD in adults (Brugha et al. 2009b), with APMS 2014 being the second. Rates may be different in specific adult populations, such as among people who are homeless or living in prison. Rates were higher in men and in those without educational qualifications.

ASD is known to be strongly associated with the presence of learning disabilities and it has been estimated that 7.5% of adults with a learning disability may also have ASD (Cooper et al. 2004). The 2007 survey was extended to cover people with learning impairments, including those living in residential settings, and found rates to be higher in this group (Brugha et al. 2012). A secondary analysis of the APMS 2007 confirmed earlier indications that autism is associated with an increased risk of epilepsy (Rai et al. 2012).

ASD has been assessed among children and young people, and two large-scale surveys estimated the prevalence of childhood ASD to be around 1%,<sup>1,2</sup> and higher in boys than girls (Baird et al. 2006; Green et al. 2004). ASDs are more apparent and easier to study in children, in part because the diagnosis of autism should include presence of symptoms in childhood and parent and teacher observations of this are more likely to be accurate and available for this group. Because these studies have used different methodologies to APMS, the results are not directly comparable.

The number of reported (diagnosed) cases of autism increased steeply throughout the 1990s. It is quite possible that this was due to changes in public and professional awareness of the condition, different diagnostic definitions and practices, availability of services and referrals, and earlier age at diagnosis (Fombonne 2009). Nevertheless, the current evidence available does not rule out the possibility that the prevalence of ASD has increased (Rutter 2005).

- 1 The prevalence of ASDs among children in South Thames was estimated by Baird et al. to be 116.1 per 10,000 (95% CI 90.4–141.8). A narrower definition of childhood autism, which combined clinical consensus with instrument criteria for past and current presentation, provided a prevalence of 24.8 per 10,000 (17.6–32.0).
- 2 Green et al. presented confidence intervals for the estimated prevalence of ASD among 5 to 10 year olds in England (1.13, 95% CI 0.65–1.39) and for 11 to 16 year olds (0.76, 95% CI 0.47–1.06).

## 6.2 Definition and assessment

### Autism spectrum disorder (ASD)

The concept of autism gained recognition in the mid-20th Century and is still evolving (Frith 1991; Silberman 2015). It remains unclear whether ASDs comprise one condition or a range of similar inter-related neuro-developmental conditions, with separate subtypes. Experts have achieved a broad consensus on what constitutes the category of ASD, and the diagnostic criteria set out in the fourth Diagnostic and Statistical Manual (DSM-IV) (APA 1994) and the International Classification of Disease (ICD-10) (WHO 1993) are very similar. Both systems use the term pervasive developmental disorders (PDD) and require information on early childhood development for diagnosis. The fifth revision of the DSM (DSM-5) (APA 2013) has removed the requirement to endorse subtypes of ASD, such as Asperger's syndrome. It emphasises instead the importance of severity based on social communication impairments and restricted, repetitive patterns of behaviour, and whether with or without accompanying intellectual impairment. Furthermore, in DSM-5, individuals with a well-established DSM-IV diagnosis of autistic disorder, Asperger's syndrome, or PDD not otherwise specified should be given the diagnosis of ASD. In this chapter, the terms autism and ASD are used interchangeably.

### Assessment of ASD

#### *Case assessment of ASD*

In surveys of ASD in childhood, information on behaviour and early development has been collected from parents and teachers. For adults, the ideal scenario would involve assessments of directly observed current behaviour and information on both early development and on current day to day functioning over an extended period. This is not a practical option for a large general population survey of adults. Therefore, the assessment process used on APMS 2007, and replicated on APMS 2014, was based on a combination of self-report data collected at the phase one interview and a semi-structured assessment carried out by a clinically trained research interviewer at the phase two interview (Brugha et al. 2009a). This multi-stage case assessment for ASD is similar in structure to that used in the

APMS series since 1993 for the assessment of psychotic disorders. The APMS 2007 process involved a detailed validation assessment (Brugha et al. 2011b). It includes the following stages:

- A. Phase one AQ-20 self-completion test
- B. Selection of cases for phase two assessment
- C. Phase two ADOS assessment of a subset of cases
- D. Weighting to adjust for selection probabilities and non-response.

This approach has undergone an extensive programme of validation work supported by the NHS and Department of Health (Brugha et al. 2009a; 2011b; 2012; 2016). The validation programme has involved calibration of the ADOS with other research instruments for autism assessment; interviews with participants' parents and other family members; comparison with further data collected from community, learning impairment, and patient samples; consensus ratings of participant vignettes with autism practitioners; and engagement with psychiatrists and epidemiologists with expertise in this field. The validation of the APMS process for identifying autism has been more extensive than that of other conditions covered on the survey. Further work is now planned to address recent developments in classification based on DSM-5 and drafting work for ICD-11.

#### *A. Phase one interview: Autism Quotient*

The full Autism Quotient, here referred to as the AQ-50, is one of few fully structured questionnaires designed to capture signs of ASD in adult participants (Baron-Cohen et al. 2001). The AQ-50 was reported in clinical populations to have good correspondence with a full ASD diagnosis (Baron-Cohen et al. 2001). Other available questionnaires tend to be either longer (Ritvo et al. 2008) or require data to be collected from a collateral informant, such as a parent (Constantino et al. 2003). A clinical diagnosis cannot be derived from the AQ-50; it is a test designed to identify potential underlying autistic traits.

The full AQ consists of 50 items; to minimise participant burden on the already long APMS 2007 questionnaire, a shorter 20 item version was derived using data collected by two of the AQ authors in the development of the full schedule.

Details of the modelling undertaken to select the best subset of items are given in a separate technical report (Brugha et al. 2011b). The AQ-50 questionnaire is composed of items designed to assess five broad dimensions: social functioning, imagination, communication, attention switching and attention to detail. The 20 adopted items selected by the modelling procedure as the best predictors of a positive ASD assessment spread quite evenly across these categories: six were social functioning items; four, communication; four, attention to detail; three, attention switching; and three, imagination. The AQ-20 was discussed by an expert panel and tested in the cognitive piloting conducted as part of the APMS 2007 development work. Further modelling took place using a random sample of adults in contact with mental health services. This identified the 17 most predictive AQ items used in the 2007 survey, these were retained and three (which had performed poorly in the 2007 data) were replaced with items with improved prediction selected from the original AQ-50 (Tyrer et al. 2013). The revised 20 item version of the AQ is reproduced in full in the questionnaire in Appendix D.

A score was generated for each participant based on their responses to the 17 AQ items included in both the 2007 and 2014 surveys. Each response indicative of ASD was given one point, so that a higher score indicated greater likelihood that the person may have ASD. The AQ-20 is a self-completion questionnaire, and it was administered via a laptop computer in the phase one interview. Because it is a brief test and not a diagnostic measure, a clinical assessment was included in the phase two interview.

On APMS, the AQ was used only to exclude cases with an extremely low likelihood of having autism (those with an AQ score of between zero and three) and to inform the selection probabilities for phase two. It was not used to positively identify ASD.

### *B. Selection of cases for phase two assessment*

A subsample of phase one participants was invited to take part in a second phase interview. Participants' probabilities of selection for phase two were determined by their responses to questions at phase one, including their score on the AQ and whether they were male or female. Those with a higher AQ score had a higher chance of being selected, as did men. No one with an AQ score of zero to three was selected for a phase two assessment (unless they endorsed a psychosis criterion,

as psychotic disorder was also covered in phase two). All men with an AQ score of eight or more and all women with an AQ score of 11 or more were selected for phase two (except for those interviewed in the final two months of fieldwork, who were excluded). For men with an AQ score between four and seven and women with a score between four and ten, a subsample of those agreeing to recontact were selected for phase two, as outlined in the table below.

#### Probability of selection to phase two based on phase one AQ score

Sex	Phase one AQ score	Phase two selection probability <sup>a</sup>
Men	0 to 3	0.000
	4 to 7	0.157
	8 to 10	1.000
	11 or more	1.000
Women	0 to 3	0.000
	4 to 7	0.045
	8 to 10	0.245
	11 or more	1.000

<sup>a</sup> Of those who agreed to take part in phase two.

It was not feasible for all phase one participants to have a phase two assessment, and this approach was designed so that those with the highest likelihood of a having autism (or psychosis) had the highest likelihood of being assessed, combined with being able to generate estimated rates of ASD for the population as a whole.

#### C. Phase two assessment: Autism Diagnostic Observation Schedule (ADOS)

The second phase interviews were carried out by clinically trained research interviewers from the University of Leicester. The assessment of conditions such as ASD required a more flexible interview than was possible at the first phase, and the use of judgement in rating clinical criteria for diagnostic classification.

The Autism Diagnostic Observation Schedule (ADOS), Module 4, was completed with 628 participants at the APMS 2014 phase two (and 618 at the phase two

of APMS 2007). It is a widely recommended 'gold standard' clinical research assessment instrument for autistic disorders that is used to collect information on adult functioning (Lord et al. 2002). The ADOS is a semi-structured clinical assessment of whether current behaviour is consistent with a diagnosis of an autistic disorder. In 2014, additional questions on restricted, repetitive patterns of behaviour and sensory differences were added to the second phase two interview. This was done due to their increased emphasis in DSM-5 and because the ADOS does not offer an adequate opportunity to measure restricted and repetitive behaviours, although such behaviours are coded on the ADOS if they occur. This additionally collected data is not reported on in the current chapter, but will be analysed in subsequent publications.

The ADOS and its algorithm have been validated in previous clinic based testing, but prior to APMS 2007 they had rarely been used with older adults or in a general population setting (Gotham et al. 2008). The methods and results of a quality assurance and validation study made use of clinician ratings and developmental interviews with parents and other informants to inform severity and clinical significance thresholds (Brugha et al. 2009a). That study found the ADOS performed well, and its results have informed the case threshold used in this report.

The ADOS consists of a series of tasks that evaluate communication, reciprocal social interaction (social functioning), creativity, imagination and stereotyped interests and restricted interests. These tasks are rated by the trained interviewer. The ADOS ratings that correspond to autism criteria are summed to produce an overall score. A score of seven or more is the threshold used to identify an inclusive category of ASD that is intended to correspond generally to the conceptualisation that underlies the term PDD (Brugha et al 2011b). The recommended threshold of 10 or more is applied in this report to indicate a case of autism, validated in the same population.

#### *D. Weighting to adjust for selection probabilities and non-response*

For the designation of an ASD outcome the following approach was used:

- For men with a phase one AQ score of four or more and women with a phase one AQ score of eight or more, and who had an ADOS assessment, the results of the ADOS were used.

- Men with a phase one AQ score of three or less and women with a phase two ADOS score of seven or less were designated ASD negative, regardless of whether or not an ADOS assessment was completed.
- Men with a phase one AQ score of four or more and women with a phase one AQ score of eight or more who did not have an ADOS assessment (e.g. due to non-selection, refusal or non-contact) were excluded from the analysis, and a weighting strategy was applied to take account of their absence and to address non-response biases.

For analysis of estimated prevalence of disorders assessed at phase two (autism and psychosis), the weighted phase two participants are added to the set of phase one participants who were not eligible for phase two, the prevalence being assumed to be zero for the not eligible group. Those not eligible are given their phase one weights. The sampling and weighting strategy is described in more detail in Section 14.7 of the Methods Chapter.

For the analyses presented in this report the 2007 and 2014 samples were combined to increase the sample size available for subgroup analysis. The survey series has been designed with the intention that samples should be combined, especially for analyses of low prevalence disorders or subgroups. This approach is also taken in the chapter on psychotic disorder.<sup>3</sup>

## 6.3 Results

### Prevalence of autism in 2007 and 2014, by age and sex

The estimated prevalence of autism in 2014, using the threshold of a score of 10 on the ADOS to indicate a positive case, was 0.7% of the adult population in England (equivalent to a rate of 7 per thousand). The estimated prevalence of autism in the 2007 data (1.0%) was similar to the 2014 estimate; with largely overlapping confidence intervals.

<sup>3</sup> Several papers published in peer-reviewed medical journals have analysed samples combined from across the survey series. See Appendix A for examples of these.

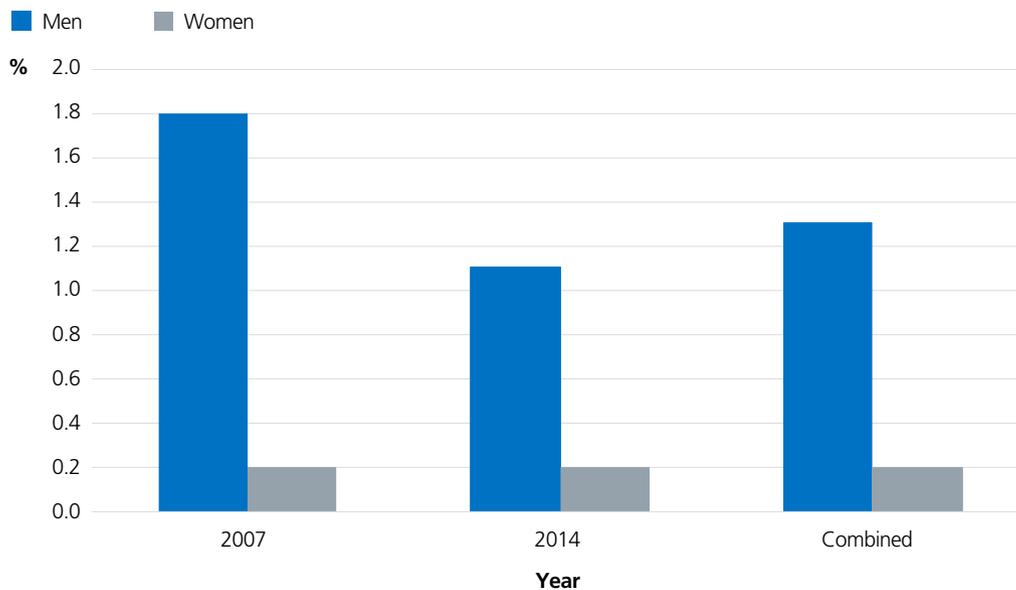
A total of 12 probable cases were identified in the 2014 sample, because a sub-sample of respondents was selected for a phase two interview. This small base means that great caution is required in interpreting the population distribution of autism. To improve how robust the estimates are, the 2007 and 2014 samples have been combined, yielding 31 participants identified with autism. Estimates based on the combined sample are more robust than those based on the separate 2007 and 2014 samples.

Using the combined sample, the prevalence of ASD was estimated to be around 0.8%. Survey estimates are always subject to sampling error. Given this, we estimate that if all adults in the population had been tested, the proportion identified with ASD would probably be between 0.5% and 1.3%. The size of this confidence interval is similar to that of some of the other low prevalence disorders considered on APMS.<sup>4</sup>

Estimated rates of ASD were higher in men (1.5%, 95% CI: 0.8% to 2.6%) than women (0.2%, 95% CI: 0.1% to 0.6%). [Tables 6.1, 6.2](#)

**Figure 6A: Autism in 2007, 2014 and combined years, by sex**

*Base: all adults*

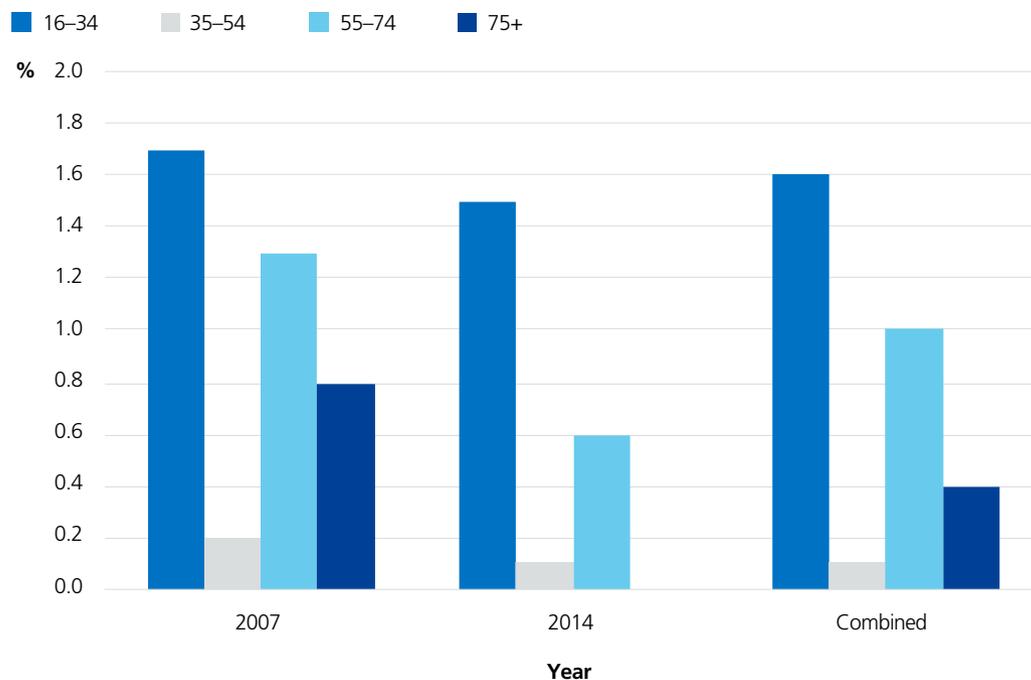


<sup>4</sup> For example, the estimated proportion of the population with signs of dependence on drugs other than cannabis is 0.8%, with a 95% confidence interval of 0.6% to 1.2%.

Some variation in prevalence of autism was evident with age, although there was not a clear pattern. [Tables 6.1, 6.2](#)

**Figure 6B: Autism in 2007, 2014 and combined years, by age**

Base: all adults



### Variation by other characteristics in combined 2007 and 2014 data

#### *Ethnic group*

None of the 31 adults identified with autism in the APMS 2007 and 2014 samples was a participant from a minority ethnic group. However, due to the small number of minority ethnic respondents in the sample as a whole, caution is required in interpreting whether or not autism is associated with ethnic group. No table is presented for this analysis.

## Region

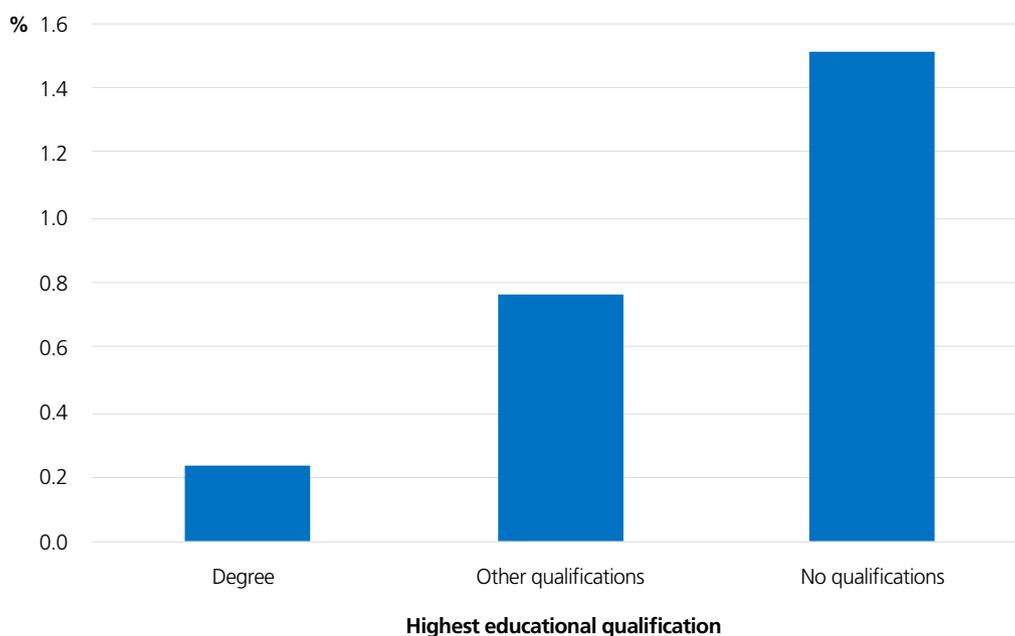
There was no significant variation in the prevalence of autism across the four NHS England regions. [Table 6.3](#)

## Education

Presence of autism was associated with the highest educational qualification that people had achieved. Overall, the rate was lowest among those with a degree level qualification (0.2%) and highest among those with no qualifications (1.5%). 3.2% of men without qualifications were identified with autism. [Table 6.4](#)

### Figure 6C: Autism, by highest educational qualification: 2007 and 2014 combined

Base: all adults

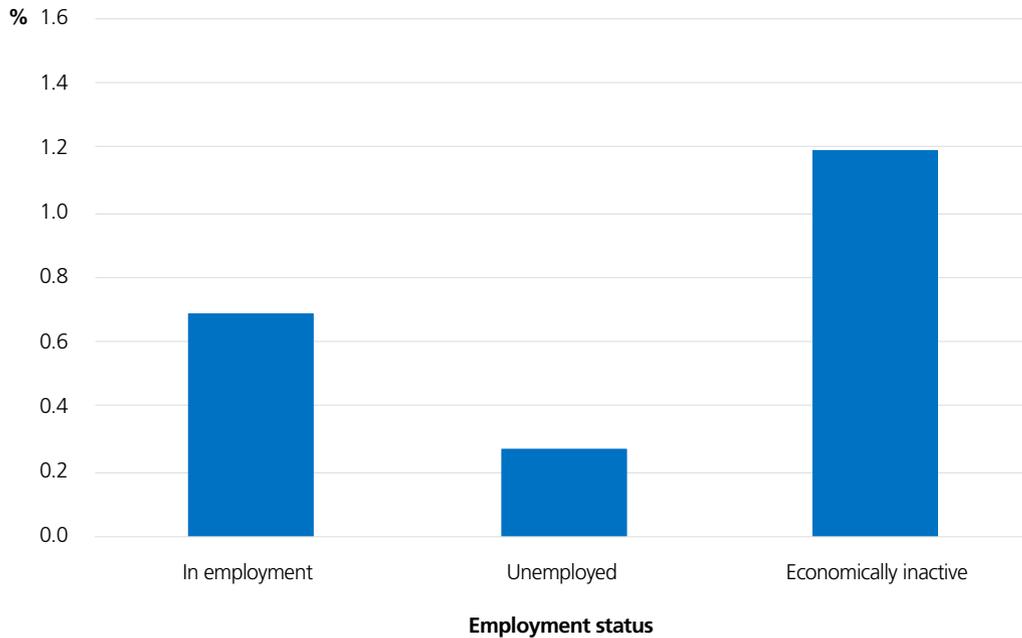


## Employment status

Analysis by employment status was run on those aged 16–64, to exclude people who are retired constituting most of the economically inactive group. There was no significant variation in the proportion of adults identified with autism according to whether they were employed, unemployed or economically inactive. [Table 6.5](#)

**Figure 6D: Autism, by employment status: 2007 and 2014 combined**

*Base: adults aged 16-64*



### Treatment and service use

As mentioned above, even when the 2007 and 2014 APMS samples were combined, there were just 31 adults identified with autism. This of necessity limits the scope of analysis.

People identified with autism were no more likely than those without autism to use any of a range of different types of treatment or services for a mental health reason. In fact, in terms of use of health services for a mental health reason, it even appears that people with autism were less likely. Healthcare services included use of inpatient or outpatient health services within the last three months for a mental health reason or discussing a mental or emotional problem with a GP within the last year. 3.7% of adults identified with autism reported this, compared with 11.6% of those who without autism. [Table 6.6](#)

Physical and mental comorbidity with autism is considered in Chapter 13.

## 6.4 Discussion

The estimated prevalence of autism in adults in private households in England was estimated to be around 0.8% (95% CI: 0.5% to 1.3%) based on the combined samples for the 2007 and 2014 APMS. There was no significant difference between the rates of autism identified in 2007 and 2014. In these surveys adults were interviewed if they were able to participate fully. However, adults who would be unable to participate in the APMS because of learning disabilities were also represented in a recent extension to the 2007 APMS (Brugha et al. 2012). No significant change in the prevalence of autism was found when the population of adults with learning disabilities was accounted for in the analysis.

There was no clear pattern in the distribution of autism by age. Rates were higher in men than women, as found in most research on autism (Brugha 2011a). However, it has been suggested that assessments for autism may draw more on how the condition manifests in men, and this may lead to under identification of autism in women (Trubanova et al. 2014). Autism was much more common among people, especially men, without any qualifications, and rates were lower in those with a university degree. No one from an ethnic minority group was identified with autism in either the 2007 or the 2014 APMS. This is likely to be due to the small sample size.

Among 16 to 64 year olds, employment status was not significantly related to whether or not someone was identified with autism. This finding took into account the 'economically inactive' group, which includes students, and those looking after home, long term sick or disabled, or in early retirement. Employment and autism is a complex topic that needs more detailed study, including research which considers people in whom autism is unrecognised (that is, present but not diagnosed).

Adults in the survey identified with autism were no more likely than adults without autism to use treatment or services for a mental health reason. And in fact, adults with autism appeared even less likely than those without to use health services for a mental or emotional reason. In contrast, every other mental health condition examined in this and previous APMS has been shown to be associated

with increased use of treatment and health services. Other work shows that adults with mental disorders receive attention from services because mental health problems are recognised needs (Spiers et al. 2016). This recognition of need does not appear to extend to adults with ASD.

Adults with autism have enduring problems with communication and social understanding. There are no effective medical treatments for autism in adulthood. However care services for identifying and supporting them are being developed lead by local authorities throughout England.<sup>5</sup> These services are based on the principle that carers and health and social care staff can recognise and accept the presence of the condition, and learn how to understand and communicate with those who have it. Clinical experience of providing informed social care of this kind to adults given a diagnosis of ASD could lead to real improvements in quality of life.

## 6.5 Tables

### Prevalence

Table 6.1 Autism in 2007 and 2014, by age and sex

Table 6.2 Autism (2007 and 2014 combined), by age and sex

### Characteristics

Table 6.3 Autism (observed and age-standardised), by region and sex

Table 6.4 Autism (age-standardised), by highest educational qualification and sex

Table 6.5 Autism (age-standardised), by employment status and sex

### Treatment and service use

Table 6.6 Treatment and service use, by autism

<sup>5</sup> [www.improvinghealthandlives.org.uk/projects/autsaf2014results](http://www.improvinghealthandlives.org.uk/projects/autsaf2014results)

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# Personality disorder

Paul Moran | Keeva Rooney | Peter Tyrer | Jeremy Coid

## Summary

- Personality disorders are longstanding, ingrained distortions of personality that interfere with the ability to make and sustain relationships. The self-completion Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II) was used among 16–64 year old participants in the first phase interview to screen for antisocial personality disorder (ASPD) and borderline personality disorder (BPD).
- ASPD is characterised by a pervasive pattern of disregard for and violation of the rights of others in people aged at least 18, which has persisted since the age of 15. BPD is characterised by high levels of personal and emotional instability associated with significant impairment.
- 3.3% of people aged 18–64 screened positive for ASPD. It was more common in men (4.9%) than women (1.8%).
- 2.4% of people aged 16–64 screened positive for BPD, differences between men and women did not reach statistical significance.
- Personality disorder has also been seen as unitary, characterised by core interpersonal dysfunction and the presence of a range of adaptive and maladaptive traits. A general personality disorder screen (the SAPAS) was added to APMS 2014 to screen adults of all ages for 'any personality disorder' (PD).
- 13.7% of people aged 16 and over screened positive for any PD, with similar rates in men and women.
- Screening positive on all three measures of PD (ASPD, BPD, and any PD) was more common among younger people, and in those living alone, not in employment, or in receipt of benefits.
- 6.2% of people screening positive for ASPD and 13.2% of BPD screen positives, also believed that they have had a personality disorder. In comparison, about 1% of people who did not screen positive for these believed that they have had a personality disorder. Most people who believed that they have had a personality disorder, also had a diagnosis of this from a professional.

- Participants screening positively for PD, on any of the measures used, were more likely to be in receipt of mental health treatment than those who did not. 26.6% of people who screened positive for ASPD, 43.1% of screen positives for BPD, and 28.9% of screen positives for any PD reported receiving psychotropic medication, psychological therapy or both.
- 16.6% of screen positives for BPD, 9.1% of screen positives for ASPD, and 7.3% of screen positives for any PD had requested some kind of mental health treatment which they had not (yet) received, compared with 0.8% of people not screening positive for any PD.

## 7.1 Introduction

Personality disorders are longstanding, ingrained distortions of personality that interfere with the ability to make and sustain relationships. Impairment in relational functioning is an enduring feature of personality disorder (Skodol et al. 2005). Along with substantial social difficulties (Yang et al. 2010), individuals with personality disorder also experience poor general health (Fok et al. 2014) and reduced life expectancy (Fok et al. 2012). Antisocial personality disorder (ASPD) and borderline personality disorder (BPD) are two types with particular public and mental health policy relevance (Coid et al. 2006). They are associated with substantial burden on affected individuals, their families and wider society (Coid et al. 2009). Personality disorders often co-occur with mood and anxiety disorders (Grant et al. 2005). Yet prospective, population-based research shows that even after accounting for the effects of concurrent mood and anxiety disorder, personality disorder is an independent risk factor for poor future mental health, as well as serious relational difficulties (Moran et al. 2016). Mapping the prevalence and correlates of personality disorder in the general population is therefore important as the diagnosis identifies a subsection of the population who are at particularly high risk of future health problems.

## Antisocial personality disorder (ASPD)

ASPD is characterised by disregard for and violation of the rights of others. People with ASPD have a pattern of aggressive and irresponsible behaviour which emerges in childhood or early adolescence (Goldstein et al. 2006). It is associated with increased morbidity and mortality, due, among other things, to increased rates of assaults, suicidal behaviour, road accidents, and sexually transmitted infections (Ellis et al. 1995; Shephard and Farrington 2003). The presence of ASPD may complicate treatment of comorbid conditions.

The estimated prevalence of ASPD in the wider general population varies with diagnostic classification system, method of assessment and place: for example the rate is higher in urban than rural areas (Coid et al. 2006). Despite these differences, there is great similarity in the estimates generated by community surveys of personality disorder based on full clinical assessment: 0.7% of 18–65 year olds in Oslo, Norway (Torgersen et al. 2001), 0.6% in the US (Lenzenweger et al. 2007), and 0.3% in England (McManus et al. 2009). ASPD is more prevalent in men than women.

People with ASPD have often grown up in families where parenting was characterised by conflict and inconsistency, and care sometimes transferred to outside agencies (Black et al. 1995). Resultant truancy, delinquent peer groups and substance misuse contribute to low educational attainment, unemployment, unstable housing and inconsistency in relationships in adulthood (Martin et al. 1985). While ASPD is distinct from general antisocial behaviour, Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (APA 1994) criteria do require childhood antisocial behaviour (to the level of conduct disorder) for the full diagnosis in adulthood. Interventions during childhood have, therefore, been identified as a priority by the Home Office in preventing the development of full adult ASPD (Moran and Hagell 2001).

Criminality is strongly associated with, but not essential for, the diagnosis of ASPD, which includes a broad range of antisocial behaviours and personality traits. The 1997 APMS prisoners' survey identified ASPD in a very high proportion of inmates: 63% of male remand prisoners and 49% of male sentenced

prisoners (Singleton et al. 1998). People with the disorder account for a disproportionately large proportion of crime and violence committed.

The costs and extended harm associated with ASPD include high levels of personal injury and financial damage to victims, as well as increased costs of policing, and the impact on the criminal justice system and prison services (Welsh et al. 2008). Additional costs resulting from ASPD include increased use of healthcare, lost employment opportunities, and family breakdown.

### **Borderline personality disorder (BPD)**

BPD is characterised by high levels of personal and emotional instability associated with significant impairment. People with BPD have severe difficulties in sustaining relationships, and self-harm and suicidal behaviour is common (Paris and Zweig-Frank 2001). Most people with the disorder first show symptoms in late adolescence or early adult life. The symptoms fluctuate but generally improve over time (Newton-Howes et al. 2015). Among those receiving treatment, as many as half improve sufficiently not to meet the criteria for BPD 5–10 years after first diagnosis (Zanarini et al. 2003).

As with ASPD, the prevalence of BPD identified through community based surveys is sensitive to the diagnostic classification system used and the method of assessment. The rates identified have, however, been broadly similar across studies: 0.7% in the Oslo study (Torgersen et al. 2001), 1.4% in the US (Lenzenweger et al. 2007), and 0.5% in APMS 2007 (McManus et al. 2009). The rate has been found to be higher in women than men; in APMS 2007 it was identified in 0.7% of women and 0.3% of men (Skodol et al. 2005). A higher rate among women is consistently observed in clinical samples.

A considerable proportion of people with BPD are known to have experienced some form of physical, emotional or sexual abuse or neglect in childhood. Its association with past trauma and its similarities with posttraumatic stress disorder (PTSD) have led some to suggest that BPD should be regarded as a form of delayed PTSD (Cloitre et al. 2014). It is rare for a patient to have BPD without comorbid conditions (Coid et al. 2009), and because of this considerable overlap some have argued that BPD should not be classed as a personality disorder

(NCCMH 2009). National Institute for Health and Clinical Excellence (NICE) guidelines on the treatment and management of BPD, however, do regard BPD as a personality disorder.

### **Personality disorder**

The categorical classification of personality disorder remains controversial. Population-based studies have failed to demonstrate a bimodal distribution of abnormal personality traits (Livesley et al. 1992). Furthermore, the diagnostic criteria for individual personality disorder subtypes considerably overlap. There is therefore substantial artefactual comorbidity among personality disorder subtypes. Given these limitations, it has been proposed that personality disorder should be classified as a unitary disorder, characterised by core interpersonal dysfunction (of varying degrees of severity), accompanied by the presence of a range of adaptive and maladaptive traits (Tyrer et al. 2015; Ellis et al. 1995). In light of these recent proposals, in APMS 2014 a general personality disorder screen was added to the assessment battery.

In this chapter, screen positive rates for ASPD, BPD and also for ‘any personality disorder’ for the household population in England are presented. Associations with age, sex, ethnicity, household structure, employment and benefit status, and region are examined, as well as levels of mental health service use and treatment among people screening positive. Comorbidity with personality disorder is covered in Chapter 13.

## **7.2 Definition and assessment**

### **Antisocial, borderline and any personality disorders**

When this survey was in development DSM-IV was in place and the measures used relate to DSM-IV criteria. DSM-5 has since been released, and implications for the classification of PD are addressed in the discussion section of this chapter (see Section 7.4).

## *Personality disorder*

DSM-IV defines a personality disorder as ‘an enduring pattern of inner experience and behaviour that deviates markedly from the expectations of the individual’s culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment’.<sup>1</sup>

Personality disorders were made a separate diagnostic axis under the DSM-III classification of mental disorders (APA 1980). DSM-IV identifies ten types of personality disorder grouped into three clusters (APA 1994):

- Cluster A includes the ‘odd or eccentric’ types
- Cluster B disorders are the ‘dramatic, emotional or erratic’ types, and
- Cluster C is the anxious-fearful group (Coid et al. 2006).
- ASPD and BPD are both cluster B disorders: the other ‘dramatic, emotional or erratic’ types (narcissistic and histrionic) yielded no positive cases when assessed in APMS 2000 and were not included in the 2007 or 2014 surveys.<sup>2</sup>

## *ASPD*

DSM-IV characterises ASPD as a pervasive pattern of disregard for and violation of the rights of others that has persisted in the individual since the age of 15 or earlier, as indicated by three (or more) of seven criteria:

- Failure to conform to social norms
- Irresponsibility
- Deceitfulness
- Indifference to the welfare of others
- Recklessness
- Failure to plan ahead
- Irritability and aggressiveness (Millon and Davis 1993).

1 NICE guidelines recommend the use of the DSM-IV diagnostic system for both antisocial and borderline personality disorder.

2 Coid et al. examine reasons for the absence of histrionic and narcissistic personality disorder in the APMS 2000 sample: some studies have identified a higher rate of histrionic in particular, e.g. Torgersen et al. (2001) 2.0% histrionic, 0.8% narcissistic; and Samuels et al. (2002) 0.2% histrionic; 0.03% narcissistic.

A feature of ASPD in the DSM-IV is that it requires the individual to meet diagnostic criteria in childhood (presence of conduct disorder before age 15) as well as adulthood. Because particular behaviours must have persisted beyond the age of 18, people younger than this cannot be given the diagnosis. For this reason, participants aged 16 or 17 were excluded from the base for the ASPD analysis.

### *BPD*

According to the DSM-IV diagnostic criteria for BPD, the key features are instability of interpersonal relationships, self-image and mood, combined with marked impulsivity, beginning in early adulthood.<sup>3</sup> It is indicated by five (or more) of the following criteria:

- Frantic efforts to avoid real or imagined abandonment
- Pattern of unstable and intense personal relationships
- Unstable self image
- Impulsivity in more than one way that is self-damaging (e.g. spending, sex, substance abuse, binge eating, reckless driving)
- Suicidal or self-harming behaviour
- Affective instability
- Chronic feelings of emptiness
- Anger
- Paranoid thoughts or severe dissociative symptoms (quasi-psychotic).

Unlike ASPD, a DSM-IV diagnosis of BPD is possible before the age of 18, and the BPD analysis therefore included all APMS participants aged 16 and over.<sup>4</sup>

<sup>3</sup> The tenth International Classification of Disease (ICD-10, WHO 1992) does not have a directly equivalent category although 'emotionally unstable personality disorder, borderline type' (F60.31) shares some features.

<sup>4</sup> Although some psychiatrists argue that a diagnosis of BPD should not be made before 18, as personality is still forming.

## Assessment

Three methodologically rigorous surveys have covered all ten types of personality disorder,<sup>5</sup> including APMS 2000 which used the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II) (First et al. 1997; Singleton et al. 2002). There are issues with all the available screening tools,<sup>6</sup> and no 'gold standard' has emerged (Zimmerman 1994; Guy et al. 2008). One common disadvantage is the large number of questions required to assess the full range of disordered personality types. In order to release capacity for new topics, the 2007 survey only measured ASPD and BPD. This was made possible by the modular structure of the SCID-II, which covers each personality disorder type separately.

In the current survey, personality disorders were not assessed in two phases (as they had been in previous surveys in the series). Instead APMS 2014 screened for personality disorders based only on phase one self-report data. The rates presented in this chapter, therefore, are not comparable with the two-phase rates in the 2007 report. A positive screen for personality disorder only indicates that someone may have sufficient traits to warrant further and fuller investigation. Screen positive rates tend to be higher than actual rates of disorder. It should also be noted that the term 'screen' is used as a convention, and does not indicate that the screening tests used in the survey are used as part of any national screening programme in England.

### *Screening positive for ASPD or BPD on the SCID-II*

SCID-II is available as both a self-completion screen and as a semi-structured clinician administered face to face interview. In APMS 2014, the modules of the self-completion SCID-II covering BPD and ASPD were included in the Computer Assisted Self Interview (CASI) at phase one. They were asked of participants aged between 16 and 64 (in 2007, the SCID-II was asked of everyone).

The ASPD module covered childhood conduct disorder and adult antisocial personality, as a diagnosis of ASPD requires both to be present. The questions

5 DSM-III listed 12 types of personality disorder, but passive-aggressive and self-defeating were not included in DSM-IV. ICD-10 lists nine categories of personality disorder.

6 These include relying on respondent self-report in response to a structured interview, the way in which other disorders can mimic symptoms of borderline personality disorder, and the absence of an informant account of a patient's personality. (Zimmerman 1994).

used to assess these disorders are listed in the questionnaire in Appendix D. Each question asked the participant to indicate whether or not they had a particular personality characteristic, for example: 'Are you the kind of person who...'. All questions had three response categories: yes, no, and 'don't know/does not apply'. A score of one was given for each item endorsed.

### *Screening positive for any personality disorder on the SAPAS*

In APMS 2014, the Standardised Assessment of Personality: Abbreviated Scale (SAPAS) (Moran et al. 2003) was added to measure the likelihood that an individual has a personality disorder in a more general sense, as opposed to screening for specific types of personality disorder (Hesse and Moran 2010). The SAPAS was chosen on the grounds that it is currently the best performing rapid screen for personality disorder (Germans et al. 2012). Each of the eight questions on the SAPAS asked participants to indicate whether or not they had a particular personality characteristic, for example "Are you normally an impulsive sort of person?" Participants could answer either 'yes' or 'no'. A score of one was given for each item endorsed, generating a score of 0–8. Those scoring four or more were defined as screening positive for possible personality disorder. This cut-point was chosen as it provides the best balance between sensitivity and specificity in a general population sample (Lenzenweger et al. 2007; Fok et al. 2015). Participants with more than two SAPAS items missing were not given a SAPAS score.

In summary, in this chapter:

- Screen positive for ASPD and BPD always draws on the SCID-II
- Screen positive for 'any PD' always draws on the SAPAS.

## **7.3 Results**

### **Screening positive for ASPD, BPD and any PD by age and sex**

Overall, 3.3% of participants aged 18 to 64 screened positive for ASPD on the SCID-II. If everyone in the population had been screened, it is likely

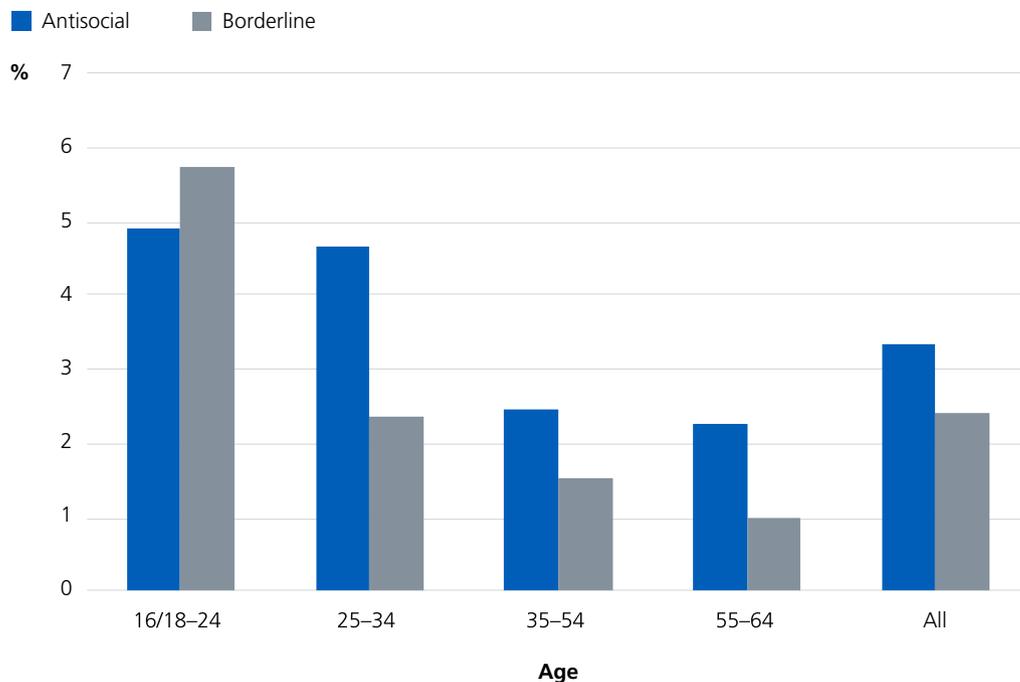
(95% probability) that between 2.8% and 4.0% of 18 to 64 year olds would screen positive. The ASPD rate was higher in men (4.9%, 95% confidence interval (CI): 3.9% to 6.0%) than women (1.8%, 95% CI: 1.4% to 2.4%). Screening positive for ASPD was associated with age. Positive screens for ASPD were more common in men aged 18–24 (6.4%) and 25–34 (6.6%) than in men in older age groups (4.1% of men aged 55–64). A similar pattern was observed among women: 3.3% of women aged 18–24 screened positive for ASPD, compared with 0.4% of women aged 55–64.

2.4% of adults aged 16 to 64 screened positive for BPD on the SCID-II, it is likely that the rate in the wider population of 16 to 64 year olds is between 2.0% and 2.9%. An apparent difference in rate by sex did not achieve statistical significance, with 1.9% (95% CI 1.3% to 2.7%) of men screening positive and 2.9% (95% CI 2.3% to 3.7%) of women. Younger people were more likely to screen positive for BPD than older people, this pattern was more evident in women than men.

**Table 7.1**

**Figure 7A: Screen positive for antisocial and borderline personality disorder in past year (SCID-II)**

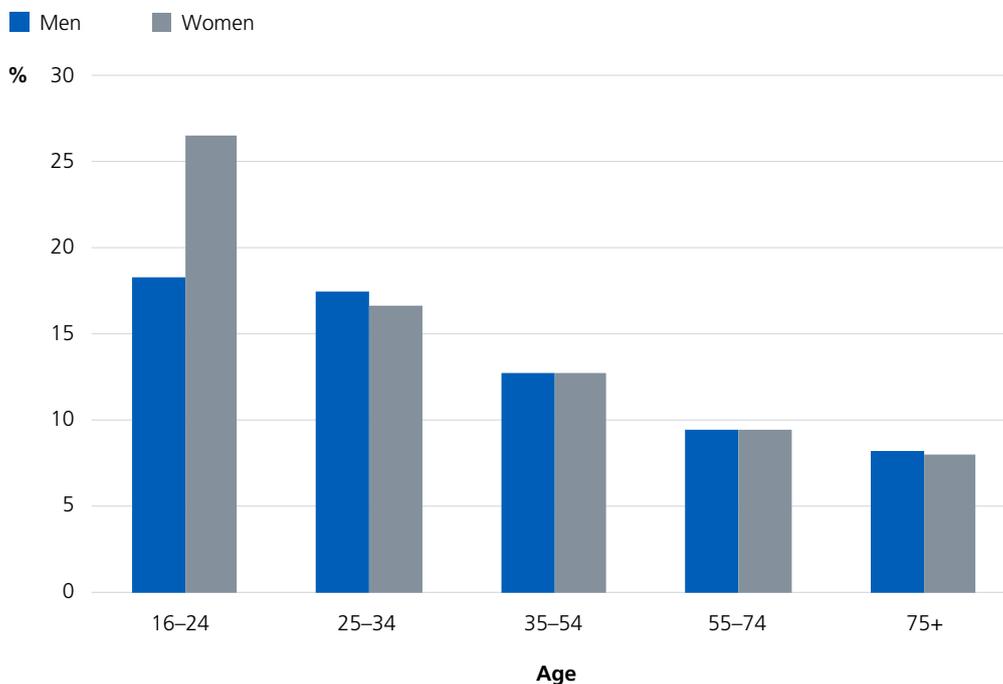
*Base: 18–64 (ASPD); aged 16–64 (BPD)*



Using the SAPAS, 13.7% of adults screened positive for any PD, at a cut-point of 4. The proportion of the population as a whole is likely to be between 12.7% and 14.6%. The prevalence among men (13.2%, CI 95% 11.9% to 14.7%) and women (14.0%, CI 95% 12.8% to 15.4%) was very similar. There was a strong, linear association between age and screening positive for any PD: 22.4% of 16–24 year olds screened positive compared with 8.0% of adults aged 75 and over. [Table 7.2](#)

**Figure 7B: Screen positive for any personality disorder (SAPAS), by age and sex**

*Base: all adults*



### ASPD and BPD screens by any PD screen

The SAPAS identifies about one person in eight aged 16 or over as screen positive for 'any PD' (covering all ten types of PD), while the SCID-II screen detects specifically ASPD in about one person in thirty (aged 18–64) and BPD in one in forty (aged 16–64). As expected therefore, while most participants identified with ASPD or BPD also screened positive on the SAPAS, most SAPAS screen positives did not also screen positive on the SCID-II. [Table 7.3](#)

## Self-diagnosis and professional diagnosis of PD

Participants were asked whether or not they thought that they had ever had any of a list of mental disorders, including 'a personality disorder'. Those who responded positively to this were also asked whether a professional had confirmed that diagnosis.

6.2% of people screening positive for ASPD and 13.2% of BPD screen positives, also believed that they have had a personality disorder. In comparison, less than 1% of people who did not screen positive on the SCID-II believed that they have had a personality disorder. Most people who thought that they have had a personality disorder, also had a diagnosis of this from a professional.

3.4% of people who screened positive for any PD also believed that they have had a personality disorder. Again, most of these people had been diagnosed by a professional. [Table 7.4](#)

## Screening positive for PD by other characteristics

### *Ethnic group*

There was no significant association between any measure of PD and ethnic group. This was the case both when the analysis was age-standardised and when the analysis was run without adjusting for the different age-profiles of the ethnic groups.<sup>7</sup> It should be noted that the APMS sample is underpowered for looking at variation by ethnic group. [Tables 7.5, 7.6](#)

### *Household type*

Participants aged less than 60 and living in lone person households had higher rates of PD than those living in other types of household, for all measures of PD.

[Tables 7.7, 7.8](#)

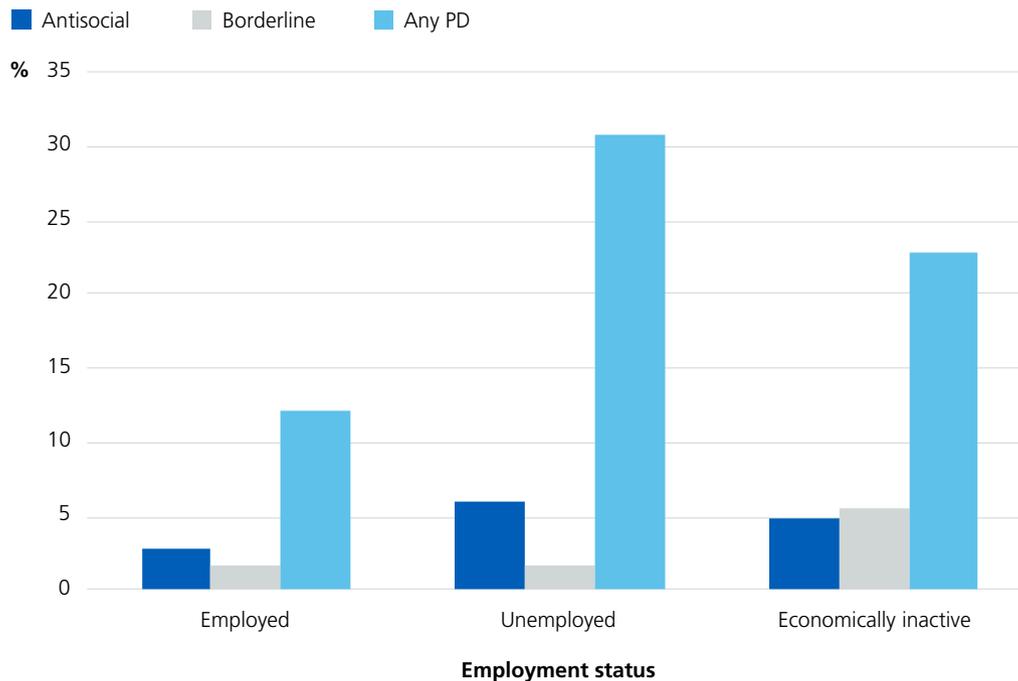
### *Employment status*

Employment status was associated with all measures of PD. Screen positive rates were highest among the unemployed for ASPD and any PD, and in people who were economically inactive for BPD. [Tables 7.9, 7.10](#)

<sup>7</sup> Age-standardisation allows for comparisons to be made between groups after adjusting for the effects of any differences in age distribution. Observed results refer to those which have not been age-standardised.

### Figure 7C: Screen positive for antisocial, borderline personality disorder and any personality disorder, by employment status

Base: 18-64 (ASPD); aged 16-64 (BPD and any PD)



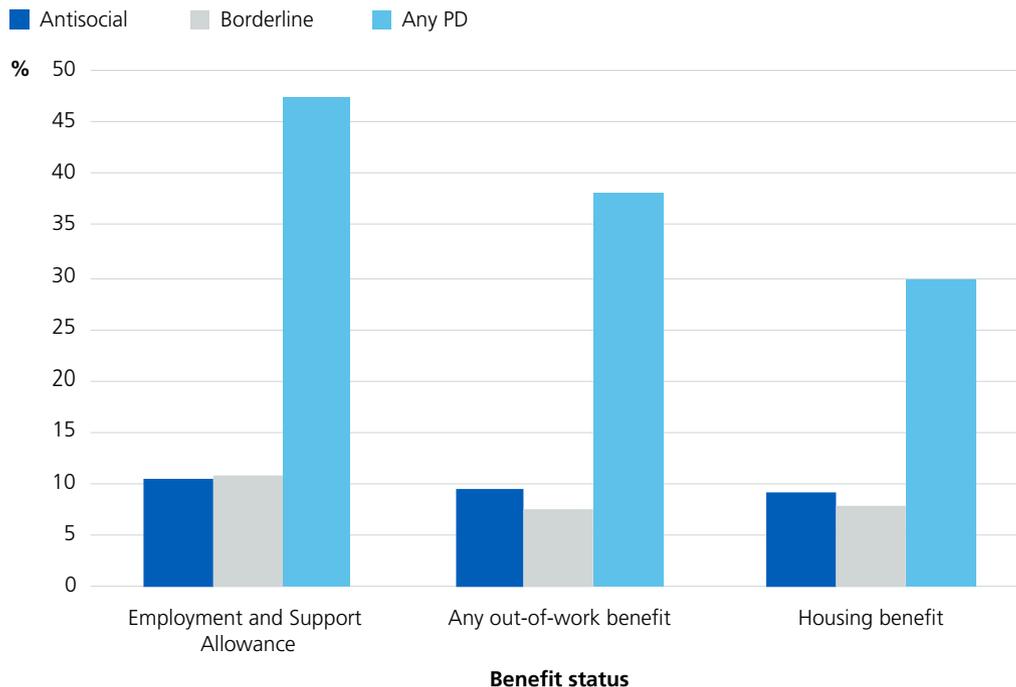
#### Benefit status

Benefit status was looked at in relation to three groupings: being in receipt of any out-of-work benefit (including Jobseeker's Allowance and Employment and Support Allowance (ESA)), receiving an out-of-work benefit specifically related to disability (ESA), and living in a household that received housing benefit support with rent. These categories are further described in the Glossary.

Screening positive for PD – across all three PD indicators – was higher among those who received benefits than among those who did not. The strength of association was greatest for those receiving ESA. About half of the people in this group (40.1% of men and 57.9% of women) screened positive for any PD, compared with one in eight (13.5% of men and 14.5% of women) not receiving an out-of-work disability benefit. [Tables 7.11, 7.12](#)

## Figure 7D: Screen positive for antisocial, borderline personality disorder and any personality disorder, by type of benefit received

Base: 18-64 (ASPD); aged 16-64 (BPD and any PD)



### Region

Screening positive for PD did not vary by region, using any of the PD measures.

[Tables 7.13, 7.14](#)

### Treatment and service use

Participants screening positively for PD, on any of the measures used, were more likely to be in receipt of mental health treatment than those who did not. 26.6% of 18 to 64 year olds who screened positive for ASPD, 43.1% of screen positives for BPD, and 28.9% of screen positives for any PD reported receiving psychotropic (mental health) medication, psychological therapy or both. [Tables 7.15, 7.16](#)

People screening positive were more likely to be in receipt of medication than counselling. Psychotropic medication was being taken by about a quarter of individuals screening positive for ASPD (24.5%) and any PD (25.6%), and more than a third of those screening positive for BPD (38.3%). As in the general population, drugs

used in the treatment of anxiety or depression were the most commonly prescribed to people screening positive for PD, although a notably high proportion of BPD cases were taking antipsychotics (7.5%) or medication indicated for bipolar disorder (9.5%).

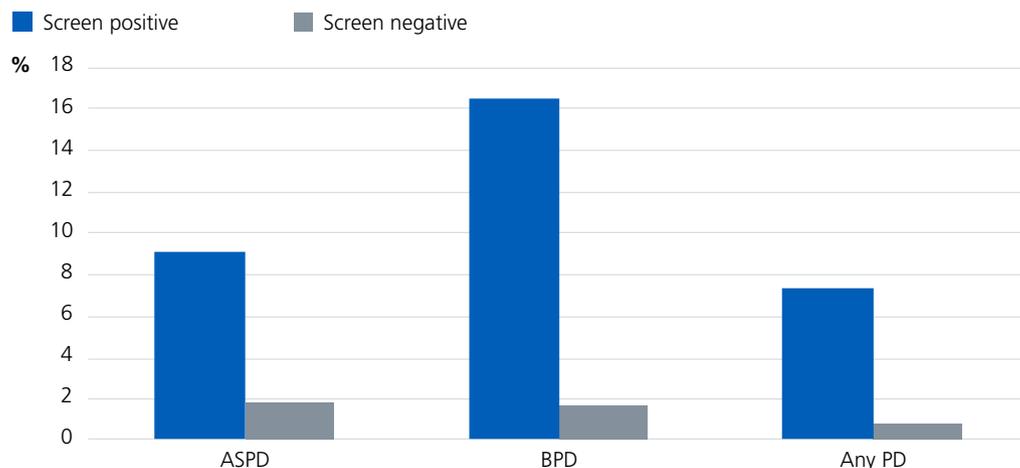
As well as psychotropic medication, substance dependence medication was being taken by 8.0% of ASPD and 8.0% of BPD screen positives, and 4.0% of screen positives for any PD. [Table 7.17, 7.18](#)

Counselling or other psychological therapy was currently being received by one in five (20.2%) people screening positive for BPD (aged 16 to 64), one in seven (13.6%) with ASPD (aged 18 to 64), and one in ten (9.7%) screen positive for any PD. For ASPD, the most common form was alcohol or drug therapy (6.2%), and for BPD it was psychotherapy or psychoanalysis (7.5%) and cognitive behavioural therapy (6.9%). [Table 7.19, 7.20](#)

Along with the finding that people screening positive for PD are more likely to be in receipt of mental health treatment, it was also the case that they were more likely to have requested a particular treatment which they then did not receive. 16.6% of screen positives for BPD, 9.1% of screen positives for ASPD, and 7.3% of screen positives for any PD had requested some kind of mental health treatment in the past 12 months which they had not (yet) received, compared with 0.8% of people not screening positive for any PD. [Table 7.21](#)

### Figure 7E: Requested but did not receive a particular mental health treatment, by personality disorder screens

Base: 18–64 (ASPD); aged 16–64 (BPD); all adults (PD)



## 7.4 Discussion

The epidemiological data generated from this survey has limitations, chiefly in terms of the reliance on self-reported cross-sectional data. Although the numbers of people who screened positive for ASPD and BPD were relatively small (164 and 121 respectively), a number of clear patterns are evident.

People at high risk of personality disorder are more likely to live alone and not be in employment compared with those who do not screen positively for personality disorder. ASPD is more common in men than women. All the measures of personality disorder included in the survey showed strong associations with age: with rates higher in younger age groups than older.

Since this study was carried out there have been significant changes in the classification of personality disorder. The DSM-5 approach was rejected by the American Psychiatric Association (detailed reasons can be found in Zachar et al. (2016)) and so the classification has reverted to the DSM-IV criteria, at least for the next few years. This former classification includes the definitions of antisocial and borderline personality disorder described in this chapter.

The ICD classification has changed radically in that all categorical diagnoses of personality disorder have been abandoned (Tyrer et al. 2015). In its place a single dimensional classification has been proposed, which extends from no personality dysfunction through to severe personality disorder, with personality difficulty, and mild and moderate personality disorder as intermediate levels. A recent population-based longitudinal study has provided some empirical support for this new severity-based classification scheme (Moran et al. 2016). There are five trait domains that qualify the level of severity but are not diagnoses in their own right. These are dissocial, anankastic, detached, negative affective and disinhibited domains that relate directly to normal personality variation. People with personality disorder can have disturbance in more than one domain, and in recent research using the ICD-11 criteria those currently diagnosed as borderline tend to cluster together across the negative affective and dissocial domains (Mulder et al. 2016).

The ICD-11 revision group was also impressed with the evidence that personality disorder is not stable over time (Seivewright et al. 2002; Zanarini et al. 2003),

a finding which is also tentatively supported by the age distribution associated with personality disorder found in this study. For this reason it has included two additional diagnoses; late-onset personality disorder and personality disorder in development, that allow personality disorder to be diagnosed at different ages (Tyrer et al. 2015).

Stability is a defining feature of both the ICD-10 (WHO 1992) and DSM definitions of personality disorder (NICE 2003). The cross-sectional association with age is therefore interesting as it raises a prospective research question about whether the condition truly persists across the life course. Certainly there is evidence of fluctuation over time in the presence of criteria within individuals (Livesley et al. 1992), and the course of the disorder also seems to be susceptible to treatment (NCCMH 2013; Marcus et al. 2006). Moreover, clinical trials have shown that some talking therapies can be effective in the treatment of a number of personality disorders, although the results of pharmacological trials have been less conclusive (Paris 2008).

Most people screening positive for personality disorder in the APMS sample were not receiving treatment although it is noteworthy that the prevalence of reported therapy was higher among those with personality disorder, compared to those without any personality disorder. Of those that were receiving treatment, more cited medication than psychological therapies. It is also noteworthy that screening positive for personality disorder was also associated with requesting but not receiving specific treatment.

As noted previously, the sample size and cross-sectional nature of these data requires us to treat these findings with some caution. Nevertheless, they also suggest that further improvements in treatment provision may be required in order to achieve satisfactory levels of therapeutic help for people with personality disorder as recommended by NICE. For example, NICE quality standards for people with BPD include being offered a choice of psychological therapy.

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Table 7.20 Current counselling or therapy for a mental or emotional problem, by screen positive for any personality disorder

Table 7.21 Requested but not received a particular mental health treatment in the past 12 months, by personality disorder screens

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# Attention-deficit/ hyperactivity disorder

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## Summary

- Attention-deficit/hyperactivity disorder (ADHD) is a complex neurodevelopmental disorder which starts in childhood and often persists into adulthood. Adult ADHD is often unrecognised or misdiagnosed by professionals. It is associated with significant impairment and adverse outcomes, including premature mortality.
- APMS provides the only general population data on ADHD in adults in England. The 2007 and 2014 surveys both included the six-item Adult ADHD Self-Report Scale (ASRS). The screen assesses ADHD characteristics of inattention, hyperactivity and impulsivity during the six months prior to interview. A score of 4 or more constitutes a positive screen for ADHD.
- Screening positive for ADHD indicates that someone warrants a fuller assessment. While the actual prevalence of ADHD will be lower, APMS provides key information on the distribution of ADHD characteristics in the general adult population.
- One in ten (9.7%) adults screened positive for ADHD, with similar rates for men and women. This rate was slightly higher than that found in 2007 using the same measure (8.2%).
- Screening for ADHD was more common among: younger adults; those living alone; people without educational qualifications; the unemployed and those who are economically inactive, especially those in receipt of disability-related out-of-work benefits.
- Very few adults screening positive for ADHD believed that they had the disorder (3.7%) or had been diagnosed with ADHD by a professional (2.3%). 0.5% of adults screening positive for ADHD were currently taking medications specifically indicated for ADHD.
- However, adults screening positive for ADHD were three times more likely to be in receipt of psychotropic medication or psychological therapy than those who did not (34.3% compared with 10.8%). They were also more likely to make use of health or community care services, and to have requested particular treatment which they did not subsequently get.

- These findings suggest that ADHD characteristics are widespread in the adult population in England. While no definitive assessments of ADHD are reported on here, the findings are consistent with the view that ADHD may often go unrecognised, misdiagnosed and undertreated.

## 8.1 Introduction

Attention-deficit/hyperactivity disorder (ADHD) is widely recognised as a complex neurodevelopmental disorder in childhood. Prevalence estimates for childhood ADHD range between 3% and 9%, depending on the diagnostic criteria applied (NICE 2008). The persistence of ADHD into adulthood is also well established, but has only gained significant recognition – and become a focus for research and clinical management – over the past decade (Nutt et al. 2007).

The National Institute for Health and Clinical Excellence (NICE) reviewed the diagnostic construct of ADHD across the lifespan and concluded that when ADHD persists into adulthood it is often associated with significant impairment (2008). It remains uncertain what level of ADHD symptoms and impairment in adults should be considered grounds for intervention.

Worldwide prevalence estimates for ADHD in adults from survey studies range from 2.5% to 3.4% (Simon et al. 2009; Fayyad et al. 2007). Survey estimates of reporting both childhood ADHD and persistence into adulthood vary widely within and between countries, with US general population surveys suggesting a prevalence of between 3% and 5% (Fayyad et al. 2007; Faraone and Biederman 2005; Kessler et al. 2006). Analysis of multiple follow-up studies of children diagnosed with ADHD has indicated that about 15% of children diagnosed with ADHD retained the diagnosis at age 25. A further 50% of children with ADHD were in partial remission by age 25, meaning they still experienced some impairing symptoms (Nutt et al. 2007). More recent follow-up studies in the UK and the Netherlands of children with ADHD attending child mental health services found far higher persistence rates into adulthood (in the order of 80%) (Van Lieshout et al. 2016; Cheung et al. 2015). This may reflect the severity of the cases in these studies.

APMS 2007 provided the first epidemiological data on the prevalence of ADHD characteristics in the adult population in England. Findings from that survey indicated that prevalence was higher among particular population subgroups: most notably unemployed people, those with substance misuse disorders, and previously married individuals (McManus et al. 2009). APMS 2014 has the same screening tool as that used in 2007, and presents the first opportunity to look at trends in ADHD characteristics.

ADHD in adults may go unrecognised or be misdiagnosed by mental health professionals (Asherson 2005). A recent survey using diagnostic interview assessments with non-psychotic patients attending adult mental health services in European countries found an ADHD rate of 15.8% (DSM-IV) (APA 1994) to 17.4% (DSM-5) (APA 2013). Their ADHD was often undiagnosed and untreated (Deberdt et al. 2015). One difficulty with diagnosis is that some of the characteristic features of ADHD may also be seen in other psychiatric conditions. These include personality disorders (particularly those characterised by emotional instability such as antisocial personality disorder and borderline personality disorder), while poor attention and distractibility are also common in depression, anxiety and bipolar disorder. ADHD symptoms also overlap or co-occur with other neurodevelopmental disorders such as autism and intellectual disability, and specific learning difficulties. This may result in additional or alternative diagnoses (Nutt et al. 2007). Furthermore, behavioural problems such as substance misuse disorders and antisocial behaviour occur at increased rates in adults with ADHD. If ADHD in adulthood is unrecognised as a result of comorbidity, service provision and treatment may be ineffective.

Untreated, the presence of ADHD may lead to educational and occupational disadvantage, and significant social impairments. Adults with ADHD tend to have fewer academic qualifications, probably because of difficulties with distractibility and restlessness, as well as problems with organising time, prioritising tasks and meeting deadlines (Nutt et al. 2007). ADHD is found in 26% of prisoners (Young et al. 2014; Ginsberg et al. 2010) and 12% of treatment-seeking patients with substance abuse disorders (van de Glind et al. 2014). It is associated with increased rates of criminal convictions (Lichtenstein et al. 2012), transport accidents (Chang et al. 2014) and mortality (Dalsgaard et al. 2015). Additional costs to society are incurred through absenteeism, reduced productivity and

poor work performance (Kessler et al. 2005b). The social consequences of the adult form of ADHD are equally marked, with dysfunctional patterns of behaviour leading to poor interpersonal relationships and marital failure (Nutt et al. 2007).

Service provision and treatment for ADHD in childhood is now well established, but is much less available for adults diagnosed with the condition. Many ADHD medications considered effective for children and adolescents are not licensed for use in adults (Nutt et al. 2007), although this is changing with licensed indications for the first time in the UK for use of atomoxetine and lisdexamfetamine in adults with ADHD. Mental health services for adults with ADHD remain relatively uncommon or greatly under-resourced in the UK and across much of Europe, resulting in high levels of untreated disorder even when it is identified (Van Lieshout et al. 2016).

Information about the prevalence of ADHD and the use of mental health services by adults presenting with the characteristic features of ADHD in the English population is essential for planning improvements in diagnosis and service provision. This chapter describes the general population distribution of characteristic behavioural symptoms associated with ADHD, examines their association with age, sex, and certain sociodemographic characteristics, and profiles the use of mental health treatment and services. Comorbidity involving ADHD is addressed in Chapter 13.

## 8.2 Definition and assessment

### **Attention-deficit/hyperactivity disorder (ADHD)**

ADHD is a neurodevelopmental disorder defined by the core dimensions of inattention, hyperactivity and impulsiveness. Characteristic symptoms and behaviours include significant and enduring difficulties with organisation and planning, distractibility, forgetfulness, over-activity, restlessness and impulsiveness, to an extent that causes significant distress or significantly interferes with everyday functioning (Weiss et al. 2002). The role of ancillary characteristics has been highlighted in recent years; these include emotional dysregulation, sleep onset insomnia and problems with the self-regulation of behaviour (Asherson et al. 2016).

While these are not used to define ADHD, they are commonly seen in the condition and often lead to impairment. They are also seen in other mental disorders.

Two official sets of diagnostic criteria are in current use; the International Classification of Diseases 10th Revision (ICD-10) (WHO 1992) and the Diagnostic and Statistical Manual of Mental Disorders fifth edition (DSM-5) (APA 2013). The ICD-10 uses a more restricted set of criteria, whereby ADHD symptoms are classified as *hyperkinetic disorder* when all three characteristics of inattention, hyperactivity and impulsivity are present and lead to impairment. This stricter classification excludes cases comorbid with conditions such as anxiety, personality disorder and pervasive developmental disorder, although such comorbidity is common. The narrowness of this definition can be seen as a limitation, as it will not identify people with all the features of adult ADHD if the criteria for other conditions are also met, and will only detect the most severe cases. On the other hand, given the severity of ICD-10 hyperkinetic disorder, people meeting these criteria represent a clear priority. DSM-5 in contrast sets out a broader definition of the disorder and allows the presence both of comorbid disorders and of impairing symptoms in the inattentive or hyperactive-impulsive domains. This approach might therefore be seen as over-identifying ADHD in individuals who are primarily suffering from other disorders (Nutt et al. 2007).

### **Adult ADHD Self-Report Scale-v1.1 (ASRS)**

The Adult ADHD Self-Report Scale (ASRS), developed in collaboration with the World Health Organisation (WHO), was used in both the 2007 and 2014 APMS to estimate the prevalence of possible ADHD (WHO 2003). The scale is referred to in this chapter as a screening test for reasons of convention, although it is not currently recommended as part of an official screening programme in England.

The six-item ASRS is a shortened version of the 18-item Symptom Checklist scale, which measures the frequency of recent symptoms of adult ADHD listed in the DSM-IV.<sup>1</sup> This short screen appears to out-perform the full 18-question ASRS in terms of sensitivity (68.7% versus 56.3%), specificity (99.5% versus 98.3%),

<sup>1</sup> DSM-IV Criterion A symptoms are categorised as a clinical diagnosis of adult ADHD requiring a respondent to have at least six symptoms of either inattention or hyperactivity-impulsivity during the six months before the interview.

and total classification accuracy (97.9% versus 96.2%) (Kessler et al. 2007). Its use and validity have been established predominantly in community samples, although it has been suggested that the scale could also prove to be a useful complement to more accurate clinical diagnostic assessments (Kessler 2005a). However, it may lack sufficient predictive validity in some populations, such as those with substance use disorders (van de Glind et al. 2013).

The ASRS screen was administered face-to-face to all participants. The six questions assess the ADHD characteristics of inattention, hyperactivity and impulsivity during the six months prior to interview. Participants were asked to rate the frequency of these characteristics using a five-point response scale: 'never', 'rarely', 'sometimes', 'often' and 'very often'. In this chapter we report 1) the proportion of adults reporting four or more characteristics at or above the specified frequency threshold, and 2) the proportion reporting all six characteristics. The four-item threshold is that recommended for indicating the need for a clinical assessment for ADHD (Fayyad et al. 2007). However, the developers of the scale also emphasise that the higher the score the more likely it is that ADHD is present, and for this reason we also show the proportion of the sample meeting the threshold frequency for all six items. This reveals subgroups with the greatest likelihood of a positive diagnosis at clinical assessment.

While it has been established that the ASRS identifies a group with a greater chance of meeting the full criteria, the rate will not be accurate because some participants may lack significant impairment or another defining characteristic of ADHD symptoms. To address this problem, additional work using a short clinical assessment format was introduced to phase two during the 2014 fieldwork and will be described and reported on separately.<sup>2</sup> In the meantime, the validity of self-evaluation of ADHD characteristics described in the present report should be regarded with some caution.

The questions in the ASRS scale used to screen for possible adult ADHD and the threshold frequencies are displayed below.

<sup>2</sup> The phase two data on ADHD will be analysed in subsequent publications.

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## Adult Self-Report Scale-v1.1 (ASRS-V1.1) Screen

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<i>Thinking about now and the past six months...</i>	<i>Responses indicating symptom is significant</i>
... how often do you have trouble wrapping up the fine details of a project, once the challenging parts have been done?	Sometimes, often, very often
... how often do you have difficulty getting things in order when you have to do a task that requires organisation?	Sometimes, often, very often
... how often do you have problems remembering appointments or things you have agreed to do?	Sometimes, often, very often
... when you have a task that requires a lot of thought, how often do you avoid or delay getting started?	Often, very often
... how often do you fidget or squirm with your hands or your feet when you have to sit down for a long time?	Often, very often
... how often do you feel overly active and compelled to do things, like you were driven by a motor?	Often, very often

---

Although the ASRS screen shows strong concordance with clinical diagnosis in US population surveys, caution is required in interpreting ASRS-based findings. First, self-reported information is always subject to some social desirability biases (Greenfield et al. 2001). Second, adults may under-report their ADHD symptoms in comparison to informant observations (Cheung et al. 2015; Moffitt et al. 2015). Third, the childhood age of onset, the level of impairment resulting from the symptoms of hyperactivity and inattention, and the degree of pervasiveness across situations such as home and work are key criteria for the diagnosis of ADHD, and the ASRS does not include an overall assessment of these requirements.

It is important to note that for the purposes of this chapter, scoring four or more on the ASRS is counted as a 'positive screen for ADHD'. Occasionally a rate is also presented for those who endorsed all six items on the ASRS. Screening positive for ADHD (with a score of 4 or more) indicates that an individual has sufficient symptoms to warrant a further and more detailed ADHD assessment. The actual ADHD rate is likely to be lower than the rate screening positive for ADHD.

## 8.3 Results

### Screening positive for ADHD in 2007 and 2014, by age and sex

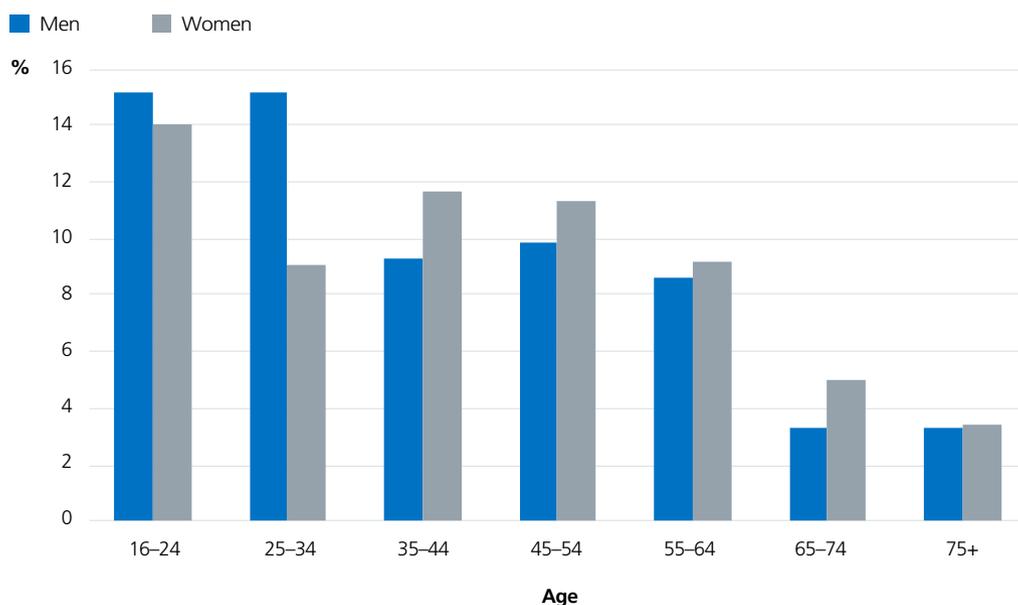
One in ten (9.7%) adults scored four or more (the threshold at which clinical assessment for ADHD may be warranted) on the ASRS. If all adults in the household population had been screened it is likely (95% confidence) that the proportion who screened positive would be between 8.9% and 10.6%. The proportion endorsing all six characteristics on the ASRS screen was much lower (0.7%).

Overall, men and women were equally likely to screen positive (at either threshold); 10.0% of men and 9.5% of women scored four or more on the ASRS, and 0.7% of men and 0.6% of women scored six. The lack of association with sex is consistent with findings from APMS 2007. However, some studies have found ADHD to be two to four times more prevalent in men than women (Faraone and Biederman 2005).

The proportion of adults screening positive for ADHD broadly decreased with age. This pattern was observed in both women and men. The proportion with scores of four or more was highest in adults aged 16–24 (14.6%), and lowest in adults aged 75 and over (3.4%). [Table 8.1](#)

### Figure 8A: Screen positive for ADHD (score of 4 or more on the ASRS), by age and sex

Base: all adults

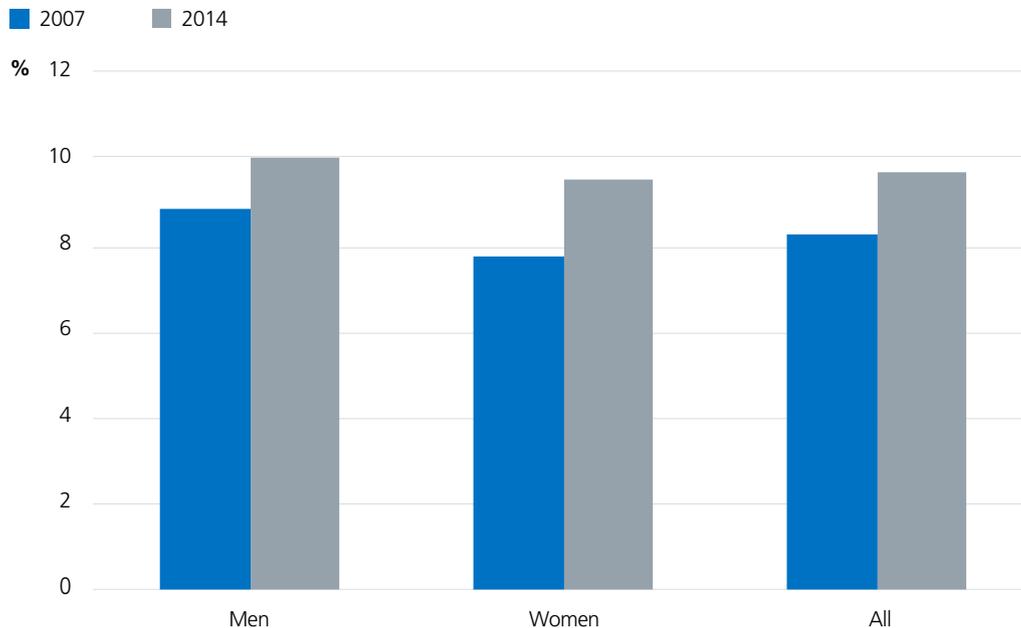


The proportion of adults screening positive for ADHD was somewhat higher in 2014 (9.7%) than in 2007 (8.2%). This upward trend was evident in both men (8.8% in 2007; 10.0% in 2014) and women (7.7% in 2007; 9.5% in 2014).

**Table 8.2**

**Figure 8B: Screen positive for ADHD in 2007 and 2014, by sex**

*Base: all adults*



**Self diagnosis and professional diagnosis of ADHD**

Table 8.3 presents ASRS scores in relation to whether or not people considered themselves to have had ADHD, and whether or not a professional had diagnosed them with ADHD.

There was some concordance between the survey test for ADHD and people’s own perceptions. People who screened positive on the ASRS were also more likely to think that they had ADHD than those who did not screen positive. Even so, a small minority of those who screened positive for ADHD believed that they had ADHD (3.7% of those endorsing four or more ADHD characteristics, and 7.7% who endorsed all six).

Men were more likely than women to think that they had had ADHD. 5.4% of men reporting four or more ADHD characteristics thought that they had had the disorder, compared with 1.9% of women.

People who screened positive on the ASRS were also more likely than those who did not to have had the disorder diagnosed by a professional. 2.3% of people with four or more ADHD characteristics reported having had a diagnosis. Men screening positive for ADHD were more likely than screen-positive women to have been diagnosed. Of those with a score of four or more, 3.9% of men had been diagnosed with ADHD at some point, compared with 0.7% of women. [Table 8.3](#)

### **Variation in screening positive for ADHD by other characteristics**

#### *Ethnic group*

No significant association was found between ethnic group and screening positive for ADHD. While this is consistent with findings from the 2007 survey, the small number of minority ethnic participants in the sample should be noted.

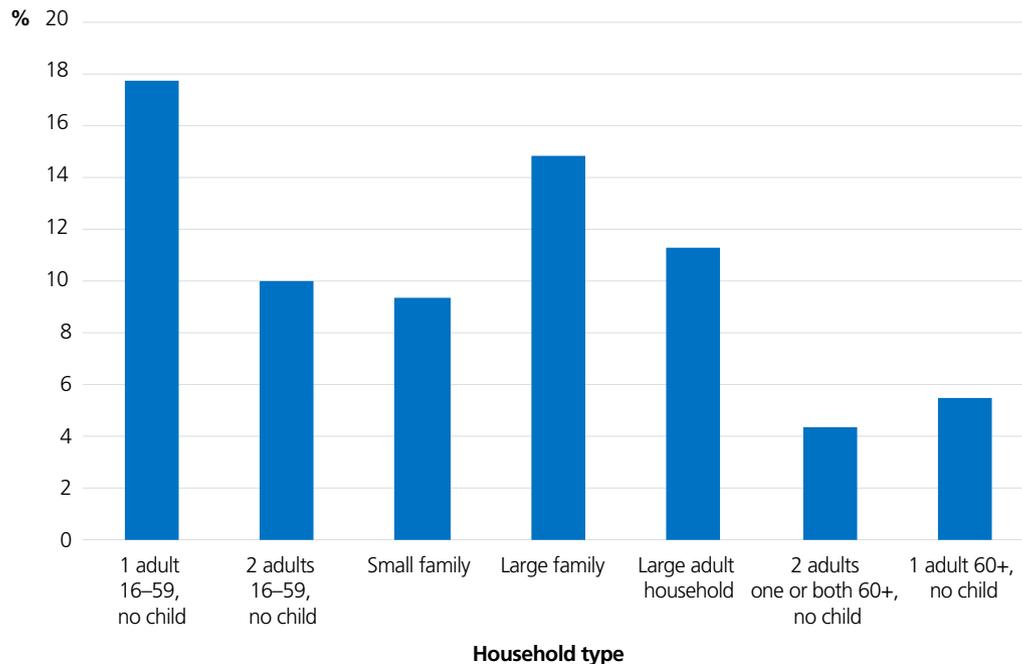
#### [Table 8.4](#)

#### *Household type*

People screening positive for ADHD were more likely to live in some types of household than in others. In particular, people living in households with one adult aged under 60 had the highest prevalence of ADHD characteristics (17.7%), while the prevalence was lowest (4.4%) in those living in households consisting of two older adults (aged 60 or over). It should be noted that analysis by household type could not be age-standardised, and it is likely that the association is partly explained by the younger age profile of people screening positive. [Table 8.5](#)

**Figure 8C: Screen positive for ADHD, by household type**

Base: all adults



### Region

The prevalence of ADHD characteristics did not vary with region. [Table 8.6](#)

### Educational qualifications

Screening positive for ADHD varied somewhat by highest educational qualification achieved, although this was less pronounced than the association with employment status. People without qualifications were the most likely to score four or more on the ASRS (14.5%). This compares with 11.0% of people whose highest qualifications were GCSE (or equivalent), and 7.7% of those with a degree. A similar pattern was also observed in the 2007 survey data. [Table 8.7](#)

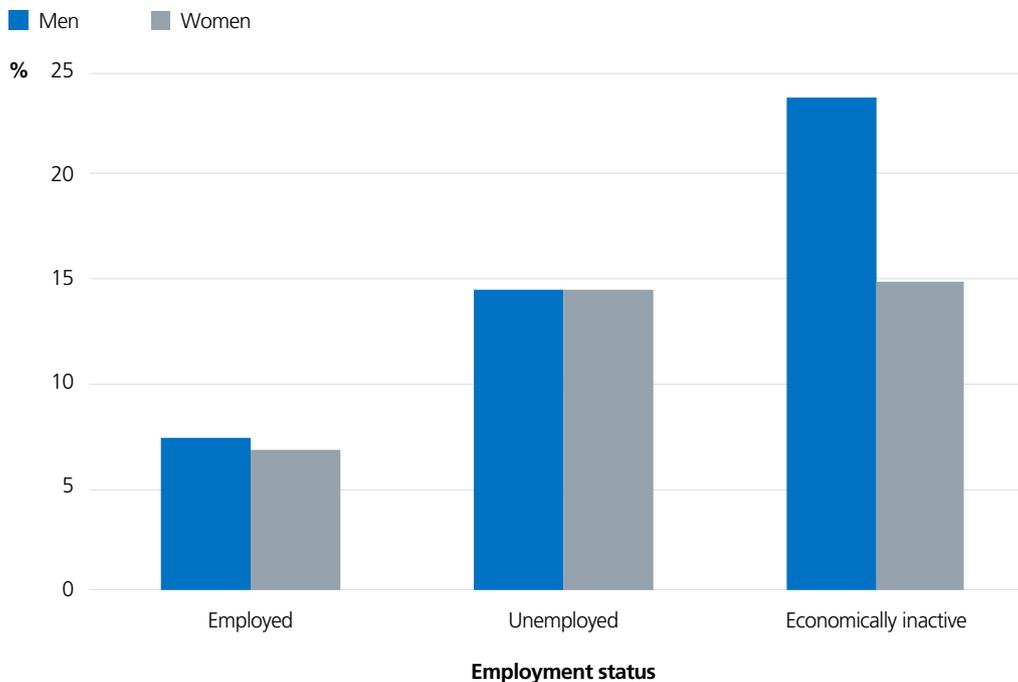
### Employment status

Employment status was strongly associated with screening positive for ADHD. Unemployed people (14.6% of unemployed men and 14.5% of unemployed women) were about twice as likely as those in employment (7.3% of men and 6.7%

of women) to screen positive for ADHD. The employment status associated with the highest rates however, particularly among men, was the ‘economically inactive’ group. This heterogeneous category included students, people looking after the home, those who were long-term sick or disabled, and those taking early retirement (the analysis was run on adults aged 16–64). One in four economically inactive men (23.8%) and one in seven economically inactive women (15.0%) screened positive for ADHD. (See the Glossary for a definition of economic inactivity). [Table 8.8](#)

**Figure 8D: Screen positive for ADHD, by employment status and sex (age-standardised)**

*Base: all adults aged 16–64*



### *Benefit status*

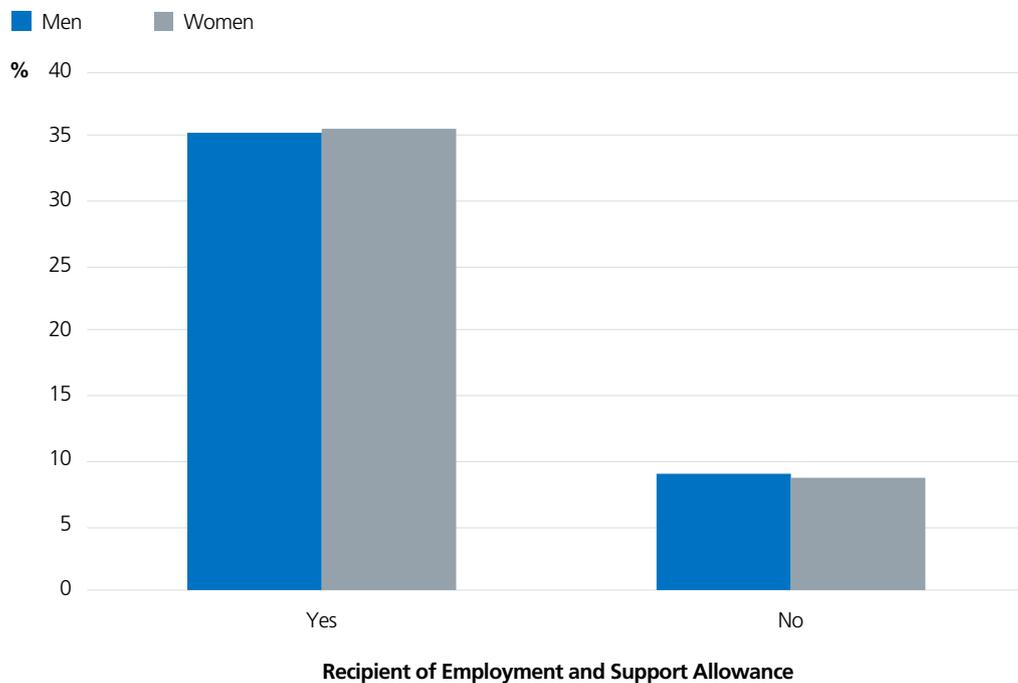
Benefit status was looked at in relation to three groupings: being in receipt of any out-of-work benefit (including Jobseeker’s Allowance and Employment and Support Allowance (ESA)), receiving an out-of-work benefit specifically related to disability (specifically ESA), and living in a household that received housing benefit support with rent. Analysis by out-of-work benefits were based on those aged 16 to 64 years. These categories are further described in the Glossary.

Screening positive for ADHD was higher in each of these groups than in people not in receipt of the benefits. The strength of association was greatest among those receiving ESA. One in three people in this group (35.1% of men and 35.5% of women) screened positive for ADHD, compared with one in eleven (9.0% of men and 8.6% of women) not receiving an out-of-work disability benefit.

**Table 8.9**

**Figure 8E: Screen positive for ADHD, by receipt of Employment and Support Allowance and sex**

*Base: all adults aged 16–64*



### Treatment and service use

Participants were asked about a range of types of treatment and services. These included current use of psychotropic medication or psychological therapy for a mental or emotional problem, together with the use of a range of health, community and day care services over the last year. Two of the most commonly prescribed ADHD medications were asked about: methylphenidate (e.g. Ritalin,

Concerta, Equasym) and atomoxetine (Strattera). The treatment and service use variables are described in more detail, including variation in their reference periods, in the Glossary.

One in three adults (34.3%) screening positive for ADHD was currently in receipt of medication, counselling or therapy for a mental or emotional problem. This compares with 10.8% of those with ASRS scores of less than four. Adults screening positive for ADHD were five times more likely than those below the threshold to be having counselling or other psychological therapy (10.1%, compared with 2.2%), and three times more likely to be on medication (31.5% of those with a score of four or more were taking psychotropic medication, compared with 9.4% of those scoring less).

More than one in three adults who screened positive (37.4%) reported using health care services for a mental or emotional reason, compared with one in ten of those below the threshold (10.0%). There was a similar pattern in the use of community care and day care services. [Table 8.10](#)

Among those screening positive, the types of psychotropic medication most likely to be taken were drugs for treating anxiety (27.2%) and depression (27.2%). Only 0.5% of adults who screened positive for ADHD were currently taking medication specifically indicated for ADHD (methylphenidate or atomoxetine). However, it is possible that some participants may have been taking an ADHD preparation not asked about, may have taken an ADHD medication preparation in the past, or could be currently taking methylphenidate or atomoxetine and not reported it (either because they chose to withhold this information or because they were unaware). Adults who scored four or more on the ASRS were more likely to have used every type of service asked about than those who screened negative. [Table 8.11](#)

7.8% of people screening positive for ADHD reported that they had requested a particular mental health treatment in the past 12 months (not necessarily for ADHD), but had not received the requested treatment. In comparison, 1.0% of people without a positive ADHD screen had requested, but not got, a particular mental health treatment. [Table 8.12](#)

## 8.4 Discussion

There is a lack of survey data describing the presence of possible ADHD in the general adult population in England. The circumstances of adults with ADHD are also poorly understood. This chapter presents data on the prevalence of possible ADHD as measured by the six-item ASRS screen previously used in the 2007 survey.

In 2014, 9.7% of the population were identified as having sufficient ADHD characteristics in the last six months to warrant clinical assessment for ADHD. This was slightly higher than the rate found (8.2%) when the survey was last carried out, in 2007. Comparable data have been collected in the US using the same screening tool, with similar population patterns found. Studies that include a fuller assessment of ADHD tend to find a lower prevalence of ADHD (Fayyad et al. 2007; Faraone and Biederman 2005; Kessler et al. 2006), as these studies often factor in reporting of childhood ADHD and adult persistence (Kessler et al. 2006). ADHD-like symptoms in some participants screening positive on the ASRS may have first occurred in adulthood, and perhaps are related to a different adult-onset condition (Faraone and Biederman 2016). They may also reflect adult onset forms of ADHD, perhaps secondary to acquired factors. While these have been identified in recent studies, they have not yet been validated (Moffit et al. 2015). The ASRS does not take account of whether symptoms persist across different aspects of a person's life, nor how impairing symptoms are. Despite these limitations, the APMS findings are valuable in identifying the population distribution of characteristics associated with possible ADHD that warrant recognition and assessment.

Previous research has identified variations in rates of ADHD by particular socio-demographic factors. Only some of these factors were consistent with the APMS 2014 data (Faraone and Biederman 2005). For example, although no significant variation by sex and ethnic origin was observed, positive screens for the disorder were found to be concentrated in younger age groups, among the unemployed and in those in receipt of benefits. The APMS 2007 survey also highlighted associations with educational attainment and marital status.

The great majority of people screening positive for ADHD did not access treatment for ADHD. However, they were more likely than those screening negative to seek – and not get – treatment and services for mental or emotional reasons. They were also more likely than those screening negative to get other types of mental health treatment. This may reflect the fact that adults screening positive for ADHD often have comorbid diagnoses of other psychiatric conditions (such as depression, anxiety and personality disorders). Alternatively, their ADHD characteristics may be misdiagnosed by doctors not trained to recognise and treat adult ADHD. This interpretation is supported by the very low levels of ADHD medication currently being taken by participants screening positive for ADHD, together with their high levels of anxiolytic and antidepressant use. It is worth noting, however, that the APMS cannot be used to estimate how many adults would be likely to benefit from treatment.

Progress is being made with the development of best practice advice and guidelines on care for adults with ADHD, which identifies key priorities for treatment and management of the disorder (Nutt et al 2007). These APMS findings have clearly identified the need for further work in improving the diagnosis and treatment of adult ADHD, both at the population level where precise screening tools need to be developed in relation to clinical assessments of the general population, and in clinical practice. Further analyses of the APMS 2014 data are underway in this area.

## 8.5 Tables

### Prevalence and trends

- |           |   |
|-----------|---|
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| Table 8.2 | Screen positive for ADHD in past six months in 2007 and 2014, by age and sex                      |
| Table 8.3 | Screen positive for ADHD in past six months, by self-diagnosis and professional diagnosis of ADHD |

## Characteristics

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- Table 8.5 Screen positive for ADHD in the past six months, by household type and sex
- Table 8.6 Screen positive for ADHD in the past six months (observed and age-standardised), by region and sex
- Table 8.7 Screen positive for ADHD in the past six months (age-standardised), by highest educational qualification and sex
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- Table 8.9 Screen positive for ADHD in the past six months (age-standardised), by benefit status and sex

## Treatment and service use

- Table 8.10 Treatment and service use, by ASRS score
- Table 8.11 Psychotropic medication currently taken, by ASRS score
- Table 8.12 Requested but not received a particular mental health treatment in the past 12 months, by ASRS score

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# Bipolar disorder

Steven Marwaha | Nina Sal | Paul Bebbington

## Summary

- Bipolar disorder, previously known as manic depression, is a common, lifelong, mental health condition characterised by recurring episodes of depression and mania. It is associated with significant impairment.
- Before APMS 2014, bipolar disorder had not been assessed in the UK general population. The World Mental Health Survey initiative incorporated screening for bipolar disorder, identifying a rate of 2.4% across 11 other countries.
- The 15-item Mood Disorder Questionnaire was added to the 2014 survey. A positive screen required endorsement of at least 7 lifetime manic/hypomanic symptoms, as well as several co-occurring symptoms, together with moderate or serious functional impairment. A positive screen indicated the likely presence of bipolar disorder and that fuller assessment would be warranted.
- Overall, 2.0% of the population screened positive for bipolar disorder. Rates were similar in men and women.
- Positive screening for bipolar disorder was more common in younger age-groups. 3.4% of 16–24 year olds screened positive compared with 0.4% of those aged 65–74. None of the participants aged 75 and over screened positive for bipolar disorder. It did not vary by region or ethnic group.
- Rates of positive screening for bipolar disorder were higher in non-employed people, in those receiving particular benefits, and in people living alone.
- Most people screening positive for bipolar disorder were not in receipt of psychotropic medication or psychological therapy at the time of the interview. Furthermore, one in eight had unsuccessfully requested a particular mental health treatment in the past 12 months.

## 9.1 Introduction

Bipolar disorder, previously known as manic depression, is a common, lifelong, mental health condition. It is characterised by recurring episodes of *depression* (feelings of low mood and lethargy) and of *mania* (feelings of elation and overactivity) or hypomania (a milder form of mania) (RCPsych 2016). While at one level it is considered to lie on a spectrum, several subtypes can be identified, diagnoses of which are based on the frequency and pattern of episodes of (hypo) mania and depression. Worldwide prevalence rates of bipolar disorder are estimated to be between 1.0% and 5.0% (Bebbington and Ramana 1995). These figures vary depending on the part of the bipolar spectrum researchers assess and the instruments used. The World Mental Health Surveys identified a rate of 2.4% across 11 countries (Akiskal et al. 2000; Merikangas et al. 2011), and in the National Comorbidity Survey Replication, a US nationally representative study, prevalence rates for bipolar spectrum disorders were found to be 4.4% (Merikangas et al. 2007). Prevalence rates have been found to be comparable in men and women, with an inverse relationship with age (Merikangas et al. 2011; Pini et al. 2005).

At present, there is a lack of epidemiological data on the prevalence of bipolar disorder in the UK (Gupta and Guest 2002). One of the reasons that bipolar disorder has not been measured previously on APMS is that it requires information about lifetime symptoms, while APMS tends to focus on more recent time frames. This chapter, newly introduced in APMS 2014, therefore provides crucial data on the prevalence and socio-demographic profile of bipolar disorders in England.

The World Health Organisation (WHO) identified bipolar disorder as the 6th leading cause of disability in the world (Murray and Lopez 1996). It leads to significant psychosocial impairment, such as fewer employment prospects and lower annual income (Coryell et al. 1993; Judd et al. 2005; Marwaha et al. 2013), as well as placing a great burden on health care services (Pini et al. 2005). The annual economic costs for bipolar disorder in England were estimated, in 2007, to be £5.2 billion, two thirds of which was attributable to loss of employment. This estimation is projected to rise to £8.21 billion by 2026 (McCrone et al. 2008).

Bipolar disorder is comorbid with a number of other disorders such as substance misuse, anxiety disorders, personality disorders and attention-deficit/hyperactivity disorder (ADHD) (NICE 2014b). Furthermore, the risk of suicide among those with bipolar disorder is approximately 20–30 times greater than that in the general population (Pompili et al. 2013). It has a peak age of onset between 15–19 years, though it is recognised that there is often considerable delay between onset and treatment, with those seeking help not receiving a correct diagnosis for around six years from the onset of symptoms and very often longer (NICE 2015). Diagnosis of bipolar disorder is challenging, in that it cannot be confidently differentiated from unipolar depression until an episode of hypomania is identified. Further, the prevalence of depressive symptoms in people with bipolar is greater than that of related mood (Philips and Kupfer 2013).

Treatment options, as based on the guidelines of the National Institute for Health and Care Excellence (NICE), vary depending on whether the individual is experiencing a depressive or manic (hypomanic) episode. For manic or hypomanic episodes, treatment will usually involve some form of mood stabilising medication, which can take the form of anti-psychotic drugs. For depressive episodes NICE currently recommends psychological therapies such as cognitive behavioural therapy (CBT), and/or medication. Long term treatment with mood stabilising medication such as lithium is also recommended as maintenance treatment to reduce the risk of relapse (NICE 2014a). NICE estimates that 25% of adults with bipolar disorder never seek help or treatment (2014b).

## 9.2 Definition and assessment

### Bipolar disorder

There are a number of subtypes of bipolar disorder recognised in the new edition of the US-based Diagnostic and Statistical Manual of Mental Disorders (DSM-5) with the major groupings being: bipolar I; bipolar II and cyclothymia (APA 2013). In the WHO's International Classification of Diseases version 10 (ICD-10), no distinction is made between type I and II.

Bipolar I disorder is characterised by at least one lifetime episode of mania; a period of elevated mood and increased levels of energy including such symptoms as increased talkativeness, inflated self-esteem, feelings of grandiosity, and a decreased need for sleep, that lasts at least one week and causes significant impairment in social or occupational functioning. Whilst in DSM-5 a manic episode is sufficient to make the diagnosis of bipolar I, in ICD-10 the experience of a depressive episode is required for the bipolar disorder diagnosis to be made. The vast majority of people experiencing a manic episode will however go on to develop a depressive episode in their lifetime (Phillips and Kupfer 2013).

Diagnosis for bipolar II disorder requires at least one episode of hypomania, similar to a manic episode though not severe enough to cause impairment in social or occupational functioning, and at least one episode of major depression.

For a diagnosis of cyclothymia, the individual must experience hypomanic and depressive symptoms that fall short of the criteria for a manic, hypomanic or major depressive episode. DSM-5 also identifies 'other specified bipolar and related disorders' (previously referred to as 'bipolar not otherwise specified (NOS)' by DSM-IV) for instances in which there is significant distress or impairment but not meeting the full diagnostic criteria for previously defined bipolar disorder subtypes (APA 2000).

### **Mood Disorder Questionnaire (MDQ)**

Bipolar disorder was assessed in the APMS 2014 self-completion using the Mood Disorder Questionnaire (MDQ), a self-report 15-item scale based on DSM-IV criteria (the diagnostic classification system current at the time the survey was in development). It was designed to screen for bipolar spectrum disorders, i.e. bipolar I, bipolar II, cyclothymia and bipolar NOS. This assesses lifetime experience of manic or hypomanic symptoms by way of 13 yes/no items. It also establishes whether several of the symptoms have been experienced at the same time, and whether they have caused moderate to serious problems (Hirschfield et al. 2000).

A positive screen for bipolar disorder requires endorsement of at least 7 lifetime manic/hypomanic symptoms, as well as several co-occurring symptoms, and moderate or serious associated functional impairment.

The MDQ has been used in a number of large scale epidemiological studies in the US. It was developed and validated using a psychiatric outpatient population,

and was found to correctly identify seven out of 10 people with bipolar disorder, and successfully screen out nine out of 10 people that did not have bipolar disorder (APA 2013). A general population study showed similarly specificity rates, though limitations were noted since the sensitivity (the ability to identify those with bipolar disorder successfully) was low (0.28) (Hirschfield et al. 2003).

All participants in APMS 2014 were asked the first 13 items on the MDQ. Those who answered 'yes' to at least seven of these items were asked whether they had experienced several symptoms at the same time, and if so, how much of a problem this caused in terms of being unable to work; having family, money or legal troubles; or getting into arguments or fights.

---

### Mood Disorder Questionnaire

---

*Has there ever been a period of time when you were not your usual self and...* Yes/No

---

... you felt so good or so hyper that other people thought you were not your normal self or you were so hyper that you got into trouble?

---

... you were so irritable that you shouted at people or started fights or arguments?

---

... you felt much more self-confident than usual?

---

... you got much less sleep than usual and found you didn't really miss it?

---

... you were much more talkative or spoke much faster than usual?

---

... thoughts raced through your head or you couldn't slow your mind down?

---

... you were so easily distracted by things around you that you had trouble concentrating or staying on track?

---

... you had much more energy than usual?

---

... you were much more interested in sex than usual?

---

... you were much more active or did many more things than usual?

---

... you were much more social or outgoing than usual, for example, you telephoned friends in the middle of the night?

---

... you did things that were unusual for you or that other people might have thought were excessive, foolish, or risky?

---

... spending money got you or your family into trouble?

---

Note that the term 'screening' is used here to refer to identifying people with a high likelihood of having a disorder. A definitive diagnosis of bipolar disorder would require a comprehensive clinical assessment which was not carried out in this survey. The MDQ is not used as part of any National Screening Programme in England.

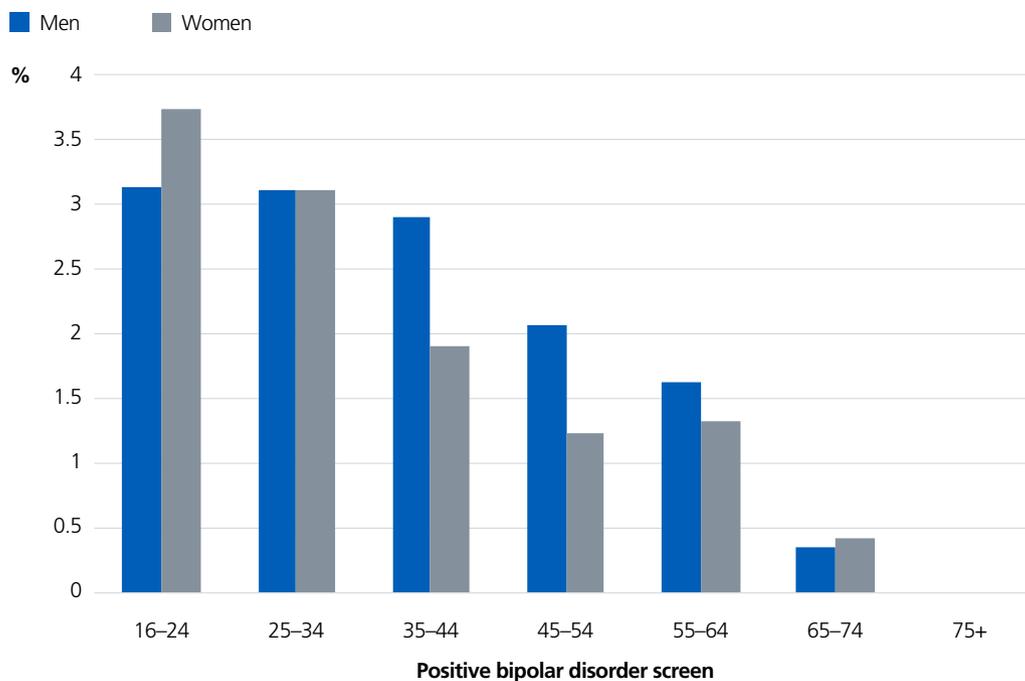
## 9.3 Results

### Screening positive for bipolar disorder, by age and sex

Overall, 2.0% of participants screened positive for bipolar disorder, with the rate in the wider population likely to be (with 95% confidence) between 1.6% and 2.4%. There was no significant difference in the rates for men and women (2.1% for men and 1.8% for women). However, the proportion screening positive for bipolar disorder did vary by age, being more common in younger age-groups: 3.4% of 16–24 year-olds screened positive compared with 0.4% of those aged 65–74. None of the participants aged 75 and over screened positive for bipolar disorder. [Table 9.1](#)

**Figure 9A: Positive bipolar disorder screen, by age and sex**

*Base: all adults*



## Variation in screening positive for bipolar disorder by other characteristics

### Ethnic group

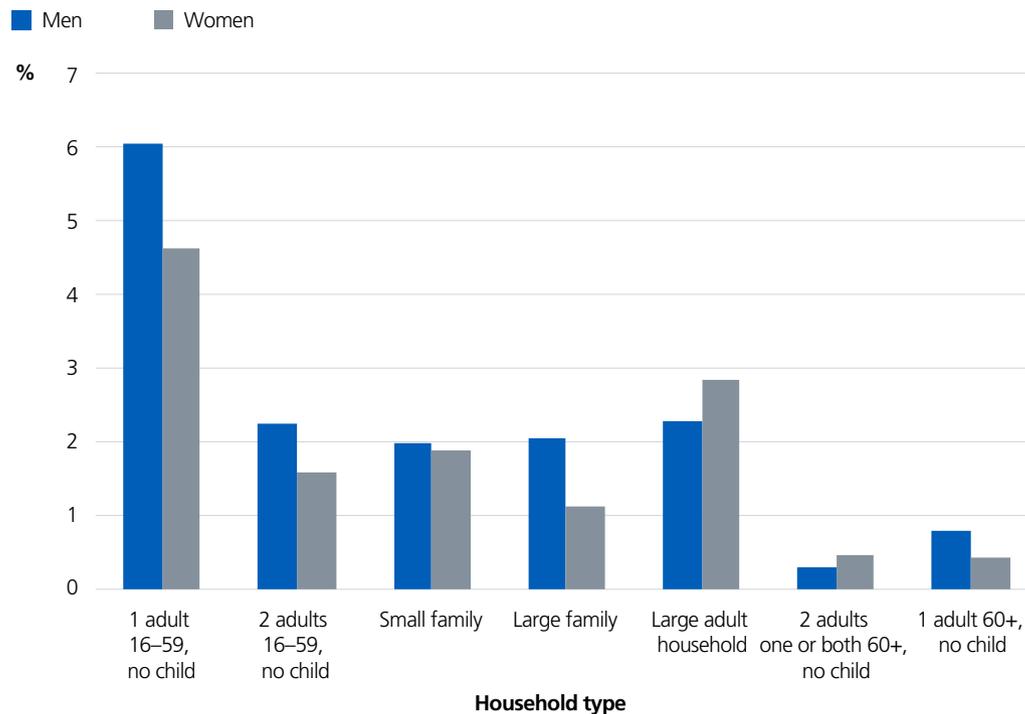
Screening positive for bipolar disorder did not vary by ethnic group. This was the case whether or not the analysis was age-standardised. [Table 9.2](#)

### Household type

Bipolar disorder screen positive rates varied with the type of household people lived in. Among people aged less than 60, 5.5% living in a household as a lone occupant screened positive for bipolar disorder, compared with 1.9% who lived with one other person. Rates for other types of household ranged between 0.4% and 2.6%. [Table 9.3](#)

### Figure 9B: Positive bipolar disorder screen, by household type and sex

Base: all adults



### Region

The proportion screening positive for bipolar disorder did not differ by region.

### Table 9.4

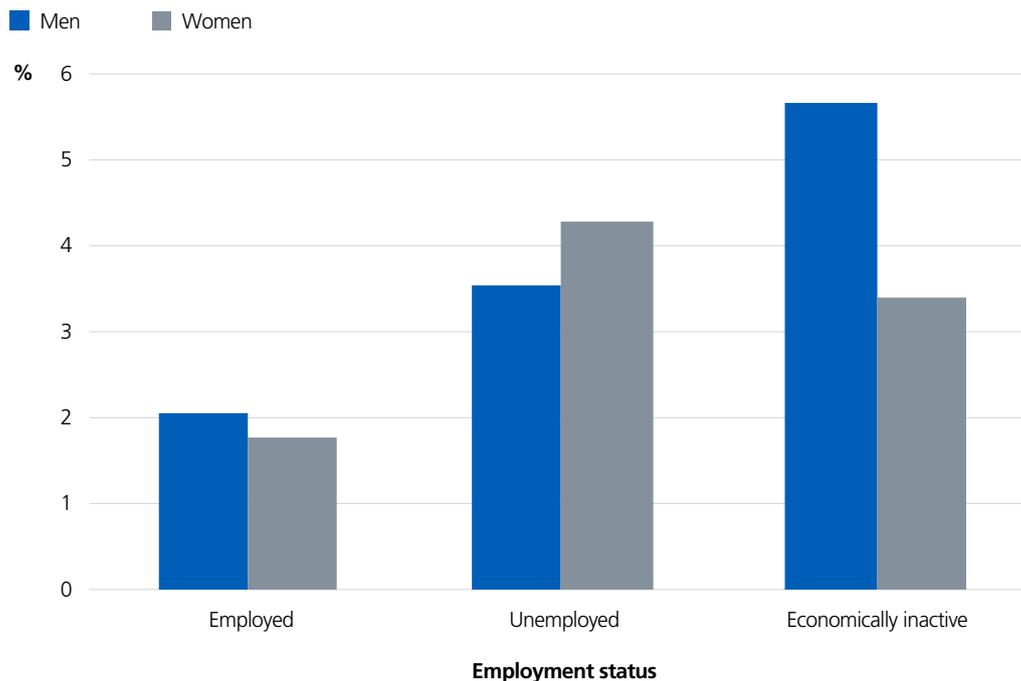
### Employment status

The likelihood of screening positive for bipolar disorder varied with employment status. 16 to 64 year olds who were either unemployed or economically inactive were more likely to screen positive (3.9% and 4.3% respectively, age-standardised), while their counterparts in employment (1.9%) were less likely to. In men, the highest rates were observed in the economically inactive and in women the highest rates were observed in the unemployed, although this variation was not significant.

### Table 9.5

**Figure 9C: Positive bipolar disorder screen, by employment status and sex**

Base: all adults aged 16–64



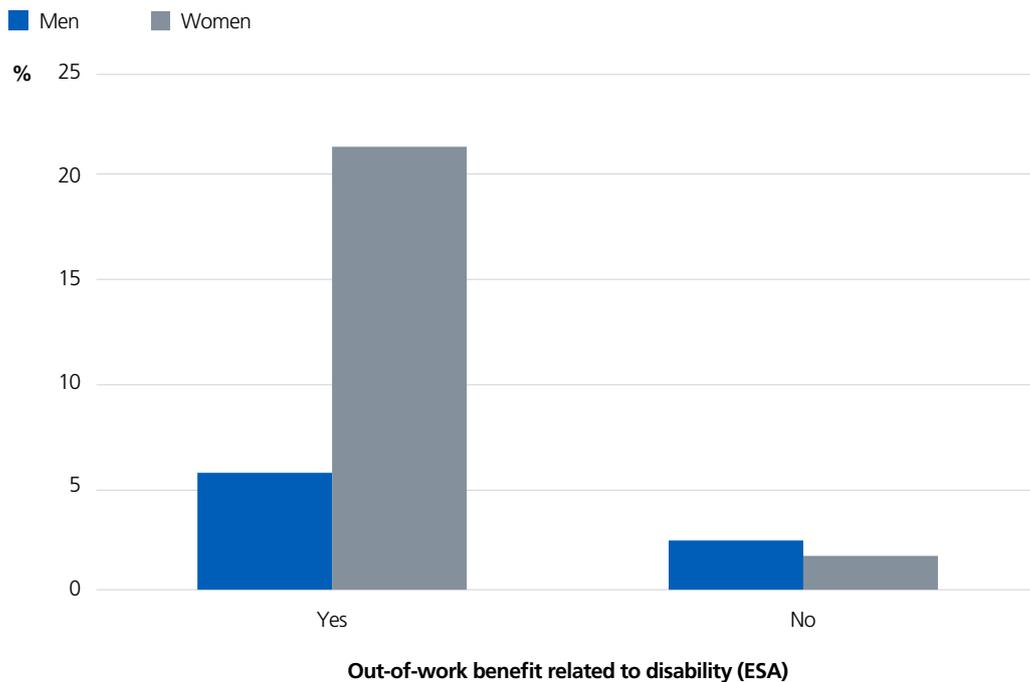
### Benefit status

Benefit status was looked at in relation to three groupings: being in receipt of any out-of-work benefit (including Jobseeker's Allowance and Employment and Support Allowance (ESA)), receiving an out-of-work benefit specifically related to disability (ESA), and living in a household that received housing benefit support with rent. These categories are further described in the Glossary.

Screening positive for bipolar disorder was significantly more likely in people who received any form of benefit than in those who did not. The strongest association was observed for those who received an out-of-work benefit related to disability (ESA); 12.4% screened positive compared with 2.0% who did not receive the benefit. Moreover, among those receiving this type of benefit, women were almost four times more likely to screen positive for bipolar disorder (21.4%) than men (5.7%). [Table 9.6](#)

### Figure 9D: Positive bipolar disorder screen, by receipt of Employment and Support Allowance and sex

Base: all adults aged 16–64



### Self-diagnosis and professional diagnosis of bipolar disorder

Participants were asked whether they themselves thought they had ever experienced bipolar disorder. If they did, they were asked whether this had been diagnosed by a professional, and if they thought that the disorder had been present in the last 12 months.

80 people in the APMS survey sample (1.0%) reported thinking they had had 'bipolar disorder or manic depression' at some point. Most of these participants (62) had this diagnosis confirmed by a professional, and for more than half (48 participants) the condition was felt to be present in the last 12 months.

Of people who had had bipolar disorder diagnosed by a professional and for whom this had been present in the past 12 months, 38.3% screened positive on the MDQ. No differences were found between men and women. [Table 9.7](#)

### Treatment and service use

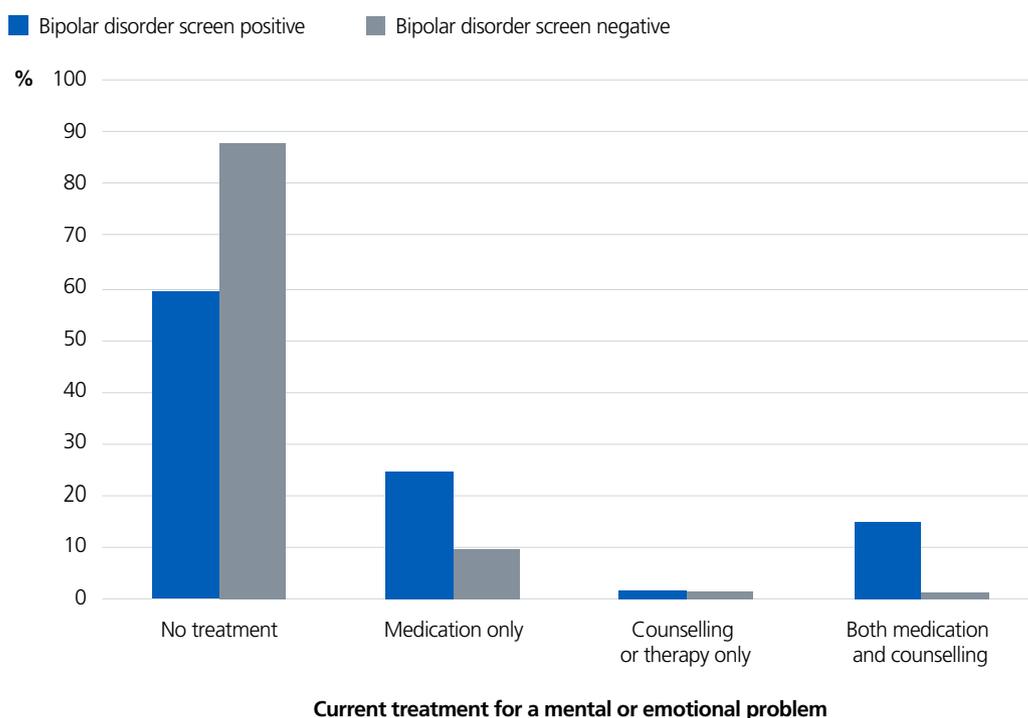
Participants were asked about a range of types of mental health treatment and service use. These included current medication or psychological therapy for a mental or emotional problem, together with the use of a range of health, community and day care services over the last year.

Of those who screened positive for bipolar disorder, 6 out of 10 were not in receipt of any current medication or treatment (59.2%). Those who screened positive were, nonetheless, considerably more likely to report receiving some form of psychotropic medication (39.2%) or psychological therapy (16.4%) than those who screened negative (10.7% and 2.6% respectively).

Those who screened positive were also more likely to report using the other types of service asked about. For example, half of those screening positive for bipolar disorder reported having used a health care service in the past year (50.0%), compared with a tenth of those who screened negative (11.8%). [Table 9.8](#)

### Figure 9E: Current treatment for a mental or emotional problem, by bipolar disorder screen

Base: all adults



Regarding the type of medication received by people screening positive for bipolar disorder, the most common medications were those used to treat anxiety (31.9%) or depression (34.8%), followed by 14.5% who took medication specifically for bipolar disorder. For all types of psychotropic medication, with the exception of medication used to treat ADHD, those screening positive were more likely to be taking it than those screening negative. [Table 9.9](#)

Participants were asked if they had requested a particular treatment in the past 12 months but had not received it. One in eight people who screened positive for bipolar disorder reported requesting but not receiving some form of mental health treatment (12.7%), this compared with 1.4% of bipolar screen negatives. [Table 9.10](#)

## 9.4 Discussion

This chapter presents findings on bipolar disorder, a newly-introduced module within APMS 2014, to provide much-needed information on prevalence and sociodemographic profile of people with bipolar disorder in England. The overall prevalence of likely bipolar disorder in the APMS 2014 was 2.0%, closely consistent with findings from epidemiological studies in other countries (Merikangas et al. 2011; Merikangas et al. 2007). Rates were similar for men and women and higher in younger than older people.

Prior to these findings, no lifetime prevalence rates from a UK general population survey were available for bipolar disorder (Pini et al. 2005). Based on studies conducted in other countries, however, prevalence rates worldwide have been conservatively estimated at between 1–1.5% (Bebbington and Ramana 1995), and as high as 5% (Akiskal et al. 2000) in relation to the full spectrum of bipolar disorder. The World Mental Health Survey Initiative reported that the lifetime aggregate prevalence from 11 countries (not UK) was 2.4% for bipolar disorders (BP-I, BP-II, and subthreshold BP) (Merikangas et al. 2011). The APMS 2014 data are consistent with this range.

It is important to note however, that the instrument used for screening for bipolar disorder while designed to screen for the full bipolar spectrum disorders does have limitations. The MDQ is less sensitive at identifying bipolar II disorders than the longer Hypomania Checklist, another widely used instrument (Meyer et al. 2011). There are also limitations on its use in general population studies (APA 2000). Whilst showing excellent specificity (suggesting a positive result is useful for ruling in bipolar disorder) the instrument has been shown to have limited sensitivity (the proportion of people with a condition who have a positive result); thus these survey prevalence rates may be underestimates.<sup>1</sup> Overall the MDQ, albeit limited by these considerations, appears to have performed reasonably well in the APMS 2014.

Bipolar disorder is known to cause considerable disability, together with impairments in work and social life (Sanchez-Moreno et al. 2009), and this

<sup>1</sup> For discussion of specificity and sensitivity see: Centre for Evidence-based Medicine: [www.cebm.net/sppin-and-snnout/](http://www.cebm.net/sppin-and-snnout/)

is reflected in the findings presented in this chapter. There was a revealing relationship with household type. People living alone were more likely to screen positive than those living with other people, consistent with evidence suggesting links between bipolar disorder, social isolation and difficulty with relationships. Individuals who were unemployed or economically inactive were also more likely to screen positive for bipolar disorder. This parallels the increased proportion of people screening positive for bipolar disorders among those receiving some form of out of work benefit, or housing benefit. Examination of the data by ethnicity and region showed no associations, although the sample size is small for such comparisons.

The age distribution replicated US data for bipolar disorder and indeed was similar to the distribution for several other mental disorders (Kessler et al. 2005). However, as bipolar disorder is a lifelong condition, we would have expected the prevalence to gradually increase with age. The survey findings may represent a problem of recall. The increased mortality associated with the disorder may also be part of the explanation.

NICE estimate a possible delay of 6 years between the onset of symptoms and treatment, while around 25% of affected adults never seek treatment for bipolar disorder (NICE 2014b). The APMS data presented here shows that around a third of people screening positive for bipolar disorder believed that they have had the disorder, and of those, a third had been diagnosed by a professional.

The majority of people screening positive for bipolar disorder were not currently receiving any form of treatment, either psychological therapy or psychotropic (mental health) medication. Furthermore, one in eight who screened positive for bipolar disorder had asked for, but not received, some particular form of mental health treatment in the last 12 months.

Almost 40% of adults screening positive for bipolar disorder were currently taking some form of psychotropic medication, with 15% prescribed this in combination with some form of psychological therapy. Only a small percentage was receiving psychological therapy only. Recommendations for treatment vary, depending on whether the individual is experiencing a manic (hypomanic) episode or a depressive episode. Manic episodes are usually treated pharmacologically with antipsychotics, whereas depressive episodes are treated either psychologically

or with medication (NICE 2015b). Almost a third of people screening positive for bipolar disorder reported taking medications indicated for anxiety, consistent with the high prevalence of comorbid anxiety disorder in bipolar disorder reported in previous studies. The second most prevalent medication was that primarily indicated for depression, and again this is consistent with the prevalence of depressive symptoms being higher in people with bipolar disorder than manic or hypomanic symptoms (Pompili et al. 2013).

Some of the comparisons reported in this chapter are based on small numbers and must be interpreted with caution. In addition, due to the cross-sectional nature of these data, the direction of cause and effect is unclear.

The findings discussed in this chapter were consistent with prevalence studies internationally, despite the limitations of the survey assessment method. They offer much needed information on the characteristics, difficulties and health service contact of people with bipolar disorder living in the community. Future study is warranted to establish the prevalence of bipolar subtypes, why people do not seek or obtain help, and how health services might adapt to better meet the needs of the whole population of people with bipolar disorder.

## 9.5 Tables

### Prevalence and trends

Table 9.1 Number of bipolar disorder characteristics reported (lifetime), by age and sex

### Characteristics

Table 9.2 Screen positive for bipolar disorder (observed and age-standardised), by ethnic group and sex

Table 9.3 Screen positive for bipolar disorder, by household type and sex

Table 9.4 Screen positive for bipolar disorder (observed and age-standardised), by region and sex

Table 9.5 Screen positive for bipolar disorder (age-standardised), by employment status and sex

Table 9.6 Screen positive for bipolar disorder (age-standardised), by benefit status and sex

### Treatment and service use

Table 9.7 Screen positive for bipolar disorder, self-diagnosis and professional diagnosis of bipolar disorder

Table 9.8 Treatment and service use, by bipolar disorder screen

Table 9.9 Psychotropic medication taken, by bipolar disorder screen

Table 9.10 Requested but not received a particular mental health treatment in the past 12 months, by bipolar disorder screen

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# Alcohol dependence

Colin Drummond | Orla McBride | Nicola Fear | Elizabeth Fuller

## Summary

- According to the Alcohol Use Disorders Identification Test (AUDIT), 16.6% of adults drank at hazardous levels (AUDIT scores of 8 to 15), 1.9% were harmful or mildly dependent drinkers (AUDIT scores of 16 to 19) and 1.2% were probably dependent drinkers (AUDIT scores of 20 or more). As in previous years, men were more likely than women to drink at hazardous levels and above. Most adults drank at lower risk levels (57.5%) or did not drink at all (22.8%).
- Of men aged 16 to 64, between a quarter and a third drank at hazardous levels or above. Such drinking was less common in men aged 65 and older. In women, drinking at hazardous levels or above was most common in 16 to 24 year olds (25.6%). In the 25 to 64 year age-groups, between 13% and 15% drank at these levels, while rates in older women were lower.
- Harmful, mildly dependent, and probably dependent drinking was most common in men aged 25 to 34 (6.6%). The proportions drinking at this level were lower in older age-groups. In women, drinking at this level was most frequent in those aged 16 to 24.
- Levels of hazardous drinking have declined in men over the past fifteen years (36.8% in 2000 among 16 to 74 year olds; 32.4% in 2007; 27.9% in 2014), and remained stable in women.
- Overall, levels of harmful and dependent drinking have remained stable. However, this masks trends divergent between age groups. AUDIT scores of 16 or above have become less common in 16 to 24 year olds (6.2% in 2007, 4.2% in 2014), but more common in 55 to 64 year olds (1.4% in 2007, 2.8% in 2014).
- Self-diagnosis and diagnosis by professionals of alcohol or drug dependence was most frequent among people whose AUDIT scores indicated probable dependence: but even then such diagnoses were reported only by a minority. Of those with probable dependence, 42.2% reported that they had at some time experienced alcohol or drug dependence, and 34.2% reported that they had received such a diagnosis from a professional.

- White British men and women were more likely to drink at hazardous, harmful or dependent levels than their counterparts in other ethnic groups.
- Adults aged less than 60 and living in households with no children were more likely to be drink at hazardous levels or above than those who lived with children. In particular, men aged under 60 living alone were almost twice as likely to drink at harmful or mildly dependent levels or above than men in any other type of household. In contrast, adults aged over 60 living alone or with another adult were the least likely to drink at hazardous levels or above.
- Men and women in receipt of Employment and Support Allowance (ESA) were more likely than those who did not receive this benefit to be harmful or mildly dependent drinkers or above. 10.8% of men and 9.4% of women on ESA drank at these levels, compared with 4.9% of men and 2.1% of women who did not receive ESA. There was a similar pattern for other benefits.
- A third of adults with probable alcohol dependence (AUDIT 20+) were receiving treatment and services for a mental or emotional problem. They were also more likely than others to use health and community care services. Furthermore, 6.1% of this group were in receipt of medication intended to treat substance misuse and 6.3% were in substance misuse counselling.

## 10.1 Introduction

### The impact of alcohol consumption

In England, alcoholic drinks are widely available and widely consumed by the majority of the adult population. Most people who drink do so without adverse consequences. However, alcohol is responsible for a considerable degree of health and social harm.

Alcohol-related harms exist on a continuum, and include acute and chronic health and social consequences, as well as harm to people other than the drinker. According to the World Health Organisation (WHO), alcohol is wholly or partly responsible for over 200 different disease conditions. Alcohol is identified as a Grade 1 carcinogen (the most carcinogenic type) and is responsible for 4%

of all cancers worldwide (WHO 1988; Rehm et al. 2009). Excessive alcohol consumption is a leading cause of disability in the UK and Europe (WHO 2010).

Acute harms from alcohol include accidents, injuries, collapse, self-harm and in severe cases, acute alcohol poisoning. Alcohol misuse does not only harm those who drink. It is implicated in 53% of violent incidents in England and Wales (ONS 2015a). Results from the Crime Survey for England and Wales 2015 indicated that one in ten adults had witnessed drinking-related antisocial behaviour in their local area (ONS 2015b). In 2013, 4% of all road traffic accidents and 14% of all deaths reported in road traffic accidents involved at least one driver over the drink-driving limit (Department of Transport 2015). Alcohol misuse is associated with violence and marital breakdown, and children of problem drinkers are more likely to suffer emotional and behavioural problems, and to perform poorly at school (Cuijpers et al. 2006).

There is evidence that heavy drinkers have poorer levels of mental health. Alcohol misuse often co-exists with common mental disorders, such as depression and anxiety, as well as with misuse of other substances (Grant et al. 2004; Weich et al. 2011; McManus 2009). High levels of hazardous and dependent drinking have been recorded in people being treated for serious mental health problems. Alcohol dependence and other problems associated with alcohol misuse are also frequent in homeless people and prisoners, again often in combination with poor mental health (Drummond et al. 2008; Light et al. 2013).

Alcohol-related hospital admissions continue to increase in England and exceed one million per annum (HSCIC 2015). Between 2003/04 and 2013/14 hospital admissions due wholly or partly to alcohol consumption more than doubled (HSCIC 2015). In 2013/14 the commonest wholly attributable cause of alcohol admissions was mental and behavioural disorders due to use of alcohol, including alcohol dependence and related conditions (204,450), followed by alcoholic liver disease (53,310), and toxic effects of alcohol (35,620). The most common partly alcohol-attributable causes of hospital admission were cardiovascular disease (511,260) followed by cancer (86,650), unintentional injuries (50,720) and intentional injuries including self-harm and assault (9,350). These are likely to be an underestimate of the true burden of alcohol on NHS hospital services due to the well-recognised under-diagnosis of alcohol use

disorders in hospital settings. Wholly attributable alcohol deaths have also increased by 23% from 2001 (5,479 deaths) to 2013 (6,592 deaths) (HSCIC 2015).

In 2012, it was estimated that the cost of alcohol misuse in England was around £21 billion a year; as well as costs to the health service, this included the costs of crime and anti-social behaviour and the impact on productivity in the workplace (Home Office 2012).

### **Policy and guidance**

In recent years the government has made alcohol misuse a strategic priority. The 2012 *Government's Alcohol Strategy* identified ways to reduce the harm caused by alcohol: by increasing the price of alcohol, banning multi-buy promotions, improving the early identification and treatment of those with alcohol problems, and addressing alcohol-related crime and disorder.

The implementation of the ambitions set out in the Government's strategy has included some of the key proposed strategies, such as setting a minimum unit price for alcohol and banning multi-buy promotions, not being carried forward. In 2007, a Public Service Agreement (PSA) target was set to 'reduce the harm caused by alcohol and drugs'. One indicator of success was defined as reducing the number of alcohol-related hospital admissions, to be achieved in part by improving at every level the services available to those who wanted to drink less. The target to reduce alcohol related hospital admissions has been reiterated in the most recent Public Health Outcomes Framework (DH 2013).

In 2016, the UK Chief Medical Officer published new guidelines on alcohol, based on the recommendation of an expert review of the association between alcohol consumption and health harms (DH 2016). This review identified a lower than previously thought beneficial effect of alcohol and evidence of a stronger association with certain types of cancer and other health harms than was previously identified. Based on this evidence, the guidelines advised that for both men and women, it is safest not drink more than 14 UK units of alcohol per week (112g of pure ethanol), and within that to avoid alcohol binges by spreading drinking over 3 or more days per week. The revised advice in pregnancy is that the safest approach is to abstain.

## Patterns of consumption

In 2014, Health Survey for England data showed that 85% of men and 79% of women consumed some alcohol in the last year (Craig et al. 2015). The proportion of adults who do not drink at all has increased over the past decade from 11% of men and 16% of women in 2006 to 15% of men and 21% of women in 2014. In particular, the proportion of non-drinkers among young people aged 16 to 24 has increased from 17% of young men and 16% of young women in 2006 to 22% of young men and 23% of young women in 2014 (DH 2016; Craig and Mindel 2007).

Among adults who had drunk alcohol in the last year, the median weekly consumption was 9.2 units by men and 3.8 units by women. Overall, 63% of men reported average weekly consumption of no more than 21 units (until the publication of new guidelines, the recommended lower risk limit for men), and 62% of women drank no more than 14 units a week. A further 17% of men and 12% of women drank at increasing risk levels (22 to 50 units a week for men, 15 to 35 units for women). 5% of men and 4% of women drank more than these amounts (considered higher risk consumption according to NHS guidance at the time) in an average week.

In England in 2014, 59% of men and 43% of women reported drinking alcohol every week. 17% of men and 9% of women had drunk alcohol on five or more days in the last week. The proportion of men drinking alcohol in the last week increased with age, and was highest for those aged 55 to 64 years. A similar trend was evident among women – the proportion of women who drank in the last week increased up to the 45 to 54 age group, and declined thereafter.

The Adult Psychiatric Morbidity Survey (APMS) focuses on the prevalence of hazardous, harmful and dependent drinking, collectively classified by the tenth International Classification of Disorders (ICD-10) as alcohol use disorders (National Institute of Alcohol Abuse and Alcoholism 2013). It has been estimated that a minority of the population consumes the majority of all alcohol consumed in England: 70% of the alcohol is consumed by the 20% of the population whose drinking is classed as hazardous, harmful or extreme (Sheron and Gilmore 2016).

## 10.2 Definition and assessment

'Alcohol use disorders' encompass a range of conditions defined in the ICD10. In this chapter we consider 'harmful alcohol use' (an established pattern of drinking causing damage to health) and 'alcohol dependence' as defined by ICD10 (including signs of addiction to alcohol). We also consider hazardous drinking (an established pattern of drinking increasing the risk of health harm). Initial questions about alcohol consumption were asked by the interviewer face to face. All participants who drank alcohol, even if just occasionally, were then routed to the remaining alcohol use questions. These were administered using computer-assisted self-completion interview (CASI), consistent with the approach used on the 2000 and 2007 surveys.

The primary measure presented in this chapter is the Alcohol Use Disorders Identification Test (AUDIT) (Saunders et al. 1993). The AUDIT takes the year before the interview as a reference period, consists of 10 items and covers the following areas:

- Alcohol consumption (frequency of drinking, typical quantity, frequency of heavy drinking)
- Alcohol-related harm (feeling of guilt or remorse after drinking, blackouts, alcohol-related injury, other concern about alcohol consumption)
- Symptoms of alcohol dependence (impaired control over drinking, increased salience of drinking, morning drinking).

Answers to all questions are scored from zero to four, and summed to give a total score ranging from 0 to 40. A score of:

- Non-drinker or low risk drinking (scores up to 7)
- Hazardous drinking (scores from 8 to 15)
- Harmful drinking and/or mild dependence (scores from 16 to 19)
- Probable dependence (scores 20 or more).

A rationale for using these AUDIT score thresholds is presented in Room et al. 2005. Alcohol dependence was further assessed using the Severity of Alcohol

Dependence Questionnaire (SADQ) (Stockwell et al. 1979) to provide an alternative estimate of the prevalence of alcohol dependence. This measure was also used in the 2000 and 2007 surveys. The SADQ consists of 20 items, covering a range of dependence symptoms, with the six months before the interview as the reference period. Answers to all questions are scored from zero to three, and summed to give a total score ranging from zero to 60. The thresholds indicate different levels of alcohol dependence:

- None or mild dependence (scores up to 14)
- Moderate dependence (scores from 15 to 30)
- Severe dependence (scores from 31 to 60) (NICE 2011).

Because of the focus of the SADQ on symptoms of dependence, for example symptoms following a period of heavy drinking, it was asked only of participants with an AUDIT score of 10 and above. Note that an error in the AUDIT scoring syntax used in 2007 has been identified. The 2007 data has been revised so that it is correct and is consistent with the 2000 and 2014 analyses. Further details of how the AUDIT and SADQ questionnaires were scored are provided in Appendix B.

## 10.3 Results

### **Prevalence of hazardous, harmful or dependent drinking, by age and sex**

In 2014, the majority (57.5%) of adults drank alcohol, but at low risk levels. 22.8% of adults did not drink.

The remaining 19.7% – around one in five adults – drank at hazardous levels or above, as indicated by an AUDIT score of 8 or more. Most of these (16.6% of all adults) were hazardous drinkers, with an AUDIT score between 8 and 15. A further 1.9% of adults were harmful or mildly dependent drinkers (AUDIT score 16 to 19), and 1.2% were probably dependent drinkers (AUDIT score 20 or more). This indicates that 3.1% of the population drank at a level considered to be harmful or probably dependent. If all adults in the population had been assessed, it is likely (95% confidence interval (CI)) that the proportion drinking at harmful or probably dependent levels would be between 2.6% and 3.6%.

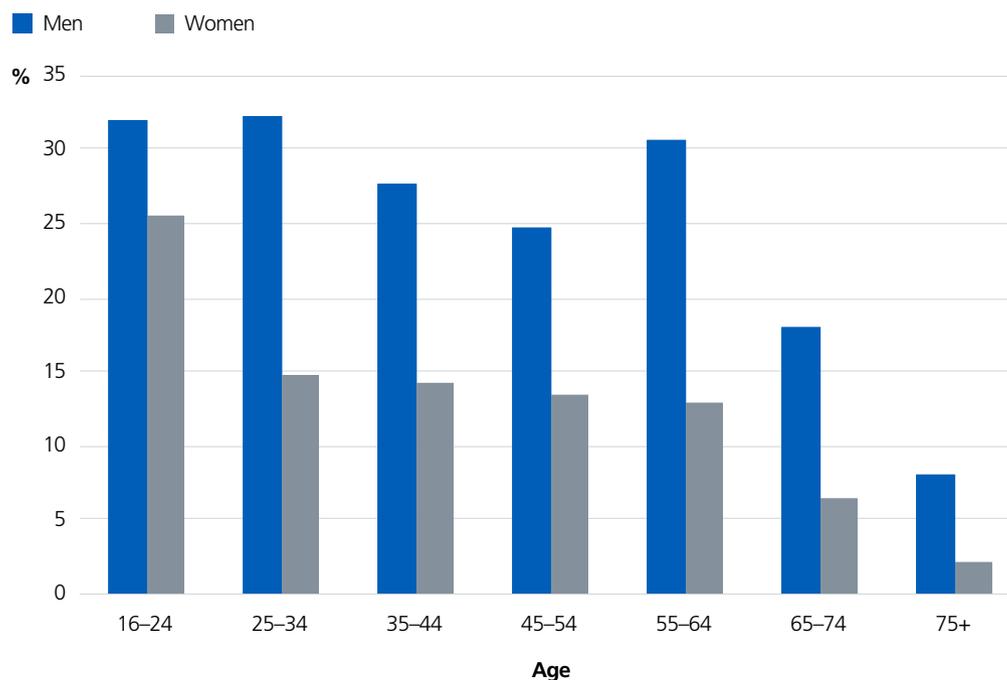
As in previous years, men were more likely than women to drink at hazardous levels or above. 26.3% of men and 13.4% of women had an AUDIT score of 8 or more, including 4.4% of men (95% CI: 3.6% to 5.4%) and 1.8% (95% CI: 1.4% to 2.4%) of women with an AUDIT score of 16 or more.

Among men, drinking at hazardous levels or above was most prevalent among those aged 16 to 64, varying between a quarter and a third across the age range with no clear pattern. Adults aged over 64 were less likely to drink at this level; 18.1% of men aged 65 to 74 and 8.1% of those aged 75 and over.

Among women, 25.6% of those aged between 16 and 24 drank at hazardous levels or above. Between the ages of 25 and 64, this proportion was lower and fairly constant, around one in seven. As with men, older women were much less likely to drink at hazardous levels or above; 6.3% of 65 to 74 year olds and 2.3% of those aged 75 and over. [Table 10.1](#)

**Figure 10A: Drinking at hazardous levels or above in the past year (AUDIT score of 8 or more), by age and sex**

*Base: all adults*

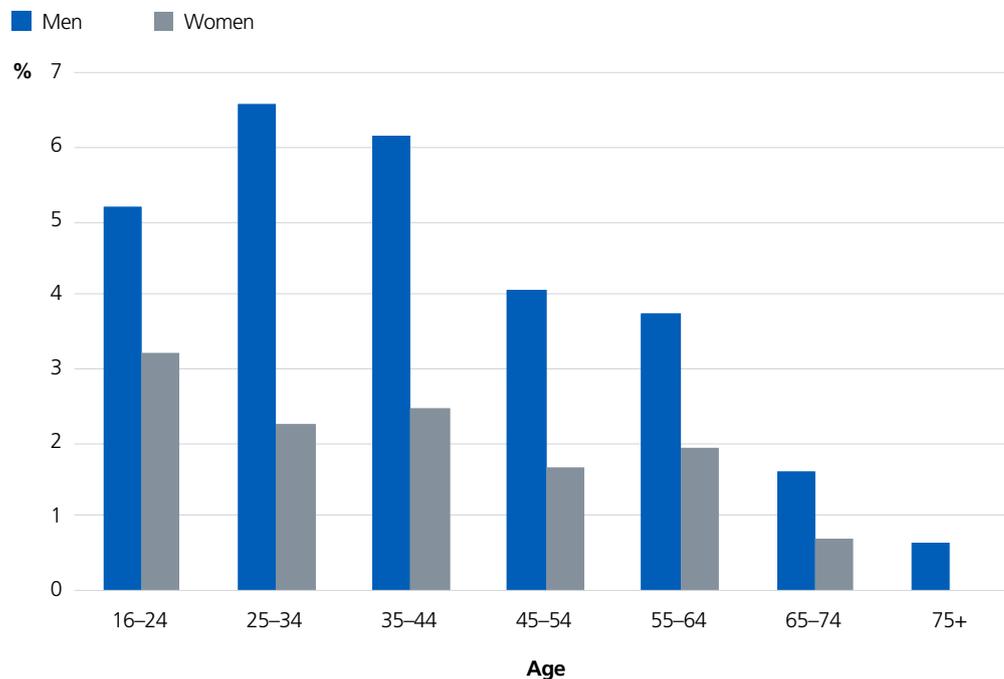


Almost one in ten men aged 25 to 34 (6.6%) had an AUDIT score of 16+, indicative of harmful drinking, mild dependence or probable dependence. This proportion declined thereafter with age to 0.6% of those aged 75 and over. Among women, drinking at these levels was highest in the youngest age group (3.2%), was around 2% for women aged between 25 and 65, and declined to 0.7% of women aged 65 to 74. No female participants aged 75 or over were in this group.

AUDIT scores indicating probable dependence (20+) were evident in 1.9% of men and 0.6% of women. This was most prevalent among men aged between 35 and 44 (3.1%) and women aged between 16 and 24 (1.1%). [Table 10.1](#)

**Figure 10B: Harmful drinking/mild or probable dependence (AUDIT score of 16 or more), by age and sex**

Base: all adults



### Trends in hazardous and dependent drinking: 2000 to 2014

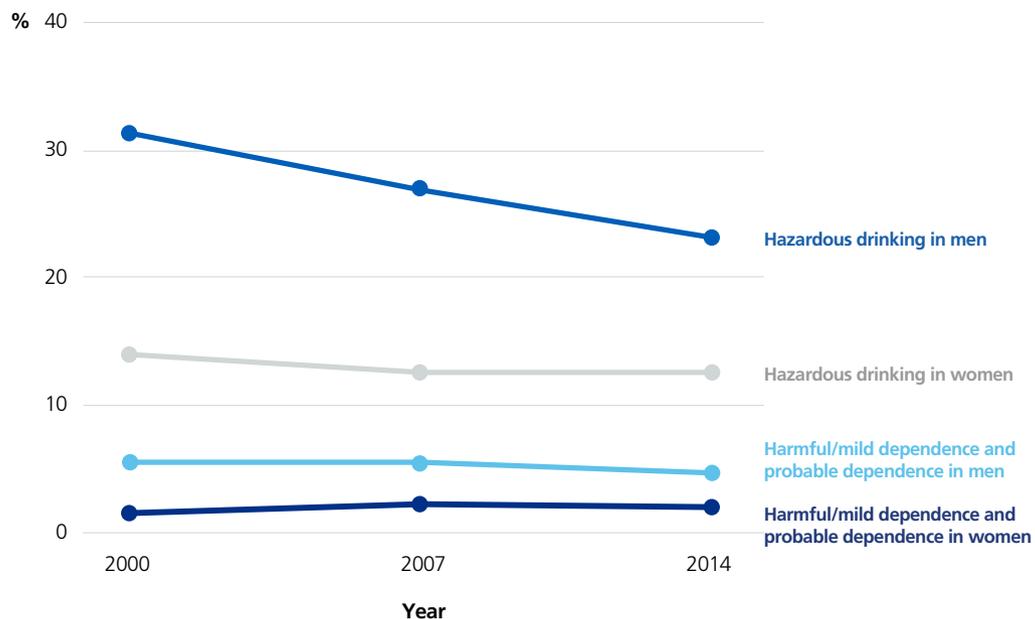
Comparisons of 2014 findings with previous survey years (2000 and 2007) are based on adults aged between 16 and 74, as the 2000 survey did not interview those aged 75 or more.

The proportion of men who were hazardous drinkers or above (AUDIT scores of 8 or more) was less in 2014 than in previous years: 27.9%, compared with 36.8% in 2000 and 34.4% in 2007. The proportion of women drinking at this level did not change over the same period.

Overall, the proportion of men and of women who were harmful or mildly dependent drinkers or probably dependent (AUDIT scores of 16 or more) did not change over time. However, there were indications of changes in the proportion drinking at this level within particular age groups. Young adults aged 16 to 24 were less likely to have an AUDIT score of 16 or more than in previous years: 4.2% drank at this level in 2014, compared with 6.8% in 2000 and 6.2% in 2007. Men and women aged between 55 and 64 were more likely to have AUDIT scores of 16 or more than in previous years: 2.8% in 2014, compared with 1.3% in 2000 and 1.4% in 2007. These results are consistent with there being differences between generations over time. Other differences over time within age groups were not statistically significant. [Table 10.2](#)

**Figure 10C: Hazardous, harmful and dependent drinking in the past year by sex: 2000, 2007 and 2014**

*Base: adults aged 16–74*



## Self-diagnosis and professional diagnosis of alcohol or drug dependence

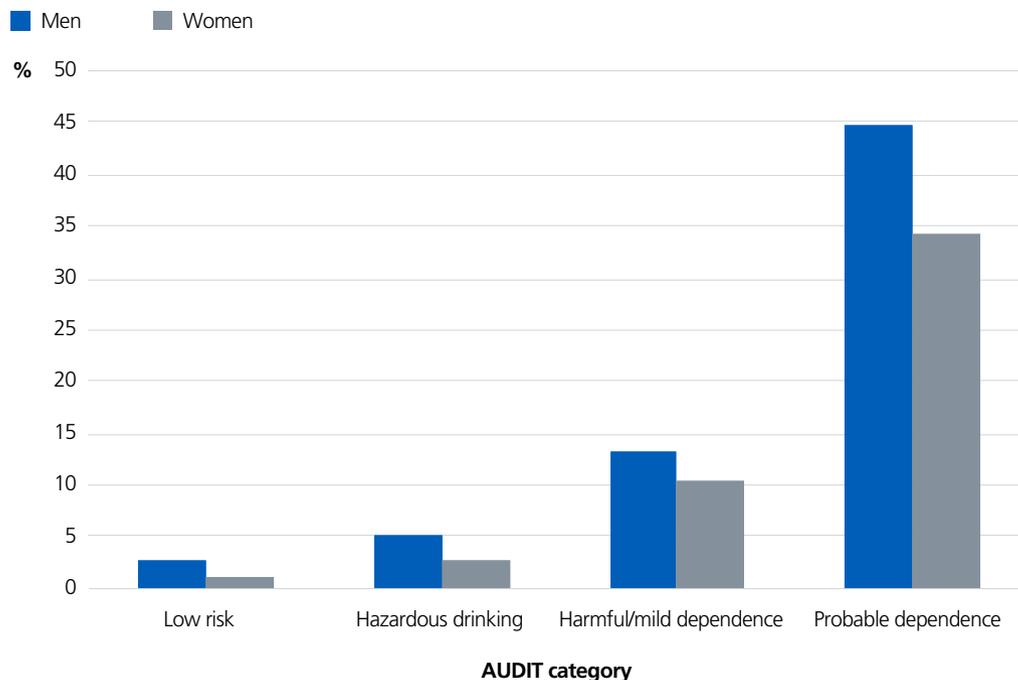
All participants were asked whether they had ever been alcohol or drug dependent, and whether they had been given this diagnosis by a doctor, psychiatrist or other professional. This analysis compares responses according to the level of risk indicated by AUDIT scores, based on reported behaviour over the last year. It should be noted that there were relatively small numbers of women with scores indicating mild or probable dependence on alcohol (AUDIT 16+).

Overall, 2.8% of adults said that they felt they had been alcohol or drug dependent at some point in their life. Men were more likely than women to report this, both overall (4.3%, compared with 1.5%) and within each level of drinking risk. Among men, the proportion increased from 2.6% of those with an AUDIT score of 7 or less, to 44.8% of those with an AUDIT score of 20+ (indicating probable dependence). Among women, the corresponding range was from 1.0% of those whose recent drinking was at low risk levels to 34.2% of those with probable dependence.

**Table 10.3**

### Figure 10D: Self-identified as having ever experienced alcohol or drug dependence, by AUDIT category and sex

Base: all adults

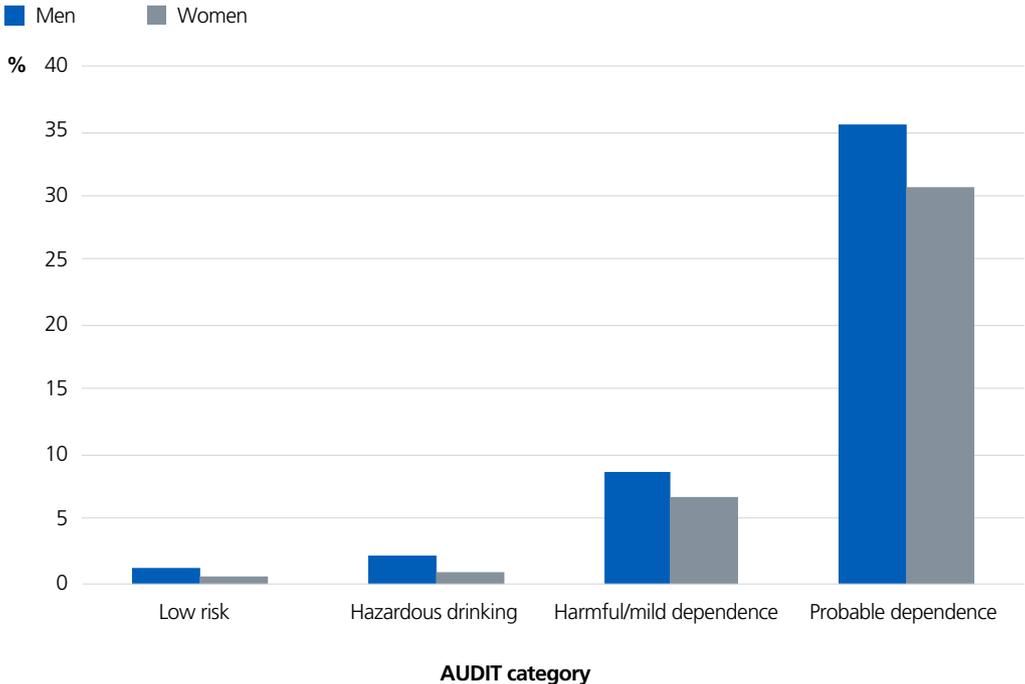


Those participants who said that they had been drug or alcohol dependent were asked whether they had ever been diagnosed with alcohol or drug dependence by a doctor, psychiatrist or other professional. Overall, 1.6% of adults reported this; again, this was more common in men than women. The proportion of men who had been diagnosed increased from 1.3% in the low risk group, to 4.3% of those whose drinking was classed as harmful or mildly dependent (AUDIT score of 16 to 19) and 35.3% of those with a score of 20+, indicating probable dependence. In women, levels of reported diagnosis were increased from 0.7% of those with AUDIT scores of 0–7 to 6.7% of those with AUDIT scores of 16 to 19. The group with a score of 20+ had a much higher likelihood of diagnosis; 30.8% reported that they had been diagnosed with alcohol or drug dependence at some time.

Very few participants, 0.6%, reported that they had been diagnosed with alcohol or drug dependence in the last year. This included 13.7% of men and 24.4% of women with an AUDIT score of 20+. [Table 10.3](#)

**Figure 10E: Ever diagnosed by a professional with alcohol or drug dependence, by AUDIT category and sex**

*Base: all adults*



## The Severity of Alcohol Dependence Questionnaire (SADQ)

Surveys in the APMS series also measured alcohol dependence using the SADQ, described in Section 10.2 above. This was asked of participants scoring 10 or more on the AUDIT, and among this group the SADQ score showed strong concordance with the AUDIT score. [Table 10.4](#)

## Characteristics of hazardous and dependent drinkers

### *Ethnic group*

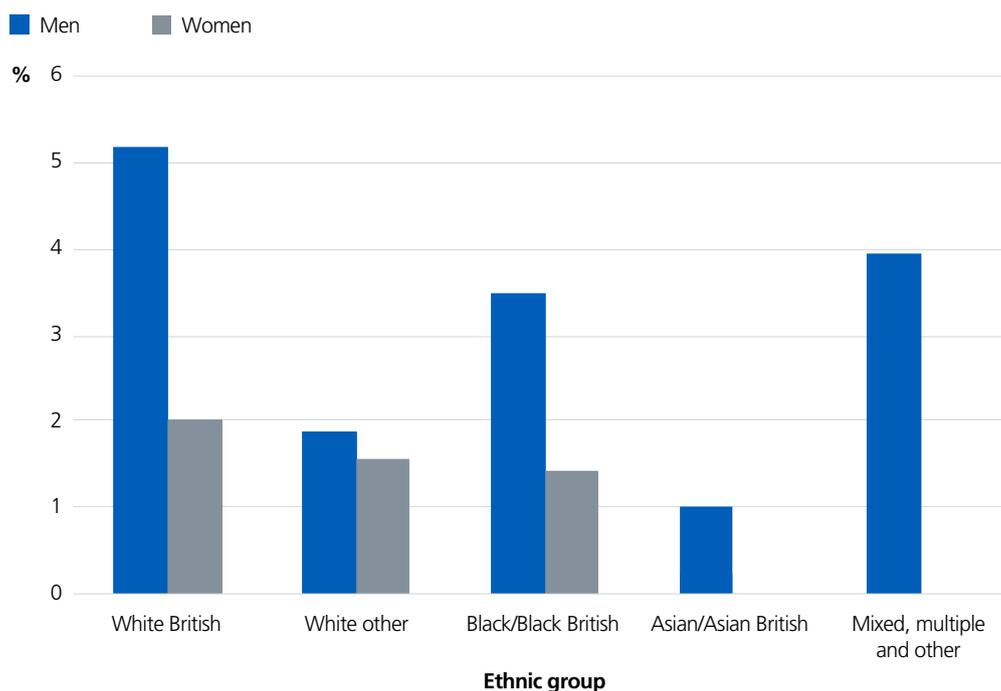
Comparisons between ethnic groups are based on age-standardised estimates to account for differences in the age profile of different groups.

White British adults were more likely to drink at hazardous levels or above than other groups. 30.8% of White British men had an AUDIT score of 8 or more, compared with 18.4% of non-British White men, 6.6% of Black men, 4.7% of Asian men, and 12.9% of men from other or mixed ethnic groups. Similarly, 14.8% of White British women had AUDIT scores of 8 or more, compared with 11.6% of other White women, 7.4% of Black women, 2.6% of Asian women, and 7.2% of women from other ethnic groups.

The pattern for AUDIT scores indicating harmful drinking, mild dependence or probable dependence was slightly different, although prevalence was still highest among White British adults. 5.2% of White British men had AUDIT scores of 16 or more, compared with 1.0% of Asian men and 2% to 4% of men in other groups. 2.0% of White British women drank at this level, compared with 1.6% of non-British White women and 1.4% of Black women. No Asian women or women from other ethnic groups were identified as drinking at this level of risk. [Table 10.5](#)

**Figure 10F: Harmful drinking/mild or probable dependence (AUDIT score of 16 or more), by ethnic group and sex (age-standardised)**

Base: all adults



### Region

Comparisons between regions are based on age-standardised estimates to account for differences in the age profile between regions.

The overall proportion with hazardous, harmful or dependent drinking varied across regions. It was highest in the North West (25.2%) and lowest the East of England (15.5%).

The variation between regions for the proportions with AUDIT scores indicating likely dependence was not statistically significant.<sup>1</sup> [Table 10.6](#)

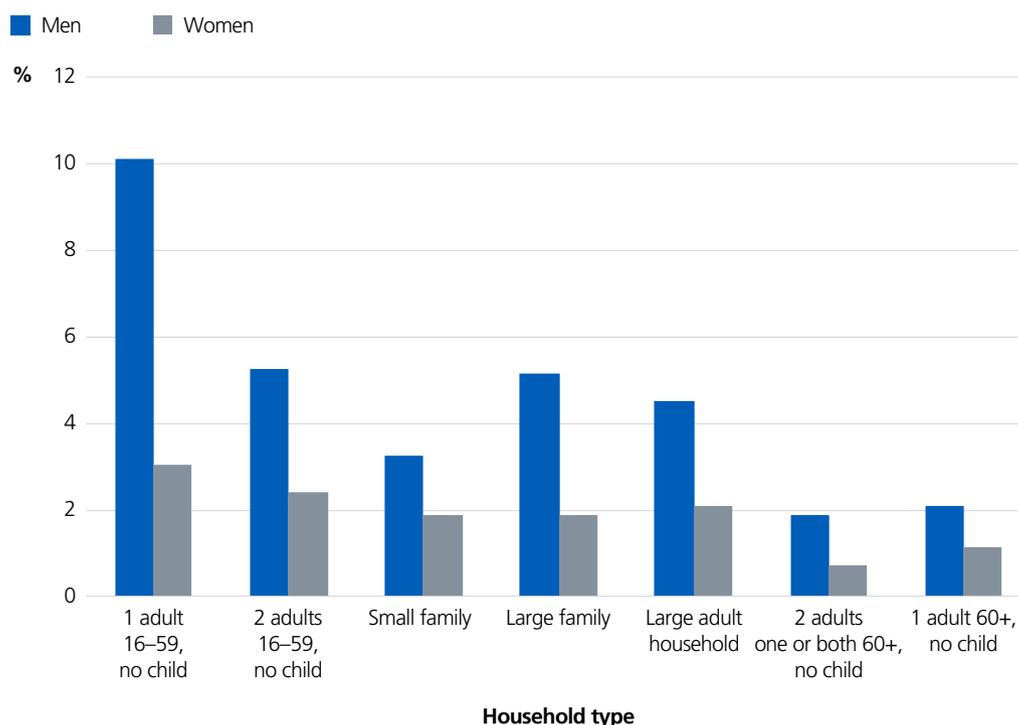
<sup>1</sup> Note that the 'London effect' – the high proportion of non-drinkers in London when compared with other English regions – does not persist through to differences in the proportions of adults in higher categories of consumption, whether measured by quantities consumed or the AUDIT's broader criteria (Craig et al 2014).

### Household type

There were strong relationships between the type of household people lived in and their AUDIT score. Broadly, drinking at hazardous levels or above (an AUDIT score of 8 or more) was most common in households entirely composed of adults aged under 60, particularly in people aged under 60 who lived alone (35.6% of men, 18.6% of women). Adults who lived in households with children (small or large families) were less likely to drink at this level. Households comprising one or two adults over 60 were least likely to drink at hazardous levels or above (for example, 18.0% of men and 6.4% of women aged over 60 who lived alone). There was a similar pattern in the prevalence of AUDIT scores indicating harmful drinking, mild dependence or probable dependence. [Table 10.7](#)

**Figure 10G: Harmful drinking/mild or probable dependence (AUDIT score of 16 or more), by household composition and sex**

Base: all adults



### *Employment status*

Comparisons between groups are based on age-standardised estimates to account for differences in the age profile between individuals within different employment categories. This analysis is limited to adults aged between 16 and 64.

Among both men and women, drinking at hazardous levels (an AUDIT score of 8 or above) was highest among those in employment (31.4% of men, 17.4% of women) and lowest among those classed as economically inactive (22.9% of men, 12.1% of women). Variation by employment status for AUDIT scores of 16+ were not statistically significant. [Table 10.8](#)

### *Benefit status*

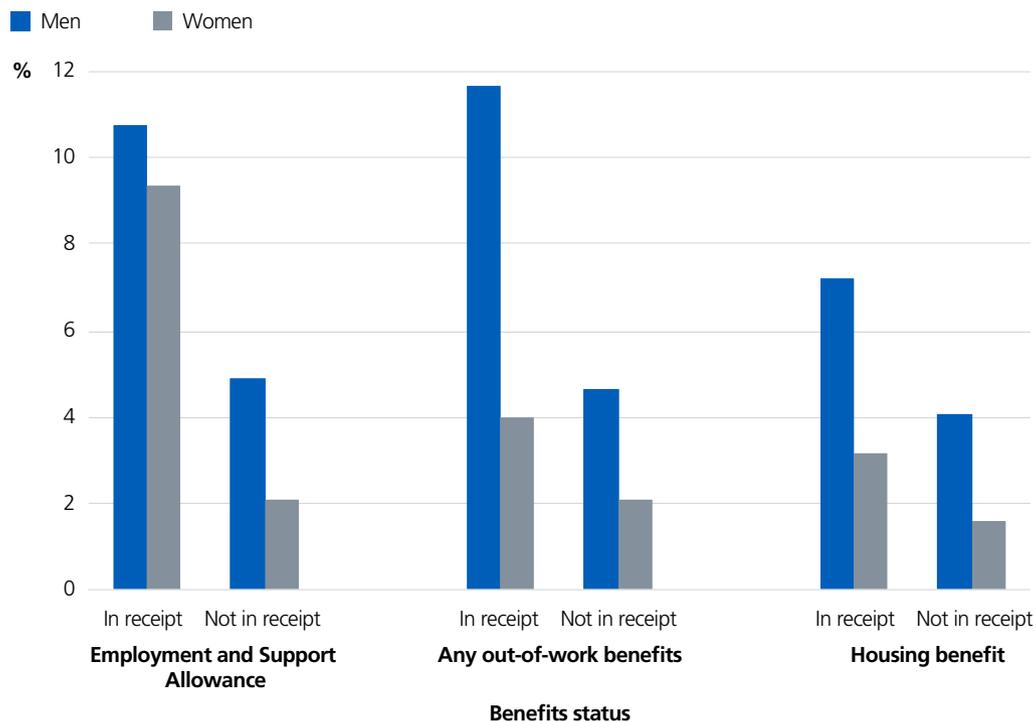
Comparisons between groups are based on age-standardised estimates to account for differences in the age profile between individuals in receipt of different types of benefit. For Employment and Support Allowance (ESA) and any out-of-work benefits (JSA and ESA), the analysis is limited to adults aged between 16 and 64.

The proportions of adults with AUDIT scores of 8 or more were not significantly different according to whether or not they were in receipt of ESA. However, both men and women in receipt of ESA were more likely than those who were not to have AUDIT scores of 16 or more (indicating that their drinking was harmful or dependent). 10.8% of men and 9.4% of women in receipt of ESA had AUDIT scores of 16 or more; unusually the proportions were similar for men and women. The equivalent proportions among those who were not in receipt of ESA were 4.9% of men and 2.1% of women.

A similar pattern was seen for adults in receipt of any kind of out-of-work benefits (although the difference was less pronounced among women). The proportion with AUDIT scores of 8 or more were similar, regardless of benefit status. But men and women in receipt of out-of-work benefits were more likely to be harmful or mildly dependent drinkers or probably dependent than those who were not. 11.7% of men and 4.0% of women in receipt of these benefits had AUDIT scores of 16 or above, compared with 4.6% of men and 2.0% of women who were not in receipt of these benefits.

Adults living in households in receipt of housing benefit were less likely to drink at hazardous levels or above (AUDIT score of 8 or more) than those who were not. This difference was more pronounced among men (18.2% compared with 26.7% respectively) than among women (12.2% and 13.2% respectively). Conversely, the proportions whose drinking was harmful, mildly dependent or probably dependent were higher in people in receipt of housing benefit. 7.2% of such men and 3.1% of such women had AUDIT scores of 16 or more, compared with 4.1% of men and 1.6% of women who were not receiving this benefit. [Table 10.9](#)

**Figure 10H: Harmful drinking/mild or probable dependence (AUDIT score of 16 or more), by benefit status and sex (age-standardised) 16–64 (out of work benefits); all adults (Housing benefit)**



### Treatment for a mental or emotional problem

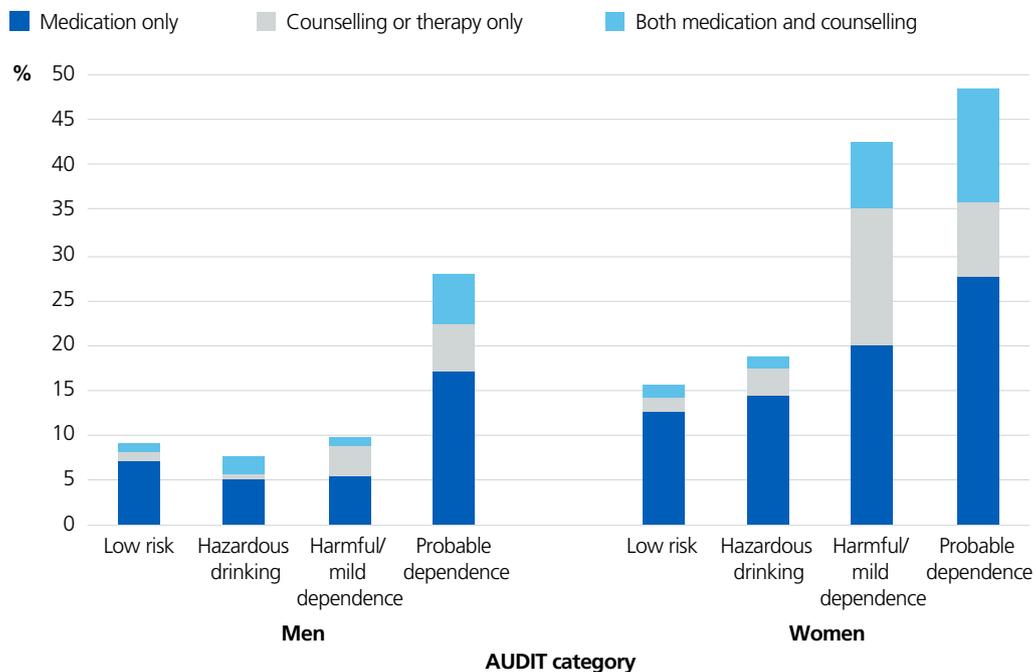
The following analysis compares current treatment for a mental or emotional problem by AUDIT scores. It should be noted that there were relatively small numbers of women identified with mild or probable dependence on alcohol (16+), and also that treatment refers to any psychotropic medication or psychological therapy, and was not necessarily for an alcohol-related disorder.

The proportion receiving treatment for a mental or emotional problem was higher among those whose AUDIT score indicated likely dependence on alcohol. 9.2% of men who were at low risk of alcohol-related harm were currently receiving treatment, compared with 7.7% of men who were hazardous drinkers and 9.8% of men classified as harmful or mildly dependent. The proportion of men with probable dependence receiving treatment for a mental or emotional problem was more than twice as high – 27.7%. Among women, 15.5% in the low risk category and 18.7% of hazardous drinkers were receiving treatment. This proportion increased to 42.5% of harmful or mildly dependent drinkers, and 48.5% of women who were probably dependent on alcohol.

The majority of those receiving treatment were on medication only, with a minority receiving psychological therapy or a combination of therapy and medication. For example, among men with an AUDIT score indicating probable dependence, 17.0% were on medication only, 5.3% received psychological therapy only, and 5.5% received a combination of both. The corresponding proportions among women with probable dependence were 27.6%, 8.3% and 12.6% respectively. [Table 10.10](#)

**Figure 10I: Currently receiving treatment for a mental or emotional problem, by AUDIT category and sex**

Base: all adults



### *Psychotropic medication*

Of adults with an AUDIT score below 20, including those whose drinking was harmful or mildly dependent, around one in ten reported taking some kind of psychotropic medication. This proportion was more than doubled in adults with an AUDIT score of 20 or more. This pattern was similar for most types of psychotropic medication, particularly medication for anxiety (taken by between 8% and 12% of those with an AUDIT score of less than 20, compared with 22.3% of those with an AUDIT score of 20+); and antidepressants (taken by between 8% and 13% of those with AUDIT scores below 20, compared with 25.0% of those with AUDIT scores of 20+). Furthermore, 6.1% of people with probable dependence (AUDIT 20+) were in receipt of medications used to treat substance misuse. [Table 10.11](#)

### *Psychological therapy*

The proportions of adults receiving psychological therapy ranged from 2.5% in the low risk category to 13.2% of those whose AUDIT score of 20 or more indicated probable dependence. Adults with an AUDIT score of 20 or more were most likely to be receiving alcohol or drug counselling (6.3%), followed by psychotherapy or psychoanalysis (3.6%) and other forms of counselling (3.3%). [Table 10.12](#)

### **Service use**

Adults with an AUDIT score of 20 or more, indicating probable dependence, were much more likely to have used health services for a mental or emotional problem than those with a lower AUDIT score. 36.9% reported speaking to a GP about a mental or emotional problem in the last year, including 18.8% who had spoken to a GP in the last two weeks. This was much higher than for adults in lower risk AUDIT categories.

Adults with probable dependence on alcohol were also more likely than others to have attended hospital in the last three months because of a mental or emotional problem, either as an inpatient (2.2%) or an outpatient (2.7%). [Table 10.13](#)

Community and day care service use was also higher in probably dependent adults than in those whose risk of alcohol-related harm was lower. 18.6% of this group reported using one or more services, compared with between 6% and

11% of those with lower AUDIT scores. This included 9.0% who had attended a community day care centre, 6.5% who had attended a self-help or support group, and 5.6% who had seen a community psychiatric nurse (CPN). [Table 10.14](#)

### **Unmet treatment requests**

Although relatively few participants said that they had requested a particular treatment in the past 12 months but did not get it, this was more likely in those with higher AUDIT scores. 1.5% of those with an AUDIT score of 7 or less reported this, compared with 1.9% of those with a score between 8 and 15, 5.1% of those with a score between 16 and 19, and 5.1% of those with a score of 20 or more. [Table 10.15](#)

## **10.4 Discussion**

The prevalence of hazardous drinking, as measured in APMS 2014, is similar to that in the 2014 Health Survey for England (HSE), which found 22% of men and 16% of women were drinking at levels of increased or higher risk (DH 2016). The prevalence of drinking at harmful or dependent levels was highest among young adults, men aged 25–34 and women aged 16–24, declining gradually with increasing age. This is a similar pattern to that seen in previous APMS surveys as well as the HSE in recent years, suggesting a gradual ‘maturing out’ of heavy drinking.

Although levels of hazardous drinking and above have remained broadly stable since 2000, there are indications of a decline in harmful or mildly dependent drinking among the youngest adults (aged 16 to 24) and an increase among those aged 55–64.

As in previous APMS surveys, men had a higher prevalence than women across the whole spectrum of alcohol use disorders, while participants from ethnic minority groups had lower prevalence rates than their white British counterparts. Regional variations in hazardous drinking seen in previous surveys were less apparent in 2014. Hazardous drinking and above was highest among people in employment compared to those who were economically inactive. However adults receiving Employment and Support Allowance and out-of-work

benefits were more likely to be harmful or dependent drinkers than those not receiving benefits, although there were no significant differences in hazardous drinking between these economic groups.

It should be noted that, as with less common conditions such as psychotic disorders, a survey of the household population may under-represent alcohol dependent adults, who are more likely to be homeless or in an institutional setting and therefore not included in the survey. Moreover, problematic drinkers living in private households may, like other problematic substance users, be relatively less likely to respond to surveys, as they may be somewhat less available, able or willing to answer survey questions. There is also an issue in interpreting and extrapolating prevalence rates of more severe alcohol use disorders of relatively low prevalence to the wider population of England, due to relatively small numbers with moderate and severe dependence identified by this survey.

Only around a third of men and women with probable alcohol dependence recalled having ever been diagnosed by a doctor or professional as having alcohol or drug dependence. A quarter of men and half of women with probable dependence were currently receiving treatment for a mental or emotional problem, mostly medication only, and were more likely to use health services, including inpatient, community and primary care, than those with less severe alcohol use disorders or low risk drinkers. However, in those of both sexes with probable dependence only a small proportion (6.1%) were being prescribed medication for substance dependence. Dependent drinkers were also more likely than other groups to have requested, but not received, treatment. Overall these findings suggest that alcohol dependence remains both under-diagnosed and under-treated in England (Cheeta et al. 2008; Brown et al. 2016).

## 10.5 Tables

### Prevalence and trends

Table 10.1 Harmful and dependent drinking in the past year, by age and sex

Table 10.2 Trends in harmful and dependent drinking in the past year, by age and sex: 2000 to 2014

Table 10.3 Self-diagnosis and professional diagnosis of alcohol or drug dependence, by AUDIT score and sex

Table 10.4 Severity of Alcohol Dependence Questionnaire (SADQ) score, by AUDIT score and sex

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Table 10.5 Harmful and dependent drinking in the past year (observed and age-standardised), by ethnic group and sex

Table 10.6 Harmful and dependent drinking in the past year (observed and age-standardised), by region and sex

Table 10.7 Harmful and dependent drinking in the past year, by household type and sex

Table 10.8 Harmful and dependent drinking in the past year (observed and age-standardised), by employment status and sex

Table 10.9 Harmful and dependent drinking in the past year (observed and age-standardised), by benefit status and sex

### Treatment and service use

Table 10.10 Treatment currently received for a mental or emotional problem, by AUDIT score and sex

Table 10.11 Types of psychotropic medication currently taken, by AUDIT score

Table 10.12 Current counselling or therapy for a mental or emotional problem, by AUDIT score

Table 10.13 Health care services used for a mental or emotional problem, by AUDIT score

Table 10.14 Community and day care services used in past year, by AUDIT score

Table 10.15 Requested but not received a particular mental health treatment in the past 12 months, by AUDIT score

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# Drug use and dependence

Caireen Roberts | Hayley Lepps | John Strang | Nicola Singleton

## Summary

- Drug misuse is defined by the World Health Organisation (WHO) as the use of a substance for a purpose not consistent with legal or medical guidelines, for example the non-medical use of prescription medications or the recreational use of illegal drugs.
- This chapter draws on self-completion data to profile the prevalence and trends in drug misuse and in signs of dependence in the adult population of England.
- Overall, 35.4% of men and 22.6% of women had taken an illicit drug at least once in their life. For both men and women, those aged between 25 and 34 were most likely to have ever used illicit drugs (52.9% and 35.0% respectively), declining to 3.3% of men and 2.8% of women aged 75 or over.
- Cannabis was the most commonly used drug in the past year (9.4% of men and 5.1% of women). Among 16–24 year olds, 23.7% of men and 16.2% of women had used it in the past year, followed by ecstasy, cocaine, ketamine and mephedrone. Ketamine and mephedrone were rarely reported by people in older age-groups.
- People who reported usage of particular drugs were asked about signs of dependence on that drug. The signs, or markers, asked about were: daily use for 2 weeks or more; having a sense of need or dependence; inability to abstain; increased tolerance, and withdrawal symptoms.
- Overall, 3.1% of adults showed signs of dependence on drugs, including 2.3% who showed signs of dependence on cannabis only and 0.8% with signs of dependence on other drugs (with or without cannabis dependence as well). After increases in the 1990s, the overall rate has remained stable since 2000.
- Rates varied with age and sex, and were greatest in men and in the youngest age group; 4.3% of all men showed signs of dependence on illicit drugs (compared with 1.9% of women), including 11.8% of men aged 16 to 24 and 6.6% of men aged 25 to 34.

- Signs of drug dependence varied with ethnic group, and were highest among black men. This, however, was explained by higher rates of cannabis use in this group. It should be noted that daily use of cannabis over a two-week period has been questioned as a reliable marker of dependence.
- People in receipt of Employment and Support Allowance (ESA) were more likely to report signs of drug dependence than people who did not receive this benefit. Some of these people will have been eligible for ESA due to their drug dependence and associated poor physical and mental health.
- Half (51.2%) of people with signs of dependence on drugs other than cannabis were in receipt of mental health treatment at the time of the interview. In contrast, those with signs of dependence on cannabis only (12.6%) had similar mental health treatment rates to the rest of the population (12.2%).
- Over a third of adults with current signs of dependence on drugs other than cannabis (36.2%) had received treatment, help or advice specifically because of their drug use at some point, 28.8% had received this in the past six months. This was twice the rate of those with signs only of cannabis-dependence; among whom 14.6% had ever received treatment, help or support specifically because of their drug use, and 5.5% had received this in the past six months.
- A range of new psychoactive substances (NPS) have entered the drugs market but were not assessed in this survey. Uncertainty over their content and rapid changes in what is available makes measuring the use of these substances in surveys extremely challenging and knowledge of the prevalence of their use is limited.

## 11.1 Introduction

The United Kingdom has quite high levels of drug use compared to many comparable countries, although overall levels of use have been declining over recent years (UKDPC 2012). In 2014/15, it was estimated that more than eleven million adults aged between 16 and 59 in England and Wales had taken illegal drugs in their lifetime, including nearly three million who had taken an illicit drug in the past year (Lader 2015).

Many drug users have taken cannabis only a few times in their lives and no other drugs (UKDPC 2012). For a minority, drug use becomes regular and prolonged, and is associated with a high degree of harm to themselves and others (Home Office 2010). Recently there has been a rapid expansion in the number of new drugs available on the drug market. These new synthetic substances, sometimes called designer drugs or legal highs, generally mimic the effects of more traditional drugs and came to prominence during a period when the ecstasy and cocaine on the market was generally of very poor quality. The new psychoactive substances (NPS) were appealing to users as they were legal, better quality and readily available. Since then action has been taken to control many of these substances, but slightly modified ones are then produced most of which are only transiently on the market. The actual content of the substances marketed under different brand names changes constantly and some are highly potent and pose serious risks to users. This uncertainty over content increases the risk but also, alongside the rapid changes in what is available, also makes measuring the use of these substances in surveys extremely challenging so our knowledge of the prevalence of their use is limited.

Drug misuse is not necessarily problematic, though it can never be considered risk-free (ACMD 2008). More people take cannabis than any other drug, but problematic drug use, particularly dependence, is most frequently associated with opiates (NCCMH 2008). For example, Public Health England report that opiates, (mainly heroin) were the main problem substance for 52% of the 295,224 people aged 18 or over in contact with drug and alcohol treatment services in 2014/15 (PHE 2015). However, the number of young people with heroin problems entering treatment has been declining in recent years and the proportion of those in treatment for other substances has been increasing.

A number of adverse health outcomes have been associated with drug misuse. Injecting drug users are vulnerable to thrombosis, abscesses, blood-borne diseases (particularly hepatitis B and C and HIV), and respiratory problems (Coulthard et al. 2002). Frequent cannabis use has also been associated with respiratory problems (PHE 2015).

Problematic use of one drug often co-occurs with misuse of or dependence on other drugs and alcohol (Farrell et al. 2002). Alcohol dependence and tobacco also

cause major health and wider problems and are dependence-producing, alcohol is considered further in Chapter 10. Drug misuse and drug dependence are more prevalent in adults with various psychiatric problems, from common mental disorders to personality disorders and severe psychotic illness (Coulthard et al. 2002; CMH et al. 2011). For example, cannabis use has been linked to the development of acute and long-term psychotic symptoms, though the causal pathways for the latter remain unclear (Moore et al. 2007). In prisoners in England and Wales, severe dependence on cannabis or stimulants, such as amphetamines or cocaine, was associated with an increased risk of psychosis (Farrell et al. 2002). Significant proportions of those being treated as inpatients or in the community for severe mental illness have substance misuse problems, and this has treatment implications that are not always satisfactorily addressed (Menezes et al. 1996; Phillips and Johnson 2003; Weaver et al. 2003). The 2002 Comorbidity of Substance Misuse and Mental Illness Collaborative study concluded that 75% of users of drug services and 85% of users of alcohol services were experiencing mental health problems (Weaver et al 2003). Comorbidity, including with drug dependence, is considered in Chapter 13 of this report.

The number of admissions to NHS hospitals with a primary diagnosis of drug-related mental health or behavioural disorder has risen since 2012/13 but is still lower than ten years ago; in 2013/14 there were 7,104 (HSCIC 2014). This is an 8.5% (555) increase from 2012/13 when there were 6,549 such admissions. Overall, however, between 2003/04 and 2013/14 admissions have decreased by 11%.

In 2014, there were 2,248 drug misuse deaths involving illegal drugs registered in England and Wales. This was a marked increase from 2013 and equates to a mortality rate of 39.9 deaths per million population, the highest ever recorded (ONS 2015). From 2003 to 2007 drug misuse deaths in England increased but this was followed by a period of stabilisation and decline between 2008 and 2012, before the recent steep rise. Opiates are the drugs most commonly associated with drug misuse deaths, followed by benzodiazepines and alcohol is quite often found in combination with illicit drugs (PHE 2016).

Though the health impacts of drug dependence are significant, the harm to society of drug-related crime is also great (MacDonald et al. 2005). It has been estimated that between a third and a quarter of acquisitive crime – including burglary, theft, fraud and the sale of sex – is drug-related (Home Office 2010).

Surveys of offenders have shown high rates of recent heroin and cocaine use, and made explicit the link between criminal behaviour and the need to get money to buy drugs (Boreham et al. 2006). Other types of crime are less strongly linked to drug use, although drug dealing may be linked to high levels of community violence (UKDPC 2012; Lupton et al. 2002).

The risk factors for drug use are similar to those for a number of unhealthy as well as criminal behaviours, and include social and economic deprivation, inequality and family breakdown (UKDPC 2012). In young people, truancy, exclusion from school, serious or frequent offending and homelessness are linked to an increased risk of frequent drug use and the use of Class A drugs (Becker and Roe 2005; Fuller et al. 2015). The harm caused by problematic drug use also extends to the families of drug users and to the communities in which they live. The children of problematic drug users have been described as being at risk from conception to adulthood, from multiple and cumulative harms to their mental and physical health, and to their social, emotional and educational development (ACMD 2003). Already-deprived communities are most at risk of drug-related harm, through the direct effect on users, as well as increased rates of crime and antisocial behaviour (Home Office 2010). The annual social and economic cost of Class A drug use has been estimated at £15.4 billion a year; 99% of this is accounted for by problem drug use (Home Office 2010).

The major source of data on the prevalence of drug use by adults aged 16 and over in England is the annual Crime Survey for England and Wales (CSEW), funded by the Home Office and previously called the British Crime Survey. The 2014/15 CSEW estimated that 8.6% of adults aged between 16 and 59 in England had taken drugs in the past year. Cannabis was the most commonly used drug; 6.8% of adults had taken cannabis in the past year while 3.2% had taken a Class A drug in the same time period (Lader 2015).

This chapter presents the prevalence of reported drug misuse and signs of dependence in the English adult general population and examines some associations, including those with use of treatment and services. It is important to note that using a household survey to measure drug use and dependence will underestimate several key groups whose patterns and levels of drug use may be atypical. These include students in halls of residence, the homeless, and those living in institutional settings,

including hospitals and prisons (Singleton et al. 1998). Additionally, problematic drug users living in private households may be less likely to participate in surveys, given that they may lead chaotic lives which make them less available, able or willing to answer survey questions (Lader 2015). Hence household surveys are likely to underestimate the number of dependent drug users (UKDPC 2012).

## 11.2 Definitions and assessment

### Drug misuse

Drug misuse is defined by the WHO as the use of a substance for a purpose not consistent with legal or medical guidelines, for example the non-medical use of prescription medications or the recreational use of illegal drugs (ACMD, 2008). It may lead to problematic drug use, including dependence.

Dependence syndrome is defined in the International Classification of Diseases, 10th edition (ICD-10) as 'a cluster of behavioural, cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persistence in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state' (WHO 1992). Diagnostic criteria for dependent drug use are covered by the substance dependency codes F10 to F19 of the ICD-10, and are very similar to the criteria specified in the fourth Diagnostic Statistical Manual (DSM-IV; APA 1994). A threshold of three or more of the following occurring in the past 12 months is required for a diagnosis:

- Preoccupation with substance use
- Sense of need or dependence
- Impaired capacity to control substance-taking behaviour
- Increased tolerance
- Withdrawal symptoms, and
- Persistent substance use despite evidence of harm.

DSM-5 was launched after APMS 2014 was in development. The drug dependence questions used in the survey series were designed to DSM-IV criteria.

### Measuring drug use and dependence

Questions about drug use were asked using a computer-assisted self-completion interview (CASI), as in the 2000 and 2007 surveys. They covered lifetime experience of 15 types of named drug, together with use in the past year. The drugs asked about are those considered to be mostly widely used and about match those included on the CSEW, with the additional inclusion of volatile substances. For the reasons outlined in the introduction, new psychoactive substances (NPS) were not included.

For each of eight drug types (cannabis, amphetamines, crack, cocaine, ecstasy, tranquillisers, opiates and volatile substances), reported use in the past year was followed by five questions based on the Diagnostic Interview Schedule and designed to assess symptoms of drug dependence (Malgady et al. 1992). These questions asked about the past month and year, and covered:

- Daily use for 2 weeks or more
- Sense of need or dependence
- Inability to abstain
- Increased tolerance, and
- Withdrawal symptoms.

A positive response to any of the items was used as an indicator of possible drug dependence. This is a lower threshold than that recommended by ICD-10 and DSM-IV, and the set of questions does not include the diagnostic criteria of preoccupation and persistent use despite evidence of harm. However, the same approach and wording was used in the 1993, 2000 and 2007 surveys and comparability has been maintained. Because people can be dependent on more than one type of drug, and because the nature of cannabis use is widely considered to be different from the other drugs asked about,<sup>1</sup> dependence was grouped into three categories, those:

<sup>1</sup> In particular it has been argued that daily use of cannabis for a two week period does not sufficiently differentiate between recreational use and dependency (see Singleton et al., 1998).

- With no dependence
- Who were dependent on cannabis only, and
- Who were dependent on another drug (including those who were also dependent on cannabis).

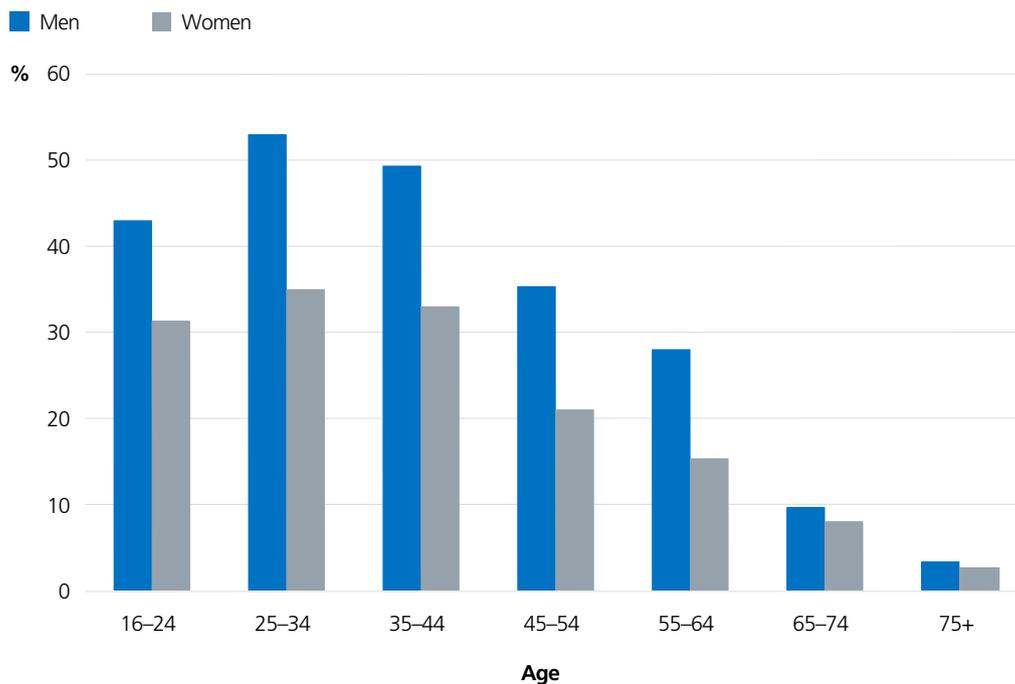
## 11.3 Results

### Prevalence of illicit drug use, by age and sex

Lifetime experience of illicit drug use was strongly related to age and sex. Overall, 35.4% of men and 22.6% of women had taken an illicit drug at least once in their life. For both men and women, those aged between 25 and 34 were most likely to have ever used illicit drugs (52.9% and 35.0% respectively), declining to 3.3% of men and 2.8% of women aged 75 or over.

**Figure 11A: Ever used an illicit drug, by age and sex**

*Base: all adults*

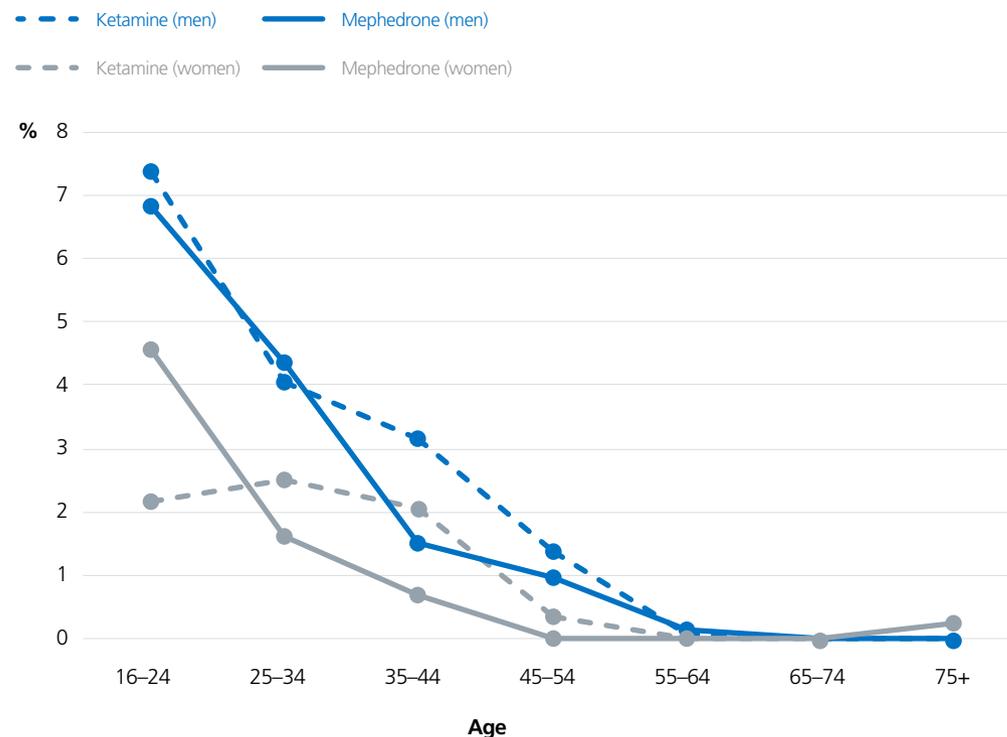


Men and women in most age groups were more likely to have tried cannabis than other drugs. Overall, 31.6% of men had used cannabis, compared with 11.0% who had used cocaine, 8.3% amphetamines and 8.1% ecstasy (the next most commonly used drugs). Among women, 20.6% had used cannabis. The next most commonly used drug, cocaine, had been taken by 5.0% of women.

The age profile of users varied with type of drug. Ketamine and mephedrone were the fourth and fifth most cited drugs taken by 16–24 year olds, their reported lifetime use then declined steeply with age.

**Figure 11B: Ever taken ketamine or mephedrone, by age and sex**

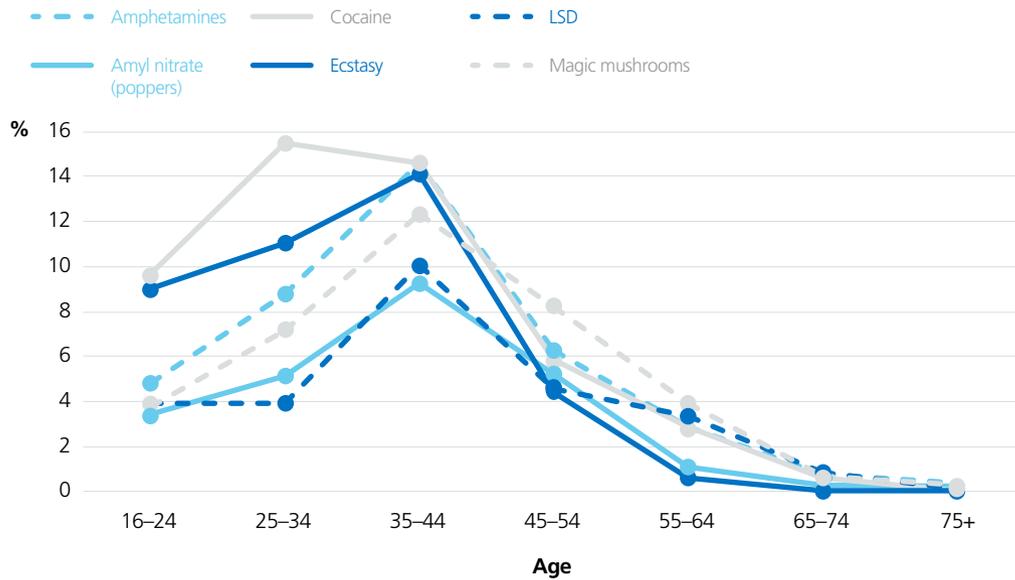
Base: all adults



Lifetime use of many other drugs (such as ecstasy, amphetamines, magic mushrooms, LSD, and amyl nitrite) was highest among 35–44 year olds. These figures relate to a complex mix of period, generational and age group associations. Recall could be a factor in the very low levels of reported lifetime use among those in the oldest age groups. [Table 11.1](#)

**Figure 11C: Six most common drugs ever taken (excluding cannabis), by age**

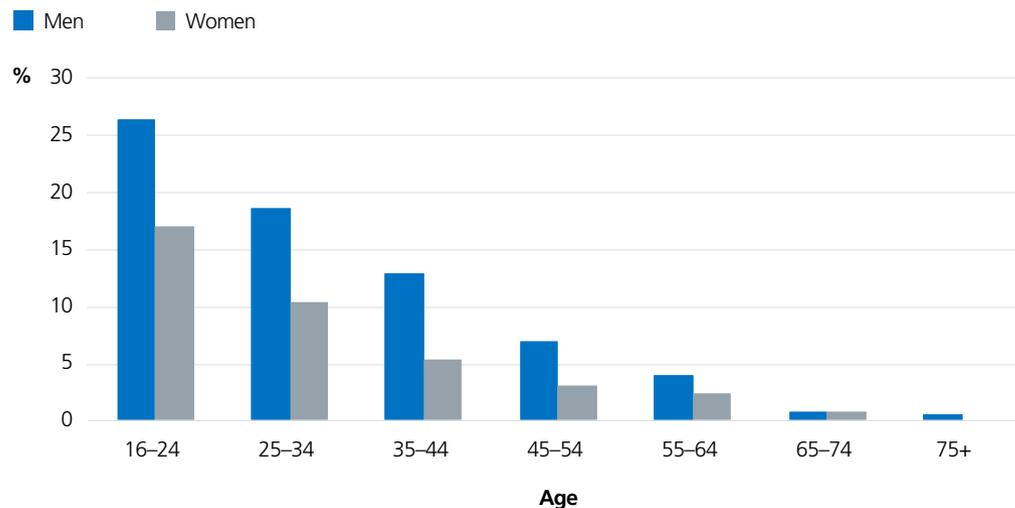
Base: all adults



11.3% of men and 6.0% of women had used at least one illicit drug in the past year. Illicit drug use in the past year was most common in young people (26.4% of men and 17.1% of women aged 16 to 24) and declined sharply with age to 0.5% of men aged 75 or over. It was not reported by any female participants in this age-group.

**Figure 11D: Illicit drug use in the past year, by age and sex**

Base: all adults



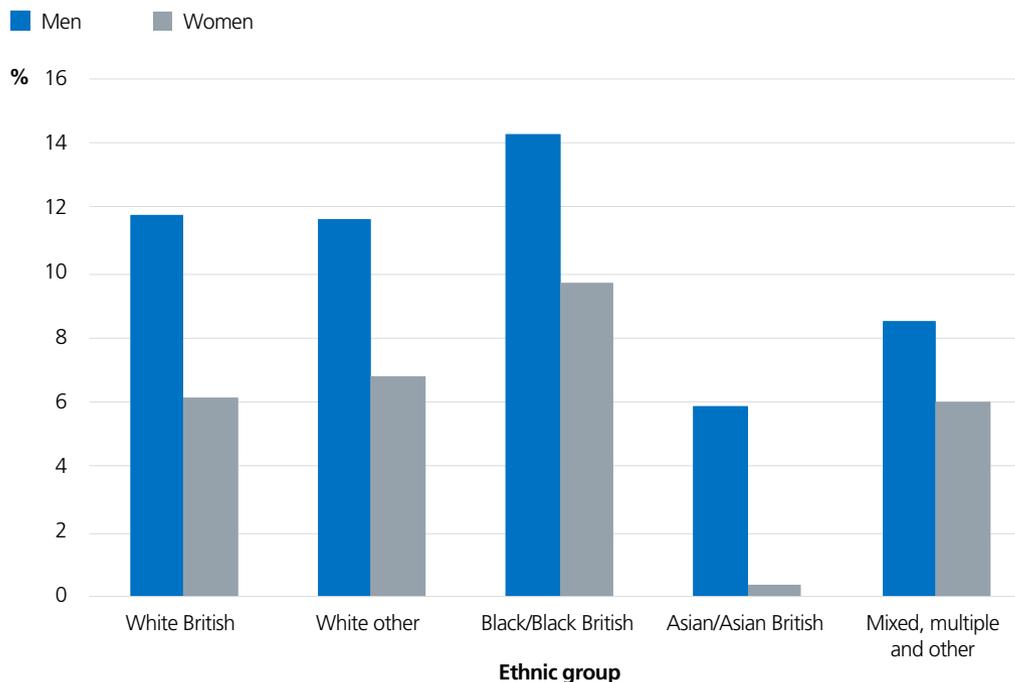
Cannabis was the most commonly used drug in the past year; 9.4% of men and 5.1% of women had used it in the past year, including 23.7% of men and 16.2% of women aged 16 to 24. The use of other drugs in the past year was relatively uncommon, except in young adults where cocaine and ecstasy were the next most likely to be mentioned. Ketamine was included in the survey for the first time in 2014, and among young adults aged 16 to 24, particularly men, it was the next most commonly reported drug used in the past year. [Table 11.2](#)

### Illicit drug use in the past year, by ethnic group and region

The analysis by ethnicity was standardised to account for the different age profiles of the ethnic groups, and the age-standardised rates are referred to here. Black/Black British adults were the most likely to have taken drugs in the past year (14.3% of men; 9.7% of women), and Asian/Asian British adults were the least likely to have done so (5.9% of men; 0.4% of women). The higher rate of drug use among Black men was explained by higher rates of cannabis use in this group. [Table 11.3](#)

**Figure 11E: Illicit drug use in the past year (age-standardised), by ethnic group and sex**

Base: all adults



The proportion of adults who had taken illicit drugs in the past year did not vary significantly across English regions. [Table 11.4](#)

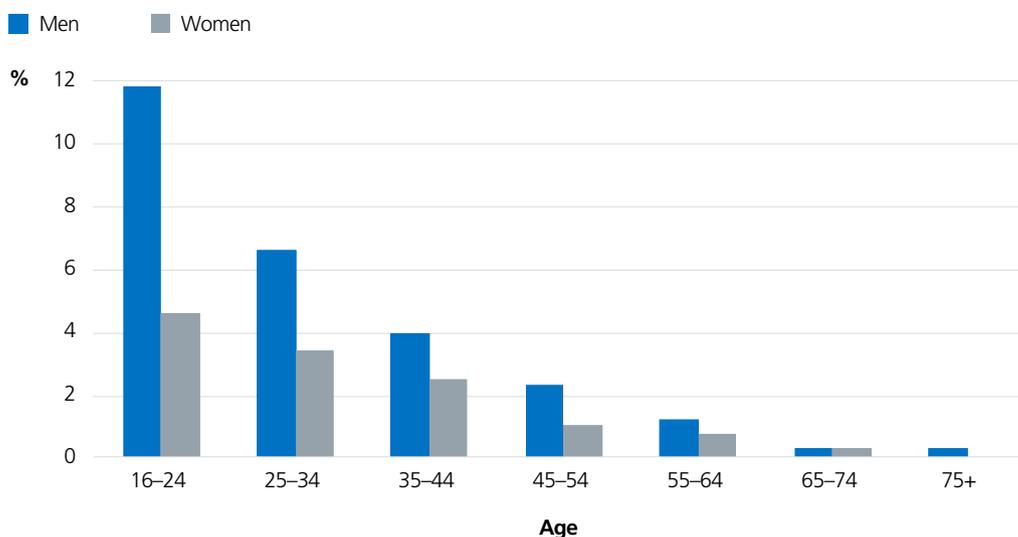
### Prevalence of drug dependence, by age and sex

The prevalence of signs of drug dependence was measured for each of eight types of drug: cannabis, amphetamines, cocaine, crack, ecstasy, opiates (heroin and methadone), tranquillisers and volatile substances (glue, gas, aerosols or solvents). For each drug, sign of dependence was defined as endorsing at least one of five questions about use of the drug (see Section 11.2). Dependent users were grouped into those who were dependent on cannabis only and those who were dependent on other drugs (including those who were also dependent on cannabis).

Overall, 3.1% of participants showed signs of dependence on illicit drugs, with the true rate in the wider population likely to be between 2.6% and 3.6% (95% confidence interval (CI)). This includes 2.3% who showed signs of dependence on cannabis only (95% CI: 1.9% to 2.8%) and 0.8% with signs of dependence on other drugs (with or without cannabis dependence as well) (95% CI: 0.6% to 1.2%). Rates varied with age and sex, and were greatest in men and in the youngest age group; 4.3% of all men showed signs of dependence on illicit drugs (compared with 1.9% of women), including 11.8% of men aged 16 to 24 and 6.6% of men aged 25 to 34. [Table 11.5](#)

**Figure 11F: Signs of drug dependence in the past year, by age and sex**

*Base: all adults*



Of the five signs of drug dependence asked about, the most commonly reported was two weeks of daily use (1.7%, data not shown). The table below shows that, overall, 1.1% of people reported just one sign of dependence, 0.7% reported two, and 1.2% reported three or more (1.6% of men and 0.9% of women). The latter is closer to the threshold for drug dependence according to ICD-10. This chapter focuses on all those reporting at least one sign, an approach consistent with previous surveys in the series.

#### Number of signs of drug dependence reported

	Men	Women	All
	%	%	%
0	95.7	98.1	96.9
1	1.6	0.6	1.1
2	1.1	0.4	0.7
3–5	1.6	0.9	1.2

The highest rates of dependence were on cannabis; 3.7% of men and 1.6% of women. Rates of dependence in the survey sample were 0.5% or lower for other drugs. The prevalence of dependence on heroin/methadone was almost the same as the prevalence of use in the last year, suggesting that almost all users showed signs of dependence. No participants reported signs of dependence on volatile substances. For most age groups, dependence was most likely to be on cannabis only. Dependence on other drugs was largely restricted to younger men. There was almost no overlap in women between signs of dependence on cannabis and on other drugs.

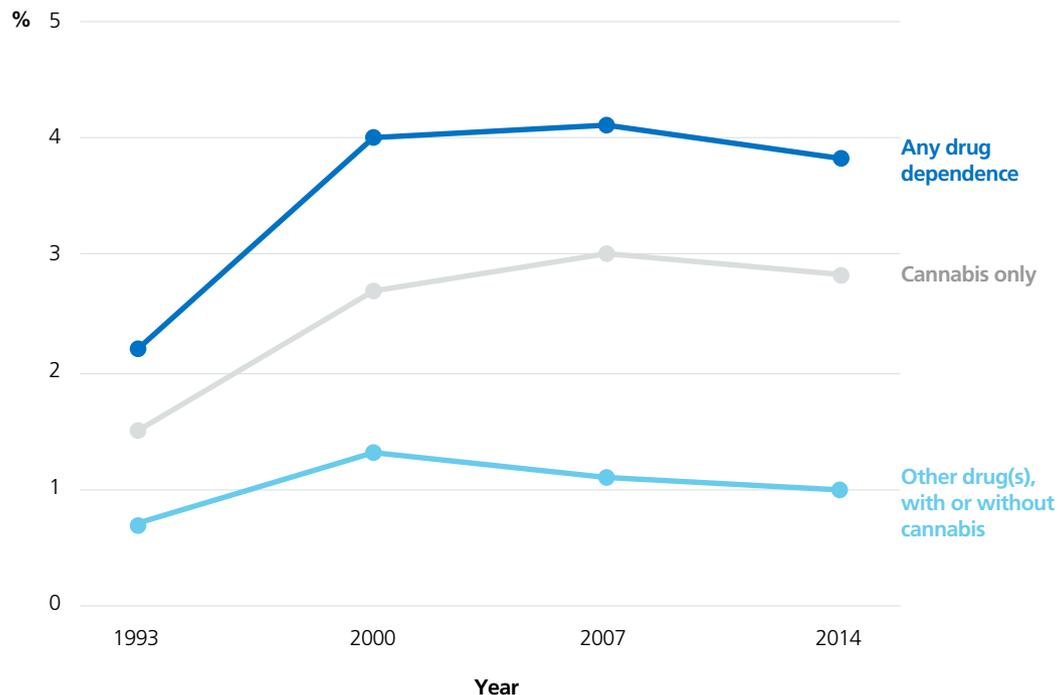
#### Trends in signs of drug dependence, 1993 to 2014

The prevalence of drug dependence in 1993, 2000, 2007 and 2014 can be assessed for adults aged 16 to 64 (the upper age limit of the 1993 survey). Between 1993 and 2000 there was an increase in the proportions of adults reporting signs of dependence on drugs other than cannabis, as well as signs of dependence on cannabis but not other drugs. Between 2000 and 2014 the overall level of signs

of dependence has remained stable. This was true both for signs of dependence on cannabis only, and for signs of dependence on other drugs (with or without cannabis as well). [Table 11.6](#)

**Figure 11G: Signs of dependence on any drug, on cannabis only, and on other drugs in the past year, 1993 to 2014**

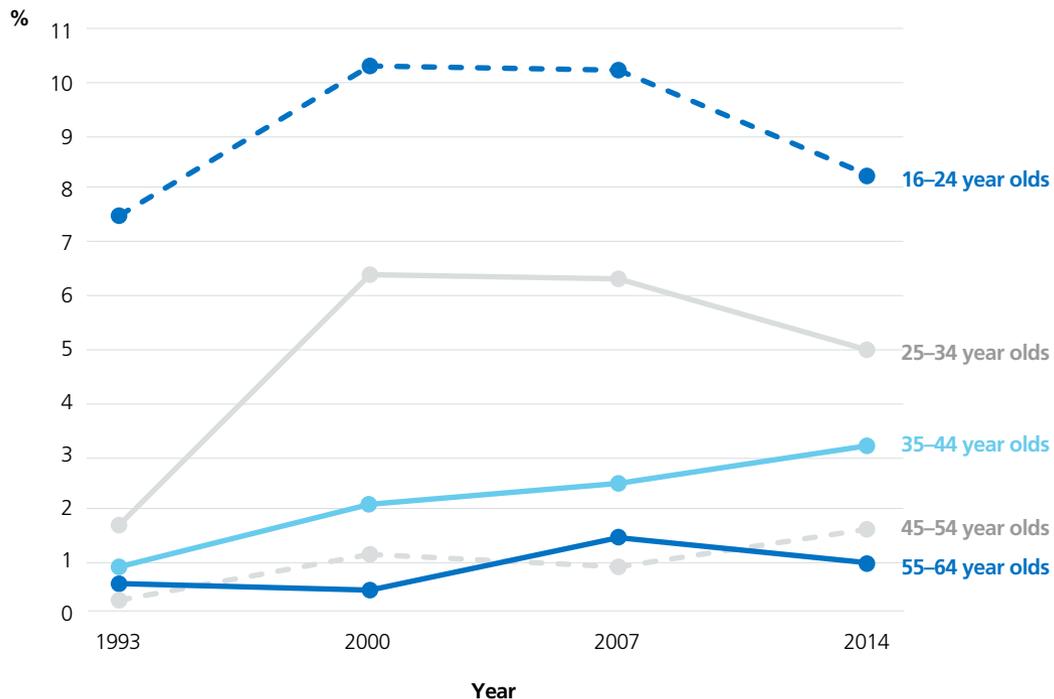
*Base: 16–64 year olds, living in England*



This pattern of overall stability in rates of drug dependence is interesting given the wider context of declining rates in drug use. There are also indications of possible different trends within age-groups. Although not statistically significant, it appears that rates of drug dependence in 16–34 year olds may have started to fall, while rates in 35–54 year olds are sustained, suggesting a possible generational effect. This is consistent with patterns observed in the alcohol chapter (Chapter 10). [Table 11.6](#)

**Figure 11H: Signs of drug dependence in the past year, 1993 to 2014, by age**

Base: 16–64 year olds, living in England



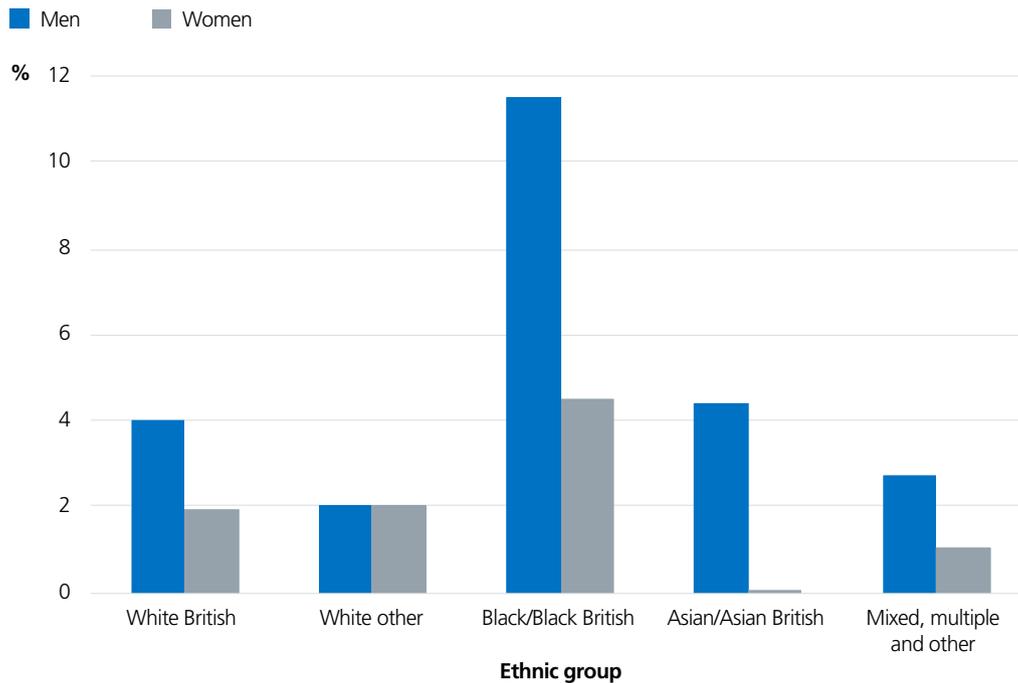
## Drug dependence by other characteristics

### *Ethnic group*

Like the pattern observed for drug use, the prevalence of reported signs of drug dependence also varied between ethnic groups. Using age-standardised data, the proportion showing signs of dependence was highest (at 7.5%) among adults in the Black/Black British group. This may be explained by their higher rates of cannabis use, and could reflect reporting of daily use. [Table 11.7](#)

**Figure 11i: Signs of drug dependence in the past year (age-standardised), by ethnic group and sex**

*Base: all adults*



### *Household type*

Household type was also associated with drug dependence. Signs of drug dependence were highest in those aged less than 60 who lived alone (6.7%).

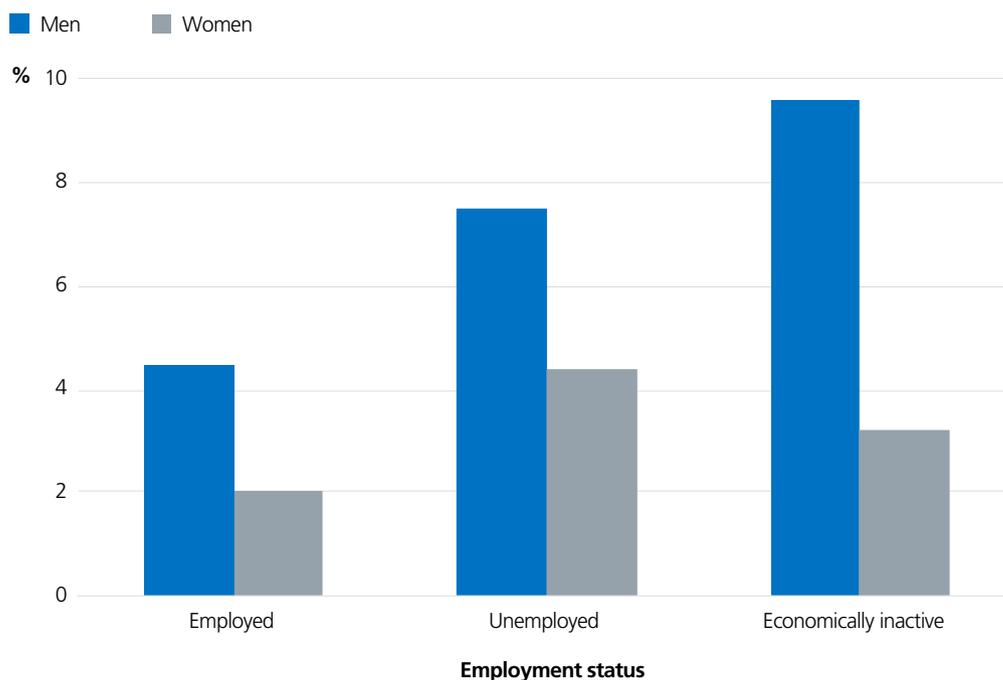
### **Table 11.8**

### *Employment status*

Among people aged 16–64, the prevalence of drug dependence varied with employment status. In men, signs of drug dependence were most common in those classed as economically inactive (9.6%). For women, the highest prevalence was found in the unemployed (4.4%). Prevalence was lowest in both men and women who were in employment (4.5% of employed men, 2.1% of employed women). This is a different pattern to that found for drinking alcohol at hazardous levels, where rates are highest among those in employment (see Chapter 10). [Table 11.9](#)

**Figure 11J: Signs of drug dependence in the past year (age-standardised), by employment status and sex**

Base: adults aged 16–64

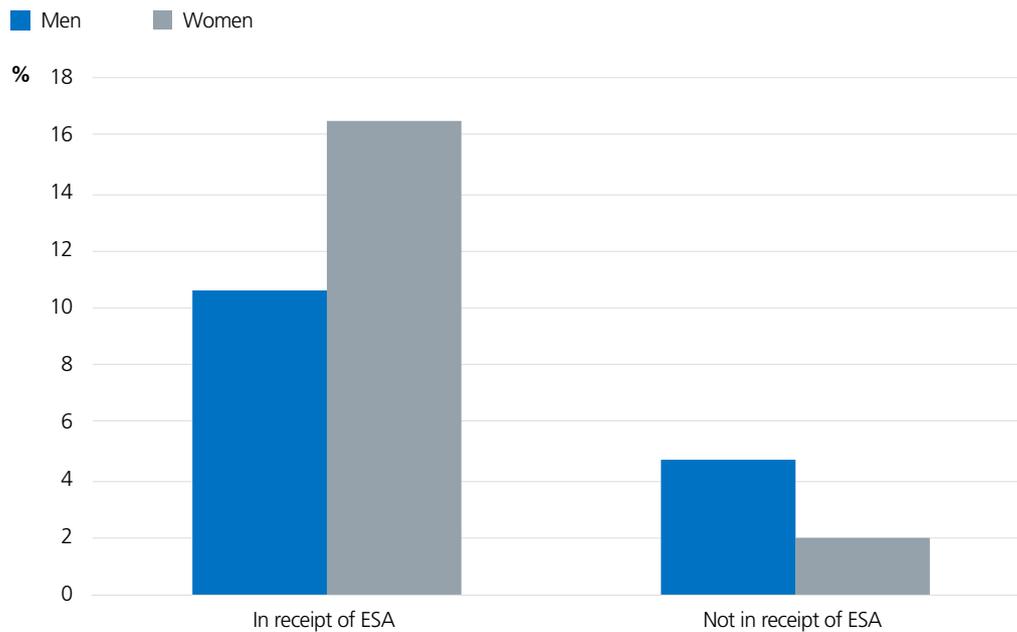


### *Benefit status*

Recipients of benefits were more likely to show signs of dependence than those not receiving benefits, and the differences were most pronounced for Employment and Support Allowance (ESA). People with drug dependence may be in receipt of ESA as a result of their dependence and associated comorbid physical and mental health problems. For ESA, there was a significant interaction between sex and receipt of this type of benefit. The difference between the levels of drug dependence for those in receipt of ESA and those not was larger for women than men, around eight times for women compared with around double for men. Due to small base sizes these figures should be viewed with caution. [Table 11.10](#)

**Figure 11K: Signs of drug dependence in the past year (age-standardised), by receipt of Employment and Support Allowance (ESA) and sex**

*Base: adults aged 16–64*



### *Region*

Levels of drug dependence in different English regions did not vary significantly.

### **Table 11.11**

### **Treatment and service use, by type of drug dependence**

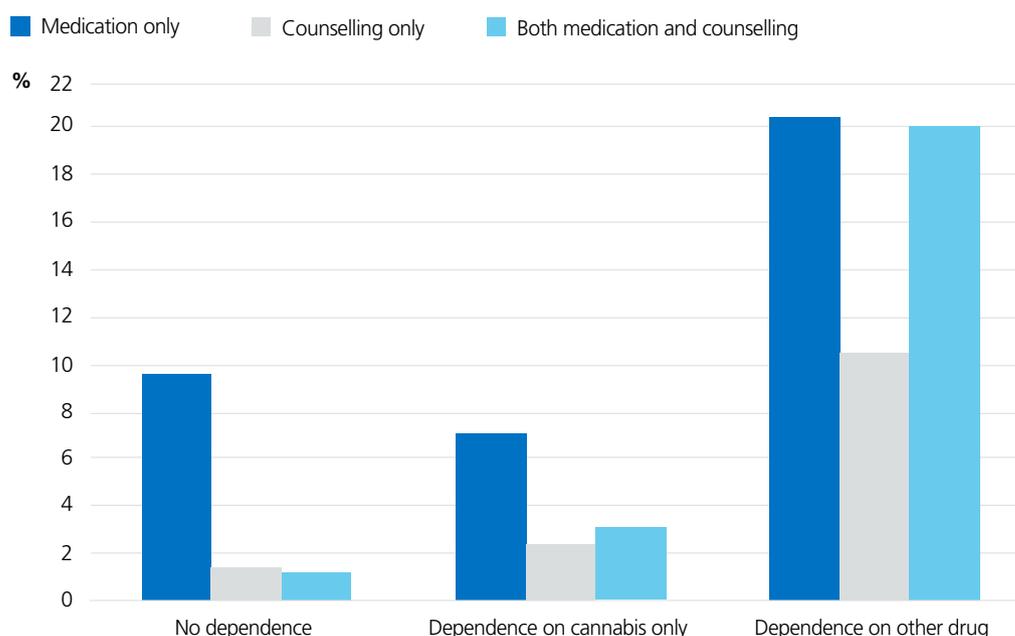
Estimates in this section should be treated with caution: the sample of drug-dependent adults was very small, in particular for those showing signs of dependence on drugs other than cannabis (44 people). Furthermore, the treatment tables in this chapter were not age-standardised, despite drug dependence being strongly associated with age.

### *Psychoactive medication and psychological therapy*

Adults who reported signs of dependence on drugs other than cannabis were more likely than other adults to be receiving treatment for a mental or emotional problem, although this treatment was not necessarily for a drug problem. Half (51.2%) of people with signs of dependence on drugs other than cannabis were in receipt of mental health treatment at the time of the interview. In contrast, those with signs of dependence on cannabis only (12.6%) had similar mental health treatment rates to the rest of the population (12.2%). [Table 11.12](#)

**Figure 11L: Treatment currently received for a mental or emotional problem, by level of drug dependence in past year**

*Base: all adults*



Compared with other adults, those with signs of dependence on drugs other than cannabis were more likely to be taking psychotropic medication; 40.7% compared with 10.2% of those dependent on cannabis and 10.8% of those who reported no signs of drug dependence. Adults with signs of drug dependence were also more likely to use psychological therapy; 5.5% of those dependent on cannabis and 30.7% of those dependent on other drugs, compared with 2.6% of other adults.

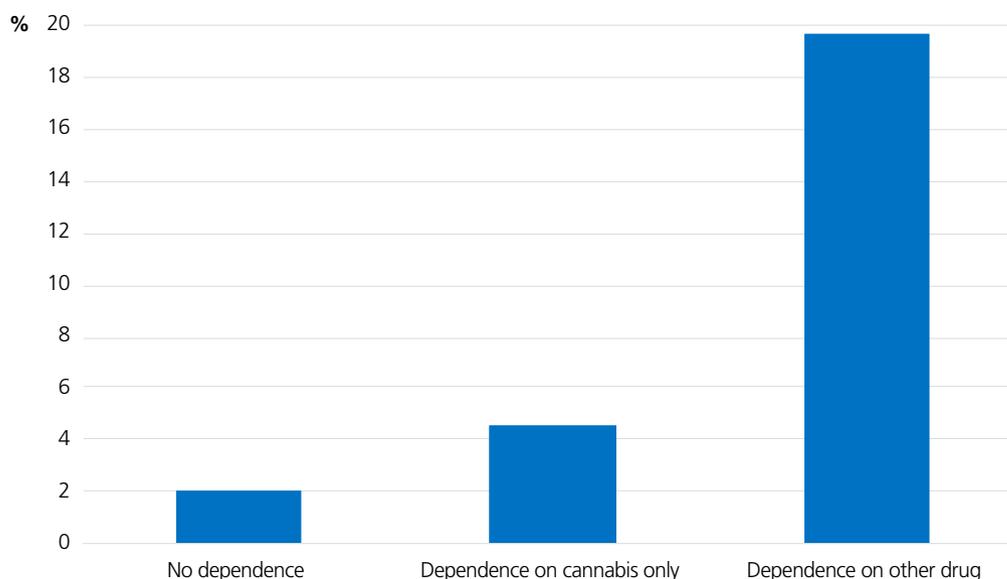
[Tables 11.13, 11.14](#)

### Health care

People with signs of drug dependence were also more likely than others to access health care services for a mental or emotional problem. 21.7% of adults with signs of cannabis dependence only and 54.4% of those with signs of dependence on other drugs had spoken with a GP for this reason in the past year, compared with 11.7% of other adults. 4.6% of cannabis-dependent adults and 19.8% of 'other' drug-dependent adults had spoken with a GP about a mental or emotional problem in the past two weeks, compared with 2.0% of other adults. [Table 11.15](#)

**Figure 11M: Spoken with GP about mental or emotional problem in past two weeks, by level of drug dependence in past year**

Base: all adults

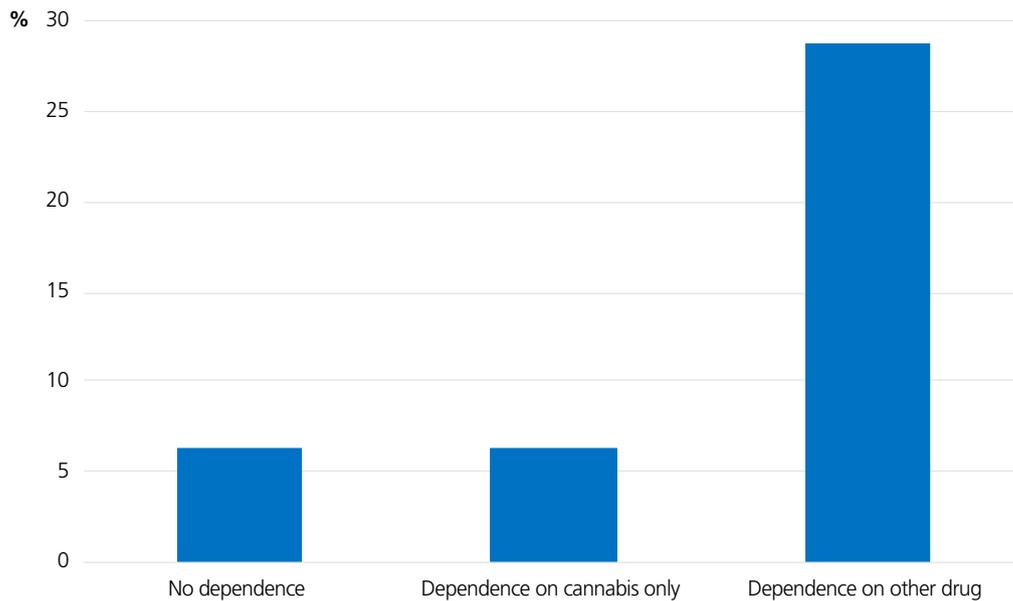


### Community and day care

Levels of community and day care service use in the past year were the same for adults who reported no signs of drug dependence and adults who reported signs of cannabis dependence only (6.4%), while 28.9% of adults with signs of dependence on other drugs had used at least one of the community or day care services asked about in the past year. Adults with signs of dependence on other drugs had distinct patterns of service use; in particular, they were more likely than others to access psychologists (10.6%), community psychiatric nurses (8.0%) and psychiatrists (7.7%). [Table 11.16](#)

**Figure 11N: Community or day care service use in past year, by level of drug dependence in past year**

*Base: all adults*

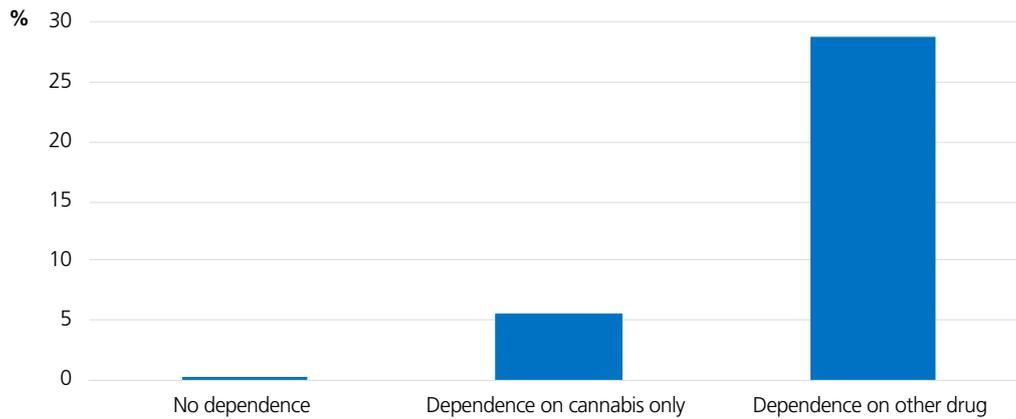


*Treatment, help or advice due to drug use*

All participants were also asked whether they had ever received treatment, help or advice due to drug use. Over a third of adults with current signs of dependence on 'other' drugs (36.2%) had received treatment, help or advice specifically because of their drug use at some point, 28.8% had received this in the past six months. This was twice the rate of those with signs only of cannabis-dependence; among whom 14.6% had ever received treatment, help or support specifically because of their drug use, and 5.5% had received this in the past six months. [Table 11.17](#)

**Figure 11O: Received treatment, help or advice in the past six months because of use of drugs, by level of drug dependence in past year**

*Base: all adults*



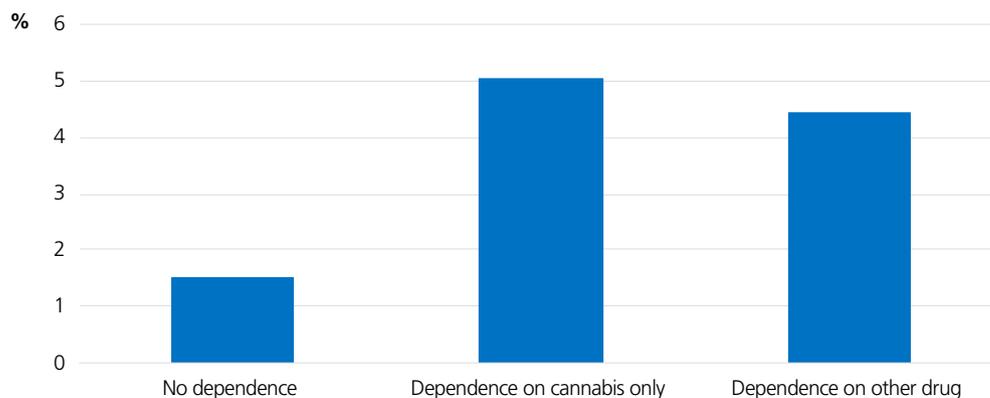
#### *Unmet treatment requests*

Adults showing signs of drug dependence were more likely to have requested but not received a particular mental health treatment in the past 12 months than other adults; 5.0% of those with signs of cannabis-dependence and 4.5% of those with signs of dependence on other drugs, compared with 1.5% of other adults.

#### **Table 11.18**

**Figure 11P: Requested but not received particular mental health treatment in the past 12 months, by level of drug dependence in past year**

*Base: all adults*



## 11.4 Discussion

The pattern of drug use reported here is similar to that reported in the Crime Survey for England and Wales (CSEW).

Men were more likely than women to take drugs, and the prevalence of drug use was highest in early adulthood and declined thereafter. By far the most commonly used drug was cannabis. Both surveys are limited by their lack of data on new psychoactive substances (NPS).

Drug use and signs of drug dependence increased between 1993 and 2000, and have remained steady since. This also reflects trends in drug use reported elsewhere (Lader 2015). When drug use and drug dependence data are examined together, it appears that most drug users do not become dependent. There is evidence of 'maturing out', that is, youthful drug use does not necessarily develop into a lifetime habit. As with drug taking in general, symptoms of dependence were more common in men than in women, and most common in young adults. The prevalence of signs of drug dependence measured here varies with ethnicity, employment status, household structure, and receipt of benefits. These variations warrant further investigation.

The majority of drug users in this sample who could be described as dependent tended to be dependent only on cannabis. However, while there were very few heroin/methadone users in the sample, almost all of them reported at least one sign of dependence.

Drug dependent individuals were more likely to use services for a mental or emotional problem, particularly if showing symptoms of dependence on drugs other than cannabis. However, at least half of these adults, whatever the nature of their dependence, were not in contact with such services.

Although this indicates a link between drug dependence and recognised mental health problems, the characteristics of the dependent individuals in the sample suggest they were mostly on the edge of dependence. Ultimately, a survey of this kind cannot provide a fully representative picture of drug dependent adults in England.

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# Suicidal thoughts, suicide attempts, and self-harm

Sally McManus | Angela Hassiotis | Rachel Jenkins | Mick Dennis | Camille Aznar | Louis Appleby

## Summary

- Suicide prevention is a major goal for local authorities and central government. Between 2007 and 2013, suicide registration data showed a broadly upward trend among men and stability among women, although in 2014 and 2015 the male rate declined and the female rate increased.
- Self-reported suicidal thoughts, suicide attempts and self-harming (without suicidal intent) are associated with great distress for the people who engage in them, as well as for the people around them. They are strongly associated with mental illness, and help to identify people at increased risk of taking their own life in the future.
- The Adult Psychiatric Morbidity Survey (APMS) included questions on these in both the face to face and the self-completion parts of the interview. For reasons of comparability, trends over time draw on face to face reports, which tend to be lower. A variable combining face to face and self-completion data was used for examining differences in rates between groups.
- The proportion of the population who reported having self-harmed increased from 2.4% and 3.8% of 16 to 74 year olds in 2000 and 2007, to 6.4% in 2014. This increase is evident in both men and women and across age-groups. Greater awareness of self-harming is probably a factor in the increased reporting.
- One in four 16 to 24 year old women (25.7%) reported having self-harmed at some point; about twice the rate for men in this age group (9.7%) and women aged 25 to 34 (13.2%). The gap between young men and young women has grown over time.
- Self-harm in young women mostly took the form of self-cutting. The majority reported that they did not seek professional help afterwards.
- In 2014, 5.4% of 16 to 74 year olds reported suicidal thoughts in the past year, a significant increase on the 3.8% reporting this in 2000. For women, the increase occurred between 2000 and 2007; for men it took place later, between 2007 and 2014.

- Since 2000 there has been a slight increase in the reporting of suicide attempts, but only among women (0.5% in 2000, 1.0% in 2007).
- Particular subgroups have experienced more pronounced increases over time. For example, people aged 55 to 64 suicidal thoughts (2.1% in 2000; 4.9% in 2014) and suicide attempts (0.1% in 2000; 0.6% in 2014) at least doubled in rate since 2000. This was evident both in men and women.
- Some groups in the population were more likely than others to report these thoughts and behaviours, such as those who lived alone or were out of work (either unemployed or economically inactive). Benefit status identified people at particularly high risk: two-thirds of Employment and Support Allowance (ESA) recipients had suicidal thoughts (66.4%) and approaching half (43.2%) had made a suicide attempt at some point.
- Overall, half of people who attempted suicide sought help after their most recent attempt (50.1%). About a quarter sought help from a GP, a quarter went to a hospital or specialist medical or psychiatric service, and a fifth tried to get help from friends or family.
- Men and women were equally likely to seek help after a suicide attempt. Older people were more likely to seek help from a hospital or specialist medical or psychiatric service than younger people; the latter were more likely to turn to family and friends. Using GPs as a source of support following a suicide attempt was equally common across age-groups.

## 12.1 Introduction

In 2015, England's Department of Health (DH) published its second annual report on the cross-government outcomes strategy to save lives: *Preventing suicide in England: Two years on* (DH 2015). Between 1990 and 2007 the suicide rate in England fell, and in 2007 reached its lowest recorded level in men (at 13.9 per 100,000). The male suicide rate then saw an upward trend, reaching 16.1 per 100,000 in 2013 (a return to about the level it was in 2001) before falling in 2014 and 2015. In 2015 it was highest in men aged 40 to 59 (ONS 2016). Economic

and employment context has been identified as a factor in trends in male suicide; those areas of England worst affected by recent unemployment experienced greater increases in suicide (Barr et al. 2012). Rates in women are lower and have stayed relatively constant since 2007, although increasing from 4.3 to 5.0 deaths per 100,000 between 2013 and 2015 (ONS 2016).

Among its key objectives, the English National Suicide Prevention Strategy includes the development of epidemiological evidence concerning suicide and self-harm (DH 2015). Such knowledge is needed to plan services and target interventions at the most relevant groups. A prior attempt is a key risk factor for suicide (WHO 2014), and so measuring suicide attempts and self-harm can help profile people at increased risk of suicide. However, it is important to note that the relationship between suicidal ideas, self-harm and suicide is not straightforward. The profile of people reporting suicidal thoughts, attempts and self-harm is very different, in terms of age and sex, from that of people who take their own life, and the great majority of people who engage in these thoughts and behaviours do not go on to die by suicide.

Suicidal thoughts and suicidal behaviours are, in their own right, associated with high levels of distress, both for the people engaging in them and in those around them. They frequently co-occur, but are distinct. While much research on self-harm has combined suicide attempts with non-suicidal self-harming, Adult Psychiatric Morbidity Survey (APMS) data can be used to examine these behaviours separately as it includes some indication of self-reported intention.

Among those who engaged in non-fatal self-harming (with suicidal intent or not) many do not consult health services and, if they do, they may not be identified as being suicidal. Data collected routinely for administrative health datasets provides a unique understanding of patterns of service use but provides a different understanding to community prevalence studies. Studies of people attending health services will be affected by the factors associated with clinic and hospital attendance (Geulayov et al. 2016). Official statistics on recorded suicides (official suicides and undetermined deaths) provide a profile of people who have taken their own life, but not systematically coded detail about their life and socioeconomic circumstances. While this can be obtained from surveys, survey

samples exclude those people, mostly male, who take their own life at the first attempt (Isometsä and Lönnqvist 1998). There is therefore a need to look across a range of data sources, and at suicidal thoughts and self-harm as well as attempts.

This chapter provides nationally representative estimates of the prevalence of suicidal thoughts, suicide attempts and self-harm, and trends in these since 2000. Their relationship to age, sex and other characteristics is described alongside findings on the methods and reasons reported for self-harming. Finally, results are presented on the help-seeking behaviour of people who have made a suicide attempt, and on the types of professional help received by those who have self-harmed.

## 12.2 Definition and assessment

### **Suicidal thoughts, suicide attempts and self-harm**

The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (APA 2013) includes two types of self-harming behaviour as conditions for further study: non-suicidal self-injury (NSSI) and suicidal behaviour disorder (SBD). While intentionality can be difficult to establish (Kapur et al. 2013), this is broadly the approach that has also been adopted in the APMS series, with a separate focus on thinking about suicide; making a suicide attempt with the intention of taking one's own life; and harming oneself without the intent to die.

### **Measuring suicidal thoughts, suicide attempts and self-harm**

#### *Face to face questions*

As in APMS 2000 and 2007, all participants were asked in the face to face section of the interview a number of questions about suicidal thoughts, suicide attempts, and self-harm without suicidal intent.<sup>1</sup> These questions form part of the revised Clinical Interview Schedule (CIS-R). For the purposes of the analysis in this chapter, suicidal thoughts, attempts and self-harm were assessed using the following questions:

<sup>1</sup> These questions were also asked in the 1993 APMS survey, but only of a subgroup of respondents (those who had been depressed in the previous week). Therefore trends are only presented for 2000, 2007 and 2014.

- Have you ever thought of taking your life, even though you would not actually do it?
- Have you ever made an attempt to take your life, by taking an overdose of tablets or in some other way?
- Have you ever deliberately harmed yourself in any way but not with the intention of killing yourself?

A positive response to each was followed up with a question on whether this last occurred in the past week, the past year, or longer ago.

### *Self completion questions*

While questions about suicidal thoughts, attempts and self-harm were asked face to face in order to retain comparability with the previous APMS surveys, it was recognised that some participants might choose not to report them if asked face to face. For this reason, in the 2007 and 2014 surveys, some questions were also asked of all respondents a second time, later in the interview, using laptop self-completion. In 2007 this consisted of the three lifetime prevalence questions listed above (a subset of the full section administered face to face). In 2014, most of the questions on suicidal thoughts, attempts and self-harm were administered in the self-completion section, with some retained in the face to face section for trends and for use in scoring the CIS-R.

### *Questions used for results in this chapter*

In 2014, a new question was added on when the participant had last self-harmed. In previous surveys in the series, participants were asked if they had ever self-harmed, but not when this had last happened. Trends in self-harm, therefore, are based only on reports of lifetime experience. Also to retain comparability of method with the 2000 and 2007 surveys, only data collected in the face to face interviews were used to assess change over time. The other analyses of suicidal thoughts, attempts and self-harm in this chapter draw on derived variables that combine positive responses in the face to face interview with positive responses in the self-completion section, as we believe this approach to be

the most accurate. Generally, reporting in the self-completion was higher than reporting face to face, but not all participants did the self-completion.

### **Measuring methods of self-harming**

In the self-completion section of the interview, participants who reported that they had self-harmed at some point were asked which of a list of methods (cutting, burning, swallowing something, or some other way) they had used. It was possible to give more than one response.

*Did you... (You may give more than one response)*

1. Cut yourself
2. Or burn yourself
3. Or swallow anything
4. Or harm yourself some other way

### **Measuring reasons for self-harming**

Participants who reported in the self-completion that they had self-harmed were also asked two questions about their motivation. It was possible to endorse neither, one, or both of these reasons:

- Did you do any of these things to draw attention to your situation or to change your situation?
- Did you do any of these things because it relieved unpleasant feelings of anger, tension, anxiety or depression?

The issue of intent is very complex; these questions are reductive and the reasons given by participants for self-harming may reflect subsequent rationalisations (Kapur et al. 2013). The data presented on this should be treated as only indicative.

## 12.3 Results

### Suicidal thoughts, suicide attempts and self-harm by age and sex

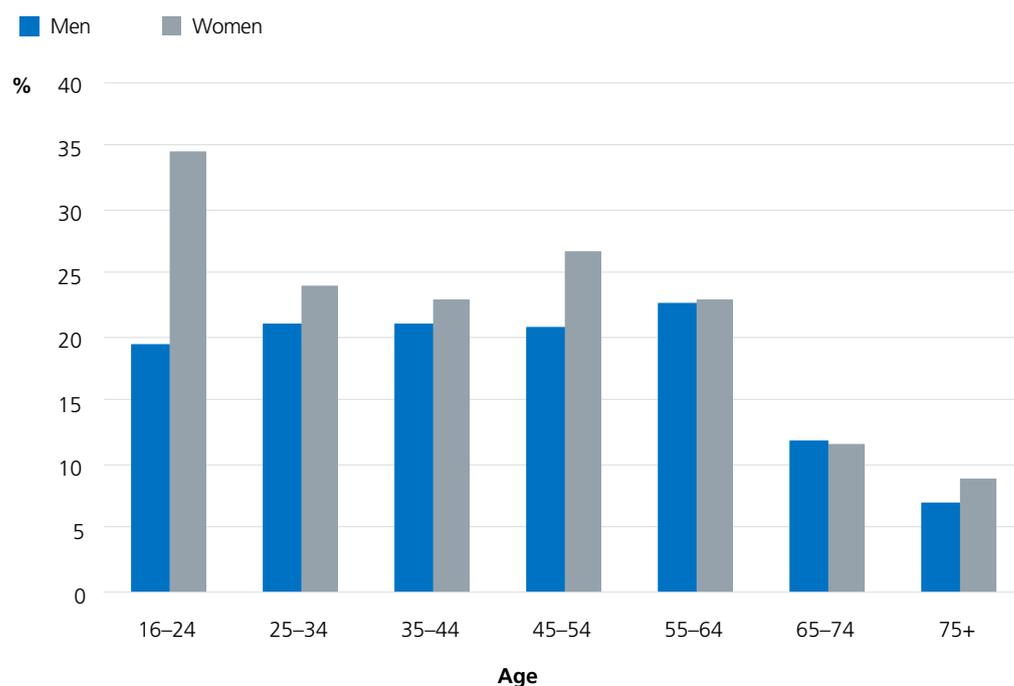
#### *Prevalence of suicidal thoughts*

A fifth of adults (20.6%) reported that they had thought of taking their own life at some point. If all adults in the wider population had been asked about this it is likely that the proportion agreeing would be between 19.5% and 21.7% (95% confidence interval (CI)). This was more common in women (22.4%) than men (18.7%), and in people of working-age than those aged 65 or more.

The survey questions related to suicidal thoughts across the lifetime. The higher reporting in people aged less than 65 might be explained by generational differences, with young people now being more likely to have suicidal thoughts than their counterparts in the past. However, age group variations in recall, perception and willingness to report, together with healthy-survivor effects,<sup>2</sup> may explain some of this association with age.

#### **Figure 12A: Suicidal thoughts ever, by age and sex**

*Base: all adults*



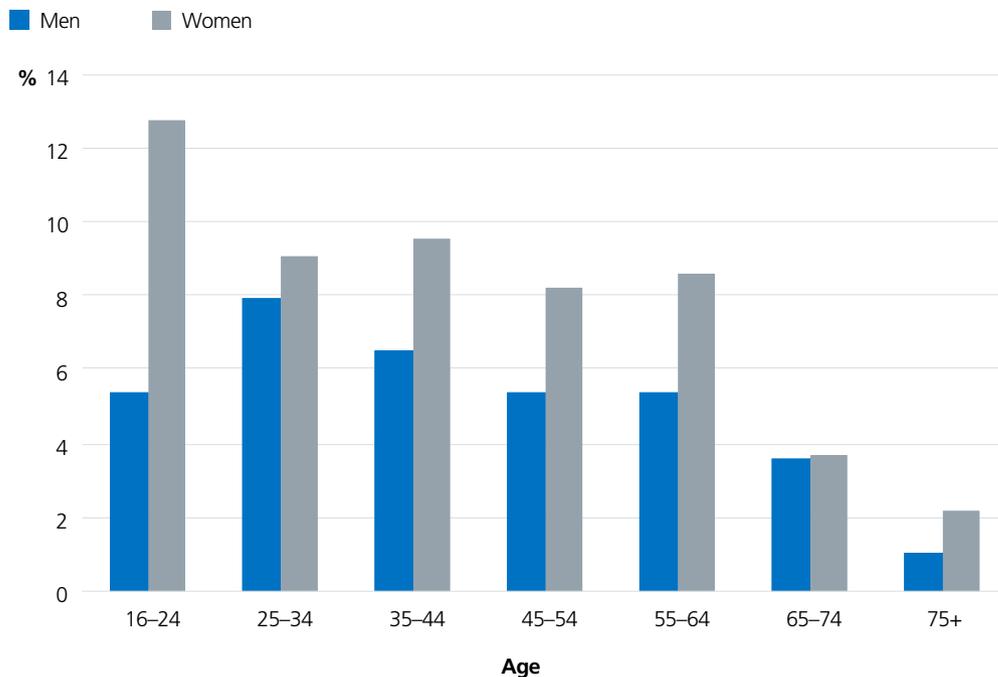
<sup>2</sup> 'Healthy survivor effect' is a type of selection bias. People who face adversities on average die younger than those who do not. This means that those who survive into late old-age will not be representative of their birth-cohort in terms of level of exposure to adversity.

### Prevalence of suicide attempts

One person in fifteen had made a suicide attempt at some point (6.7%, CI 95%: 6.1% to 7.4%). Despite men being more likely than women to take their own life (ONS 2015), women were more likely to report an attempt (5.4% of men, compared with 8.0% of women). As for suicidal thoughts, lifetime suicide attempts were more likely in working-age adults than in those who were older. While the overall pattern by age was not significantly different in men and women, the rate of suicide attempts reported by young women (aged 16 to 24) was notably high. This fits with their particularly high levels of suicidal thoughts, self-harm, and wider psychiatric morbidity, as captured in other chapters of this report.

**Figure 12B: Suicide attempts ever, by age and sex**

Base: all adults



### Prevalence of self-harm without suicidal intent

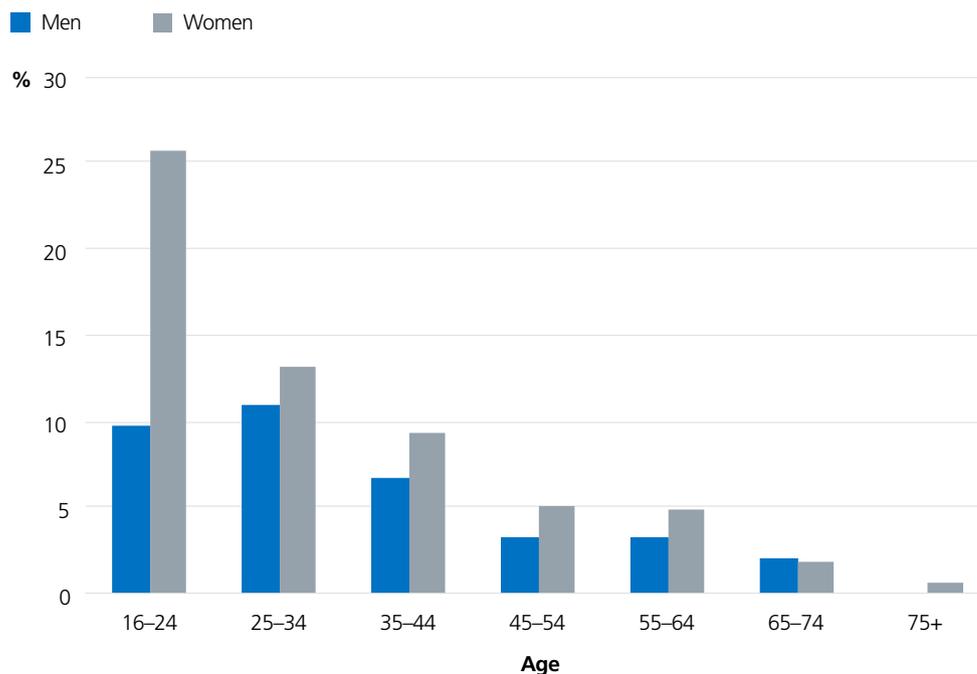
The overall rate of self-harm in the adult population (7.3%, CI 95%: 6.7% to 8.0%) was comparable to that for suicide attempt (6.7%), with rates higher in women (8.9%) than in men (5.7%). However, the age gradient for self-harm was more pronounced, and this was particularly evident in women. One in four women aged 16 to 24 (25.7%) report having self-harmed, compared with one in a hundred women aged 75 or over (0.6%).

Young women were also much more likely than young men to self-harm: 25.7% of women aged 16 to 24 reported this, compared with 9.7% of men in the same age group. Such variation by sex was not evident in older age groups.

**Table 12.1**

**Figure 12C: Self-harm without suicidal intent ever, by age and sex**

*Base: all adults*



## Suicidal thoughts, attempts and self-harm; 2000, 2007 and 2014

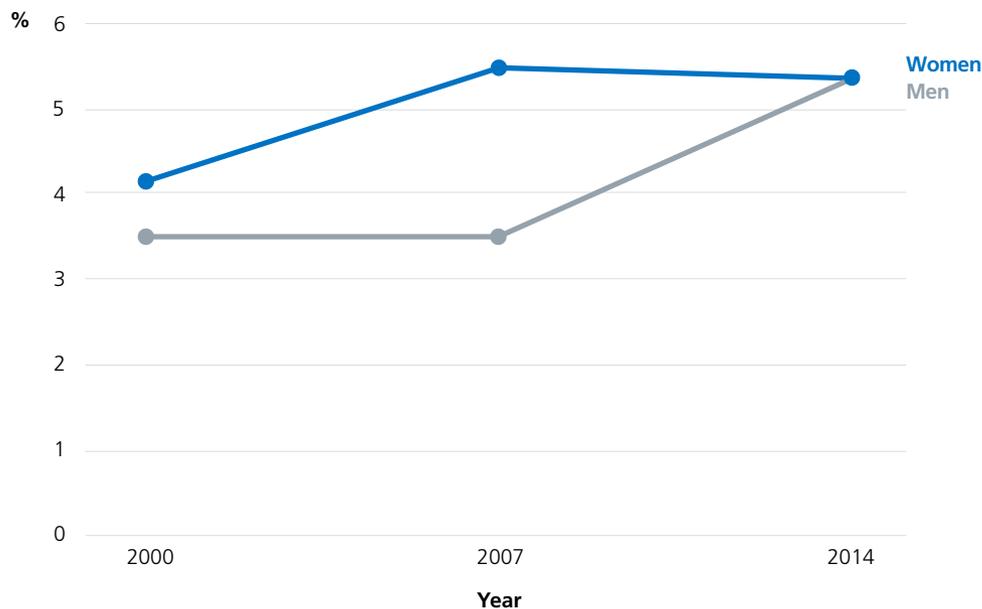
Note that the trend data in this chapter are based only on face to face reports. In 2007 and 2014 self-completion data on this topic was also collected, this tends to elicit higher reporting.

### *Trends in suicidal thoughts*

In 2014, 5.4% of 16 to 74 year olds reported suicidal thoughts in the past year when asked in the face to face part of the interview, a significant increase on the 3.8% reporting this face to face in 2000. For women, the increase occurred between 2000 and 2007; for men it took place later, between 2007 and 2014.

### **Figure 12D: Suicidal thoughts in the past year (reported face to face) by sex; 2000, 2007 and 2014**

*Base: adults aged 16–74 and living in England*

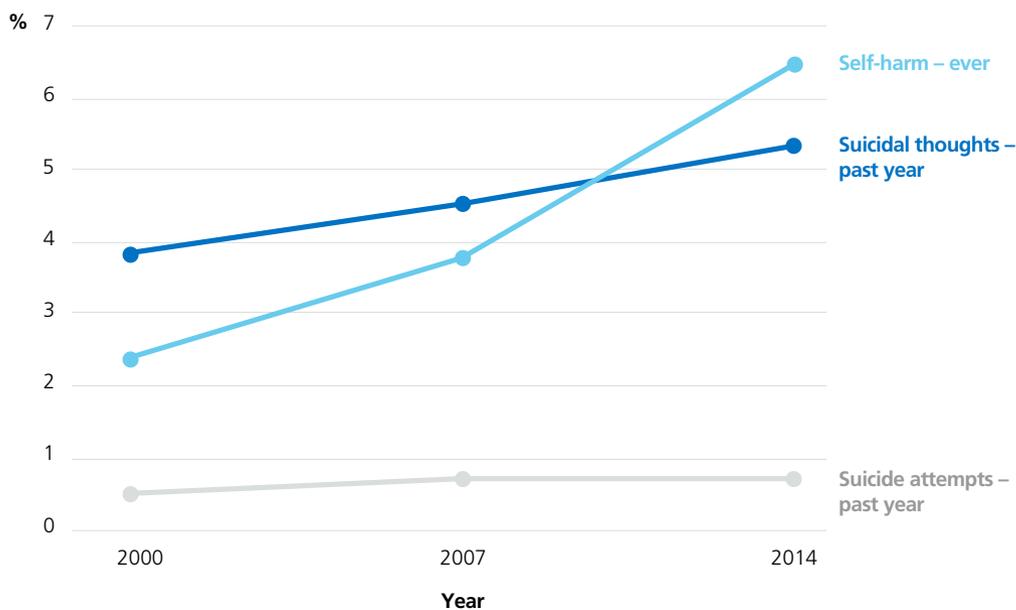


### *Trends in suicide attempts*

Between 2007 and 2014, reporting of a suicide attempt in the past year remained stable at 0.7% of 16 to 74 year olds. Since 2000 there has been a slight increase, but only among women (0.5% in 2000, 1.0% in 2007).

**Figure 12E: Suicidal thoughts, suicide attempts and self-harm (reported face to face); 2000, 2007, 2014**

*Base: adults aged 16–74 and living in England*

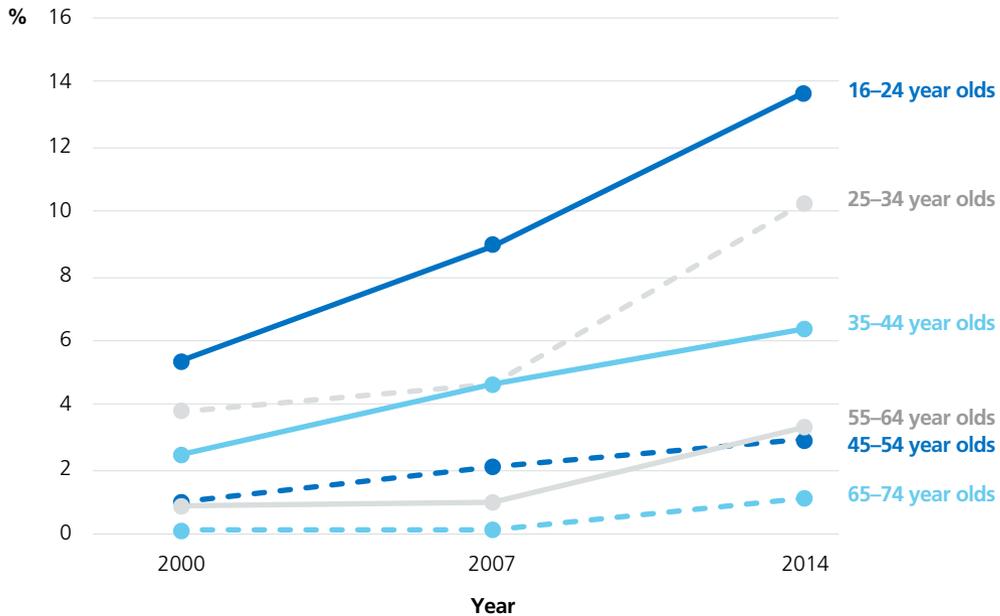


### *Trends in self-harm*

Reporting of lifetime self-harm in the face to face part of the interview has seen sustained increases over time, from 2.4% in 2000, 3.8% in 2007, to 6.4% in 2014. This increase is evident across age-groups, in all of which rates have more than doubled since 2000. In some age-groups (25 to 34 year olds, and those aged 55 to 74) reporting of lifetime self-harm has doubled since 2007.

**Figure 12F: Self-harm ever (reported face to face)  
by age; 2000, 2007 and 2014**

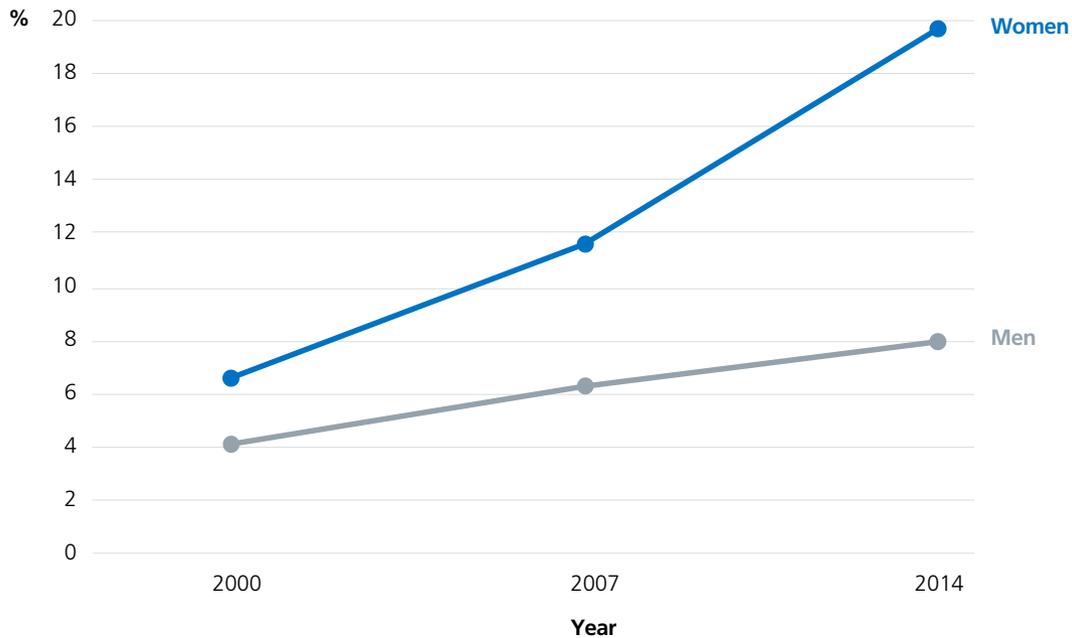
*Base: adults aged 16–74 and living in England*



Among women aged 16 to 24 years in 2000, one in fifteen reported having ever self-harmed (6.5%); this increased to one in nine in 2007 (11.7%) and to one in five in 2014 (19.7%). In 2000, rates of self-harm were similar in young men and women. By 2014, young women were more than twice as likely to report it as their male counterparts (19.7%, compared with 7.9% of 16 to 24 year old men). [Table 12.2](#)

**Figure 12G: Self-harm ever by sex among 16-24 year olds; 2000, 2007 and 2014**

*Base: adults aged 16–24 and living in England*



### Variation in suicidal thoughts, attempts and self-harm by other characteristics

#### *Ethnic group*

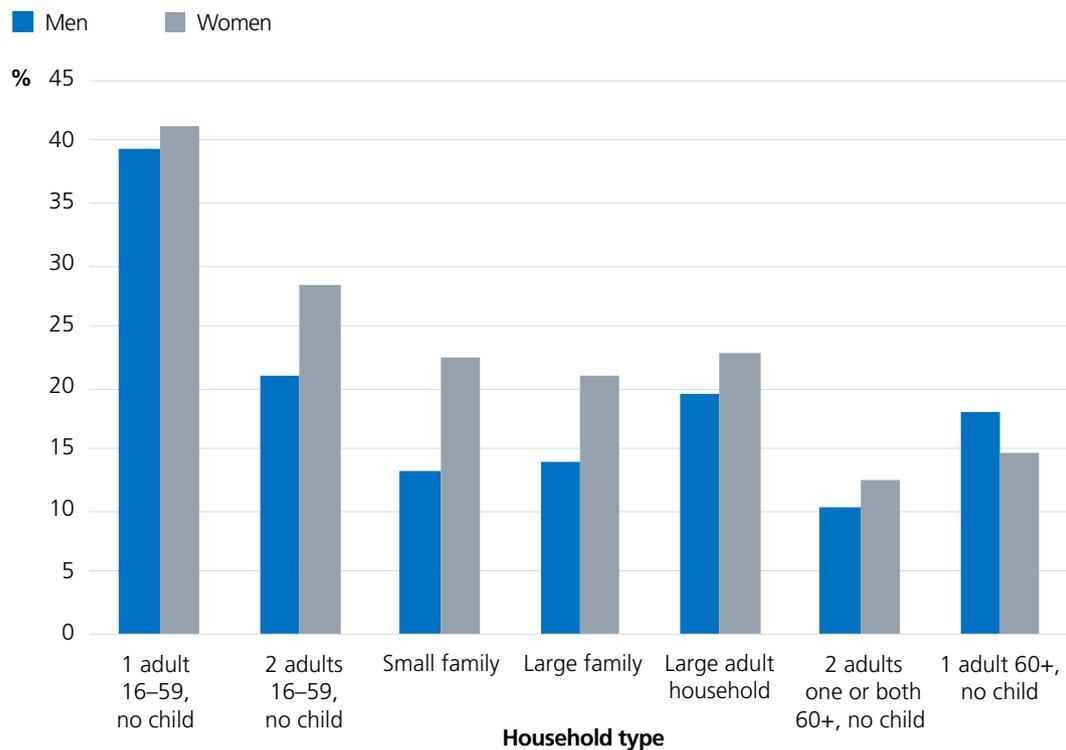
Lifetime suicidal thoughts, attempts and self-harm were evident across all ethnic groups. Rates did not differ significantly by ethnic group after age-standardising the data. It should be noted however, that due to sample size limitations the ethnic group categories are both small and heterogeneous. It is possible that this might mask real differences. [Table 12.3](#)

### Household type

People under 60 who lived on their own were more likely to have suicidal thoughts than those of the same age living with others. This was also true of having made a suicide attempt and of having self-harmed. Of people living in such circumstances, 40.2% had suicidal thoughts, compared with 24.8% of people who lived with another adult. This pattern was also evident in people aged 60 and over: those living alone were more than twice as likely to have made a suicide attempt as those living with another person (6.4%, compared with 2.5%). [Table 12.4](#)

**Figure 12H: Suicidal thoughts ever, by household type and sex**

*Base: all adults*

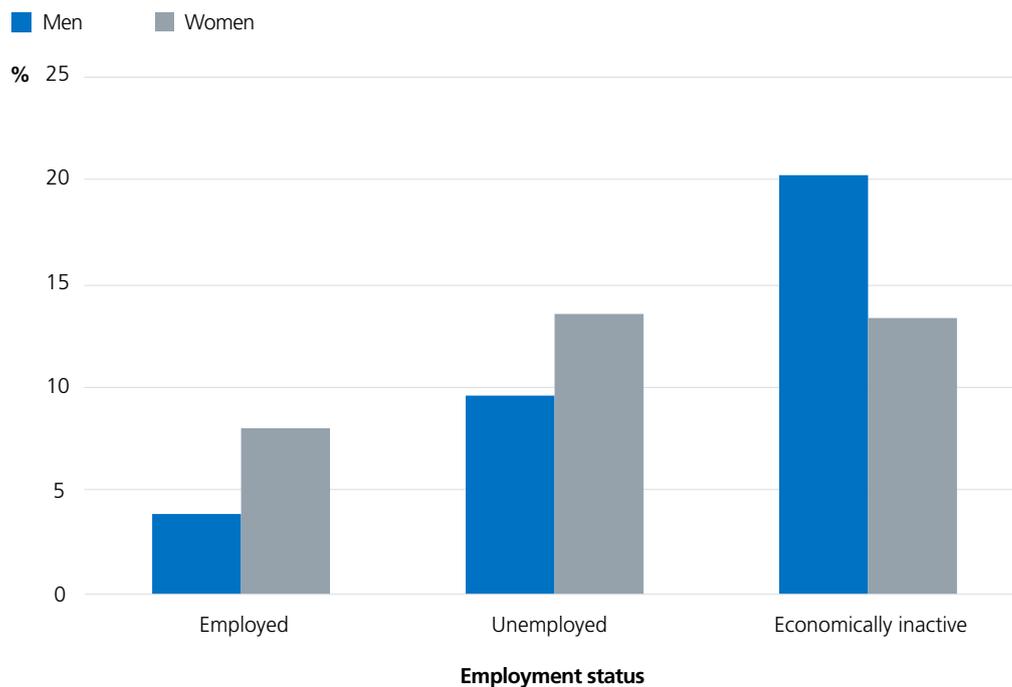


### Employment status

Employment status was associated with suicidal thoughts, attempts and self-harm in the working-age population (16 to 64 year olds). Among men, the associations were strong, with rates of each lowest among the employed and highest in the economically inactive. In women the differences were less marked, with similar rates in the unemployed and those who were economically inactive. [Table 12.5](#)

**Figure 12I: Suicide attempt ever, by employment status (age-standardised)**

Base: aged 16–64



### Benefit status

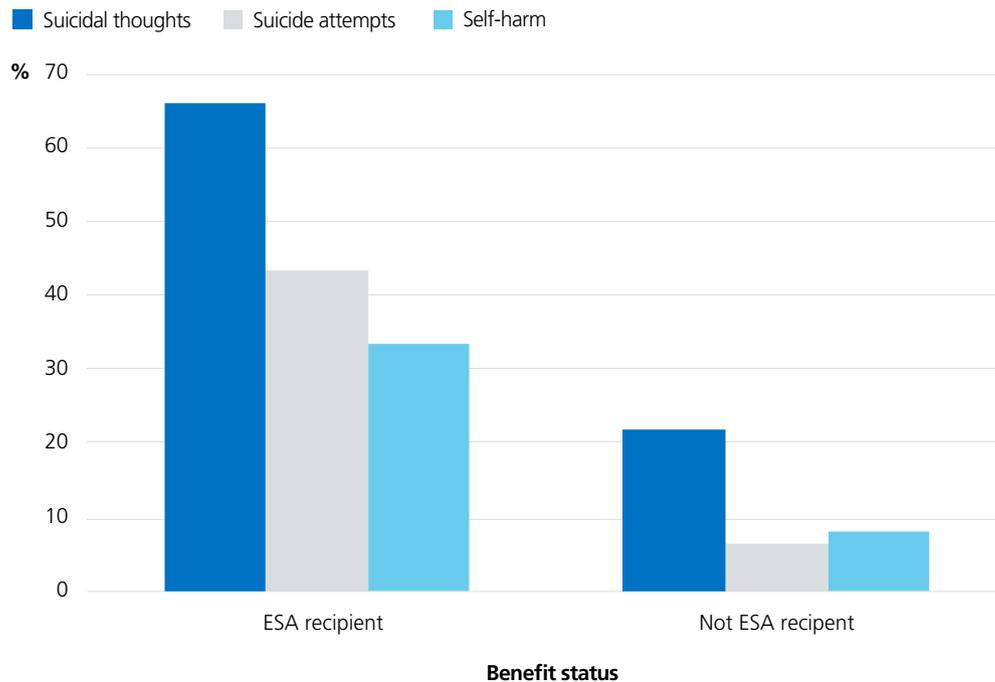
Age-standardised associations of suicidal thoughts and attempts, and self-harm with the receipt of out-of-work benefits were examined for people aged 16 to 64. Links with housing benefits are reported for the whole population.

Two thirds of people in receipt of Employment and Support Allowance (ESA) (66.4%) had thought about taking their life, approaching half had made a suicide attempt (43.2%), and a third reported self-harming (33.5%); indicating that this is a population in great need of support. People in receipt of other benefits also had

higher rates of suicidal thoughts, suicide attempts and self-harm than those who did not receive these benefits. [Table 12.6](#)

**Figure 12J: Suicidal thoughts, suicide attempts, and self-harm ever by receipt of Employment and Support Allowance (age-standardised)**

*Base: adults aged 16–64*



*Region*

Suicidal thoughts, suicide attempts, and self-harm occur in all regions of England, without significant variation in rate. This remained the case when the data were age-standardised to adjust for age-differences in the population of different regions.

[Table 12.7](#)

*Mental health*

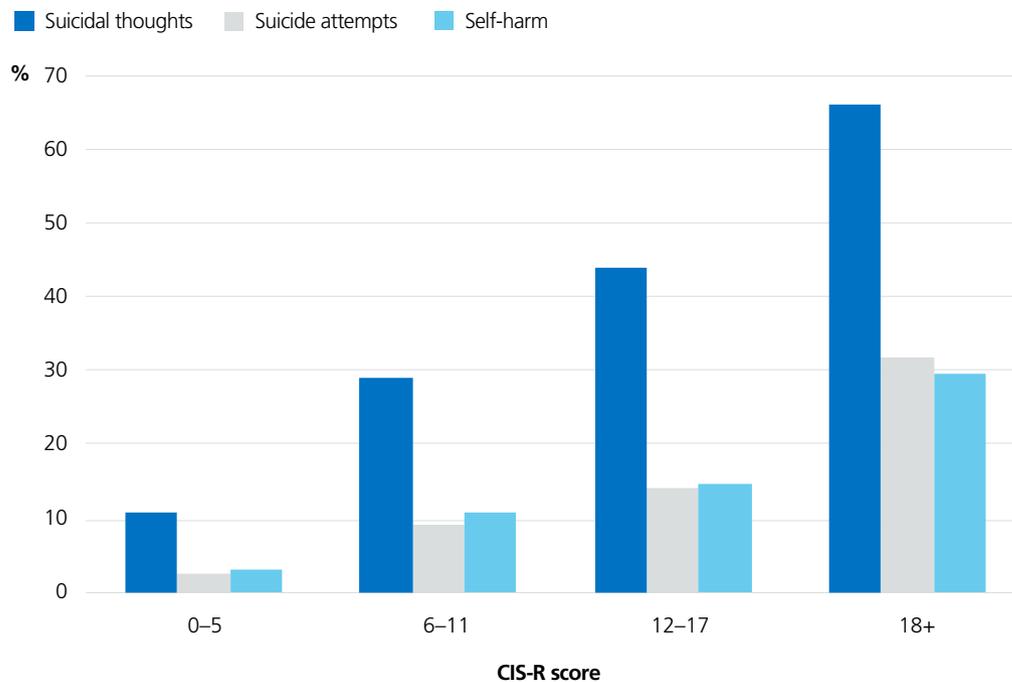
As described in Chapter 2, symptoms of common mental disorder (CMD) in the past week were assessed using the CIS-R. The total CIS-R symptom score was strongly associated with lifetime suicidal thoughts, suicide attempts, and self-harm.

Two-thirds of people with severe symptoms of CMD (CIS-R score 18+) (65.9%) had thought about taking their own life, compared with a tenth of those with no or few symptoms (10.7%). The association was stronger for men than for women.

**Table 12.8**

**Figure 12K: Suicidal thoughts, suicide attempts, and self-harm ever by severity of symptoms of CMD in the past week (CIS-R score)**

*Base: all adults*



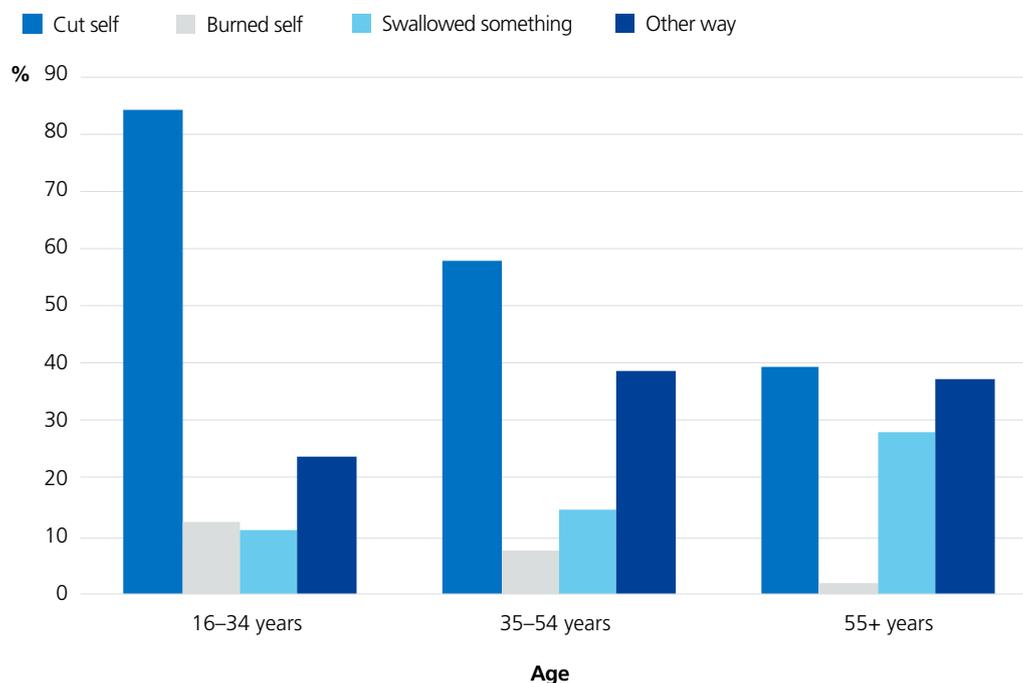
### Methods of self-harming

Overall, three-quarters of people who self-harmed had cut themselves (73.1%); around one in ten had burned themselves (10.2%); a similar proportion swallowed something (13.8%); and nearly a third had used some other method (29.1%). While women were more likely than men to report cutting (77.0%, compared with 66.2% of men), men were more likely than women to have burned themselves (16.8%, compared with 6.5% of women).

Methods of self-harming also varied with age (although caution in interpretation is required; there were only 55 people in the sample aged 55 and over who reported self-harm). Young people (16 to 34 years) were more likely than their older counterparts to report cutting or burning themselves, whereas older people were more likely to report swallowing something or some other method. It was also more common for 18 to 34 year olds to report more than one method, compared with those aged 35 or more. [Tables 12.9 and 12.10](#)

### Figure 12L: Method of self-harming, by age

Base: adults who had ever self-harmed



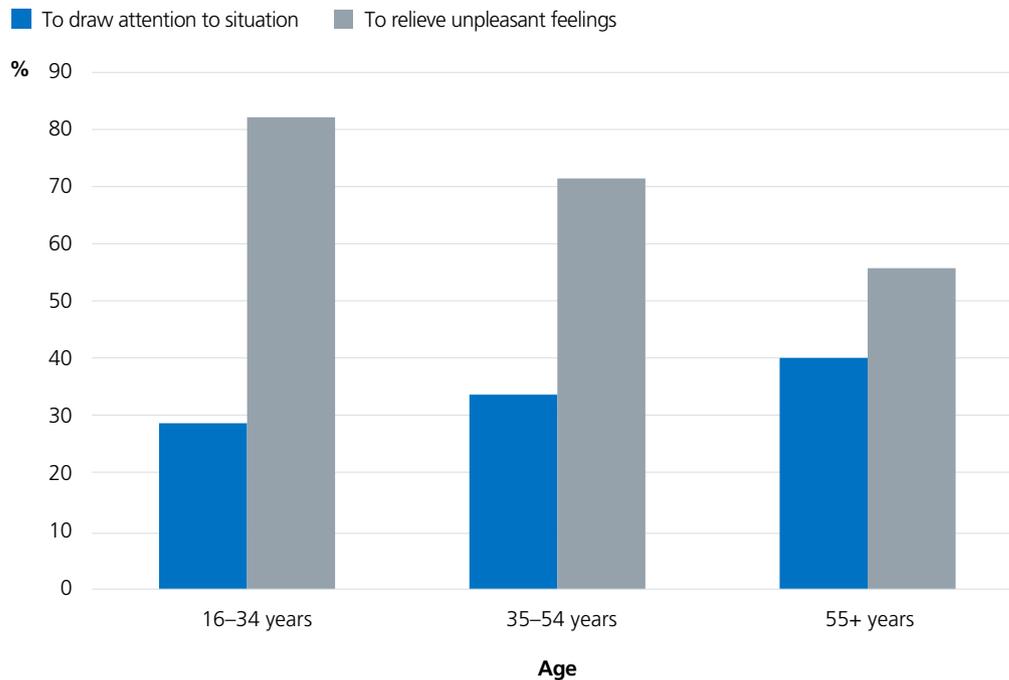
### Reported reasons for self-harming

Three-quarters of people who had self-harmed cited relieving unpleasant feelings of anger, tension, anxiety or depression as a reason for doing so (76.7%), while a third reported self-harming in order to draw attention to or to change their situation (31.0%). Women were more likely than men to agree with at least one of these reasons.

There was an association between reasons for self-harming and age. Younger people were more likely than older people to report that they self-harm in order to relieve unpleasant feelings, while older people were more likely than younger people to report self-harming in order to draw attention. [Tables 12.9 and 12.10](#)

### Figure 12M: Reasons for self-harming, by age

Base: adults who had ever self-harmed



### Help-seeking behaviour

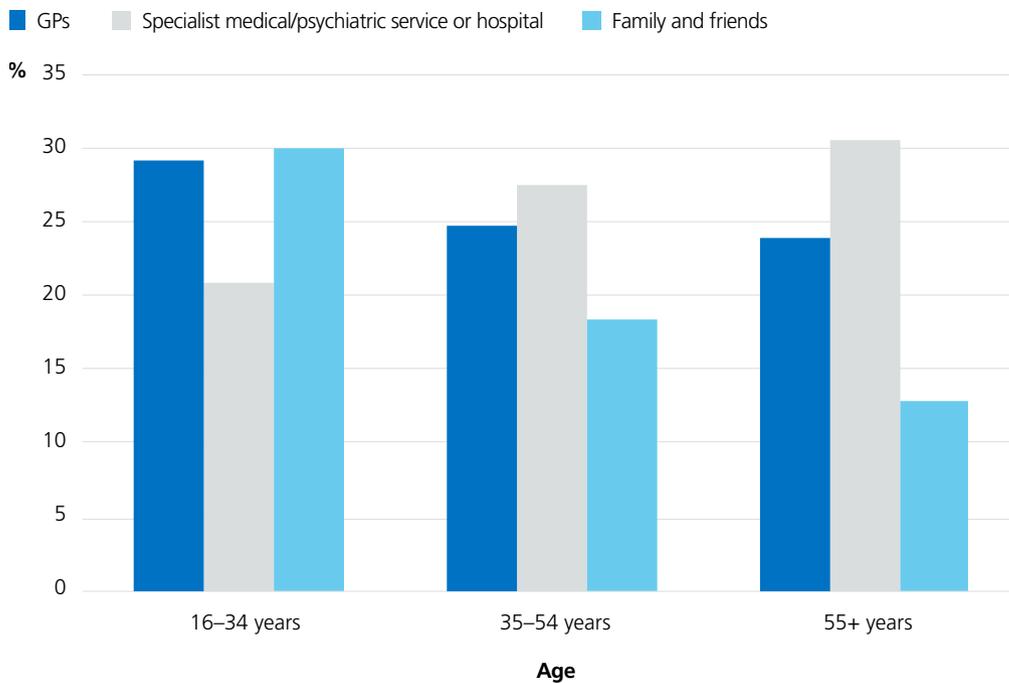
#### *Help-seeking following a suicide attempt*

Participants who reported in the self-completion section of the interview that they had made a suicide attempt were asked whether they had sought help following the most recent attempt. Overall, half reported that they had done so (50.1%). About a quarter of people sought help from a GP (26.4%), a quarter went to a hospital or specialist medical or psychiatric service (25.5%), and a fifth tried to get help from friends or family (21.7%). Very few mentioned other sources (1.8%).

Men and women were equally likely to seek help from each of these sources. However, there were differences by age-group. Older people were more likely to seek help from a hospital or specialist medical or psychiatric service than younger people; the latter were more likely to turn to family and friends. Using GPs as a source of support was equally common across age-groups. [Tables 12.11 and 12.12](#)

**Figure 12N: Help seeking after most recent suicide attempt, by age**

*Base: adults who had ever attempted suicide*



*Medical and psychological help for self-harming*

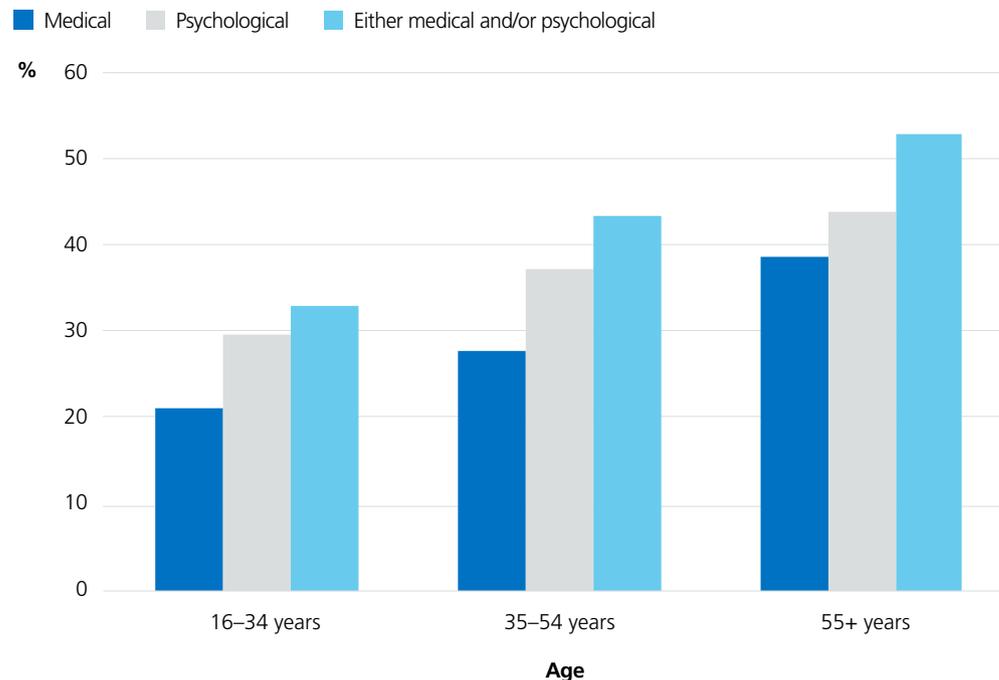
37.7% of people who self-harmed received medical or psychological help afterwards. A third of people who self-harmed reported psychological help (33.1%) and a quarter received medical attention (24.6%). 62.3% received neither.

Women were more likely than men to receive medical attention (29.2%, compared with 16.2% of men) or psychological help (38.1%, compared with 24.0% of men). There was also an age-gradient: half those aged 55 and over who had self-harmed obtained medical or psychological help at some point (52.9%),

compared with a third of those aged 16 to 34 (33.1%). It should be noted that this relates to self-harming and help received at any point; some younger people may go on to receive support in the future. [Tables 12.13, 12.14](#)

### Figure 12O: Received medical or psychological help after self-harming, by age

Base: adults who had ever attempted suicide



## 12.4 Discussion

Two major implications for policy and practice emerge in the findings presented in this chapter. The first relates to self-harming, particularly self-cutting, in young women and the second relates to suicide risk among men in midlife.

### Young women and self-harm

Over the last fifteen years reporting of self-harm has more than doubled in the population as a whole; the step increase is evident in both men and women and

across ages. In 2000, one in fifteen 16 to 24 year old women reported in the face to face part of the interview that she had self-harmed (6.5%); this increased to one in nine in 2007 (11.7%) and one in five in 2014 (19.7%). When asked in the self-completion part of the interview one in four (25.7%) young women reported having self-harmed, twice the rate in men of the same age (9.7%) and of women aged 25 to 34 (13.2%). The great majority of the self-harm reported by young women involved self-cutting.

It is likely that this increase in reporting is due (at least in part) to changes in reporting behaviour, that minor self-injury which people had not included as self-harm in previous surveys has started to be labelled as such. It is also likely that people now feel more able to disclose self-harm. This might happen if self-harming has become more normalised and less stigmatised. Improvements in rapport between interviewers and participants could also elicit higher – and probably more accurate – reporting. Finally, it is possible that increased reporting of self-harm reflects a real increase in the behaviour. It is likely that a combination of these factors may be at play.

Evidence from other sources supports the view that there has been some real increase in self-harming behaviour. The Multicentre Study of Self-harm in England found an increase in self-injury since 2008 among men and girls presenting for medical care (Geulayov et al. 2016). Analyses of Hospital Episode Statistics (HES) have also shown increases in people presenting with self-harm, although data quality concerns have been raised (Clements 2016). Registration statistics show that the suicide rate in 15–19 year olds has risen since 2013 for three consecutive years, although they still have the lowest rate of any age group (ONS 2016). A growing gap in self-harm rates between young women and young men is consistent with trends in CMD described in Chapter 2, as well as findings from the Scottish Health Survey (Knudsen 2016) and other research (Hawton and Harriss 2008). Furthermore, a growing gender gap in mental illness and low wellbeing is consistent with the increases in rates of mental illness found in girls but not boys (The Children’s Society 2016; Lessof et al. 2016).

While it cannot be confirmed that the increase in self-harm is real, it may be appropriate for policy and practice to respond now. This matters because individuals who start to self-harm when young might adopt the behaviour as a long-term

strategy for coping; there is a risk that the behaviour will spread to others; and also that it may lead in time to a higher suicide rate. There is also a need for responsible reporting of these figures: the way that this issue is discussed may influence future suicidal behaviour and risk in young people.<sup>3</sup>

If there is an upward trend in self-harming, with a particularly high rate in young women, there needs to be greater understanding of what is driving this. Some cite bullying on social media as one influence (Daine et al 2013), other sources highlight low self-esteem and anxiety (The Children's Society 2016). APMS data indicates that young people who self-harmed were more likely than older people who did so to report relieving feelings of anger, tension, anxiety or depression as a reason. It is important that alternative coping strategies are supported and that the right help is promoted, made available and accessible, including school-based mental health promotion programmes. Two-thirds of 16 to 34 year olds who self-harmed said that they got no medical or psychological support as a result (compared with around a half of older people). Younger people who made a suicide attempt described turning to family and friends or their GP. Recognition may be required of the additional burden that an increase in self-harm may mean for primary care, so that GPs are able to continue to provide this level of support.

### **Midlife men and suicide risk**

The proportion of men aged 55 to 64 who thought about suicide in the past year nearly tripled from 1.9% in 2007 to 5.3% in 2014. Other chapters in this report have identified deterioration in the mental health of this group, including Chapter 2 on trends in CMD. There was a steep rise in registered suicides among men in midlife between 2007 and 2014, and they have been highlighted as a priority in England's National Suicide Prevention Strategy. The data presented here supports existing evidence on links between male suicidal behaviour and indicators of recession (Coope et al. 2014), in particular, being unemployed, economically inactive, or receiving out-of-work disability benefits. Two-thirds of Employment and Support Allowance (ESA) recipients reported suicidal thoughts, four in ten had made a suicide attempt, and three in ten had self-harmed.

<sup>3</sup> For advice on the responsible reporting of suicide, see these guidelines produced by the Samaritans: [www.samaritans.org/media-centre/media-guidelines-reporting-suicide](http://www.samaritans.org/media-centre/media-guidelines-reporting-suicide)

Data presented here is also consistent with evidence showing that both mental illness and social context remain powerful risk factors for suicidal behaviour and self-harm. Two-thirds of people with severe CMD (CIS-R score of 18 or more) had thought about suicide, and people living alone are more likely to have suicidal thoughts, make a suicide attempt, and to self-harm than those who live with others. As lone-person households become more prevalent, the mental health associations with this secular change warrant investigation with longitudinal data.

## 12.5 Tables

### Prevalence and trends

- Table 12.1 Prevalence and recency of suicidal thoughts, suicide attempts and self-harm, by age and sex
- Table 12.2 Suicidal thoughts and suicide attempts in the past year and self-harm ever in 2000, 2007 and 2014 (face to face only), by age and sex

### Characteristics

- Table 12.3 Lifetime suicidal thoughts, suicide attempts and self-harm (observed and age-standardised), by ethnic group and sex
- Table 12.4 Lifetime suicidal thoughts, suicide attempts and self-harm, by household type and sex
- Table 12.5 Lifetime suicidal thoughts, suicide attempts and self-harm (age-standardised), by employment status and sex
- Table 12.6 Lifetime suicidal thoughts, suicide attempts and self-harm (age-standardised), by benefit status and sex
- Table 12.7 Lifetime suicidal thoughts, suicide attempts and self-harm (observed and age-standardised), by region and sex
- Table 12.8 Lifetime suicidal thoughts, suicide attempts and self-harm, by severity of current symptoms of common mental disorder and sex

## Methods and reasons

Table 12.9 Methods and reasons for self-harming, by sex

Table 12.10 Methods and reasons for self-harming, by age

## Treatment, service use and help seeking

Table 12.11 Sources sought help from following last suicide attempt, by sex

Table 12.12 Sources sought help from following last suicide attempt, by age

Table 12.13 Whether received medical and/or psychological help after self-harm, by sex

Table 12.14 Whether received medical and/or psychological help after self-harm, by age

## 12.6 References

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# Comorbidity in mental and physical illness

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## Summary

- Comorbidity refers to the presence of two or more conditions at the same time. In the 2007 report in this series, comorbidity between mental disorders was examined. In this chapter comorbidity across mental disorders, chronic physical conditions, psychological wellbeing and intellectual impairment is profiled.
- Physical health conditions were measured by showing participants a list of health conditions and asking whether a health professional had diagnosed them. Five chronic conditions were considered. Mental wellbeing was assessed using the Warwick Edinburgh Mental Wellbeing Scale (WEMWBS), where a higher score indicates greater psychological wellbeing. Intellectual impairment was also included, assessed using the National Adult Reading Test (NART).
- Overall, just over a quarter of adults (27.7%) reported having at least one of the five chronic physical conditions considered in this chapter diagnosed, and present in the last 12 months. High blood pressure was the most common, followed by asthma, diabetes, and cancer. A relatively small number of participants (52; 0.7% of adults) reported epilepsy; analysis by this group should therefore be treated with caution.
- There was an association between common mental disorder (CMD) and chronic physical conditions. In people with severe CMD symptoms (revised Clinical Interview Schedule (CIS-R) score 18 or more) over a third (37.6%) reported a chronic physical condition, compared with a quarter (25.3%) of those with no or few symptoms of CMD (CIS-R score 0 to 5).
- This pattern held for each of the chronic conditions examined. For example, people with severe symptoms of CMD (CIS-R score 18+) were twice as likely to have asthma as people with no or few symptoms (CIS-R score 0–5): 14.5% compared with 7.2%.
- Having a chronic physical condition was associated with lower levels of mental wellbeing. Overall, the mean WEMWBS score was 51.0 in people with at least one of the five chronic conditions considered, compared with 53.2 in people without a chronic physical condition.

- Both the presence of self-reported diagnosed asthma and high blood pressure were associated with a wide range of different mental disorders, including depression, anxiety disorders (such as generalised anxiety disorder (GAD) and phobias), CMD Not Otherwise Specified (NOS), and posttraumatic stress disorder (PTSD). Asthma and high blood pressure were the most common chronic physical conditions examined; the larger sample of people with these conditions meant that statistically significant differences were more likely to be detectable.
- Cancer and diabetes were also strongly associated with CMD-NOS, but higher rates of most other mental disorders were not statistically significant for these chronic physical conditions.
- Adults with low wellbeing (with the lowest 15% of WEMWBS scores) experienced extremely high levels of psychiatric morbidity, including 21.0% screening positive for PTSD, 25.9% for attention-deficit/hyperactivity disorder (ADHD) and 6.0% for drug dependence. 20.6% of this group had made a suicide attempt. These rates were between 8 and 30 times higher than those for people with the highest mental wellbeing scores.
- People with lower intellectual ability were more likely to have poorer mental health than those with average or above average intellectual functioning.
- The results indicate that people with one condition tend to be more likely to have another, and that even subthreshold symptoms of common mental disorder are associated with having a chronic physical condition. These findings provide evidence to support the bringing of physical and mental health care provision closer together.

## 13.1 Introduction

Comorbidity relates to the simultaneous presence of more than one disorder. In the 2007 Adult Psychiatric Morbidity Survey (APMS) report, psychiatric comorbidity was examined, looking at the links between different mental disorders. The focus of this chapter is on the links between mental and physical conditions.

The government's mental health outcomes strategy *No Health without Mental Health* places great emphasis on the links between mental and physical health (DH 2011). The strategy gave new responsibility to Improving Access to Psychological Therapy (IAPT) services for supporting the psychological needs of people with long-term conditions or medically unexplained physical symptoms (Naylor et al. 2012). There has been a particular emphasis on achieving 'parity of esteem' (Social Care, Local Government and Care Partnership Directorate 2014), which involves valuing mental health equally with physical health.<sup>1</sup>

The complex and dynamic relationship between physical and mental illness was highlighted in the Chief Medical Officer's 2013 annual report, which focused on public mental health priorities (Davies 2014). It highlighted that people with mental illness tend to experience worse physical health than those without mental illness. They also have higher than expected mortality, beyond what is explained by suicide (Chang et al. 2011). Much of this excess mortality is potentially avoidable (Hoang et al. 2013). People with chronic physical conditions also have a higher prevalence of depression, anxiety and other mental disorders than people without, and comorbidity between physical and mental illness is associated with a range of particularly adverse outcomes and increased costs (Egede 2007). By interacting with and exacerbating physical illness, comorbid mental health problems raise total health care costs by at least 45% for each person with a long-term condition and comorbid mental health problem (Naylor et al. 2012). People with long-term conditions and comorbid mental health problems disproportionately live in deprived areas and have access to fewer resources of all kinds. The Kings Fund has argued that the interaction between comorbidities and deprivation makes a large contribution to generating and maintaining inequalities (Hoang et al. 2013).

About 15 million people in England have a long-term condition (DH 2012). Chronic conditions are generally those which are managed long-term with drugs or other treatment. The chronic physical conditions focused on in this chapter – asthma, cancer, epilepsy, high blood pressure, and cardiovascular disease (CVD) – were identified by the Department of Health as priorities for this study.

<sup>1</sup> [www.england.nhs.uk/mentalhealth/parity/](http://www.england.nhs.uk/mentalhealth/parity/)

As highlighted in Chapter 2, about one person in six has a common mental disorder (CMD) such as anxiety or depression. Psychiatric comorbidity – or meeting the criteria for two or more mental disorders – is associated with increased severity of symptoms, longer duration, greater functional disability and increased use of health services (ESEMEd 2004; Andrews et al. 2002; Kessler et al. 2005). This was examined in the APMS 2007 report and is not the focus of this chapter.<sup>2</sup> Substance misuse, addressed in Chapters 10 and 11, affects many and the dual diagnosis of substance misuse and various mental disorders is well documented (World Health Organisation 2001; Abdulrahim 2001). When disorders are classified as either present or absent, many people are identified with two or more conditions (Kessler et al. 1996; Kessler et al. 2005), and the likelihood of two or more conditions co-existing is greater than can be attributed to chance (Slade and Watson 2006; Krueger and Markon 2006). For the purposes of the present analysis, we have included the most common mental disorders (namely anxiety and depressive disorders) as well as: psychotic disorder; antisocial, borderline and any personality disorders; posttraumatic stress disorder (PTSD); attention-deficit/hyperactivity disorder (ADHD); bipolar disorder; alcohol and drug dependence; and problem behaviours such as suicide attempts and self-harm. These are defined according to different classification criteria and refer to a variety of different reference periods (see Section 13.2).

There has been a cross-government focus on wellbeing, including on mental wellbeing.<sup>3</sup> It is known that people with chronic physical conditions or poor mental health have lower average mental wellbeing (Chanfreau et al. 2012). The nature of this relationship however remains contested, with some arguing that mental wellbeing is at the other end of a spectrum from mental illness, and others that there is a dual continuum, with mental illness and wellbeing being strongly correlated but independent (Doll 2008; Weich et al. 2011). The research in this area has tended to look at mental wellbeing among people with general measures of psychological distress. This chapter presents fresh analysis of the level of mental wellbeing among people identified with specific mental disorders.

2 The analysis of comorbidity reported on in the APMS 2007 report attempted to interpret the complicated relationships between mental disorders through the application of more advanced statistical methods – particularly latent class analysis (Davies 2014). Latent class analysis was applied to the APMS 2007 data in an attempt to identify underlying patterns of association between people according to the patterns of diagnostic criteria they met.

3 [www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/measuringnationalwellbeing/2015-09-23](http://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/measuringnationalwellbeing/2015-09-23)

Making sense of comorbidity is made difficult by the sheer number of possible combinations (Grant et al. 2005; Lenzenweger et al. 2006; Compton et al. 2007). An understanding of the prevalence of comorbid conditions, factoring in a range of different physical conditions, mental disorders, and wellbeing in the English general population is, therefore, not well developed.

## 13.2 Definition and assessment

The APMS 2014 interview covered a range of different aspects of physical health and mental health and wellbeing, allowing for the relationships between these to be explored.

### Measuring mental disorders

Detail on the methods used to identify people with mental disorders can be found in the relevant chapters of this report. In summary, the mental health conditions assessed in APMS 2014 were all included in the analyses of comorbidity between mental and physical health. Many of these took the form of psychiatric disorders as defined by the tenth revision of the International Classification of Diseases (ICD-10) chapter on Mental and Behavioural Disorders Diagnostic Criteria for Research: either to individual diagnostic categories (such as obsessive and compulsive disorder (OCD)) or as groups of ICD-10 diagnoses (such as psychotic disorders) (World Health Organisation 1992). Some conditions were defined according to the fourth Diagnostic Statistical Manual (DSM-IV) criteria (for example, personality disorder) (American Psychiatric Association 1994).<sup>4</sup> In particular, it should be noted that other conditions (specifically; ADHD, PTSD and bipolar disorder) were assessed using a screening tool that did not apply specific diagnostic criteria. In the relevant condition-specific chapters these are not described as present or not, but as screen positive or negative. Other categories of mental health problem used in the comorbidity analysis represent behaviours (self-harm and attempted suicide) that are considered problematic and indicative of major mental distress. Because of these differences in how categories of mental illness are covered, they are not

<sup>4</sup> While DSM-5 has since been issued, DSM-IV was current when the survey was in development.

combined into a single group. The reference period also varied between conditions: for example CMDs, such as generalised anxiety disorder, referred to symptoms in the past week, while psychotic disorder referred to an episode in the past year. The methods of assessment for each of the conditions are described in detail in the disorder specific chapters of this report, and are summarised in the table below.

### Screening and assessment of mental disorders on APMS 2014

Condition	Diagnostic status	Classification system	Assessment tool	Reference period
Generalised anxiety disorder (GAD)	Present to diagnostic criteria	ICD-10	CIS-R (Lewis et al. 1992)	Past week
CMD Not Otherwise Specified (NOS)	Present to diagnostic criteria	ICD-10	CIS-R	Past week
Obsessive and compulsive disorder (OCD)	Present to diagnostic criteria	ICD-10	CIS-R	Past week
Depressive episode	Present to diagnostic criteria	ICD-10	CIS-R	Past week
Panic disorder	Present to diagnostic criteria	ICD-10	CIS-R	Past week
Phobias	Present to diagnostic criteria	ICD-10	CIS-R	Past week
Bipolar disorder	Screen positive	DSM-IV	Mood Disorder Questionnaire (Hirschfield et al. 2000)	Lifetime
Problem drinking	Screen positive	—	AUDIT (Saunders et al. 1993)	Past six months
Drug dependence	Screen positive	DSM-IV	Based on the Diagnostic Interview Schedule (Malgady et al. 1992)	Past year

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**Continued**

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<b>Condition</b>	<b>Diagnostic status</b>	<b>Classification system</b>	<b>Assessment tool</b>	<b>Reference period</b>
Psychotic disorder	Present to diagnostic criteria	ICD-10	SCAN (World Health Organisation 1999)	Past year
Borderline personality disorder (BPD)	Present to diagnostic criteria	DSM-IV	Self-report SCID-II (First et al. 1997)	Past year
Antisocial personality disorder (ASPD)	Present to diagnostic criteria	DSM-IV	Self-report SCID-II	Past year
Any personality disorder	Screen positive	DSM-IV	Standardised Assessment of Personality (Hesse and Moran 2010)	Lifetime
Post-traumatic stress disorder (PTSD)	Screen positive: endorsed six out of ten items.	DSM-IV	PTSD Checklist – civilian version (Blanchard et al. 1996)	Past week
Attention deficit hyperactivity disorder (ADHD)	Screen positive: endorsed all six items	DSM-IV	Adult Self-Report Scale-v1.1 (WHO 2003)	Past six months
Attempted suicide	Occurrence of behaviour	—	Self-completion	Past year

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### Measuring chronic physical conditions

Participants were presented with a list of 22 physical conditions (or categories of physical illness) and were asked which they had ever had; which they had had in the past year; whether the condition had been diagnosed by a health professional; and if they received any medication or other treatment for it. The chronic conditions reported on in this chapter were self-reported by participants as having been diagnosed by a health professional and present in the past 12 months, irrespective of whether or not they were currently treated.

The key chronic physical health conditions focussed on here included:

- Asthma
- Cancer
- Diabetes
- Epilepsy
- High blood pressure.

It should be noted that self-report data on diagnosed conditions are subject to participants being unaware of or not recalling a diagnosis that has been made, which could lead to under-identification. On the other hand, it is possible some participants may have reported having these conditions without having received a diagnosis. Some conditions were more prevalent than others, for those with a larger sample size (such as asthma and high blood pressure) it may have been easier for a difference to be statistically significant.

### **Measuring mental wellbeing**

Mental wellbeing was assessed using the Warwick Edinburgh Mental Well-Being Scale (WEMWBS). The scale was developed to enable the monitoring of mental wellbeing in the general population, as well as for the evaluation of projects, programmes and policies which aim to improve mental wellbeing (Stewart-Brown et al. 2011). WEMWBS is a 14-item scale with five response categories, summed to provide a single score ranging from 14–70. The items are all worded positively and cover both feeling and functioning aspects of mental wellbeing. A higher score indicates a higher level of mental wellbeing. In this chapter a mean WEMWBS score is presented. In addition, predictors for being in the top 15% and bottom 15% in the WEMWBS score distribution are examined.<sup>5</sup>

<sup>5</sup> These thresholds have been applied in previous analyses of WEMWBS (Chanfreau et al. 2012).

### Measuring predicted verbal IQ

A predicted verbal IQ (V-IQ) was derived using participants' scores on the National Adult Reading Test (NART), conducted at phase one. This score was converted to a prediction of verbal IQ by applying an algorithm. Participants with a V-IQ score of below 80 were grouped together for this analysis and could be considered to be of 'borderline intelligence' with a level of cognitive functioning associated with functional impairments and difficulties living independently without the assistance of support services.

## 13.3 Results

### Chronic physical conditions

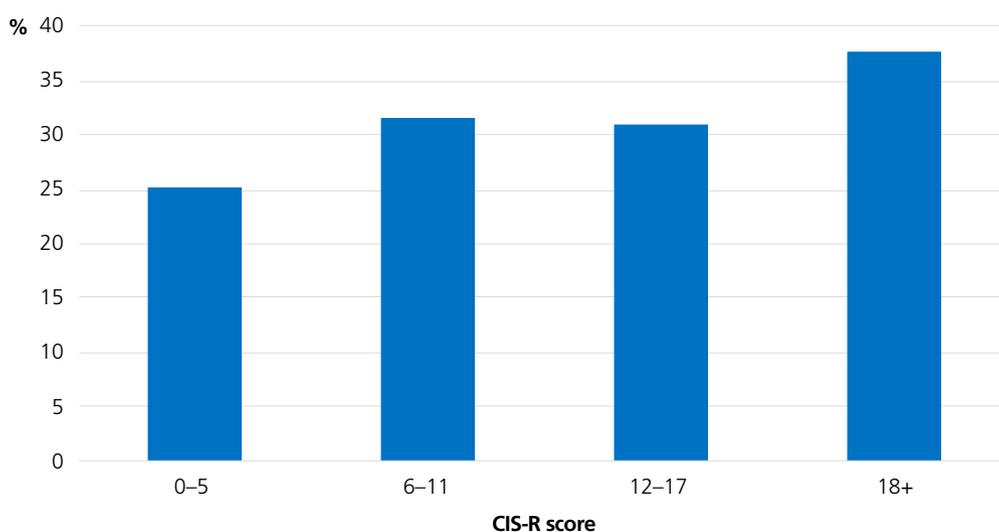
Overall, around a quarter of participants (27.7%) reported having a diagnosis of at least one of the five chronic physical conditions considered in this chapter present in the last 12 months. High blood pressure (16.9%) was the most commonly cited, followed by asthma (8.7%), diabetes (6.0%), and cancer (1.6%). 52 participants (0.7%) reported epilepsy; due to the small numbers, analysis by this group should therefore be treated with caution. A similar distribution in chronic conditions was found for men and women. [Table 13.1](#)

### Chronic physical conditions among people with mental illness

There was an association between presence of at least one chronic physical condition in the past 12 months and having symptoms of CMD in the past week. While a quarter (25.3%) of people with no or few symptoms of CMD (CIS-R score 0 to 5) had a chronic physical condition, in people with severe CMD symptoms (CIS-R 18 or more) over a third (37.6%) had a chronic physical condition as well. This pattern was similar for men and women. [Table 13.1](#)

**Figure 13A: Prevalence of any of five chronic physical conditions, by CMD symptom severity (CIS-R score)**

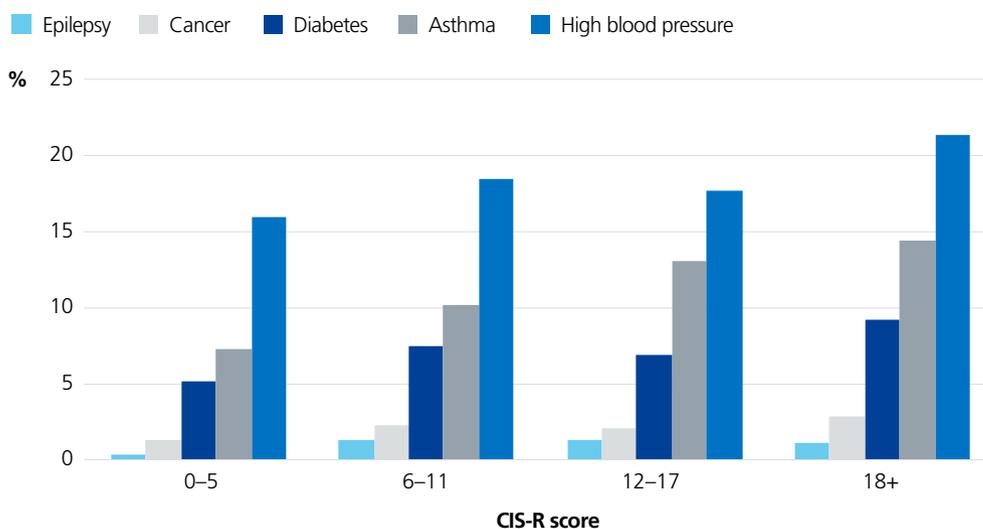
Base: all adults



This broad pattern was also evident for each of the chronic conditions when looked at individually. For example, people with severe symptoms of CMD (CIS-R score 18+) were twice as likely to have asthma as people with no or few symptoms (CIS-R score 0-5); 14.5% compared with 7.2%.

**Figure 13B: Prevalence of chronic physical conditions, by CMD symptom severity (CIS-R score)**

Base: all adults



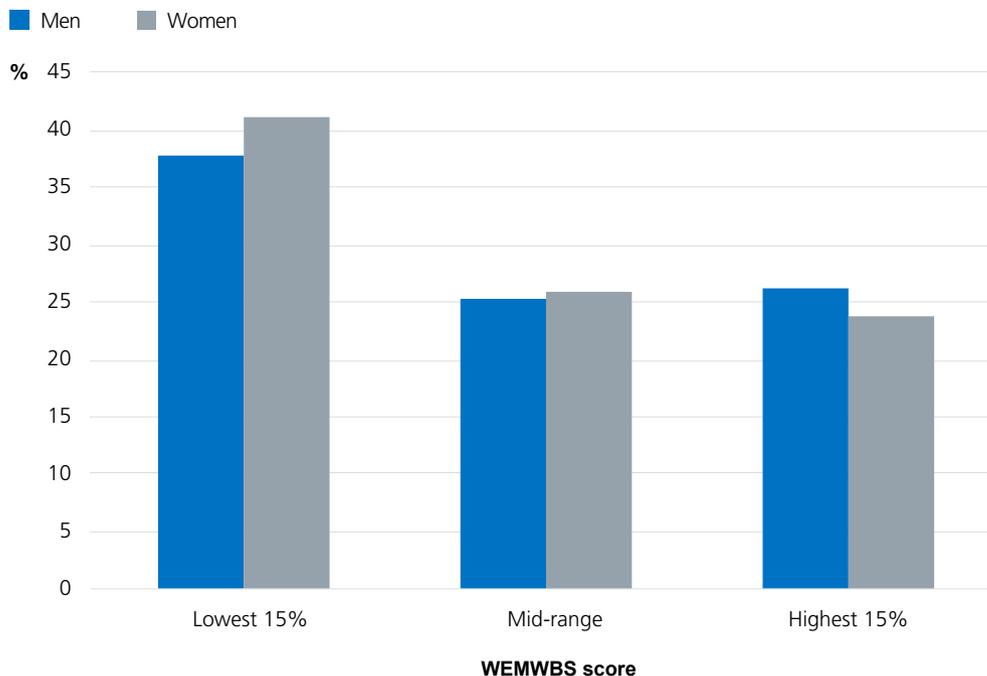
### Chronic physical conditions among people with low mental wellbeing

Having a chronic physical condition was also associated with having a lower level of mental wellbeing. Overall, the mean WEMWBS score was 51.03 in people with at least one of the five chronic conditions considered, compared with 53.15 in people without a chronic physical condition. This pattern of association was evident among both men (51.80 compared with 53.29) and women (50.32 compared with 53.02).<sup>6</sup>

Over a third (39.7%) of adults with the lowest WEMWBS scores had at least one of the five chronic physical conditions, compared with around a quarter of people with a higher WEMWBS score. No variation in rate was evident between those with a mid-range WEMWBS score and those with a score in the highest 15% of the score distribution. This was true both for men and women. [Table 13.2](#)

**Figure 13C: Prevalence of any of five chronic physical conditions, by level of mental wellbeing (WEMWBS score) and sex**

*Base: all adults*



<sup>6</sup> For asthma only, a reduced wellbeing score was not evident among men with the condition and there was a statistically significant interaction with sex for this condition.

A low level of wellbeing (defined as being in the lowest 15% of the WEMWBS score distribution) was associated with each of the individual chronic physical conditions. For example, 11.0% of people with low wellbeing had diabetes, compared with 5.1% of people with moderate mental wellbeing and 4.9% of people with high mental wellbeing.

### **Mental disorders among people with chronic physical conditions**

Generally, people with a chronic physical condition were more likely than those without to have at least one type of CMD. [Table 13.3](#)

#### **Cancer**

Among people with cancer, rates of several mental disorders appeared to be higher than in those without cancer. However, the only disorder that this was statistically significant for was CMD Not Otherwise Specified (CMD-NOS). CMD-NOS is a category for those with a CIS-R score of at least 12 but who do not meet the specific criteria for the other disorders assessed. On average, people classified with CMD-NOS have a lower mean CIS-R score than people classified with the other specific CMDs (see Chapter 3: Treatment). This suggests that the presence of diagnosed cancer in the past year may be associated with increased levels of general psychiatric distress, but there was less evidence for an association with specific diagnostic categories of mental disorder.

#### **Diabetes**

As for cancer, rates of CMD-NOS were higher in people who reported a diabetes diagnosis than in those who did not. People with diabetes were also more likely to have depression than people without diabetes.

#### **Asthma and high blood pressure**

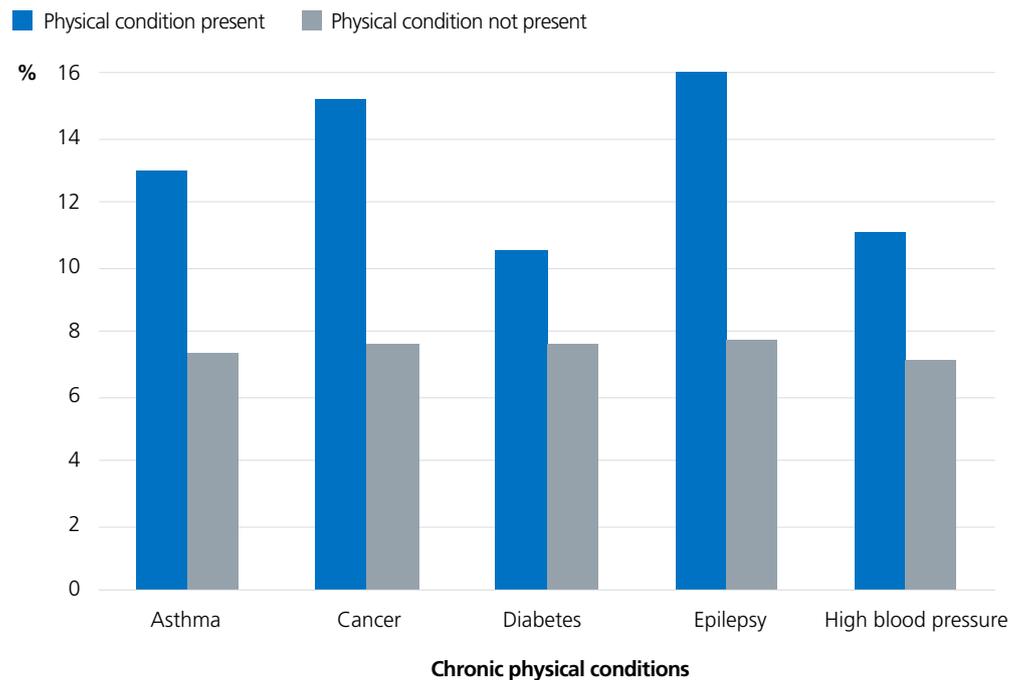
Both asthma and high blood pressure were associated with a wide range of different mental disorders, including CMD-NOS, depression, anxiety disorders (such as GAD and phobias) and PTSD. Because asthma and high blood pressure were the most common chronic physical conditions examined, their larger sample size means that the sample was also better powered to pick up on statistically significant differences. Due to particularly strong associations with age, the high blood pressure analyses were age-standardised.

## Epilepsy

The small base size for the epilepsy group (52 participants) means that findings should be treated with caution.<sup>7</sup> The strength of association with mental disorder appeared to be greater for epilepsy than for the other chronic physical conditions; however the rates were only statistically significantly higher for GAD and PTSD.

**Figure 13D: Prevalence of CMD-NOS, among people with and without each chronic physical health condition**

*Base: all adults*

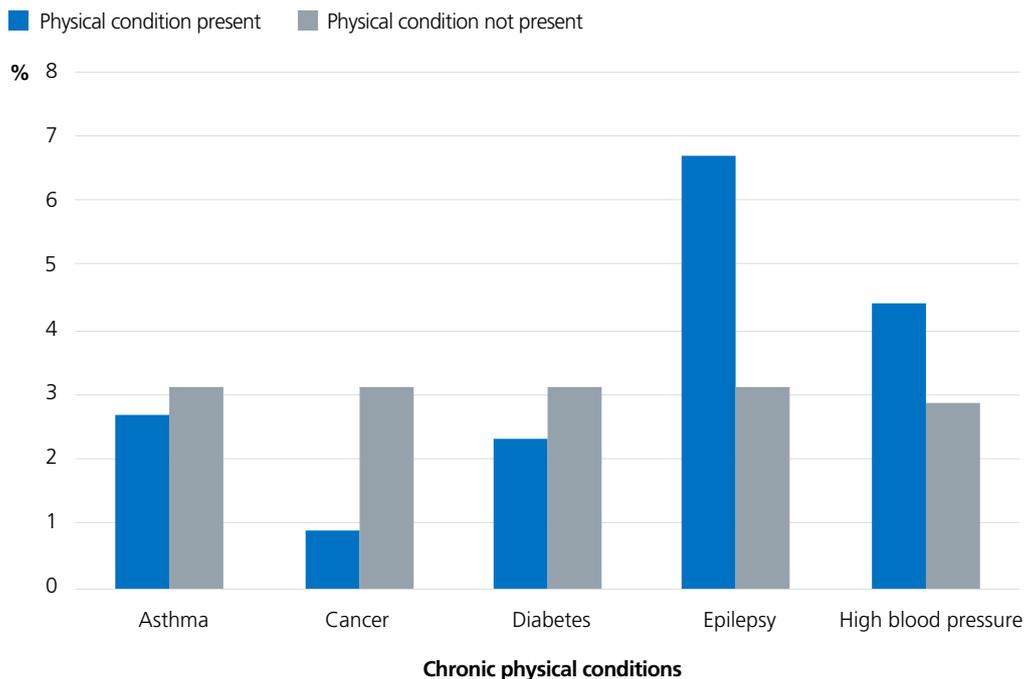


Harmful use of alcohol in the past year (as indicated by an AUDIT score of 16 or more) and signs of drug dependence were not associated with presence of any of the chronic physical conditions examined. While rates of harmful alcohol use appeared to be low in those with cancer and high in those with epilepsy, these were not statistically significant.

<sup>7</sup> This pattern has been found in analyses of APMS 2007 data previously (see Rai et al. 2012).

**Figure 13E: Prevalence of harmful alcohol use (AUDIT score 16 or more), among people with and without each chronic physical condition**

Base: all adults



### Mental disorders among people with low mental wellbeing

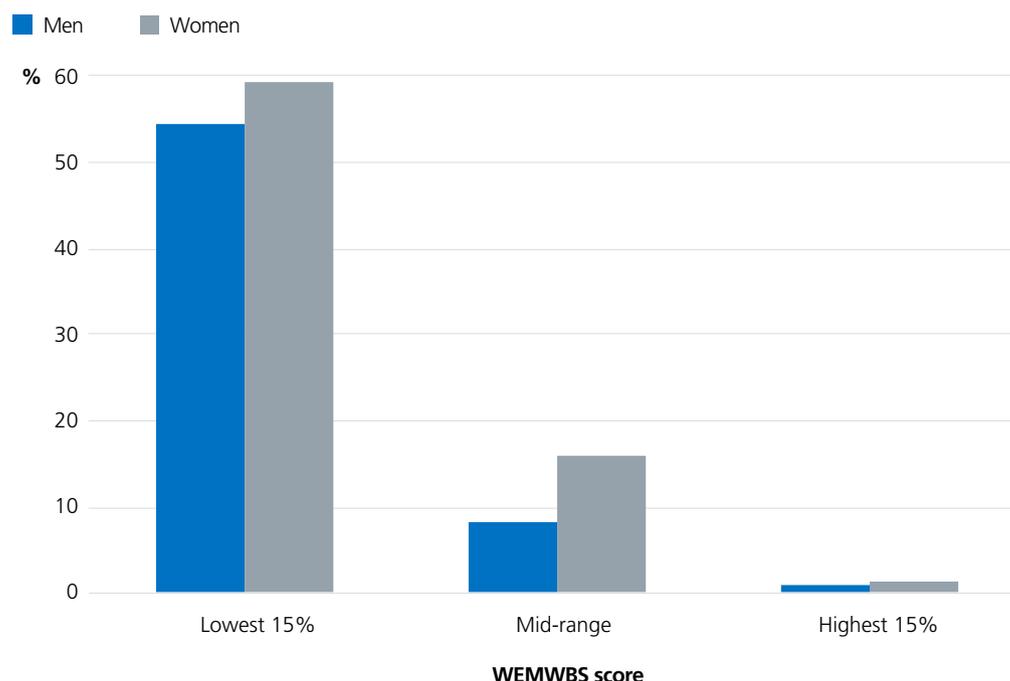
The association between mental disorder and low wellbeing was very strong, and statistically significant for every type of mental disorder examined. Adults with low wellbeing were defined as those in the bottom 15% of the WEMWBS score distribution.

#### CMD

Among people with low mental wellbeing (lowest 15% in the population distribution) more than one in two met the criteria for at least one CMD (57.3%), compared with one in a hundred (1.1%) among people in the highest 15% of the wellbeing distribution. Men (42.3) and women (43.5) with CMD had a lower level of mental wellbeing, as indicated by mean WEMWBS score, than the population as a whole (52.6, data not shown). [Table 13.4](#)

**Figure 13F: Prevalence of any CMD, by level of mental wellbeing (WEMWBS score) and sex**

*Base: all adults*

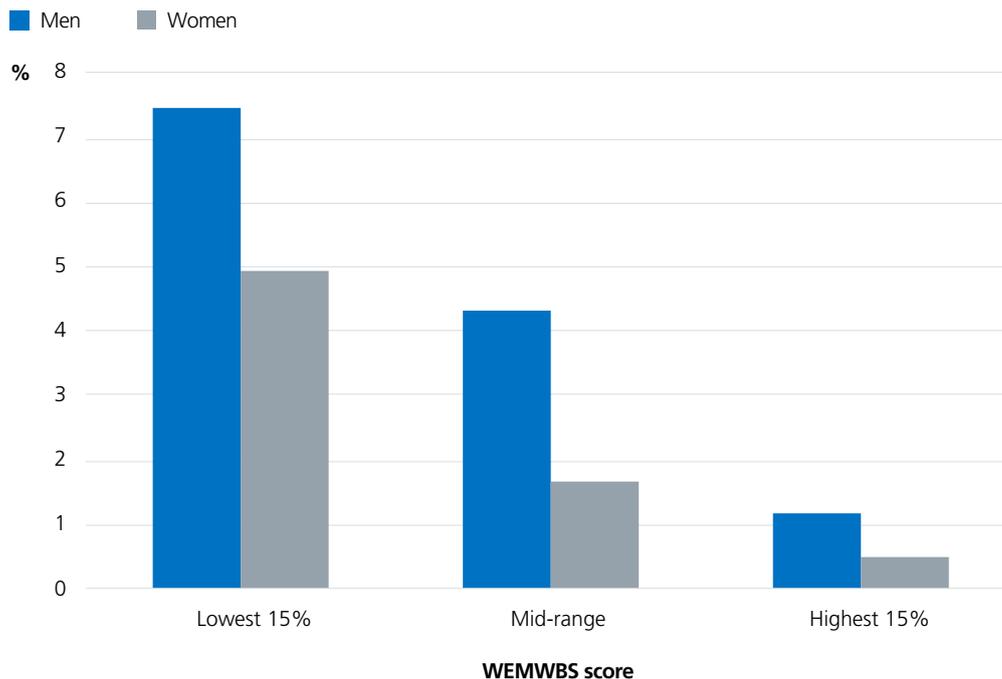


### Other mental health conditions and behaviours

Adults with low mental wellbeing had very high levels of psychiatric morbidity across all the disorders assessed, with rates between four and 50 times higher than those for people with the highest mental wellbeing scores. Over a third (37.6%) screened positive for personality disorder (compared with 3.6% of people with wellbeing in the top 15% of the distribution). A quarter screened positive for ADHD (25.9% compared with 2.0% with high wellbeing), a fifth screened positive for PTSD (21.0% compared with 0.8%); and 4.8% were identified with probable psychotic disorder (compared with 0.1%). The variation was also evident for signs of drug dependence and alcohol dependence. A fifth of people with low wellbeing (20.6%) reported having made a suicide attempt at some point. [Table 13.4](#)

**Figure 13G: Prevalence of signs of drug dependence, by level of mental wellbeing (WEMWBS score) and sex**

*Base: all adults*

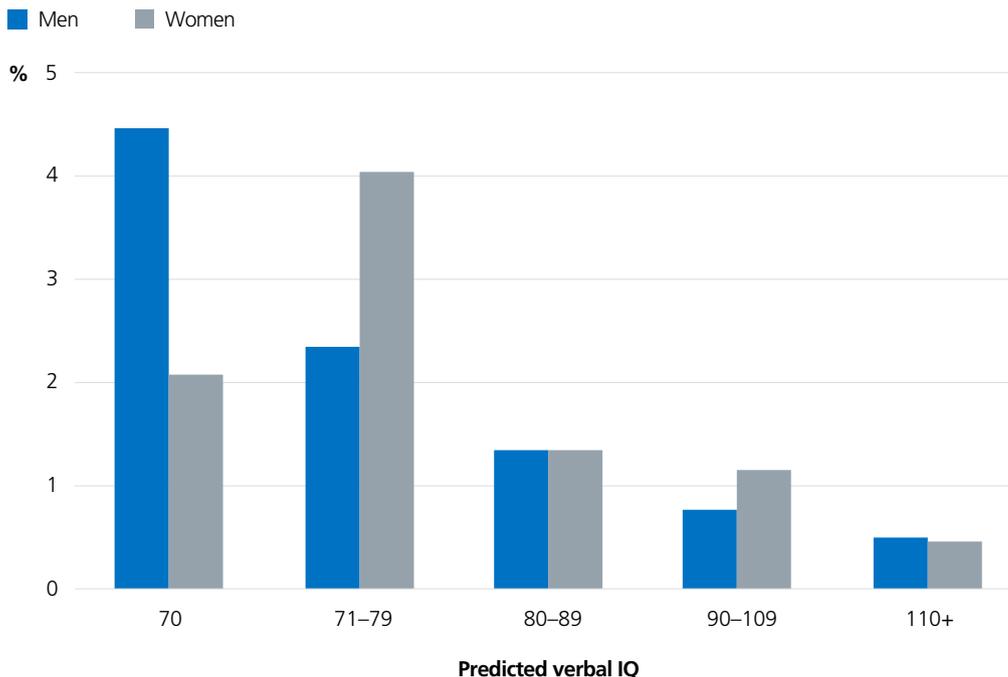


### **Mental disorders by predicted verbal IQ score**

People with a predicted verbal IQ score of less than 80 (in this analysis used to indicate intellectual impairment) had a greater level of psychiatric morbidity than those with higher verbal IQ scores. For example, while a quarter (25.0%) of people scoring at the lowest end of the verbal IQ range had at least one CMD, this was the case for 17.2% of those scoring between 90 and 109 and 13.4% of those scoring over 110. The variation by predicted verbal IQ score was particularly pronounced for rates of probable psychotic disorder. [Table 13.5](#)

**Figure 13H: Prevalence of probable psychotic disorder, by predicted verbal IQ score (based on the NART) and sex**

*Base: all adults*



## 13.4 Discussion

While the strong associations between general physical and mental health are well established, this chapter presents data on the links between different types of mental disorders by different types of chronic physical conditions. This is key for understanding how pervasive the links between physical and mental illnesses are, and for which specific mental and physical conditions the associations are strongest. Previous analyses have tended to examine comorbidity between physical conditions and a measure of general 'psychological distress' (using, for example, the General Health Questionnaire), or have focused on psychiatric comorbidity with just one type of physical condition, for example, diabetes (Das-Munshi et al. 2007; Balhara 2011) or epilepsy (Rai et al. 2012).

Having a chronic physical condition is common. Over a quarter of participants reported the diagnosed presence of at least one of the five chronic conditions examined, in the last 12 months. As reported in Chapter 2, around one person in six has a depressive or an anxiety disorder, with a wide range of other less common disorders present to varying degrees. People with CMD were much more likely than those who did not to have a chronic physical condition. For example, those with severe symptoms of CMD (as represented by a CIS-R score of 18 or more) were twice as likely to have asthma as those with no or few symptoms (CIS-R score 0–5); 14.5% compared with 7.2%. This pattern was true for each of the chronic physical conditions considered, and was evident both for women and men.

Both asthma and high blood pressure were associated with a wide range of different mental disorders, including depression, anxiety disorders (such as GAD and phobias), CMD Not Otherwise Specified (NOS), and PTSD. Asthma and high blood pressure were the most common chronic physical conditions examined; the larger sample size for these conditions meant that statistically significant differences were more likely to be detectable. Cancer and diabetes were also strongly associated with CMD-NOS, but the higher rates of most other mental disorders tended not to be statistically significant for these physical conditions. On average, people classified with CMD-NOS have a lower mean CIS-R score than people classified with the other specific CMDs (see Chapter 3: Treatment).

It may feel counterintuitive that problematic use of alcohol in the past year and signs of drug dependence were not associated with presence of a chronic physical condition, given that, for example, sustained misuse of alcohol is a known physiological risk factor for the onset of chronic conditions such as certain cancers (Danaei et al. 2005) and type 2 diabetes (Baliunas et al. 2009). However, it has been noted that onset of poor physical health can prompt subsequent reductions in alcohol intake (Fillmore et al. 2007). APMS tends to collect data on current or recent health, rather than collecting data on health across the life-course. While a strength of the APMS series is its coverage of a range of types of physical and mental conditions, limitations include its relatively small sample for the examination of comorbidity between low prevalence conditions, as well as the fact that the data are not longitudinal. Cross-sectional data is not suitable for examining causal relationships.

The survey data confirm the established relationship between lower IQ and common and severe mental illness. This is an important finding that points towards the need for further diagnostic and treatment support for this population group, who more often than not do not fit within rigid service eligibility criteria.

APMS 2014 was the first time in the survey series that a validated measure of mental wellbeing, the WEMWBS, was included. The findings presented in this chapter show the very strong associations there are between low mental wellbeing and having a chronic physical condition, as well as between low mental wellbeing and every different type of mental disorder examined. The data in this chapter lend strong support for calls for greater integration of treatment and services for mental and physical conditions, given the increased likelihood that patients for one type of condition may also be likely to benefit from treatment for another.

## 13.5 Tables

- Table 13.1 Chronic physical health conditions, by CIS-R score and sex
- Table 13.2 Chronic physical health conditions, by mental wellbeing and sex
- Table 13.3 Common and severe mental disorders, by chronic physical health conditions
- Table 13.4 Common and severe mental disorders, by mental wellbeing and sex
- Table 13.5 Common and severe mental disorders, by predicted verbal IQ and sex

## 13.6 References

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## Methods

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# Summary

## Survey design summary

The Adult Psychiatric Morbidity Survey (APMS) 2014 is the fourth in a series of national mental health surveys. Each survey involved interviewing a large stratified probability sample of the general population, covering people living in private households. The full adult age range was covered, with the youngest participants aged 16 and the oldest over 100. The two-phase survey design involved an initial interview with the whole sample, followed up with a structured assessment carried out by clinically trained interviewers with a subset of participants. People were assessed or screened for a range of different types of mental disorder, from common conditions like depression and anxiety disorder through to rarer neurological and mental conditions such as psychotic disorder, attention-deficit/hyperactivity disorder (ADHD), and autism spectrum disorder (ASD). The long questionnaire also covered many aspects of people's lives that are linked to mental health, and this information can be used to profile the circumstances and inequalities experienced by people with mental disorders.

## Aims and rationale for the survey

- To estimate the prevalence of a range of types of common and rare mental disorders in the population.
- Measure the gap between presence of each disorder and receipt of treatment.
- Produce trends in disorder and treatment through comparisons with previous surveys in the series.
- Enable the circumstances of people with different mental disorders to be compared with those of people without disorder.

## Design strengths

- **By sampling from the general population rather than from lists of patients**, APMS data can be used to examine the 'treatment gap'. That is, the survey data can be used to explore what proportion of people with a condition are not in contact with services or in receipt of any treatment, or who are in receipt of inappropriate treatment.

- **The use of validated mental disorder screens and assessments** allows for identification of people with sub-threshold symptoms and those with an undiagnosed disorder.
- **Consistent methodology and coverage over time** allows for trends in a number of conditions to be monitored.
- **An advantage surveys like APMS have over routinely collected health data** is that for each participant a large amount of data on a range of topics is collected and relationships can be examined. In particular, the questionnaire covers detailed and current information about people's social and economic circumstances, information which does not tend to be collected in a consistent or comprehensive way in administrative datasets.
- **The use of a computer assisted self-completion module** to cover the most sensitive topics – such as suicide attempts, illegal behaviours, and experience of abuse and violence – means that the survey includes information that some participants may have never disclosed before.
- **At the end of the survey a question is asked about permission for follow-up.** The study therefore presents an opportunity for longitudinal data collection and a sampling frame that allows a random sample of people with very specific experiences, who may not otherwise have been identifiable, to be invited for further research.
- **The APMS dataset is being deposited at the UK Data Service** and is designed to be suitable for extensive further analysis. There is only scope for a small part of the data collected to be covered in this report.

### Design limitations

- **The sampling frame covers only those living in private households**, and therefore those who were living in institutional settings such as large residential care homes, offender institutions, prisons, in temporary housing (such as hostels or bed and breakfasts) or sleeping rough, would not have had a chance to be selected. People living in such settings are likely to have worse mental health than those living in private households (Gill et al. 1996). However, the proportion of

the overall population not living in private households is so small that this would have little (or no significant) impact on the prevalence estimates for the disorders examined on APMS.

- **Some people selected for the survey were not able to take part in a long interview.** These include those with serious physical health conditions, who may feel unwell or be staying in hospital during the fieldwork period, and those whose mental capability may be impaired, for example due to cognitive decline as a result of dementia or injury, or because of a learning impairment. Where a selected participant could not take part due to a physical or mental health condition, some information about this was recorded by the interviewer on the doorstep. This information may be biased due to it having been collected often from another household member.
- **Some people selected for the survey could not be contacted or refused to take part.** The achieved response rate (57%) is in line with that of similar surveys (Barnes et al. 2010). A problem for all such studies is how to take account of those who do not take part, either because contact could not be established with the selected household or individual or because they refused to take part. The weighting (outlined in Section 14.7) addresses this to some extent.
- **The mental health assessments used are not as reliable as a clinical interview.** In a clinical interview, a trained psychologist or psychiatrist may take many sessions and much explorative questioning and clinical judgement to reach a diagnosis. In the context of a questionnaire administered by a lay interviewer, this is not possible. However, the assessments used have been validated and are among the best available for the purpose in hand.
- **Socially undesirable or stigmatised feelings and behaviours may be underreported.** While this is a risk for any study based on self-report data, the study goes some way to minimising this by collecting particularly sensitive information in a self-completion format.

- **As for all surveys, it should be acknowledged that prevalence rates are only estimates.** If everyone in the population had been assessed the rate found may be higher or lower than the survey estimate. Confidence intervals are given for key estimates in the methods chapter (Chapter 14). For low prevalence disorders, relatively few positive cases were identified. Particular attention should be given to uncertainty around these estimates and to any subgroup analysis based on these small samples. All comparisons made in the text have been tested and only statistically significant differences are described.

## 14.1 Introduction

The Adult Psychiatric Morbidity Survey (APMS) series began in 1993, and surveys have been conducted every seven years since. APMS 2014 is the fourth general population survey of adult mental health in the series. The first two were carried out by ONS in 1993 and 2000, and covered England, Scotland and Wales. The 2007 and 2014 surveys were carried out by NatCen Social Research, covered England only, and had no upper age limit to participation (which was 64 in 1993 and 74 in 2000). Like the preceding surveys, APMS 2014 consisted of two phases, with the second phase interview being conducted with a sub-sample of phase one participants by clinically trained interviewers coordinated by the University of Leicester.

The APMS series is part of a wider programme of surveys currently commissioned by NHS Digital, and funded by the Department of Health. Core topics are covered in every survey in the series, such as anxiety and depression, psychosis and substance use disorders. New topics in 2014 included screening for bipolar disorder and experience of childhood neglect.

This chapter provides a description of the survey methodology used on APMS 2014, including an outline of the:

- Sample design for the phase one and phase two interviews
- Topic coverage
- Piloting and questionnaire development

- Fieldwork procedures
- Survey response
- Weighting strategies
- Data analysis approach used in this report
- Quality assurance.

Further methodological detail is provided in the following appendices:

- A** Publications using data from the psychiatric morbidity survey series
- B** Assessment of psychiatric disorders
- C** Derived variables used in the main report
- D** Phase one questionnaire and phase two contents
- E** Fieldwork documents

## 14.2 Sample design

### Overview of the sample design

The sample for APMS 2014 was designed to be representative of the population living in private households (that is, people not living in communal establishments or sleeping rough) in England. People living in communal or institutional establishments tend to be either aged 16 to 24 years (and living in higher education halls of residence) or aged 65 years or over (and living in a nursing or care home setting) (ONS 2015). Older people living in communal settings are likely to have worse mental health than older people living in private housing, and this should be borne in mind when considering the survey's account of the older population's mental health. Between the 2001 and 2011 censuses the proportion of young people recorded as living in communal establishments increased slightly and the proportion of older people in such settings decreased. However, overall, communal establishment residents represented less than 2% of all usual residents in England.

The survey adopted a multi-stage stratified probability sampling design. The sampling frame was the small user Postcode Address File (PAF) because this has excellent coverage of private households in England. The small user PAF consists of those Royal Mail delivery points which receive fewer than 50 items of mail each day. Therefore, most large institutions and businesses are excluded from the sample but some small businesses and institutions may receive fewer than 50 items each day and so be included. Once the interviewer had verified that an address does not contain a private household, such addresses were recorded as ineligible. The small proportion of households living at addresses not on the PAF (less than 3%) were not covered by the sample frame (ONS 2014).<sup>1</sup>

The stratified multi-stage random probability sample used for the phase one interview involved two stages of sample selection: the sampling of the primary sampling units (PSUs) followed by the sampling of addresses within the selected PSUs.

### **Wakefield local boost sample**

In addition to the national sample, a sample for an additional local area boost was also drawn. The fieldwork involved the full phase one interview, but did not include a phase two assessment. The boost took place in Wakefield and was funded by a collaboration of the Wakefield Local Authority, NHS Wakefield CCG and South West Yorkshire Partnership NHS Foundation Trust. The Wakefield dataset will be deposited with the UK Data Service, with additional weighting variables that will allow for the datasets to be combined and analysed together as well as separately. This report focuses entirely on the national sample, which includes Wakefield only in proportion to its population.

### **Selection of primary sampling units (PSUs)**

The PSUs were individual or groups of postcode sectors. A postal sector contains on average 2,550 delivery points. Small postal sectors were grouped with contiguous sectors so that each group contained at least 500 delivery points.

<sup>1</sup> Addresses selected for all NatCen surveys in the last three years were excluded from the sampling frame. However, because they had been selected at random in the first place, this did not introduce selection bias. The benefit of this procedure is to reduce the burden of surveys on the public, which, it is hoped, will help to maintain response in the long term.

Before selection, the list of PSUs in the population was ordered (stratified) by a number of strata and a systematic random sample was selected from the ordered list. This ensures the different strata in the population are correctly represented and increases the precision of survey estimates.<sup>2</sup>

APMS 2014 used a sampling methodology that was consistent with previous surveys in the series, and very similar to that used in 2007. First, all PSUs in England were stratified by the 10 Strategic Health Authorities (SHA) as shown in Table 14.1. Within each SHA, PSUs were listed in increasing order of the proportion of people in non-manual occupations (according to the 2011 Census)<sup>3</sup> and cut-off points were drawn approximately one third and two thirds down the ordered list to create three roughly equal-sized groups. Within each of the 30 strata created (10x3), PSUs were listed in order of Census estimates of the percentage of households without a car and cut-off points were drawn to create three roughly equal-sized groups. Within each of the 90 strata created (30x3), PSUs were listed in order of the percentage of households owner-occupied. 682 PSUs were then systematically selected from the ordered list with probability proportional to the delivery point count of each PSU. Using the same stratification methodology, an additional sample of 16 PSUs was selected at a later stage to boost the size of the available achieved sample, thus bringing the total number of selected PSUs to 698. As stated above, this approach was comparable with that used for the other surveys in the series and is designed to produce a sample representative of the wider population, with biases in sample selection addressed through weighting. [Table 14.1](#)

### Sampling addresses and households

In the second stage of sampling 22 delivery points were randomly selected within each of the selected PSUs. About half-way through fieldwork, progress was reviewed and it was decided that the sample should be reduced by removing

- 2 An estimate from a survey is precise if similar results are obtained with repeated surveys. One measure of precision is the standard error around an estimate.
- 3 The NS-SEC (National Statistics Socio-economic Classification) measure relating to household reference persons (the person in whose name the accommodation is owned or rented) does not easily lend itself to a manual/non-manual breakdown. Hence the social grade measure available for all *people* aged 16 and over in households was used, where non-manual was defined by social classes AB (higher and intermediate managerial/administrative/professional) and C1 (supervisory, clerical, junior managerial/administrative/professional).

a random selection of 636 addresses from the remaining two fieldwork quarters. Finally, three of the sampled addresses were not issued to interviewers due to problems with the addresses. Therefore the total sample of issued addresses was 14,717.<sup>4</sup>

Interviewers visited the addresses to identify private households with at least one resident aged 16 or over. When visited by an interviewer, 1,398 of the selected addresses were found not to contain private households. These addresses were thus ineligible, and were excluded from the survey sample. At eligible addresses found to contain more than one dwelling/household, interviewers used multi-dwelling/household selection grids to select one dwelling/household at random.

In summary, out of the 14,717 addresses in the original sample, 13,122 (89%) were found to contain at least one private household, 1,398 (9%) were non-residential addresses, and 197 (1%) were addresses of unknown eligibility.

### **Sampling one adult per household**

One adult aged 16 years or over was randomly selected for interview in each eligible household. This was done in preference to interviewing all eligible adults because:

- It helped interviewers to conduct the interview in privacy and thereby obtain more reliable information.
- Individuals within households tend to be similar to each other and, where households differ markedly from each other, the resultant clustering can lead to an increase in standard errors around survey estimates. By selecting one person in each household this clustering effect was overcome.
- Given the length of the interview process, interviewing one household member helped to reduce the burden placed on each household.

<sup>4</sup> Consisting of 698 PSUs each with 22 addresses, minus 636 deselected and 3 not issued.

### **Sampling for the phase two**

The approach taken for selecting which phase one participants would be invited for a phase two assessment was based on that used in the 2007 survey, but amended to select on the basis of two disorders (psychosis and autism) not four (borderline and antisocial personality disorder were also covered at phase two in 2007). Further refinements to the sampling fractions, including introducing different sampling fractions for men and women, were possible due to the availability of data from the 2007 survey on the performance of the ASD screening items.

For each phase one participant, the probability of selection for a phase two assessment was calculated as the higher of two disorder-specific probabilities: psychosis probability and ASD probability. The probabilities were generated based on participants' responses to screening questions in the phase one questionnaire and whether they were male or female. These disorder-specific probabilities of selection to phase two were then corrected for in disorder specific weights, described in Section 14.7.

## **14.3 Topic coverage**

### **APMS 2014 phase one interview**

The table below summarises the topic coverage of the phase one interviews. The interview structure consisted of initial modules of questions administered by the interviewer, a self-completion section, and further interviewer administered modules. A few sections were asked only of particular age-groups, for example questions on cognitive decline were restricted to those aged over sixty years. This was done in part to minimise respondent burden. The full phase one questionnaire is reproduced in Appendix D and the documentation lodged with the UK Data Service describes each of the survey items.

## APMS 2014 phase one interview content

CAPI interview: face to face interview [1]	Age of participant		
	16–59	60–69	70+
Details of household members and relationships	•	•	•
General health and activities of daily living	•	•	•
Caring responsibilities	•	•	•
Mental wellbeing (WEMWBS) <sup>a</sup>	•	•	•
Physical health conditions	•	•	•
Sensory impairment <sup>a</sup>	•	•	•
Learning impairment <sup>a</sup>	•	•	•
Mental illness diagnoses <sup>a</sup>	•	•	•
Treatment and service use	•	•	•
Common mental disorders	•	•	•
Suicidal behaviour and self-harm	•	•	•
Psychosis screening questionnaire	•	•	•
Attention-deficit/hyperactivity disorder	•	•	•
Work related stress	•	•	–
Tobacco	•	•	•
Alcohol – any drinking	•	•	•
<b>CASI interview: self completion</b>			
Alcohol (AUDIT, SADQ)	•	•	•
Drug use and dependence	•	•	•
Personality disorder	•	•	•
Social functioning (SRQ)	•	•	•
Bipolar disorder <sup>a</sup>	•	•	•

<i>continued</i>	Age of participant		
	16–59	60–69	70+
<b>CASI interview: self completion</b>			
ASD	•	•	•
Posttraumatic stress disorder	•	•	•
Military experience	•	•	•
Domestic violence and abuse	•	•	•
Child neglect <sup>a</sup>	•	•	•
Suicidal behaviour and self-harm	•	•	•
Discrimination	•	•	•
Sexual identity and behaviour <sup>a</sup>	•	•	–
Menopause <sup>a</sup>	•	–	–
<b>CAPI interview: face to face interview [2]</b>			
Cognitive and intellectual functioning:			
TICS-M	–	•	•
National Adult Reading Test (NART)	•	•	•
Animal naming test	–	•	•
Stressful life events (LTE)	•	•	•
Parenting	•	•	•
Social support networks (IMSR)	•	•	•
Religion	•	•	•
Social capital and participation	•	•	•
Socio-demographics	•	•	•
Consents (for data linkage and phase two contact)	•	•	•

<sup>a</sup> These are new modules included in APMS for the first time in the 2014 survey.

## Mental disorders covered on APMS 2014

A summary of the measures used to assess or screen for each of the mental disorders included in APMS 2014 is listed below, with further technical detail in Appendix B.

### Measures used to assess and screen for mental disorder

Condition	Diagnostic status	Classification system	Assessment tool	Survey phase	Reference period
Generalised anxiety disorder (GAD)	Present to diagnostic criteria	ICD-10	CIS-R (Lewis et al. 1992)	One	Past week
CMD not otherwise specified (NOS)	Present to diagnostic criteria	ICD-10	CIS-R	One	Past week
Obsessive and compulsive disorder (OCD)	Present to diagnostic criteria	ICD-10	CIS-R	One	Past week
Depressive episode	Present to diagnostic criteria	ICD-10	CIS-R	One	Past week
Panic disorder	Present to diagnostic criteria	ICD-10	CIS-R	One	Past week
Phobia	Present to diagnostic criteria	ICD-10	CIS-R	One	Past week
Alcohol use disorders	Screen positive	ICD-10	AUDIT (Saunders et al. 1993); SADQ (Stockwell et al. 1994)	One	Past six months
Drug dependence	Screen positive	DSM-IV	Based on Diagnostic Interview Schedule (Malgady et al. 1992)	One	Past year
Psychotic disorder	Present to diagnostic criteria	ICD-10	SCAN (WHO 1999)	One/two	Past year

*continued*

<b>Condition</b>	<b>Diagnostic status</b>	<b>Classification system</b>	<b>Assessment tool</b>	<b>Survey phase</b>	<b>Reference period</b>
Any personality disorder	Screen positive	–	SAPAS (Moran et al. 2003)	One	Lifetime
Borderline personality disorder (BPD)	Present to diagnostic criteria	DSM-IV	Self-report SCID-II (First et al. 1997)	One	Lifetime
Antisocial personality disorder (ASPD)	Present to diagnostic criteria	DSM-IV	Self-report SCID-II	One	Lifetime
Posttraumatic stress disorder (PTSD)	Screen positive	DSM-IV	PTSD-Check List (Blanchard et al. 1996)	One	Past week
Attention-deficit/hyperactivity disorder (ADHD)	Screen positive	DSM-IV	Adult Self-Report Scale-v1.1 (WHO 2003)	One/two	Past six months
Bipolar Disorder (BD)	Screen positive	DSM-IV	Mood Disorder Questionnaire (Hirschfeld et al. 2000)	One	Lifetime
Attempted suicide	Occurrence of behaviour	–	Self completion	One	Past year
Autism	Present to diagnostic criteria	DSM-IV	Autism Diagnostic Observation Schedule (ADOS: Lord et al. 2003)	One/two	Lifetime

The phase two interview assessed psychotic disorder and autism. In addition, a further assessment of ADHD was introduced to the phase two interview in 2014. The approach taken to the phase two assessment of psychosis is described in Chapter 5, the phase two assessment of autism is described in Chapter 6. The phase two assessment of ADHD is not covered in this report but will be covered in subsequent publications.

## Coverage of the 1993, 2000, 2007 and 2014 APMS interviews

The following table summarises the topic coverage of the 1993, 2000, 2007 and 2014 APMS phase one questionnaires. In 1993 the survey was administered by paper and pen, from 2000 a consistent computer assisted interviewing approach was used. The aim has been to have consistent core coverage, with additional modules covered in different years.

<b>Summary of APMS coverage in 1993, 2000, 2007 and 2014</b>				
<b>Face to face interview</b>	<b>1993</b>	<b>2000</b>	<b>2007</b>	<b>2014</b>
General health	–	•	•	•
Activities of daily living	–	–	•	•
Caring responsibilities	–	–	•	•
Service use and medication	• <sup>a</sup>	•	•	•
Self-perceived height and weight	–	–	•	–
Common mental disorders	•	•	•	•
Suicidal behaviour and self-harm	• <sup>b</sup>	•	•	•
Psychosis screening questionnaire	•	•	•	•
Attention-deficit/hyperactivity disorder	–	–	•	•
Work related stress	–	–	•	•
Smoking	•	•	•	•
Drinking	•	•	•	•
<b>Self completion</b>				
Problem drinking	• <sup>c</sup>	•	•	•
Drug use	•	•	•	•
Personality disorder	–	•	•	•
Social functioning	–	–	•	•

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**continued**

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**Self completion**

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Problem gambling	–	–	●	–
ASD	–	–	●	●
Posttraumatic stress disorder	–	–	●	●
Military experience	–	–	●	●
Bipolar disorder	–	–	–	●
Domestic violence, abuse and neglect	–	–	●	●
Suicidal behaviour and self-harm (repeated)	–	–	●	●
Eating disorder	–	–	●	–
Discrimination	–	–	●	●

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**Face to face interview**

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Intellectual functioning:

TICS-M	–	●	●	●
National Adult Reading Test (NART)	–	●	●	●
Animal naming test	–	●	●	●
Key life events	●	●	●	●
Social support networks	●	●	●	●
Religion	–	–	●	●
Social capital and participation	–	–	●	●
Socio-demographics	●	●	●	●

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<sup>a</sup> In APMS 1993 only participants who screened positive for CMD were asked about use of services and receipt of treatment.

<sup>b</sup> In APMS 1993 only participants with depression in the past week were asked about suicidal behaviour.

<sup>c</sup> APMS 1993 data on problem drinking is not compatible with that collected in 2000, 2007 and 2014.

## Key variations across the survey series

A primary purpose of the survey series is to assess change in the population prevalence of disorders over time. For this reason comparability with previous surveys was a priority and so both the questionnaire and the approach taken to its administration were largely the same. However, there have been some changes in coverage and method over time, and these are summarised below. They were made as a result of consultation with data users and potential data users.

### *Area*

The 1993 and 2000 surveys covered England, Scotland and Wales, while the 2007 and 2014 surveys covered England only.

### *Age range*

APMS 2007 and 2014 sampled adults aged 16 and over without an upper age limit. APMS 2000 included adults aged 16–74 and APMS 1993 covered adults aged 16–64.

### *New topics added*

The following topics were included for the first time in the 2014 survey:

- Sensory impairment
- Previous diagnosis of mental illness and learning impairment
- Bipolar disorder
- Child neglect
- Menopause
- Sexual behaviour

### *Summary of amendments to existing modules*

The full questionnaire was reviewed prior to launch in 2014. A detailed list of all questionnaire changes are included with the archived dataset, including information on the rationale for changes. In summary, amendments made to modules that were in the 2007 questionnaire include:

- **Mental wellbeing:** single item measures were replaced with the validated 14 item Warwick Edinburgh Mental Well-Being Scale (WEMWBS) (Tennant et al. 2007).
- **General health:** the SF12<sup>5</sup> was replaced with detailed questions about specific chronic conditions.
- **Caring responsibilities:** additional questions were asked about the nature of the relationship between the participant and the person they provide care for.
- **Medications and service use:** an extended list of medications and services were asked about, to reflect changes in prescribing practice and services available; new questions were added on requesting treatment.
- **Common mental disorder:** questions on social phobia were added (the mini Social Phobia Inventory, Weeks et al. 2007).
- **Work-related stress:** the module was extensively revised, including adding additional questions on bullying in the workplace.
- **Tobacco:** new questions were added on smoking cessation and e-cigarettes.
- **Personality disorder:** the addition of a screen for any personality disorder (SAPAS).
- **Suicidal behaviour and self-harm:** while some questions were retained in the face to face section of the interview, most were moved into the self-completion section.
- **Drug use:** new questions were added on use of ketamine and mephedrone.
- **PTSD:** the screening tool changed to the PTSD-Check List (PCL) for better comparability with other surveys.
- **Military experience:** additional questions on deployment were added.
- **Interpersonal violence and abuse:** additional questions about the assailant were added.

5 The 12-item Short-Form Survey (SF12) [www.rand.org/health/surveys\\_tools/mos/12-item-short-form.html](http://www.rand.org/health/surveys_tools/mos/12-item-short-form.html). This change was made partly due to steep increases in the license costs for use of this tool.

- **Key life events:** changes were made to the questions about key life events to make it clearer when the events had taken place.
- **Religion:** questions on spirituality were replaced with questions on belief.
- **Poverty:** questions were added on material deprivation.

#### *Phase two sample selection*

For the 2014 survey, data from the 2007 survey were available on which to model sampling fractions for autism. This allowed for the development of more precise and discriminating probabilities. The 2014 approach is outlined in Section 14.2.

## 14.4 Piloting and questionnaire development

### **Guidance and consultation**

The APMS series is long-established, and the 2014 survey design is based on that used in previous surveys in the series. The survey development that did take place, to ensure that the survey meets current needs, drew on the expertise of a wide range of advisors and data users. These included:

- Project oversight and management from key managers at NHS Digital.
- A Steering Group comprised of representatives from the Department of Health, Public Health England, NHS England, Royal College of Psychiatrists, Improving Access to Psychological Therapies, and academic leads in psychiatric epidemiology (Professor Paul Bebbington) and economics (Lord Professor Richard Layard). This group was co-ordinated by NHS Digital.
- An APMS Academic Group, co-ordinated by the research team, and drawing on the expertise of leading academics from a range of universities and medical schools.
- A convened group of senior NatCen interviewers with practical experience of survey delivery in field.

## Cognitive testing

Two waves of cognitive testing were carried out in 2013 and 2014.<sup>6</sup> Because one of the main questionnaire modules being developed addressed psychiatric diagnoses, participants with personal experience of mental illness were oversampled. The purpose of this stage of development work was to test the questions new to the 2014 survey and some questions from 2007 that were identified by data users and others as in need of revision. In addition, the cognitive testing explored alternative survey names and visual branding, and led to the development of a study logo. Participants' interpretations of questions were explored, as well as their views on acceptability, language and terminology. Reports on the findings of the cognitive testing were submitted to NHS Digital.

## Dress rehearsal

Following the cognitive testing, the questionnaire was refined in preparation for a full dress rehearsal. The dress rehearsal enabled testing of the flow, content and timings of the interview as a whole, and of individual modules, together with the operation of fieldwork procedures. The dress rehearsal included phase two interviews conducted by clinically trained interviewers co-ordinated by the University of Leicester. The phase two pilot sample included people both men and women of a range of ages. Again, a report on the dress rehearsal was submitted to NHS Digital.

# 14.5 Fieldwork procedures

## Training and supervision of interviewers

### *Phase one interviewers*

The NatCen interviewers selected to work on the first phase of the survey tended to be particularly experienced, and most had worked previously on other health-related surveys. They were fully briefed on the administration of the survey. Topics covered on the one-day survey-specific training included introducing the survey, questionnaire content, confidentiality and responding to participant distress.

<sup>6</sup> For more details on cognitive testing see Collins D (2003) *Pretesting survey instruments: An overview of cognitive methods in Quality of Life Research* 12. Kluwer Academic Publishers.

Written instructions were provided for interviewers. As the fieldwork took place over the course of a year, refresher sessions were available for interviewers who took a break from the survey. Less experienced interviewers were accompanied by a project supervisor during the early stages of their fieldwork to ensure that the interviews were administered correctly. Routine supervision of 10% of interviewer work was subsequently carried out.

### *Phase two interviewers*

The phase two interviewers were recruited and co-ordinated by the University of Leicester. They were all experienced in psychological research interviewing, and most had worked on APMS 2007. Phase two interviewers received an extensive, month-long induction and training programme, run by a senior research psychologist and a psychiatrist. They also received training sessions from NatCen on using computer assisted interviewing. Whilst in the field these interviewers received regular supervision sessions and technical support.

### **Advance letters**

An advance letter was sent to each sampled address. This introduced the survey and stated that an interviewer would be calling to seek permission to interview. A sample advance letter is provided in Appendix E.

### **Making contact**

At initial contact, the interviewer established the number of households at the address, and made any selection necessary (see Section 14.2). The interviewer randomly selected one adult per household, and then attempted to interview that person. As in previous waves in the series, the survey title used in the field was the 'National Study of Health and Wellbeing'. This was felt to be more readily understandable than 'psychiatric morbidity', an observation confirmed in the cognitive testing (see Section 14.4). Interviewers had various materials they could use on the doorstep and leave with participants, including a survey leaflet that introduced the study and provided details of a number that people could call (see Appendix E).

## Collecting the data

The phase one and the phase two interviews each took about an hour and a half to complete on average, although some were shorter and others took as long as three hours. The phase one and phase two interviews both involved computer assisted interviewing (CAPI). In phase one, some information was collected by self-completion, also using the laptop. Despite the self-completion section being very long, 75% of participants completed this entirely alone. In 16% of cases the interviewer read out the self-completion and entered the participant's responses, and for 3% of cases the interviewer read out the questions but the participant entered their own responses. 6% of participants did not complete the self-completion section of the interview at all, this was mainly older participants.

At the end of the phase one interview, permission was sought for the participant's survey responses to be linked with other health datasets, including the NHS Central Register and Hospital Episode Statistics. 77% gave permission for data linkage. The documentation for this is included in Appendix E. Verbal permission was also sought for a University of Leicester interviewer to contact the participant again in order to explain the phase two interview, should they be selected: 78% agreed.

If the selected participant was not capable of undertaking the interview alone, for reasons of mental or physical incapacity, the option was available for additional information to be collected from another member of the family or a carer on their reasons for not being able to take part. In 2007 this took the form of a proxy interview, with data collected in the laptop. In 2014, information was collected on the doorstep.

## Token of appreciation and helpline information

A high street voucher was given to all those who took part in a phase one interview as an appreciation for their time. In addition, those who were selected and took part in the phase two interview were given an additional high street voucher. All participants were also offered a list of helpline numbers that they could call. These included the numbers for organisations providing information about the various disorders covered in the survey as well as for those providing support to people in crisis. The helplines leaflet also emphasised contacting a GP for support and advice as a first step (see Appendix E).

## 14.6 Survey response

### Response at phase one

Of the 14,717 addresses in the original sample, 13,122 (89%) were found to include at least one private household, 1,398 (9%) were non-residential addresses, and 203 (1%) were addresses of unknown eligibility. This left 13,313 cases in the sample set. Of these 3872 (29%) were refusals in field and 300 refusals direct to the office. 782 were coded as non-contacts and 813 were unproductive for another reason. 7,546 productive interviews were achieved, representing a 57% response rate. This included 18 partial interviews where the participant completed the treatment, service use and CIS-R modules, but did not reach the end of the interview.

### Response rates of adults at phase one

	Number	Percentage
<b>Potentially eligible households</b>	<b>13,313</b>	
Field refusals	3,872	29%
Office refusals	300	2%
Non-contacts	782	6%
Other unable/unproductive	813	6%
<b>Productive adults</b>	<b>7,546</b>	<b>57%</b>
Full interviews	7,528	
Partial interviews	18	

### Response at phase two

7,528 participants provided a full phase one interview. A probability of selection was calculated for each participant based on their answers to the phase one screening questions on psychosis and ASD as outlined in Section 14.2. Overall 78% of phase one participants agreed to be contacted about the phase two interview. After the application of the highest of the two disorder specific sampling fractions, 875 participants were issued for a phase two interview. Phase two interviews were conducted with 630 of these (72%), and there were 204 refusals and 41 non-contacts.

## 14.7 Weighting the data

### Weighting the phase one data

The survey data were weighted to take account of selection probabilities and non-response, so that the results were representative of the household population aged 16 years and over. Weighting occurred in four steps.

First, address selection weights (wt1) were applied to take account of the differential selection probabilities of addresses (after the removal of 636 addresses from the originally drawn sample, see Section 14.2). For each of the 698 sampled PSUs, the weight was calculated as follows:  $wt1 = \text{total addresses on PAF} / (698 \times \text{number of sampled addresses per PSU})$ . All addresses in the same PSU were assigned the same weight.

Second, to reduce household non-response bias, a household level weight was calculated from a logistic regression model using interviewer observation and area-level variables (collected from Census 2011 data) available for responding and non-responding households. The dependent variable was whether the household responded or not. The independent variables considered for inclusion in the model were the presence of any physical barriers for entry to the property (e.g. a locked common entrance or the presence of security staff), Government Office Region (GOR), Index of Multiple Deprivation 2010 (IMD 2010) quintiles,<sup>7</sup> population density (number of persons per hectare), percentage of households owner-occupied, and the percentage of adults in a non-manual occupation.

Not all the variables were retained for the final model: variables not significantly related to the propensity of households to respond were dropped from the analysis. The variables significantly associated with response were: GOR, whether there were entry barriers to the selected address, the percentage of households owner-occupied and population density. The model shows that the propensity for a household to respond was lower in Yorkshire and Humberside, East of England, and in inner and outer London (relative to the North East), higher for households

<sup>7</sup> IMD 2010 is a measure of multiple deprivation at the small area level. [www.gov.uk/government/statistics/english-indices-of-deprivation-2010](http://www.gov.uk/government/statistics/english-indices-of-deprivation-2010)

with no physical barriers for entry to the property, higher in areas where a relatively high percentage of households were owner-occupied and lower in areas with a relatively high population density.

The non-response weight (wt2) for each eligible household was calculated as the inverse of the probability of response estimated from the final model. The full model is given in Table 14.2. [Table 14.2](#)

Third, selection weights (wt3) were applied to take account of the different probabilities of selecting participants in different sized households.<sup>8</sup> The weight was equal to the number of adults (16+) in the household, the inverse of the probability of selection.<sup>9</sup>

The composite weight for selection and participation was calculated as the product of the weights from the previous stages:  $wt4 = wt1 \times wt2 \times wt3$ .

The final stage of the weighting was to adjust the composite weight (wt4) using calibration weighting.<sup>10</sup> Calibration takes an initial weight (in this case wt4) and adjusts (or calibrates) it to given control totals. The process generates a weight which produces survey estimates that exactly match the population for the specific characteristics (control totals) used in the adjustment. Calibration reduces any residual non-response bias and any impact of sampling and coverage error for the measures used in the adjustment. The population control totals used were the ONS 2014 mid-year population estimates for age-by-sex and region, shown in Tables 14.3 and 14.4. After calibration, the APMS 2014 weighted data matches the estimated population in terms of age-by sex and region as shown in Table 14.5. [Tables 14.3 to 14.5](#)

An additional weight was calculated for the combined APMS 2007 and 2014 datasets by re-calibrating the combined data to the ONS 2014 mid-year population

- 8 The selection of multiple dwellings and/or households was done as a paper exercise and was not collected in the CAPI. As a result, there was no information on selection at addresses with multiple dwelling units or at dwelling units with multiple households, so it was not possible to adjust for this in the weighting. Evidence from other large scale English-only household surveys (e.g. the Health Survey for England) show that only a very small percentage of addresses in England (under 1%) turn out to include multiple dwellings/households. Therefore, any bias from not adjusting for multiple dwellings/households should be negligible.
- 9 The selection weight wt3 was trimmed at 4 to avoid a small number of very high weights which would inflate the standard errors, reduce the precision of the survey estimates and cause the weighted sample to be less efficient.
- 10 The calibration weighting was carried out in STATA (StataCorp. 2013).

estimates for age-by sex and region. The combined weight is being used solely for analysis of the combined 2-year dataset.

### **Weighting the phase two data**

Two weighting variables have been developed specifically for use when analysing outcomes derived from phase two data: presence of psychosis and presence of autism. These weights were designed to generate condition-specific datasets that are representative of the general population, and based on all the participants with relevant information.

The phase two participants have a set of survey weights different from those generated for phase one, with one set of weights being applicable for psychosis and a second set being applicable for autism. Participants get a phase two weight if they were eligible for phase two, were selected, and then responded.

For analysis of prevalence of disorders assessed at phase two (autism and psychosis), the weighted phase two participants are added to the set of phase one participants who were not eligible for phase two, the prevalence being assumed to be zero for the not eligible group. Those not eligible are given their phase one weights.

The phase two weights account for two factors:

1. Not all those eligible for phase two were selected with equal probability: all those screened in with a positive psychosis score were selected (although those selected in the final two months of fieldwork were subsequently excluded), as were all men with an Autism-Spectrum Quotient (AQ) score of eight or more and all women with an AQ score of 11 or more. But for men with an AQ score of between 4 and 7, and women with an AQ score of between 4 and 10, sub-sampling was used.
2. Some of the eligible phase one participants did not agree to be contacted for phase two during their phase one interview so were automatically excluded from the phase two selection. Others were selected for phase two but then declined to take part. These refusals introduce the possibility of phase two non-response bias. The phase two weights incorporate a non-response adjustment to ensure that those responding have a similar weighted profile to those eligible.

The phase two weights were calculated by modelling, via logistic regression, the probability of being selected and responding to phase two, conditional on being eligible for selection. The weight per phase two participant was then calculated as the inverse of the predicted probability from the model, multiplied by their phase one weight. The predicted probabilities simultaneously account for selection probabilities and for observable non-response biases.

The variables included in the model were: phase one psychosis and AQ scores; gender; marital status, ethnic group (four categories (Moran et al. 2003)); and age group. Other variables, such as employment status, qualification, and the index of multiple deprivation quintile group, were tested in the regression model but excluded because not significant (the implication being that there is no statistical evidence of non-response bias on these variables).

## 14.8 Data analysis and reporting

### Introduction

APMS 2014 is a cross-sectional survey of the general population. While it allows for associations between mental disorder and personal characteristics and behaviour to be explored, it is important to emphasise that such associations cannot be assumed to imply causality. A list of the variables used in the analysis in this report is provided in Appendix C: all will be included in the archived dataset.

### Weighted analysis and unweighted bases

As outlined in Section 14.7 above, all the data presented in the substantive chapters of this report are weighted to account for likelihood of selection and non-response. Bases are presented as unweighted to show the number of participants included, should weighted bases be required these can be generated from the archived dataset.

### Testing for seasonal variation

The fieldwork for the psychiatric morbidity surveys conducted in 1993 and 2000 was conducted around March to August of their respective calendar years.

Fieldwork for APMS 2007 and 2014 was spread across a whole year, so that any seasonal variation in rates could be explored. This raised the issue of whether month of interview would need to be controlled for when examining trends in disorders assessed on the basis of symptoms in a recent reference period. To check on this, we looked at the rate of any common mental disorder and the rate of depression in terms of the month in which the interview took place. Adjusting for month of interview did not significantly affect rates of disorder and so is not included in this report.

### **Age-standardisation**

Rates of disorder in some analyses have been age-standardised in this report to allow for comparisons between groups after adjusting for the effects of any differences in their age distributions. When sub-groups are compared in respect of a variable on which age has an important influence, differences in age distributions between sub-groups are likely to affect the observed differences in the proportions of interest.

Most analyses in this report (sample size permitting) are presented separately for men and women, as well as for the total population. Age-standardisation was undertaken separately within each sex, expressing male data to the overall male population and female data to the overall female population. When comparing data for the two sexes, it should be noted that no age-standardisation has been undertaken to remove the effects of the sexes' different age distributions. It should also be noted that where data for all adults combined is presented as age-standardised, this has been produced in the way outlined above, with male data expressed to the age profile of the male population and female data expressed to the profile of the female population.

Age-standardisation was carried out using the direct standardisation method. The reference population was the Office for National Statistics' Census based mid-year 2014 population estimates for England.

Age-standardisation was not conducted for some analyses. These include analysis by household type. Our age-standardisation approach requires cases to be present in each 'cell'. Because some household type groups (e.g. 'one or more adults aged 65+') did not have cases in some age/sex combinations (e.g. men aged 16–24),

there was no rate in the cell to weight up to the population prevalence. Moreover, where there are very few cases in a cell, this tends to cause instability in the age-standardised rate generated. This is one of the reasons why observed rates are often presented alongside rates that have been age-standardised.

### **Standard analysis breaks**

Most of the disorders covered in this report are analysed by a core set of breaks: age, sex, ethnic group, household type, employment status, benefit status, and region, described briefly below and are defined in more detail in the Glossary.

#### *Ethnic group*

Participants identified their ethnicity according to one of fifteen groups presented on a show card, including 'other – please state'. These groups are based on those used in the latest Census and are drawn from the ONS harmonised ethnic group questions for use on national surveys. The groups were subsumed under four headings: White; Black/Black British; Asian/Asian British; and those who reported their ethnic group as mixed, multiple or other. For some analyses by ethnic group the White group was further divided into 'White British' (which included those giving their ethnic group as White and English, Scottish, Welsh or from Northern Ireland) and White other. About 15% of the sample (1,131 participants) identified with an ethnic group other than White British. This is in line with the combined prevalence of these groups in the adult population resident in England. It should be noted that these small groups are highly heterogeneous, for example the 'Black' group could include both recent migrants from Somalia and Black people born in Britain to British parents. The results of analysis by ethnic group should therefore be treated with caution.

#### *Household type*

In APMS, basic information (age, sex and relationship status) was collected from the participant about all members of the household in which they lived. This enabled a variable to be derived that summarised the structure of the household in which people lived, particularly in relation to the number and ages of the other people lived with. This enables the circumstances of people living alone to be compared with those of people living with others, as well as identifying participants living with children. A 'small family' was defined as one or two adults living with

one or two children, and a 'large family' was defined as at least one adult living with three or more children.

### *Employment status*

Detailed information was collected from participants on the nature of their employment status in the previous week. Participants were classified as either employed (including working in a family business); unemployed (and therefore looking and available for work); or economically inactive (including those who are unable to work due to disability or illness, students, retired, or looking after the home). The standard International Labour Organisation<sup>11</sup> definition was used, and is described more fully in the Glossary. Where this analysis break has been used, generally the base has been restricted to participants aged between 16 and 64.

### *Benefit status*

Participants were asked, using a series of showcards, whether or not they were in receipt of each of a range of benefits. For the purposes of the analyses presented in this report, three variables were derived. One allows participants reporting current receipt of Employment and Support Allowance (ESA) to be compared with those who do not receive this benefit. ESA is a benefit available to people of working age but who are unable to work due to disability or impairment. While Incapacity Benefit (IB) was not actually available at the time of the interview, a few participants (11) reported receiving this, and they were included in the ESA group. 'Any out of work benefit' included those reporting ESA or IB, combined with those in receipt of Jobseeker's Allowance (JSA). Analyses using these two variables were restricted to participants aged 16–64. A third benefit group was used in the analysis in this report: those living in a household in receipt of Housing Benefit. This is a household level benefit and relates to support provided to help with rent costs.

### *Region*

The former GORs were used for the analysis by region. The APMS sample is too small for analysis by geographical groupings below region.

11 [www.ilo.org/global/about-the-ilo/lang--en/index.htm](http://www.ilo.org/global/about-the-ilo/lang--en/index.htm)

### *Treatment and service use*

When looking at treatment and service use, participants screening positive for each disorder were compared with those who did not. Because of the relatively low prevalence of many of the disorders assessed in APMS 2014, this generally meant that the base size for the group with the disorder was usually small. Age-standardising a small group can be problematic, for the reasons outlined in Section 14.8, and so the treatment and service use tables were not age-standardised in most of the chapters.

### **Sampling errors and design factors**

The percentages quoted in the main report are estimates for the population based on the information from the sample of people who took part in this survey. All such survey estimates are subject to some degree of error. The confidence interval (CI) is calculated from the sampling error, which is a measure of how such a survey estimate would vary if it were calculated for many different samples. If the survey was repeated many times, such a 95% CI would contain the true value 95% of the time. For this survey, a multi-phase stratified design was used, rather than a simple random sample, and the sampling errors need to reflect this.

The effect of a complex sample design on estimates is quantified by the design factor (deft). It is the ratio of the standard error for a complex design to the standard error which would have resulted from a simple random sample. A deft of two, for example, indicates that the standard errors are twice as large as they would have been had the sample design been a simple random sample. The sampling errors, design effects and CI for key prevalence variables can be found in Tables 14.6 to 14.15. The calculations were carried out using the statistical package SPSS v21 (IBM Corp. 2012). [Tables 14.6 to 14.16](#)

### **Quality assurance**

Quality assurance has been defined as any method or procedure for collecting, processing or analysing survey data that is aimed at maintaining or enhancing reliability or validity (Statistics Canada 1998). It was an ongoing process throughout APMS, from preparation and sampling through data collection and data analysis to report writing, as detailed in this chapter. NatCen has a quality management system

with sets of procedures that were followed throughout. The purpose of establishing standard procedures, as highlighted by the WHO in relation to its World Health Surveys, is to help ensure that (Üstun et al. 2005):

- Data collection is relevant and meaningful
- Data can be compared across surveys and between subgroups
- Practical implementation of the survey adheres to proper practice
- Errors in data collection are minimised
- Data-collection capability is improved over time.

Examples of quality control measures built into, or to check afterwards, the survey process included:

- The computer programme used by interviewers had in-built soft checks (which can be suppressed) and hard checks (which cannot be suppressed); these included querying uncommon or unlikely answers, and answers out of the acceptable range.
- For phase one interviewers, telephone checks were carried out with participants at 10% of productive households to ensure that the interview had been conducted in a proper manner.
- The phase two interview was less structured, and required clinical skill and assessment by a graduate psychologist. The work of these research psychologists was supervised by a senior research psychologist. The experienced trainer also accompanied all of the interviewers on at least one of their participant visits 3 months into fieldwork, to ensure that they were conducting the interview as per protocol and to validate the coding. If a further supervised visit was felt necessary, this was also carried out.
- An ADOS (ASD assessment) reliability day was carried out, where all phase two interviewers returned to Leicester for their ADOS interviewing to be validated. Furthermore, if a phase two interviewer was unsure about any rating during fieldwork, they made extensive notes and then contacted the field research manager to discuss.

## 14.9 Tables

### Sampling

Table 14.1	Regional stratifier used and number of PSUs selected
Table 14.2	Final response model
Table 14.3	2014 mid-year household population estimates for adults in England, by age and sex
Table 14.4	2014 mid-year household population estimates for adults in England, by Government Office Region
Table 14.5	Weighted and unweighted sample distribution, by Government Office Region, age and sex

### Standard errors and confidence intervals for key estimates

Table 14.6	True standard errors and 95% confidence intervals for CIS-R score and prevalence of common mental disorders (CMDs)
Table 14.7	True standard errors and 95% confidence intervals for treatment rate among people with a CMD
Table 14.8	True standard errors and 95% confidence intervals for major trauma and screen positive for posttraumatic stress disorder (PTSD)
Table 14.9	True standard errors and 95% confidence intervals for prevalence of psychotic disorder in past year
Table 14.10	True standard errors and 95% confidence intervals for autism
Table 14.11	True standard errors and 95% confidence intervals for screening positive for personality disorder
Table 14.12	True standard errors and 95% confidence intervals for number of attention-deficit/hyperactivity disorder characteristics present in the past six months

- Table 14.13 True standard errors and 95% confidence intervals for prevalence of bipolar disorder
- Table 14.14 True standard errors and 95% confidence intervals for prevalence of hazardous and harmful drinking in the past year
- Table 14.15 True standard errors and 95% confidence intervals for prevalence of drug dependence
- Table 14.16 True standard errors and 95% confidence intervals for prevalence and recency of suicidal thoughts, suicide attempts and self-harm

## 14.10 References

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## Abbreviations and glossary

## Abbreviations

ADHD	Attention-deficit/hyperactivity disorder
ADL	Activities of Daily Living
APMS	Adult Psychiatric Morbidity Survey
AQ20	20 item Autism Quotient
ASPD	Antisocial personality disorder
ASRS	Adult ADHD Self-Report Scale
AUDIT	Alcohol Use Disorders Identification Test
BPD	Borderline personality disorder
CAPI	Computer Assisted Personal Interviewing
CASI	Computer Assisted Self-completion Interviewing
CI	Confidence interval
CIS-R	Clinical Interview Schedule-Revised
CMD	Common mental disorder
DH	Department of Health
DSM	Diagnostic Statistical Manual
GAD	Generalised anxiety disorder
HSE	Health Survey for England
HSCIC	Health and Social Care Information Centre, now NHS Digital
ICD-10	International Classification of Disease – version 10
IMD	Index of Multiple Deprivation
JSA	Jobseeker's Allowance
MDQ	Mood Disorder Questionnaire
MHCYP	Mental Health of Children and Young People Survey
NART	National Adult Reading Test
OCD	Obsessive compulsive disorder
ONS	Office of National Statistics
PHE	Public Health England
PSQ	Psychosis Screening Questionnaire
PTSD	Posttraumatic stress disorder
PTSD-CL	Posttraumatic stress disorder – checklist screening tool
SADQ	Severity of Alcohol Dependence Questionnaire
SAPAS	Standardised Assessment of Personality – Abbreviated Scale
SCAN	Schedules for Clinical Assessment in Neuropsychiatry
SCID-II	Structured Clinical Interviews for DSM Disorders
TICS-M	Modified Telephone Interview for Cognitive Status
WEMWBS	Warwick Edinburgh Mental Well-Being Scale

## Glossary

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ADHD/ADD	<p>Attention-deficit/hyperactivity disorder (ADHD) is a life-long condition characterised by sustained and excessive problems with organisation, sustaining attention in activities that require cognitive involvement, hyperactivity, restlessness and impulsiveness to the extent that it significantly interferes with everyday life.</p> <p>Also see <b>ASRS</b> (Adult ADHD Self-Report Scale – v1.1).</p>
Adults	<p>Adults were defined as people aged 16 and over.</p>
Age-standardisation	<p>Age-standardisation has been applied to some analyses to enable different groups to be compared after adjusting for the effects of any differences in their age distributions. When different sub-groups are compared in respect of a variable on which age has an important influence, any differences in age distributions between these sub-groups are likely to affect the observed differences in the proportions of interest.</p> <p>Age-standardisation was carried out using the direct standardisation method. The standard population to which the age distribution of sub-groups was adjusted was the Office for National Statistics 2014 mid-year household population estimates for England. Age-standardisation was carried out using the following age groups: 16–24, 25–34, 35–44, 45–54, 55–64, 65–74 and 75 and over. When age-standardisation was applied to analysis by ethnic age, sometimes the 65–74 and 75 and over age groups were combined due to small sample sizes.</p> <p>Age-standardisation was not applied where a variable did not have participants for every cell in every age band. For example, because there could be no people aged 16–24 living in households where everyone was aged 65 or over, age-standardisation was not applied to analysis by household type. All age-standardised tables are labelled as such in the title.</p>

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Alcohol dependence The National Institute of Health and Clinical Excellence defines alcohol dependence as a cluster of behavioural, cognitive and physiological factors that typically include a strong desire to drink alcohol and difficulties in controlling its use. Someone who is alcohol-dependent may persist in drinking despite harmful consequences. They will also give alcohol a higher priority than other activities and obligations.

Alcohol dependence was measured using two instruments. The primary measure, the Alcohol Use Disorders Identification Test (AUDIT), was used to divide the population into groups: non-drinker or low risk drinking; hazardous drinking; harmful drinking and/or mild dependence; and probable dependence.

Those who scored 10 or above on the AUDIT were also asked the Severity of Alcohol Dependence Questionnaire – Community (SADQ-C).

Also see **harmful drinking** and **hazardous alcohol use**.

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Anxiety disorders Anxiety disorders include generalised anxiety disorder (GAD), panic disorder, phobias and obsessive compulsive disorder (OCD).

Also see **common mental disorders**.

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ASPD (antisocial personality disorder) DSM-IV characterises antisocial personality disorder as a pervasive pattern of disregard for and violation of the rights of others that has been occurring in the individual since the age of 15 years, as indicated by three (or more) of seven criteria:

- A failure to conform to social norms
- Irresponsibility
- Deceitfulness
- Indifference to the welfare of others
- Recklessness
- A failure to plan ahead, and
- Irritability and aggressiveness.

Also see **personality disorder**.

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ASRS (Adult ADHD Self-Report Scale-V1.1) The Adult ADHD Self-Report Scale-V1.1 (ASRS) was used in the 2007 and 2014 APMS to estimate the prevalence of possible ADHD. The six item ASRS screen is a shortened version of the 18 item Symptom Checklist scale measuring the frequency of recent DSM-IV Criterion A symptoms of adult ADHD.

Also see **ADHD (attention-deficit/hyperactivity disorder)**.

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Benefits Participants were asked whether or not they, or their household, were in receipt of a range of different types of state benefit. Three groupings of benefits were examined in this report:

- Employment Support Allowance (ESA, plus those who reported still being in receipt of 'Incapacity Benefit' (IB))
- All out-of-work benefits (ESA, IB plus Jobseeker's Allowance)
- Housing benefit.

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Bipolar disorder Bipolar disorder is defined in ICD-10 as a condition that is characterised by repeated episodes in which someone's mood and activity levels are significantly disturbed, with some occasions of an elevation of mood and increased energy and activity (mania or hypomania), and on others of a lowering of mood and decreased energy and activity (depression). It was screened for on the APMS series for the first time in 2014, using the Mood Disorder Questionnaire (MDQ).

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BPD (borderline personality disorder) According to the DSM-IV diagnostic criteria for borderline personality disorder (BPD), the key features are instability of interpersonal relationships, self-image and mood, combined with marked impulsivity, beginning in early adulthood. It is indicated by five (or more) of the following criteria:

- Frantic efforts to avoid real or imagined abandonment
- Pattern of unstable and intense personal relationships
- Unstable self-image
- Impulsivity in more than one way that is self-damaging (e.g. spending, sex, substance abuse, binge eating, reckless driving)
- Suicidal or self-harming behaviour
- Affective instability
- Chronic feelings of emptiness

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BPD (borderline personality disorder) • Anger, and  
• Paranoid thoughts or severe dissociative symptoms.

*continued*

Also see **personality disorder**.

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Chronic physical health conditions A chronic – or long term – physical health condition is a health problem that requires ongoing management over a period of years or decades.

It generally is one that cannot currently be cured but can be controlled with the use of medication and/or other therapies.

Chronic physical health conditions focused on in this report include:

- Asthma
  - Cancer
  - Diabetes
  - Epilepsy
  - High blood pressure
- 

CIS-R (Clinical Interview Schedule – Revised) The CIS-R is a questionnaire designed to measure common mental symptoms and disorders, such as anxiety and depression. It comprises of 14 sections each covering a particular type of common mental disorder (CMD) symptom. Scores are obtained for each symptom based on frequency, duration and severity in the last week. Individual symptoms scores can be summed to provide an overall score for the level of symptoms of CMD. A score of 12 or more indicates the presence of significant symptoms of CMD warranting clinical recognition, while a score of 18 or more indicates symptoms of a level likely to require intervention. Diagnoses of six specific CMD were obtained by looking at answers to the various sections of the CIS-R and applying algorithms based on the ICD-10 diagnostic criteria for research.

The six categories of CMD are:

- Generalised anxiety disorder (GAD)
  - Depressive episode (mild, moderate or severe)
  - Phobias
-

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CIS-R (Clinical Interview Schedule – Revised)	<ul style="list-style-type: none"> <li>• Obsessive-compulsive disorder</li> <li>• Panic disorder</li> <li>• CMD-NOS</li> </ul>
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*continued*

Also see **common mental disorders** and **CMD symptoms**.

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Common mental disorders (CMDs)	<p>These are characterised by a variety of symptoms such as fatigue and sleep problems, forgetfulness and concentration difficulties, irritability, worry, panic, hopelessness, and obsessions and compulsions, which present to such a degree that they cause problems with daily activities and distress. The prevalence of CMD symptoms in the week prior to interview was assessed using the revised version of the Clinical Interview Schedule (CIS-R). A score of 12 or more indicates the presence of significant symptoms of CMD while a score of 18 or more indicates symptoms of a level likely to require treatment.</p>
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Also see **CMD symptoms** and **CIS-R** (Clinical Interview Schedule – Revised).

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Common mental disorders (CMDs) symptoms	<p>The CIS-R comprises 14 sections, each covering a particular symptom of CMD as follows:</p> <ul style="list-style-type: none"> <li>• <b>Somatic symptoms</b> are characterised by a physical ache or pain/discomfort that cannot be attributed to a medical condition or to the use of drugs. Somatic symptoms often interfere significantly with a person's ability to perform important activities.</li> <li>• <b>Fatigue</b> the emphasis is on feelings of bodily or physical weakness and exhaustion after only minimal effort, accompanied by a feeling of muscular aches and pains and inability to relax. A variety of other unpleasant physical feelings are common, such as dizziness, tension headaches, and feelings of general instability.</li> <li>• <b>Concentration and forgetfulness</b> this includes the inability to concentrate without the mind wandering and forgetting something important to the extent that it interferes with a person's ability to perform daily activities.</li> <li>• <b>Sleep problems</b> are characterised by a disturbance in the person's amount of sleep, quality or timing of sleep, or in behaviours or physiological conditions associated with sleep.</li> <li>• <b>Irritability</b> is associated with feeling short tempered and angry to the extent that it results in arguments or quarrels.</li> </ul>
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Common mental disorders (CMDs) symptoms

*continued*

- **Worry about physical health** this is defined by feelings of worry about a physical/serious physical illness to the extent that an individual is unable to take their mind off their health worries.
  - **Depression** is characterised by a lowering of mood, reduction of energy, and decrease in activity. Capacity for enjoyment, interest, and concentration is reduced, and marked tiredness after even minimum effort is common.
  - **Depressive ideas** are characterised by loss of self-esteem and ideas of worthlessness or guilt. Suicidal thoughts are common.
  - **Worry** is associated with a persistent feeling of worry about things (other than physical health).
  - **Anxiety** is defined as generalised and persistent but not restricted to, or even strongly predominating in, any particular environmental circumstances. The dominant symptoms are variable but include complaints of persistent nervousness, trembling, muscular tensions, sweating, light-headedness, palpitations, dizziness, and discomfort.
  - **Phobias** are a group of disorders in which anxiety is evoked only, or predominantly, in certain well-defined situations that are not currently dangerous. As a result, these situations are characteristically avoided or endured with dread. Individual symptoms include palpitations or feeling faint and are often associated with secondary fears of dying, losing control, or going mad.
  - **Panic** the essential feature is recurrent attacks of severe anxiety (panic), which are not restricted to any particular situation or set of circumstances and are therefore unpredictable. The dominant symptoms include sudden onset of palpitations, chest pain, choking sensations, dizziness, and feelings of unreality.
  - **Compulsions** are repetitive, purposeful and ritualistic behaviours or mental acts, performed in response to obsessive intrusion and to a set of rigidly prescribed rules.
  - **Obsessions** are defined as recurrent and persistent thoughts, impulses or images that are intrusive and inappropriate and cause anxiety or distress.
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Common mental disorders (CMDs) symptoms <i>continued</i>	<p>Symptoms of CMD are not reported on separately in the APMS 2014 report, but are included in the archived dataset.</p> <p>Also see <b>common mental disorders</b> and <b>CIS-R</b> (Clinical Interview Schedule – Revised).</p>
Community care services	Community care services included use of the following in the past year: a psychiatrist, psychologist, community psychiatric nurse, community learning difficulty nurse, other nursing services, social worker, self-help/support group, home help/homecare worker or outreach worker.
Comorbidity	The co-occurrence of two (or more) different conditions. Comorbidity is associated with increased severity and longer duration of disorders, greater functional disability and increased use of health services. In this report this refers to psychiatric comorbidity only.
Current treatment for mental or emotional problem	Current treatment for a mental or emotional problem included currently receiving any psychoactive medication, counselling or talking therapy, for a mental, nervous or emotional problem.
Day care services	Day care service use included use of a community mental health centre, day activity centre, sheltered workshop and other nursing services in the past year.
Depot injection	When antipsychotic medication is given by injections on a monthly basis, these are sometimes termed depot injections.
Depressive symptoms	Depressive symptoms include low mood and loss of interest and enjoyment in ordinary things and experiences.
Drug dependence	<p>Dependence syndrome is defined in ICD-10 as ‘a cluster of behavioural, cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state’. A threshold of three or more of the following occurring in the past 12 months is required for a formal diagnosis:</p> <ul style="list-style-type: none"> <li>• Preoccupation with substance use</li> <li>• A sense of need or dependence</li> <li>• Impaired capacity to control substance-taking behaviour</li> </ul>

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Drug dependence	<ul style="list-style-type: none"><li>• Increased tolerance</li></ul>
<i>continued</i>	<ul style="list-style-type: none"><li>• Withdrawal symptoms, and</li><li>• Persistent substance use despite evidence of harm.</li></ul>

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DSM (Diagnostic and Statistical Manual of Mental Disorders)	The Diagnostic and Statistical Manual of Mental Disorders is a manual produced by the American Psychiatric Association that categorises currently recognised mental health disorders. While DSM-5 has since been released, DSM-IV was in place when APMS 2014 was in development, and where survey measures operational DSM criteria, they tend to draw on DSM-IV.
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Economic activity/ employment status	Economically active people are those over the minimum school-leaving age who were working or unemployed in the week before the week of the interview. These people constitute the labour force.
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#### *Employed*

This category includes people aged 16 and over who, in the week before the week of the interview, worked for wages, salary or other form of cash payment such as commission or tips, for any number of hours. It covers people absent from work in the reference week because of holiday, sickness, strike or temporary lay-off, provided they had a job to return to with the same employer. It also includes people attending an educational establishment during the specified week if they were paid by their employer while attending it, people who worked in Government training schemes and unpaid family workers. People are excluded if they have worked in a voluntary capacity for expenses only, or only for payment in kind, unless they worked for a business, firm or professional practice owned by a relative. Full-time students are classified as 'working', 'unemployed' or 'inactive' according to their own reports of what they were doing during the reference week.

#### *Unemployed people*

This survey used the International Labour Organisation (ILO) definition of unemployment. This classifies anyone as unemployed if he or she was out of work in the four weeks before interview, or would have been but for temporary sickness or injury, and was available to start work in the two weeks after the interview. Otherwise, anyone out of work is classified as economically inactive.

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Economic activity/  
employment status  
*continued*      *Economically inactive*  
The 'economically inactive' group includes students, and those looking after the home, long term sick or disabled, or retired.

Most of the analyses based on employment status in the report are based on those aged 16 to 64.

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Equivalised  
household income      Making precise estimates of household income, as is done for example in the Family Resources Survey, requires far more interview time than available to this survey. Household income was thus established by means of a show card on which banded incomes were presented. Information was obtained from the selected participant, although they were encouraged to seek further information from the household reference person when this was someone else in the household.

Initially the participant was asked to state their own aggregate gross income, and was then asked to estimate the total household income including that of any other people in the household. Household income can be used as an analysis variable, but there has been interest in using measures of equivalised income that adjust income level to take account of the number of people in the household. Methods of doing this vary in detail: the starting point is usually an exact estimate of net income, rather than the banded estimate of gross income obtained in APMS 2014. The method used in the present report uses the McClements scoring system, described below.

1. A score was allocated to each household member, and these were added together to produce an overall household McClements score. Household members were given scores as follows:

First adult 0.61

Spouse/partner 0.39

Other second adult 0.46

Third adult 0.42

Subsequent adults 0.36

Dependant aged 0–1 0.09

Dependant aged 2–4 0.18

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Equivalised	Dependant aged 5–7 0.21
household income	Dependant aged 8–10 0.23
<i>continued</i>	Dependant aged 11–12 0.25
	Dependant aged 13–15 0.27
	Dependant aged 16+ 0.36

2. The equivalised income was derived as the annual household gross income divided by the McClements score. Where information on annual household gross income was not available, this was replaced with annual individual gross income.
  3. This equivalised annual income was attributed to all members of the household, including children.
  4. Households were ranked by equivalised income, and quintiles q1–q5 were identified. Because incomes were obtained in banded form, there were clumps of households with the same income spanning the quintiles. It was decided not to split clumps but to define the quintiles as ‘households with income up to q1’, ‘over q1 up to q2’ etc. Equivalised household income quintiles and corresponding income groups:
    - Lowest quintile <£12,999
    - 2nd quintile >=£12,999 <£20,279
    - 3rd quintile >=£20,279 < £31,666
    - 4th quintile >=£31,666 <£52,499
    - Highest quintile >=£52,499.
  5. All individuals in each household were allocated to the equivalised household income quintile to which their household had been allocated. Insofar as the mean number of people per household may vary between quintiles, the numbers in the quintiles will be equal. Inequalities in numbers are also introduced by the clumping referred to above, and by the fact that in any sub-group analysed the proportionate distribution across quintiles will differ from that of the total sample.
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Ethnicity Ethnic group was classified according to the latest ONS's harmonised format:

*White*

English/Welsh/Scottish/Northern Irish/British

Irish

Gypsy or Irish Traveller

Any other White background, please describe

*Mixed/Multiple ethnic groups*

White and Black Caribbean

White and Black African

White and Asian

Any other Mixed/Multiple ethnic background

*Asian/Asian British*

Indian

Pakistani

Bangladeshi

Chinese

Any other Asian background

*Black/African/Caribbean/Black British*

African

Caribbean

Any other Black/African/Caribbean background

*Other ethnic group*

Arab

Any other ethnic group, please describe

For analyses in this report the mixed and multiple ethnicities group was combined with 'other'. For some analyses, the White group was further divided into 'White British' and 'White other'.

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Harmful alcohol use A pattern of alcohol consumption that causes mental or physical damage.

Also see **alcohol dependence** and **hazardous alcohol use**.

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**Hazardous alcohol use** A pattern of alcohol consumption that increases someone’s risk of harm. Some would limit this definition to the physical or mental health consequences (as in harmful use). Others include social consequences. The term is currently used by the World Health Organisation (WHO) to describe this pattern of alcohol consumption. It is not a diagnostic term.

The prevalence in the previous year was assessed using the Alcohol Use Disorders Identification Test (AUDIT) at the initial interview. An AUDIT score of eight or above indicates hazardous alcohol use.

Also see **alcohol dependence** and **harmful alcohol use**.

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**Healthcare services** The ‘health care services used’ variable included an inpatient stay or outpatient visit in the past quarter, or spoken with a GP in the past year, for a mental or emotional reason. The time frame varied and so it is important to note that this variable does not represent all health care services used for a mental or emotional problem in the past year.

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**Health conditions** The 2007 and 2014 surveys adopted a show card approach to measuring self-reported general health and long standing illness. Participants were asked to identify which (if any) of the conditions listed below they had had since the age of 16.

- Cancer
- Diabetes
- Epilepsy/fits
- Migraine or frequent headaches
- Dementia or Alzheimer’s disease
- Anxiety, depression or other mental health issue
- Cataracts/eyesight problems
- Ear/hearing problems
- Stroke
- Heart attack/angina
- High blood pressure
- Bronchitis/emphysema
- Asthma

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Health conditions <i>continued</i>	<ul style="list-style-type: none"><li>• Allergies</li><li>• Stomach ulcer or other digestive problems</li><li>• Liver problems</li><li>• Bowel/colon problems</li><li>• Bladder problems/incontinence</li><li>• Arthritis</li><li>• Bone, back, joint or muscle problems</li><li>• Infectious disease</li><li>• Skin problems</li><li>• Other</li></ul>
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Household structure	<p>Information is collected from participants about who else is living in the household with them. This is used to derive a classification of household type. The following groupings are used in the report:</p> <ul style="list-style-type: none"><li>• 1 adult 16–59, no child</li><li>• 2 adults 16–59, no child</li><li>• Small family (1 or 2 adults and 1 or 2 children)</li><li>• Large family (1 or more adults and 3 or more children)</li><li>• Large adult household (3 or more adults)</li><li>• 2 adults one or both 60+, no child</li><li>• 1 adult 60+, no child</li></ul>
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ICD-10	<p>The International Classification of Diseases and Related Health Problems 10th Revision (ICD-10) is a classification system for diseases and signs, symptoms, abnormal findings, complaints, social circumstances and external causes of injury or diseases, as classified by the World Health Organisation (WHO).</p>
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Medications	<p>Current use of specific psychotropic medications was asked about using a series of showcards. These included all the most commonly prescribed preparations used in the treatment of mental health problems. Both generic and brand names were shown. Depot injections used in the treatment of psychosis were also included. Individual medications were grouped into categories reflecting what they are used to treat. One type of medication could be in more than one category.</p>
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Medications

Medications used in the treatment of:

*continued*

*Anxiety*

- Amitriptyline
- Buspirone
- Citalopram
- Clomipramine
- Diazepam
- Escitalopram
- Fluoxetine
- Flupentixol
- Gabapentin
- Levemepromazine
- Lorazepam
- Oxazepam
- Paroxetine
- Pregabalin
- Promazine
- Sertraline
- Venlafaxine

*Bipolar disorder*

- Aripiprazole
- Carbamazepine
- Haloperidol
- Lamotrigine
- Lithium
- Olanzapine
- Paliperidone
- Quetiapine
- Risperidone
- Valproate
- Zuclopentixol

*Depression*

- Agomelatine
- Amitriptyline
- Citalopram
- Clomipramine
- Dosulepin
- Duloxetine
- Escitalopram
- Fluoxetine
- Flupentixol
- Fluvoxamine
- Imipramine
- Lamotrigine
- Lithium
- Lofepramine
- Mianserin
- Mirtazapine
- Moclobemide
- Nortriptyline
- Paroxetine
- Phenelzine
- Reboxetine
- Sertraline
- Tranylcypromine
- Trazodone
- Trimipramine
- Tryptophan
- Venlafaxine

*ADHD*

- Atomoxetine
- Methylphenidate

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Medications  
*continued*

*Sleep problems*

- Melatonin
- Nitrazepam
- Oxazepam

- Zaleplon
- Zolpidem
- Zopiclone
- Temazepam

*Psychosis*

- Amisulpride
- Aripiprazole
- Chlorpromazine
- Clopixol (Zuclopentixol decanoate)
- Clozapine
- Depixol (Flupentixol decanoate)
- Flupentixol
- Haldol (Haloperidol decanoate)
- Haloperidol
- Levemepromazine
- Modecate (Fluphenazine decanoate)
- Olanzapine
- Paliperidone
- Promazine
- Quetiapine
- Risperdal Consta (Risperidone long-acting injection)
- Risperidone
- Sulpiride
- Trifluoperazine
- Zuclopentixol

In addition, medications used to treat the following conditions were also asked about:

*Substance dependence*

- Acamprosate
- Buprenorphine
- Chlordiazepoxide
- Diazepam
- Methadone
- Naltrexone

*Epilepsy*

- Carbamazepine
- Lamotrigine
- Levetiracetam
- Pregabalin
- Valproate

*Dementia*

- Donepezil
  - Galantamine
  - Rivastigmine
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Mood Disorders Questionnaire (MDQ)	<p>Bipolar spectrum disorders are under-diagnosed in primary care and psychiatric patient populations. The Mood Disorders Questionnaire (MDQ) is a 13-item self-report questionnaire designed to screen for bipolar spectrum disorders (BD type I, II, cyclothymia and BD not otherwise specified). In a yes/no format, the scale screens for lifetime history of DSM-IV mania/hypomania.</p> <p>Hirschfeld RMA. et al. Development and validation of a screening instrument for bipolar spectrum disorder: The Mood Disorder Questionnaire, <i>Am J of Psychiatry</i>, 2000; 157: 1873–5.</p>
Percentile	<p>The value of a distribution which partitions the cases into groups of a specified size. For example, the 20th percentile is the value of the distribution where 20 per cent of the cases have values below the 20th percentile and 80 per cent have values above it. The 50th percentile is the median.</p>
Personality disorder	<p>Personality disorder is ‘an enduring pattern of inner experience and behaviour that deviates markedly from the expectation of the individual’s culture, is pervasive and inflexible, has an onset in adolescence or early childhood, is stable over time, and leads to distress or impairment’ (American Psychiatric Association, 1994). Two types of personality disorder were investigated: antisocial personality disorder (ASPD) and borderline personality disorder (BPD).</p> <p>Also see <b>antisocial (ASPD)</b> and <b>borderline personality disorder (BPD)</b>.</p>
Psychiatric morbidity	<p>The expression ‘psychiatric morbidity’ refers to the degree or extent of the prevalence of mental health problems within a defined area.</p>
Psychotic disorder	<p>These are disorders that produce disturbances in thinking and perception that are severe enough to distort the person’s perception of the world and their relationship to events within it. Psychoses are normally divided into two groups: organic psychoses, such as dementia and Alzheimer’s disease, and functional psychoses, which mainly cover schizophrenia and affective psychosis. The disorders discussed in Chapter 5 are based on the World Health Organisation’s International Classification of Diseases chapter on Mental and Behavioural Disorders (ICD-10) Diagnostic Criteria for Research (DCR) and consist mainly of two types: Schizophrenia and affective psychosis.</p>

Psychotic disorder <i>continued</i>	Two measures of psychosis are presented in the chapter: 'probable psychotic disorder' (consistent with the approach used in the 2000 and 2007 surveys) and 'psychotic disorder'. These are defined in Section 5.2 in Chapter 5.
Posttraumatic stress disorder	<p>Posttraumatic stress disorder (PTSD) is distinct from other psychiatric illnesses in that its diagnosis requires exposure to a traumatic stressor (being actually involved in, witnessing or confronted with life endangerment, death, serious injury or threat to self or others) which is accompanied by feelings of intense fear, horror, or helplessness.</p> <p>Also see <b>PTSD-CL</b> and <b>Trauma</b>.</p>
PTSD-CL	<p>The PTSD Checklist (PCL) is a 17-item self-report measure reflecting DSM-IV symptoms of PTSD. The PCL has a variety of clinical and research purposes, including:</p> <ul style="list-style-type: none"> <li>• Testing individuals for possible PTSD</li> <li>• Aiding in diagnostic assessment of PTSD</li> <li>• Monitoring change in PTSD symptoms</li> </ul> <p>The PCL-C (civilian) asks about symptoms in relation to generic "stressful experiences" and can be used with any population. This version simplifies assessment based on multiple traumas because symptom endorsements are not attributed to a specific event.</p> <p>The measure is described more fully in Chapter 4.</p>
P value	A p value is the probability of the observed result occurring due to chance alone. A p value of less than 5% is conventionally taken to indicate a statistically significant result ( $p < 0.05$ ). It should be noted that the p value is dependent on the sample size, so that the sample differences or associations which are very small may still be statistically significant. Results should therefore be assessed for their importance on the magnitude of the differences or associations as well as the p value itself.
Quintile	Quintiles are percentiles which divide a distribution into fifths, i.e. the 20th, 40th, 60th and 80th percentiles.

Region	Tables within chapters provide data for regional analysis based on former Government Office Regions. Few disorders in this report varied significantly by region, and generally region is not referred to in the text of the chapters. A table presenting the breakdown of each disorder by region is included in each chapter as this information may be useful for users of the data involved in regional service planning and provision.
SAPAS (Standardised Assessment of Personality – Abbreviated Scale)	The Standardised Assessment of Personality – Abbreviated Scale (SAPAS) is a screening questionnaire consisting of eight dichotomously rated items designed to screen for personality disorder.
SCAN (Schedule for Clinical Assessment in Neuropsychiatry)	Schedule for Clinical Assessment in Neuropsychiatry version 2.1 (SCAN), a semi-structured interview that provides ICD-10 diagnoses of psychotic disorder.
SCID-II (Structured Clinical Interview for DSM-IV)	APMS adopts the DSM-IV classification of personality disorder and uses the Structured Clinical Interview for DSM-IV (SCID-II). The SCID-II is available as both a self-completion screen and as a semi-structured clinician administered face to face interview. Only the self-completion screen was included in APMS 2014. This was used alongside the SAPAS.
Screening	For the purposes of this report, ‘screening’ involves identifying people who have signs or traits that indicate the likely presence of a disorder. The term is not used here to refer to national screening programmes such as those recommended by the UK National Screening Committee (UK NSC).
Self-harm	The definition of self-harm used on APMS refers to self-harming without suicidal intention and includes acts such as cutting, burning, swallowing, and other self-inflicted injuries.
Standardisation	In this report, standardisation refers to standardisation (or ‘adjustment’) by age (see age-standardisation).
Suicidal behaviour	Suicidal behaviour includes suicidal thoughts and attempts. Suicidal thoughts refer to thinking about taking one’s own life; it does not incorporate feelings about ‘life not being worth living’ or ‘wishing to be dead’. ‘Suicidal attempts’ is a term used to describe an attempt to take one’s life.

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Trauma	<p>According to DSM-IV, traumatic stressors are events in which an individual experiences, witnesses, or is confronted with life endangerment, death, or serious injury or threat to self or others. Traumatic stressors are distinct from and more severe than generally stressful life events, such as divorce or expected bereavement.</p> <p>Also see <b>PTSD</b> (posttraumatic stress disorder) and <b>PTSD-CL</b> (Post-traumatic Stress Disorder – Check List Questionnaire).</p>
Treatment	See <b>current treatment for a mental or emotional problem</b> .
Wellbeing	<p>Subjective wellbeing is generally regarded as consisting of at least two factors. Broadly, these are ‘hedonic’ wellbeing (happiness, pleasure, enjoyment) and ‘eudemonic’ wellbeing (purpose, meaning, fulfilment).</p>
WEMWBS (Warwick-Edinburgh Mental Well-being Scale)	<p>The Warwick-Edinburgh Mental Well-being Scale (WEMWBS) was developed to enable the monitoring of mental wellbeing in the general population.</p> <p>WEMWBS is a 14-item scale with 5 response categories, summed to provide a single score ranging from 14–70. The items are all worded positively and cover both feeling and functioning aspects of mental wellbeing.</p>

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This report presents findings of a survey of mental illness and wellbeing among people aged 16 and over living in private households in England. The survey was commissioned by NHS Digital and funded by the Department of Health, and is the fourth in a series of surveys of adult mental health.

### **NHS Digital**

NHS Digital is the national provider of information, data and IT systems for commissioners, analysts and clinicians in health and social care. Acting as a 'hub' for high quality, national, comparative data, it delivers information for local decision makers, to improve the quality and efficiency of care. NHS Digital is an executive non-departmental public body, sponsored by the Department of Health

### **NatCen Social Research**

NatCen Social Research is an independent institute specialising in social survey and qualitative research for the development of public policy. Research is in areas such as health, housing, employment, crime, education and political and social attitudes. Projects include ad hoc, continuous and longitudinal surveys, using face to face, telephone, postal and web methods.

### **Department of Health Sciences, University of Leicester**

The Department of Health Sciences at the University of Leicester is a research-led department with established strengths across epidemiology, medical statistics, public health, primary care, health services research, and psychiatry. Structured to support innovative multidisciplinary and multi-method solutions to research questions, it conducts high quality scientific research that can inform policies and practices aimed at securing people's health and wellbeing.