Adult psychiatric morbidity in England, 2007

Results of a household survey

Edited by Sally McManus, Howard Meltzer, Traolach Brugha, Paul Bebbington, Rachel Jenkins

A survey carried out for The NHS Information Centre for health and social care
by the National Centre for Social Research
and the Department of Health Sciences, University of Leicester

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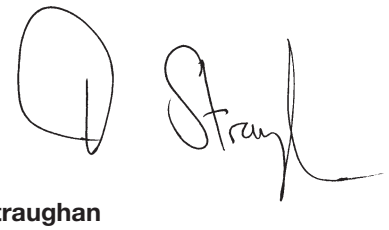
Refer to separate document for Appendices and Glossary

Foreword

Mental disorders are extremely common across the world, often disabling and generally receiving far less attention in research and survey programmes than physical disorders. At The NHS Information Centre, we are committed to providing quality and timely information to monitor the health of the population in England and this includes sustaining a national mental health survey programme.

The survey reported here is the third general population survey of adults and examines trends over the last 15 years. It is innovative in that it has added new questions on eating disorder, attention deficient hyperactivity disorder, posttraumatic stress disorder and problem gambling: a proactive response to the mental health issues of our time.

Again, this proves the ability of The NHS Information Centre to provide appropriate information befitting of national concerns to improve care received and the targeting of resources effectively.



Tim Straughan

Chief Executive

The NHS Information Centre for health and social care

Editors' acknowledgements

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We would also like to thank: the Blue Team in NatCen's Operations department, including Theresa Patterson, Bryan Mason, Helen Selwood, Coral Lawson and Claire Crudington, for organising the fieldwork and data editing; the computing staff, particularly Colin Miceli, for a substantial programming task; Susan Purdon, Shaun Scholes and David Hussey for sampling and statistical expertise; Melanie Doyle for survey management; Katharine Sadler, Marie Sanchez and Claire Devervill for data checking and preparation of the dataset for archive; and Dhriti Jotangia and Jenny Harris who worked on all aspects of the survey. Many of the above also contributed to the survey reporting, as well as Soazig Nicholson, Joanne Thompson, Elizabeth Fuller, John D'Souza, and Heather Wardle.

The overall lead on the APMS second phase was Prof Traolach Brugha of the Department of Mental Health Sciences, University of Leicester. Jane Smith coordinated the committed team of clinical interviewers. We would like to thank her and Karen Ricci, Janet Spittlehouse and Shirley Wain, for their success in conducting the phase two interviews. Trevor Hill produced the phase two diagnostic outcomes and Dr John Bankhart contributed to analysis.

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Additional specialist advice was provided on topics new to the survey from key experts in the relevant fields, including on posttraumatic stress disorder by Prof Chris Brewin; eating disorder by Prof Bob Palmer; personality disorder by Dr Mike Crawford; and ADHD by Profs Eric Taylor and Philip Asherson.

Throughout the project we have been ably led by the sponsor at The NHS Information Centre for health and social care. This has included input from: Nick Armitage, Suzie Brown, Bob Cockeram, Victoria Cooper, Alison Crawford, Netta Hollings, Jo Simpson, Maria Short, Julie Stroud and Andy Sutherland.

Sally McManus, Howard Meltzer, Traolach Brugha, Paul Bebbington and Rachel Jenkins

Notes

1. The data used in the report have been weighted. The weighting is described in Chapter 13. Both unweighted and weighted sample sizes are shown at the foot of each table. The weighted numbers reflect the relative size of each group in the population, not numbers of interviews conducted, which are shown by the unweighted bases.

2 One weighting variable was used for disorders and behaviours based on phase one data collection, and disorder specific weighting variables were used for results based on the phase two interview (which in this report are: psychosis, borderline personality disorder and antisocial personality disorder).

3 Where trend data is presented, data from the 1993 and 2000 surveys have been rerun on England only, to be comparable with the 2007 survey coverage.

4 The following conventions have been used in tables:

- \- no observations (zero value)
- 0 non-zero values of less than 0.5% (or 0.05% where data are presented to one decimal place) and thus rounded to zero
- .. data not available (e.g. the disorder was not assessed that survey year)
- [ ] used to warn of small sample bases, if the unweighted base is less than 40.

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

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

7 The prevalence of the disorders and behaviours in this report is presented as percentages to one decimal place, which is equivalent to reporting rates per thousand. Tables showing treatment and service use rates show whole percentages.

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

9 The group to whom each table refers is stated at the upper left corner of the table.

10 The term 'significant' refers to statistical significance (at the 95% level) 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 key estimates are shown in Chapter 13.

Executive summary

Introduction

The Adult Psychiatric Morbidity Survey (APMS) 2007 is the third survey of psychiatric morbidity among adults living in private households. It was carried out by the National Centre for Social Research (NatCen) in collaboration with the University of Leicester, and was commissioned by The NHS Information Centre for health and social care.

The main aim of the 2007 survey was to collect data on mental health among adults aged 16 and over living in private households in England. It is the primary source of information on the prevalence of both treated and untreated psychiatric disorders and their associations: data which cannot be obtained from other sources. As with the surveys of adult psychiatric morbidity conducted in 1993 and 2000, a two-phase approach was used. The first phase interviews included structured assessments serving diagnostic criteria and screening instruments for a range of mental disorders, as well as questions on topics such as general health, service use, risk factors and demographics. The second phase interviews were carried out by clinically trained research interviewers. A subsample of phase one respondents were invited to take part in a second phase interview. The assessment of conditions such as psychosis and personality disorder required a more flexible interview than was possible at the first phase, and the use of clinical judgement in ascertaining a diagnosis.

Each chapter of this report focuses on a different mental disorder or behaviour. The chapters present disorder (or screen positive) prevalence by various characteristics, including age, sex, ethnicity, marital status, region, and the level and nature of treatment and service use. Where comparable data exist from the 1993 and 2000 surveys, changes in rate are also considered.

Prevalence estimates are often presented as rates per thousand in psychiatric epidemiology. The prevalence of disorders in this report are given as percentages to one decimal place as this provides the same level of detail, but is easier to reference in the text and is more familiar to a wider readership than rates per thousand. However, treatment and service use rates are presented as full integer percentages so as not to imply spurious precision.

A copy of the dataset will be deposited at the UK Data Archive.

Chapter 2: Common mental disorders (CMDs)

CMDs include different types of depression and anxiety. They cause appreciable emotional distress and interfere with daily function, but do not usually affect insight or cognition.

In the APMS survey series, CMDs were assessed in the phase one interview using the revised Clinical Interview Schedule (CIS-R), which covers non-psychotic symptoms in the past week. Responses were used to generate an overall score and to diagnose six types of CMD. A score of less than 12 indicated the presence of no clinically significant neurotic symptoms in the week prior to interview.

- Most adults (84.9%) scored less than 12 on the CIS-R. Among the 15.1% of adults

scoring 12 or more, half (7.5%) were in the range 12-17 indicating a level of neurotic symptoms that was significant, but unlikely to warrant treatment. The other half had symptoms of a level of severity likely to require treatment.

- More than half of those with a CMD presented with mixed anxiety and depressive disorder (9.0%).
- Women were more likely than men to have a CMD (19.7% and 12.5% respectively), and rates were significantly higher for women across all categories of CMD, with the exception of panic disorder and obsessive compulsive disorder.
- Overall, the proportion of people aged 16-64 meeting the criteria for at least one CMD increased between 1993 and 2000, but did not change between 2000 and 2007 (15.5% in 1993, 17.5% in 2000, 17.6% in 2007). The largest increase in rate of CMD between 1993 and 2007 was observed in women aged 45-64, among whom the rate rose by about a fifth.
- Rates of CMD varied by age: those aged 75 and over were the least likely to have a CMD (6.3% of men, 12.2% of women). In women, the rate peaked among 45-54 year olds, with a quarter (25.1%) of this group meeting the criteria for at least one CMD. Among men the rate was highest in 25-54 year olds (14.6% of 25-34 year olds, 15.0% of 35-44 year olds, 14.5% of 45-54 year olds).
- A quarter (24%) of people with a CMD were receiving treatment for an emotional or mental problem, mostly in the form of medication. The level and nature of treatment varied by type of CMD: over half (57%) the adults with a phobia were in receipt of treatment, but only 15% of those with mixed anxiety and depressive disorder. Half (48%) the people with two or more CMDs were receiving treatment for a mental or emotional problem.

Chapter 3: Posttraumatic stress disorder (PTSD)

PTSD is a disabling condition characterised by flashbacks and nightmares, avoidance and numbing, and hyper-vigilance. It is different from other psychiatric disorders in that diagnosis requires that symptoms are caused by an external, traumatic event. A traumatic event is where an individual experiences, witnesses, or is confronted with life endangerment, death or serious injury or threat to self or close others. Traumatic events are distinct from and more severe than generally stressful life events.

Chapter 3 presents the first prevalence estimates of screening positive for posttraumatic stress disorder (PTSD) to be based on a large general population sample of adults in England. There are methodological limitations to the data collected. Screening positive on the Trauma Screening Questionnaire (TSQ), administered by self-completion, indicated presence of trauma related symptoms in the past week and that clinical assessment for PTSD was warranted.

- A third (33.3%) of people reported having experienced a traumatic event since the age of 16. Experience of trauma in adulthood was higher in men (35.2%) than women (31.5%).
- The proportion reporting trauma in adulthood varied with age. It is unsurprising that adult trauma was least likely in the 16-24 age group (23.5%), given the shorter period of time during which they were at risk (between zero and nine years).
- Overall, 3.0% of adults screened positive for current PTSD. While men were more likely than women to have experienced a trauma; there was no significant difference by sex in rates of screening positive for current PTSD (2.6% of men, 3.3% of women).
- 'Conditional probability' was used to indicate the likelihood that current symptoms of PTSD will be present given that a respondent has experienced a trauma in adulthood. There are caveats to how this probability can be interpreted and it is not a comparable measure to that used on other studies. It is included to facilitate comparison between groups.

- The conditional probability of screening positive for current PTSD given that a trauma had occurred since age 16 was higher for women (10.4%) than for men (7.5%).
- Screening positive for current PTSD declined with age, from 4.7% of 16-24 year olds to 0.6% of adults aged 75 or over.
- About a quarter (28%) of people screening positive for PTSD were receiving treatment for a mental or emotional problem, compared with 7% of those who screened negative.

Chapter 4: Suicidal thoughts, suicide attempts and self-harm

Suicidal thoughts, non-fatal suicide attempts and self-harm are of particular interest because of their power in predicting who is most likely to go on to commit suicide. These thoughts and behaviours are also associated with high levels of distress, both for the people engaging in them and for those around them.

Respondents were asked questions about suicidal thoughts, suicide attempts and self-harm in the face to face interview: three of these questions were then asked again in the self-completion. A higher proportion of people reported suicidal thoughts, attempts and self-harm when asked as self-completion questions than when asked face to face. Prevalence estimates from both methods are presented: for comparability, only the face to face rates are used for comparisons with the 2000 survey.

- Overall 16.7% of people reported in the self-completion that they had thought about committing suicide at some point in their life, 5.6% said that they had attempted suicide, and 4.9% said that they had engaged in self-harm. The prevalence of each broadly declined with age.
- The proportion of women reporting suicidal thoughts in the past year increased between the 2000 and 2007 surveys. There was also an increase in the proportion of people reporting self-harm, particularly among women aged 16-24.
- 63% of men and 58% of women who reported having attempted suicide said that they had sought help following the last attempt. The most common sources of help sought were a GP or family doctor; hospital or other specialist medical or psychiatric services; and family, friends or neighbours.
- Younger adults were more likely than older adults to have sought help after their most recent suicide attempt: 70% of those aged 16-34 reported that they had sought help, compared with 51% of those aged 55 or over.
- Of those who reported self-harm, 42% of men and 53% of women received medical or psychiatric help as a result.

Chapter 5: Psychosis

Psychoses are disorders that produce disturbances in thinking and perception severe enough to distort perception of reality. Symptoms include auditory hallucinations, delusional beliefs and disorganised thinking. The main types are schizophrenia and affective psychosis, such as bipolar disorder and manic depression. Organic psychoses, such as dementia and Alzheimer's disease, are not covered.

Chapter 5 presents prevalence estimates of both 'psychotic disorder' and 'probable psychosis' in the adult general population. The key difference between these variables was that a positive diagnosis was only possible for 'psychotic disorder' if the respondent was assessed as having had a psychotic episode in the past year using the phase two Schedule for Clinical Assessment in Neuropsychiatry (SCAN) interview; while a positive diagnosis of 'probable psychosis' could also be made on the basis of responses to the phase one screening questions.

- The overall prevalence of psychotic disorder in the past year was 0.4% (0.3% of men, 0.5% of women). In both men and women the highest prevalence was observed in those aged 35 to 44 years (0.7% and 1.1% respectively).
- There was no change in the overall prevalence of probable psychosis between the 2000 and 2007 surveys: the rate was 0.5% of 16-74 year olds in both years. In both surveys the highest prevalence was observed among those aged 35 to 44 years (1.0% in 2000, 0.8% in 2007).
- The level and nature of treatment and service use among people aged 16-74 with probable psychosis was very similar in 2000 and 2007. For example the proportion receiving some form of treatment (medication or counselling) for a mental or emotional problem was 85% in 2000, and 80% in 2007.
- Treatment rates were lower using the 'psychotic disorder' variable: just two-thirds (65%) of people identified by a SCAN assessment as having had a psychotic episode in the past year were receiving medication, counselling or other therapy.

Chapter 6: Antisocial and borderline personality disorders

Personality disorders are longstanding, ingrained distortions of personality that interfere with the ability to make and sustain relationships. Antisocial personality disorder (ASPD) and borderline personality disorder (BPD) are two types with particular public and mental health policy relevance.

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. BPD is characterised by high levels of personal and emotional instability associated with significant impairment. People with BPD have severe difficulties with sustaining relationships, and self-harm and suicidal behaviour is common.

Personality disorder was assessed in several stages, including using the Structured Clinical Interview for DSM-IV (SCID-II) in the phase two interview. In Chapter 6, estimates of the one-year prevalence of ASPD and BPD are presented. There were just nine cases of ASPD and 16 cases of BPD identified in the sample. These were weighted up to represent the projected 23 and 33 cases respectively that would have been identified if everyone in the sample had had a phase two assessment.

- ASPD was present in 0.3% of adults aged 18 or over (0.6% of men and 0.1% of women). 1.7% of men aged 18-34 had ASPD, while no cases were identified in men aged 55 or over. 0.4% of women aged 16-34 had ASPD, while no cases were identified in those aged over 35.
- The overall prevalence of BPD was similar to that of ASPD, at 0.4% of adults aged 16 or over. While the association with sex was not significant, the observed pattern fits with the expected profile (0.3% of men, 0.6% of women).
- The prevalence of ASPD in adults aged 16-74 and living in England was similar in 2000 (0.6%) and 2007 (0.4%), despite some differences in the sampling approach used.
- Likewise, the rate of BPD in those aged 16-74 and living in England did not change significantly between the 2000 (0.8%) and 2007 (0.5%) surveys.

Chapter 7: Attention Deficit Hyperactivity Disorder

ADHD is a developmental disorder consisting of core dimensions of inattention, hyperactivity and impulsiveness. Characteristic symptoms and behaviours include excessive problems with organisation, difficulties with activities requiring cognitive involvement, restlessness and impulsiveness to an extent that causes significant distress or interferes with everyday functioning.

The first prevalence estimates of possible Attention Deficit Hyperactivity Disorder (ADHD) in the English adult general population are presented in Chapter 7. A score of four or more on the Adult Self-Report Scale-v1.1 (ASRS) was considered to be a positive screen indicating that a clinical assessment for ADHD may be warranted.

- Overall, 8.2% of the adult population in England screened positive for ADHD characteristics. 2.3% of all adults reported five characteristics of ADHD and 0.6% reported all six characteristics of ADHD. Screening positive for ADHD did not vary significantly between men and women.
- The prevalence of screening positive for the disorder decreased with age. The proportion of men and women scoring four or more on the ASRS screen was highest among those aged 16-24 (13.8%) and lowest among those aged 75 and over (4.2%).
- 20% of adults who screened positive for ADHD were receiving medication, counselling or therapy for a mental health or emotional problem. Antidepressant medication was the type of psychoactive drug most widely taken. Two of the most commonly prescribed types of ADHD medication, Ritalin and Straterra, were also asked about. No women screening positive and 0.2% of men screening positive for the disorder were currently taking either of these.

Chapter 8: Eating disorder

Eating disorders, including anorexia nervosa, bulimia nervosa and related conditions, generally have an onset in childhood or adolescence. They include a variety of types of disordered eating, and range greatly in severity. People with eating disorders often experience acute psychological distress, as well as severe physical complications.

Chapter 8 presents the first data based on a large general population sample to describe the distribution of possible eating disorder in England across the adult age range. The SCOFF screening tool for eating disorders was administered as part of the self-completion section of the interview. Endorsement of two or more items represented a positive screen for eating disorder. This threshold indicated that clinical assessment for eating disorder was warranted.

- Overall, 6.4% of adults screened positive for an eating disorder. The proportion who screened positive and also reported that their feelings about food had a significant negative impact on their life was 1.6%.
- At 9.2%, women were more likely than men (3.5%) to screen positive for an eating disorder.
- The prevalence of screening positive for an eating disorder decreased with age, and the pattern was particularly pronounced for women. One woman in five (20.3%) age 16-24 screened positive, compared with one woman in a hundred (0.9%) aged 75 and over.
- 19% of adults screening positive for a possible eating disorder were receiving treatment for a mental or emotional problem at the time of interview.

Chapter 9: Alcohol misuse and dependence

Hazardous drinking is a pattern of alcohol consumption carrying risks of physical and psychological harm to the individual. Harmful drinking denotes the most hazardous use of alcohol, at which damage to health is likely. One possible outcome of harmful drinking is alcohol dependence, a cluster of behavioural, cognitive, and physiological phenomena that typically include a strong desire to consume alcohol, and difficulties in controlling drinking.

Chapter 9 presents prevalence estimates of hazardous and harmful drinking, and of alcohol dependence in the adult general population. A survey of the household population such as

this is likely to under-sample dependent adults, who are more likely to be homeless. Moreover, problem drinkers who do live in private households may, like problem drug users, be less available, able or willing to participate in surveys.

Hazardous and harmful drinking were measured using the AUDIT (Alcohol Use Disorders Identification Test), administered in the self-completion. An AUDIT score of eight or more indicated hazardous drinking, and 16 or more indicated harmful drinking. Alcohol dependence was assessed by the self-completed SADQ-C (Severity of Alcohol Dependence Questionnaire, community version). A SADQ-C score of four to 19 indicated mild dependence; a score of 20 to 34, moderate dependence; and a score of 35 or more, severe dependence.

- The prevalence of hazardous drinking identified by APMS 2007 was 24.2% (33.2% of men, 15.7% of women). This included 3.8% of adults (5.8% of men, 1.9% of women) whose drinking could be categorised as harmful. In men, the highest prevalence of both hazardous and harmful drinking was in 25 to 34 year olds, in women in 16 to 24 year olds.
- The prevalence of alcohol dependence was 5.9% (8.7% of men, 3.3% of women). For men, the highest levels of dependence were identified in those between the ages of 25 and 34 (16.8%), for women in those between the ages of 16 and 24 (9.8%). Most recorded dependence was categorised as mild (5.4%), with relatively few adults showing symptoms of moderate or severe dependence (0.4% and 0.1% respectively).
- The prevalence of alcohol dependence was lower for men in 2007 than in 2000, whereas it remained at a similar level in women.
- 14% of alcohol dependent adults were currently receiving treatment for a mental or emotional problem. Dependent women (26%) were more likely than dependent men (9%) to be in receipt of such treatment.

Chapter 10: Drug use and dependence

Drug misuse has been defined as the use of a substance for purposes not consistent with legal or medical guidelines. In a small proportion of users, this may lead to dependence, a cluster of behavioural, cognitive, and physiological phenomena that includes a sense of need or dependence, impaired capacity to control substance-taking behaviour and persistent use despite evidence of harm.

Dependence on specified drugs was measured in the self-completion section of the interview using questions based on the Diagnostic Interview Schedule. Use of a drug in the last year and the presence of one of five symptoms were used to indicate drug dependence, a lower threshold than recommended elsewhere. Dependence was further classified into dependence on cannabis only and dependence of other drugs (with or without cannabis dependence).

- In 2007, the prevalence of drug use in the last year was 9.2% (12.0% of men, 6.7% of women). Drug use was most common in young men aged between 16 and 34 (27.8%) and young women aged between 16 and 24 (21.9%).
- Most of those who had taken drugs in the last year had taken cannabis. The prevalence of cannabis use in the last year was 7.5% (10.1% of men, 5.0% of women).
- The prevalence of drug dependence was 3.4% (4.5% of men, 2.3% of women). Most dependence was on cannabis only (2.5%), rather than other drugs (0.9%). Symptoms of dependence were most commonly reported by adults aged between 16 and 24 (13.3% of men, 7.0% of women in this age group).
- The prevalence of drug dependence was higher in 2000 than in 1993, but has not significantly changed since.
- 14% of adults who were dependent on cannabis only and 36% of those dependent on other drugs were receiving treatment for a mental or emotional problem.

Chapter 11: Gambling behaviour

'Problem gambling' is gambling to a degree that compromises, disrupts or damages family, personal or recreational pursuits. It was measured to DSM-IV criteria in the self-completion section of the phase one interview. Data on gambling behaviour in the past year is also presented in Chapter 11.

- Overall, around two-thirds (65.9%) of adults spent money on a gambling activity in the past year. Men were more likely than women to gamble. The highest rate for men was observed in those aged 25-34 (75.4%), while for women it was in those aged 55-64 (69.5%).
- 3.2% of adults met one or more of the criteria for problem gambling, and so were considered to be at least 'at risk' of problem gambling.
- While participation in gambling in the past year was relatively low in men aged 16-24, in those who did gamble, the proportion at risk of problem gambling was higher than for any other age group.
- 0.7% of people met three or more of the diagnostic criteria, the threshold for problem gambling. 0.3% of people met the threshold of five or more criteria, indicative of pathological gambling. Men were more likely than women to meet both of these thresholds. These figures are in line with results from the British Gambling Prevalence Survey.
- The profile of use for most types of treatment and services was similar for people meeting no problem gambling criteria and for those meeting one or more criteria. However, treatment and service use was higher among adults meeting three or more criteria (the threshold for problem gambling) with 26% in receipt of medication, counselling or therapy for a mental health or emotional problem.

Chapter 12: Psychiatric comorbidity

Psychiatric comorbidity - or meeting the diagnostic criteria for two or more psychiatric disorders - is known to be associated with increased severity of symptoms, longer duration of disorders, greater functional disability and increased use of health services.

Chapter 12 is intended to describe the prevalence of and characteristics associated with psychiatric comorbidity in the English general population, and the correlations between different pairs of psychiatric conditions. It also uses latent class analysis (LCA) to identify underlying clusters of people based on the combinations of conditions they manifest, and to describe the characteristics associated with each cluster. Further details of this are also given in Appendix B and the Glossary. All the disorders and behaviours covered in each of the chapters in this report were included in the analyses of comorbidity.

- Just under a quarter of adults (23.0%) met the criteria (or screened positive) for at least one of the conditions under study. Of those with at least one condition: 68.7% met the criteria for only one condition, 19.1% met the criteria for two conditions and 12.2% met the criteria for three or more conditions. Numbers of identified conditions were not significantly different for men and women.
- There were no negative correlations between any of the conditions (except where they were mutually exclusive), suggesting that the presence of almost any of the conditions in the model increased the likelihood of another condition being present.
- Psychotic disorder and antisocial personality disorder (ASPD) were both very highly comorbid conditions, each being strongly associated with ten of the 14 other conditions in the model. This level of comorbidity was similar for all the disorders measured to diagnostic criteria, except for generalised anxiety disorder (GAD) and mixed anxiety and depression (the latter for methodological reasons).

- We examined how people group together in terms of the type and number of conditions that they were identified with. A six cluster solution emerged as optimal. These clusters were given names to reflect the characteristics of cluster members. The labels were: 'unaffected'; 'moderate internalising'; 'cothymia'; 'comorbid internalising'; 'externalising'; and 'highly comorbid'.

Chapter 13: Methods

The sample for APMS 2007 was designed to be representative of the population living in private households in England. People living in institutions were not covered. This should be borne in mind when considering the survey's account of the population's mental health.

The survey adopted a multi-stage stratified probability sampling design. The sampling frame was the small user Postcode Address File (PAF). One adult aged 16 years or over was selected for interview in each household.

The survey consisted of a phase one interview and a phase two interview conducted with a subsample of repondents. For each phase one respondent, the probability of selection for a phase two assessment was calculated as the greatest of the specific probabilities of four disorders: psychosis; Asperger syndrome; borderline personality disorder; and antisocial personality disorder. The probabilities were based on respondents' responses to screening questions in the phase one questionnaire.

Both the phase one and the phase two interviews took an average of an hour and a half to complete, although some 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.

A primary purpose of the 2007 survey was to assess change in the population prevalence of disorders over time. For this reason maintaining comparability with the 2000 survey was a priority, so both the questionnaire and the way it was administered were largely the same. Differences between the adult psychiatric morbidity surveys include: the 2007 survey covered England only (the populations of Scotland and Wales were also sampled in 1993 and 2000 also sampled Scotland and Wales) and there was no upper age limit to the 2007 survey (capped at 64 in 1993 and 74 in 2000). Several new disorders and topics were covered in 2007, including eating disorder, PTSD, ADHD and gambling behaviour.

At the phase one interview, 57% of those eligible agreed to take part in an interview. After the application of the highest of the four disorder specific sampling fractions, 849 respondents were selected for a phase two interview. Phase two interviews were conducted with 630 of these (74%).

The survey data were weighted to take account of non-response, so that the results were representative of the household population aged 16 years and over. Weighting occurred in three steps. First, sample weights were applied to take account of the different probabilities of selecting respondents in different sized households. Second, to reduce household non-response bias, a household level weight was calculated using interviewer observation and area-level variables. Third, weights were applied based on age, sex and region to weight the data to represent the structure of the national population, and to take account of differential non-response between regions and age-by-sex groups.

The phase two interview data (on psychosis, personality disorder and Asperger syndrome) have a set of survey weights different from those generated for phase one. These phase two weights were designed to generate condition-specific phase two datasets that were representative of the population 'eligible' for phase two on that particular condition.

The data in the tables of this report are weighted, but both weighted and non-weighted bases are given. The unweighted bases are presented to show the number of respondents included. The weighted base shows the relative size of the various sample elements after weighting, reflecting their proportions in the English population, so that data from different

columns can be combined in their correct proportions.

Rates of disorder in some analyses have been age-standardised to allow for comparisons between groups after adjusting for the effects of any differences in their age distributions.

Most of the disorders covered in this report are analysed by a core set of breaks: age, sex, ethnicity, marital status, equivalised household income, and region. These are all defined in more detail in the Glossary at the back of this report and the variables used are listed in Appendix C. A summary of the definitions for each of these breaks is provided below.

Marital status: Respondents were categorised according to their self-reported legal marital status. Analyses by this variable were not age-standardised. Our age-standardisation approach required cases to be present in each cell. Because some marital status groups (e.g. widowed) did not have cases in some age/sex groupings (e.g. men aged 16-24), there was no rate available to weight up to the population prevalence.

Ethnicity: Respondents identified their ethnicity according to one of fifteen groups presented on a show card, including 'other – please state'. For analysis purposes, these groups were subsumed under four headings: white, black, South Asian and other. Due to the heterogeneous nature of the 'other' group, which includes people of mixed ethnic origin and Chinese, it is generally not referred to in the text or charts in the chapters. It is however included in tables for completeness. Where there are very few cases in a cell, this can cause instability in the age-standardised rate generated. This is one reason why both observed and age-standardised rates of disorder are presented for analyses by ethnicity.

Equivalised household income: Household income was established by means of a show-card on which banded incomes were presented. This variable is adjusted to take account of the number of people living in the household. Each household member is given a score depending, for adults, on the number of adults cohabiting or not cohabitating, and for dependent children, their age. The total household income is divided by the sum of the scores to provide the measure of equivalised household income. Respondents were then allocated to the quintile to which their household had been allocated.

Region: Tables provide data for regional analysis both by Government Office Region (GOR) and Strategic Health Authorities (SHAs). The first eight columns represent GORs and SHAs of the same name, while the South East GOR (column nine) is divided into South East Coast SHA and South Central SHA, shown in the final two columns. Analysis by region is included in this report to be of use to service planners and providers working in the regions. Generally variation by region was not significant for most of the disorders assessed by APMS, and region is not usually referred to in the chapter text.

Treatment and service use: People with and without each disorder were compared in terms of their use of treatment and services. Current treatment for a mental or emotional problem included use of psychoactive medication, and counselling and other talking therapies. The service use reported on in this report included use of health care services for a mental or emotional problem (including speaking with GP in the past year, or an inpatient appointment or outpatient stay in the past quarter for a mental or emotional reason); and use of community services and day care services in the past year. Because of the distortion that can occur when age-standardising data with small bases, standardisation was only included in the analyses of treatment and service use where the disordered group included at least 100 respondents.

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Introduction

1

Jenny Harris, Rachel Jenkins, Howard Meltzer, Traolach Brugha, Paul Bebbington and Sally McManus

1.1 Background to the Adult Psychiatric Morbidity Survey 2007

Poor mental health has a very great economic and social impact. In the 1990s mental health and illness were identified as key public health priorities in England[1,2] and frameworks for action were set out.[3,4] The NHS Plan, launched in 2000, also identified mental health as one of the clinical priorities of the NHS and set precise and challenging targets for mental health services nationally.[5] In the first years of the reform, much of the focus was on specialist mental health services. However, this has shifted in recent years towards the mental health of the community as a whole.

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.[6] However a recent Foresight report highlighted that particular disorders, such as common mental disorders, addictions and personality disorder, remain poorly diagnosed and treated, and that social factors make highly significant contributions to their onset and outcomes. Hence there is a need for prevention efforts and for closer working between primary care, social and occupational services.[7] It is also recognised that little is known of the prevalence and effects in adulthood of disorders now recognised in children, including attention deficit hyperactivity disorder (ADHD) and Autism Spectrum Disorders such as Asperger syndrome.

Current Government policy priorities in this area include:

- Improved access to psychological therapies;[8]
- Removing inequalities in access to services;[9] and
- Social inclusion and improving the lives of people with mental illness.[7,10]

The community-based psychiatric morbidity survey series is particularly well placed to inform and monitor such initiatives. Previous surveys in this series were carried out by the Office for National Statistics, and were commissioned by the Department of Health, Scottish Executive and National Assembly for Wales. They covered a wide range of different population groups, including:

- Adults living in private households: aged 16 to 64 in 1993[11] and aged 16-74 in 2000;[12]
- Residents of institutions providing care and support to people with mental health problems;[13]
- Homeless adults;[14,15]
- Adults with a psychotic disorder;[16,17]
- Prisoners and young offenders; [18,19,20]
- Young people in local authority care;[21]
- Children and adolescents;[22,23] and
- Carers.[24]

The Adult Psychiatric Morbidity Survey 2007 (APMS 2007) is the third survey of psychiatric morbidity in adults living in private households. It was carried out by the National Centre for

Social Research (NatCen) in collaboration with the University of Leicester, and was commissioned by The NHS Information Centre for health and social care.

APMS 2007 retains the same core questionnaire coverage and methodological approach as the 1993 and 2000 surveys, to enable the analysis of change over time. However, the latest survey also included a number of new topics to reflect emerging policy priorities. In summary, the distinguishing attributes of the 2007 household survey were that it:

- Was conducted in England only;
- Had no upper age limit for participation;
- Was in the field over the course of a whole year; and
- Included new topics, such as additional conditions and associated risk factors.

See Chapter 13, Methods for further details of topic coverage and a list of the differences between the 2000 and 2007 surveys. The phase one questionnaire is in Appendix D.

1.2 Aims of the survey

The main aim of the survey was to collect data on mental health among adults aged 16 and over living in private households in England.

The specific objectives of the survey were:

- To estimate the prevalence of psychiatric morbidity according to diagnostic category in the adult household population of England. The survey included assessment of common mental disorders; psychosis; borderline and antisocial personality disorder; Asperger syndrome, substance misuse and dependency; and suicidal thoughts, attempts and self-harm.
- To screen for characteristics of eating disorder, attention deficit hyperactivity disorder, posttraumatic stress disorder, and problem gambling.
- To examine trends in the psychiatric disorders that have been included in previous survey years (1993 and 2000).
- To identify the nature and extent of social disadvantage associated with mental illness.
- To gauge the level and nature of 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 experience of stressful life events, abusive relationships, and work stress.
- To collect data on factors that might be protective against poor mental health, such as social support networks and neighbourhood cohesion.

It should be noted that for many of the disorders assessed on APMS 2007, a survey of the household population of this kind is likely to under-represent adults with the condition, who in the case of psychosis and alcohol dependence for example are more likely to be homeless or in an institutional setting. Moreover, adults with severe mental health problems who do live in private households may be less available, able or willing to respond to surveys.

1.3 Overview of the survey design

Fieldwork was carried out between October 2006 and December 2007. 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 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 90 minutes 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 psychosis, borderline and antisocial personality disorder, and Asperger syndrome. The assessment of these conditions requires a more detailed and flexible interview than was possible at the first phase, and the use of some clinical judgement in ascertaining a diagnosis.

Details of the sample design and methods are provided in Chapter 13.

1.4 Coverage of this report

Each of the main disorders and behaviours covered by APMS 2007 is discussed in a separate chapter. The chapters present disorder prevalence by age, sex, ethnicity, marital status, region, and the level and nature of treatment and service use. Where the disorder was also covered in the 1993 and 2000 surveys, change in rate is also considered.

The data collected as part of APMS 2007 relating to Asperger syndrome are not presented in this report. This is because subsequent fieldwork has been undertaken to validate and extend this work. These data will be analysed together, and published separately at a later date.

Further analyses of the 2007 data are planned. Publications based on data collected in the previous surveys in the series are listed in Appendix F.

1.5 Access to the data

As with the previous general population surveys, a copy of the 2007 APMS dataset will be deposited at the UK Data Archive. Copies of anonymised data files can be made available for specific research projects. Information on this process is available at the data archive website (www.data-archive.ac.uk).

A list of the derived variables used in this report can be found in Appendix C.

1.6 Ethical clearance

Ethical approval for APMS 2007 was obtained from the Royal Free Hospital and Medical School Research Ethics Committee.[25]

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Common mental disorders 2

Claire Deverill and Michael King

Summary

- Common mental disorders (CMDs) are mental conditions that cause marked emotional distress and interfere with daily function, but do not usually affect insight or cognition. They comprise different types of depression and anxiety.
- CMDs were assessed in the phase one interview using the Clinical Interview Schedule – Revised (CIS-R), which covers non-psychotic symptoms in the past week. Responses to this were used to generate an overall score and to diagnose six types of CMD.
- A score of less than 12 indicated the presence of no clinically significant neurotic symptoms in the week prior to interview, and most adults (84.9%) were in this category. Among the 15.1% of adults scoring 12 or more, 7.5% were in the range 12-17 indicating a level of neurotic symptoms that was significant, but unlikely to warrant treatment. The other half (7.5%) had symptoms of a level of severity likely to require treatment.
- 16.2% of adults met the diagnostic criteria for at least one CMD in the week prior to interview. This figure is slightly higher than the proportion scoring 12 or more as it is possible to meet the criteria for some CMDs without scoring 12.
- More than half of people with a CMD presented with mixed anxiety and depressive disorder (9.0%).
- Women were more likely than men to have a CMD (19.7% and 12.5% respectively), and rates were significantly higher for women across all categories of CMD with the exception of panic disorder and obsessive compulsive disorder.
- Overall, the proportion of people aged 16-64 meeting the criteria for at least one CMD increased between 1993 and 2000, but did not change between 2000 and 2007 (15.5% in 1993, 17.5% in 2000, 17.6% in 2007). The largest increase in rate of CMD between 1993 and 2007 was observed in women aged 45-64, among whom the rate rose by about a fifth.
- Rates of CMD varied by age: those aged 75 and over were the least likely to have a CMD (6.3% of men, 12.2% of women). In women, the rate peaked among 45-54 year olds, with a quarter (25.2%) of this group meeting the criteria for at least one CMD. Among men the rate was highest in 25-54 year olds (14.6% of 25-34 year olds, 15.0% of 35-44 year olds, 14.5% of 45-54 year olds).
- After age-standardisation, there was little variation between white, black and South Asian men in the rates of any CMD. However, in women all CMDs (except phobias) were more prevalent in the South Asian group. The number of South Asian women in the sample was small, so while the differences were pronounced they were only significant for CMD as a whole, generalised anxiety disorder and panic disorder.
- Married and widowed men and women had low rates of CMD compared with people of other marital statuses, although this was due in part to the age profile of these groups.
- People living in households with the lowest levels of income were more likely to have a CMD than those living in the highest income households.
- A quarter (24%) of people with a CMD were in receipt of treatment for an emotional or

mental problem, mostly in the form of medication. The level and nature of treatment varied by type of CMD. Over half (57%) of adults with a phobia were in receipt of treatment, but only 15% of those with mixed anxiety and depressive disorder.

- Half of respondents with two or more CMDs (48%) were receiving treatment for a mental or emotional problem.
- 39% of those with a CMD had used some type of health care service for a mental or emotional problem, compared with 6% of people without a CMD. Those with two or more CMDs were more than twice as likely (73%) as those with one CMD (34%) to have used health care services for a mental or emotional reason.

2.1 Introduction

Reducing the prevalence of common mental disorders (CMDs) such as depression and anxiety is a major public health challenge.[1] CMDs can result in physical impairment and problems with social functioning, and are a significant source of distress to individuals and those around them. Both anxiety and depression often remain undiagnosed[2] and often individuals do not seek treatment. If left untreated, CMDs are more likely to lead to long term disability and premature mortality.[3] Although evidence exists for effective treatment of depression and anxiety,[4] 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, and people with CMD do not always adhere to treatment.[5,6,7]

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, but the nature and direction of the association remains unclear.[8,9] There are a wide range of other known associations, including: being female,[10] work stress,[11] social isolation,[12] poor housing,[13] negative life events, poor physical health, a family history of depression,[14] poor interpersonal and family relationships, a partner in poor health, and problems with alcohol.[15] Development of effective strategies for prevention of CMDs has been limited by a lack of evidence on how risk factors act in concert. However, a multifactor risk algorithm to predict major depression has recently been published, and may influence future prevention efforts in primary care.[16] A similar risk algorithm for anxiety disorders is under development by the same team.

Although usually less disabling than major psychiatric disorders such as psychosis, the greater prevalence of CMDs mean that the cumulative cost to society is great.[4] These costs are even higher if CMD co-occurs with a personality disorder.[17] Mixed anxiety and depression has been estimated to cause one fifth of days lost from work in Britain.[18] Even before the recent expansion of the European Union, it was estimated that work-related stress affected at least 40 million workers in its then 15 Member States and that it cost at least €20 billion annually. In the United Kingdom, it has been suggested that over 40 million working days are lost each year due to stress-related disorders.[19] Around one in five GP consultations are about CMD.[1]

2.2 Definitions and assessment

2.2.1 Common mental disorders (CMDs)

CMDs, also known as neurotic disorders, are mental conditions that cause marked emotional distress and interfere with daily function, though 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 well-being and behaviour. Anxiety disorders include generalised anxiety disorder (GAD), panic disorder, phobias, and obsessive and compulsive disorder (OCD). Symptoms of depression and anxiety frequently co-exist, demonstrated for example by the high proportions meeting the criteria for more than one CMD or for mixed anxiety and depressive disorder.

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 intrusive and inappropriate and cause 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.[20]

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

Neurotic symptoms and CMD were assessed in the first phase lay interview using the Clinical Interview Schedule - Revised (CIS-R). The CIS-R is an interviewer administered

structured interview schedule covering non-psychotic symptoms in the week prior to interview. It can be used to provide prevalence estimates for 14 types of neurotic symptoms, six types of CMD, and a continuous scale that reflects the overall severity of neurotic psychopathology.[21]

Each section of the CIS-R assessed one type of neurotic symptom. These were:

- Somatic symptoms;
- Fatigue;
- Concentration and forgetfulness;
- Sleep problems;
- Irritability;
- Worry about physical health;
- Depression;
- Depressive ideas;
- Worry;
- Anxiety;
- Phobias;
- Panic;
- Compulsions; and
- Obsessions.

Definitions of each of these types of neurotic symptom are provided in the Glossary.

The sections started with two filter questions to establish the presence of the particular symptom in the past month. A positive response led 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 determined the scores for each symptom. Scores ranged from zero to four, except for depressive ideas, which has a maximum score of five. Combinations of the items within each section produced the total score for that section. Descriptions of the items that make up the scores for each of the symptoms measured by the CIS-R can be found in Appendix A. Data on neurotic symptoms are not presented in this chapter, but are available on archived dataset.

The scores for each section were then summed to produce a total CIS-R score, which is an indication of the overall severity of symptoms. A score of 12 or more indicated a significant level of symptoms, and a score of 18 or more denoted symptoms of a level likely to require treatment.

The respondents' answers to the CIS-R were next used to define ICD-10 diagnoses of neurotic disorders using the computer algorithms described in Appendix A.[22] These ICD-10 diagnoses were then amalgamated to produce the six categories of disorder used in this report:

- Generalised anxiety disorder (GAD);
- Mixed anxiety and depressive disorder;
- Depressive episode (including mild, moderate and severe);
- Phobias;
- Obsessive-compulsive disorder (OCD); and
- Panic disorder.

It should be noted that mixed anxiety and depressive disorder was defined as having a CIS-R score of 12 or more but falling short of the criteria for any other CMD. Respondents with this diagnosis therefore could not by definition be classed as having any other CMD measured by the CIS-R. For the other five ICD-10 disorders, a respondent 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 and 2000 Adult Psychiatric Morbidity Surveys. The schedule was administered using Computer Assisted Personal Interviewing (CAPI) in the 2000 and 2007 surveys, and by Paper Assisted Personal Interviewing (PAPI) in 1993. However the approach has otherwise remained consistent, and the data are comparable across survey years. Comparisons between survey years in this chapter were limited to respondents age 16-64 and living in England (the previous surveys also covered Scotland and Wales). This age range was used because the 1993 survey did not sample adults aged 65 and over.

2.3 Results

2.3.1 CIS-R score by age and sex

The total CIS-R score ranged from 0 to 49. A score of less than 12 indicated the presence of no clinically significant neurotic symptoms in the week prior to interview, and most adults (84.9%) were in this category. Among the 15.1% of adults scoring 12 or more, 7.5% were in the range 12-17 indicating a level of neurotic symptoms that was significant, but unlikely to warrant treatment. The other half (7.5%) had symptoms of a level of severity likely to require treatment.

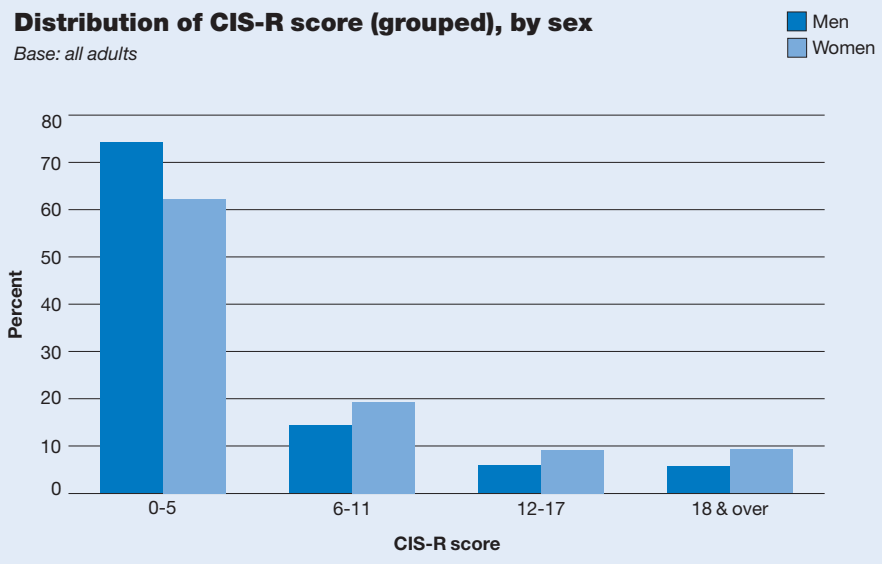
Men were less likely than women to have a CIS-R score of 12 or more (11.6% and 18.4%, respectively) and a CIS-R score of 18 or more (5.7% and 9.3%, respectively). For both men and women, the proportion scoring 12 or more varied by age. The rate was highest among those aged 45-54 (13.8% of men, 23.4% of women), although broadly similar to those aged 16-44, and lowest among those aged 75 and over (6.3% of men, 11.6% of women).

Table 2.1, Figures 2A, 2B

Figure 2A

Distribution of CIS-R score (grouped), by sex

Base: all adults



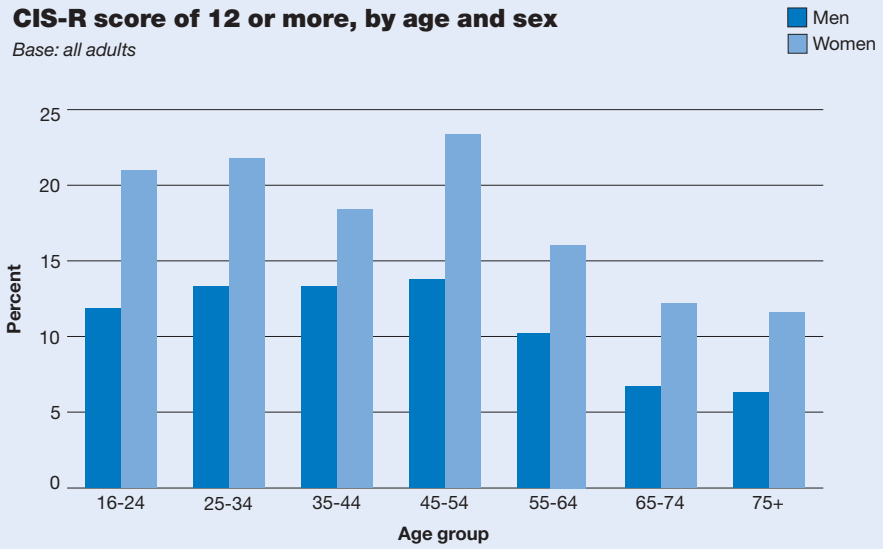
2.3.2 Change in CIS-R score (12+) since 1993

Overall, the proportion of people aged 16-64 with a CIS-R score of 12 or more increased between 1993 and 2000, but did not increase again between 2000 and 2007 (14.1% 1993, 16.3% 2000, 16.4% 2007).

Figure 2B

CIS-R score of 12 or more, by age and sex

Base: all adults



The increase between 1993 and 2000 was significant for men (10.5% in 1993, 13.4% in 2000). However the proportion of men with a score of 12 or more then declined slightly in 2007 (12.6% in 2007). The increase in rate among men between 1993 and 2007 was not significant.

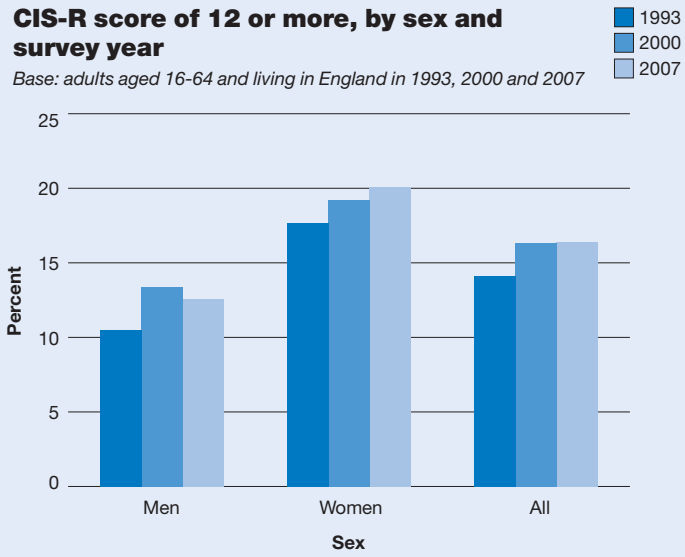
Among women the increase between 1993 and 2000 was not significant (17.7% in 1993, 19.2% in 2000). However the proportion of women with a score of 12 or more went up again in 2007 (20.1%), and the difference between the 1993 and 2007 rates was significant.

Table 2.2, Figure 2C

Figure 2C

CIS-R score of 12 or more, by sex and survey year

Base: adults aged 16-64 and living in England in 1993, 2000 and 2007

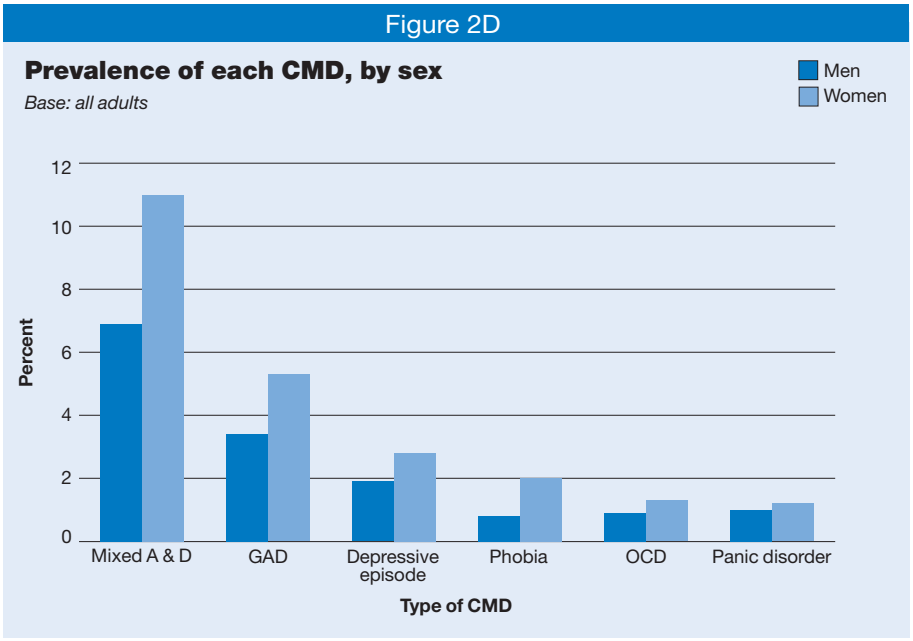


2.3.3 CMDs by age and sex

16.2% of adults met the diagnostic criteria for at least one CMD in the week prior to interview. The figure is slightly higher than the proportion scoring 12 or more on the CIS-R because it is possible to meet the criteria for some CMDs without scoring above 11. More than half of adults with a CMD presented with mixed anxiety and depressive disorder (9.0%). General anxiety disorder was the next most common condition (GAD, 4.4%), followed by depressive episode (2.3%). Less than one and a half percent of the population met the diagnostic criteria for each of the remaining categories.

Overall and across all age groups, men were less likely to have a CMD than women (12.5%

Figure 2D



of men, 19.7% of women). Prevalence rates were significantly higher among women than men across all categories of CMD, with the exception of panic disorder and obsessive compulsive disorder, where the excess prevalence in women was not significant. **Figure 2D**

Rates of CMD also varied by age group: those aged 75 and over were the least likely to have a CMD (6.3% of men, 12.2% of women). The rate among women peaked in the 45-54 age group, with a quarter (25.2%) meeting the criteria for at least one CMD. Among men, the rate was highest in 25-54 year olds (14.6% of 25-34 year olds, 15.0% of 35-44 year olds, 14.5% of 45-54 year olds). **Table 2.3**

2.3.4 Change in prevalence of CMDs since 1993

Changes in the prevalence of CMD across survey years were similar to the change in the proportion with a CIS-R score of 12 or more. Overall, the proportion of people aged 16-64 meeting the diagnostic criteria for at least one CMD increased between 1993 and 2000, but did not change between 2000 and 2007 (15.5% in 1993, 17.5% in 2000, 17.6% in 2007).

The largest increase in CMD between 1993 and 2007 was observed in women aged 45-64, among whom the rate rose by about a fifth. **Table 2.4**

2.3.5 Variation by other characteristics

Ethnicity

Rates of having at least one CMD were higher for white, black and South Asian women than for white, black and South Asian men respectively. The greatest difference was among South Asian adults where the age-standardised rate among women (34.3% of South Asian women) was three times that of men (10.3% of South Asian men).[23]

After age-standardisation of the data, there was little variation between white, black and South Asian men in the rates of any CMD. However, among women rates of all CMDs (except phobias) were higher in the South Asian group. The number of South Asian women in the sample was small, so while the differences were pronounced they were only significant for CMD as a whole, and generalised anxiety disorder and panic disorder.

Table 2.5

Marital status

Women across all marital status categories were more likely than their male counterparts to have CMD, except for divorced people, in whom the prevalence for men and women was very similar (26.6% for women, 27.7% for men).

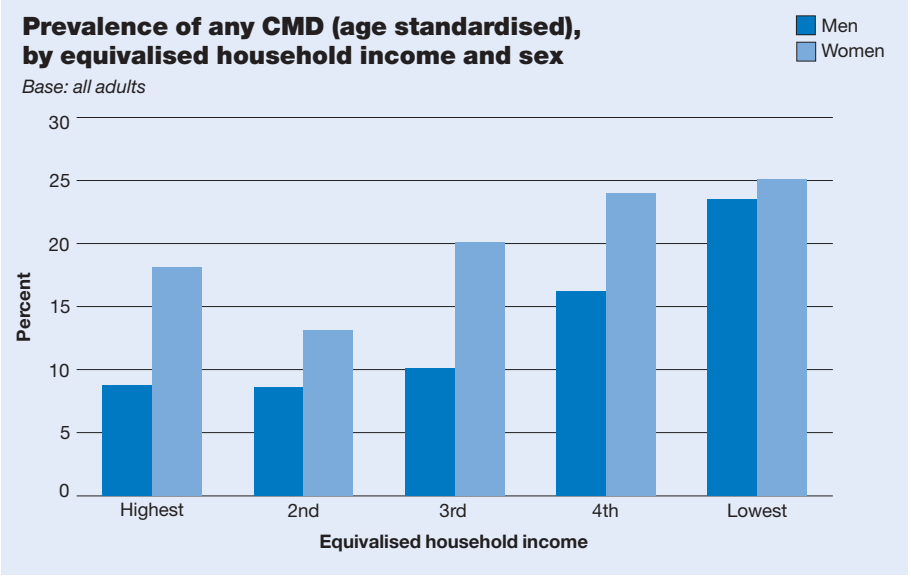
Among men, those currently divorced had the greatest likelihood of having CMD: variation

by other marital status categories was less pronounced. For women the rate of CMD was high for divorced women, but even higher for separated women (33.0%). Men and women who were married or widowed had the lowest observed rates of CMD (10.1% of married men, 16.3% of married women; 10.4% widowed men, 17.4% widowed women). **Table 2.6**

Equivalised household income

People in the lowest quintile of equivalised household income (see the Glossary for a full definition) were more likely to have CMDs than those in the highest quintile, with a linear trend through the income quintiles. The pattern was more marked in men than women. After adjusting for age, men in the lowest household income group were three times more likely to have a CMD than those in the highest income households (23.5% and 8.8% respectively). Of the individual disorders, depressive episodes showed the largest difference across income groups, especially among men, rising from 0.2% of men in the highest quintile to 6.9% of men in the lowest.[24,25] **Table 2.7, Figure 2E**

Figure 2E



2.3.6 Treatment and service use

Respondents were asked about any treatment they were currently receiving for a mental or emotional problem. This included the use of a range of different types of psychoactive medication and counselling or other talking therapies. The drugs asked about are listed in the Glossary. Questions covering use of health, community and day care services in the past year were also included. More detailed definitions of these, including variation in the timescales referred to, are provided in the Glossary. Analysis has been presented by; presence of any CMD, presence of each CMD, and by number of CMDs present (grouped into 0, 1 and 2+). 15% of those with some kind of CMD met the criteria for two or more diagnoses: comorbidity, including between different types of CMD, is explored in detail in Chapter 12. Treatment by grouped CIS-R score is also presented.

Treatment by CIS-R score

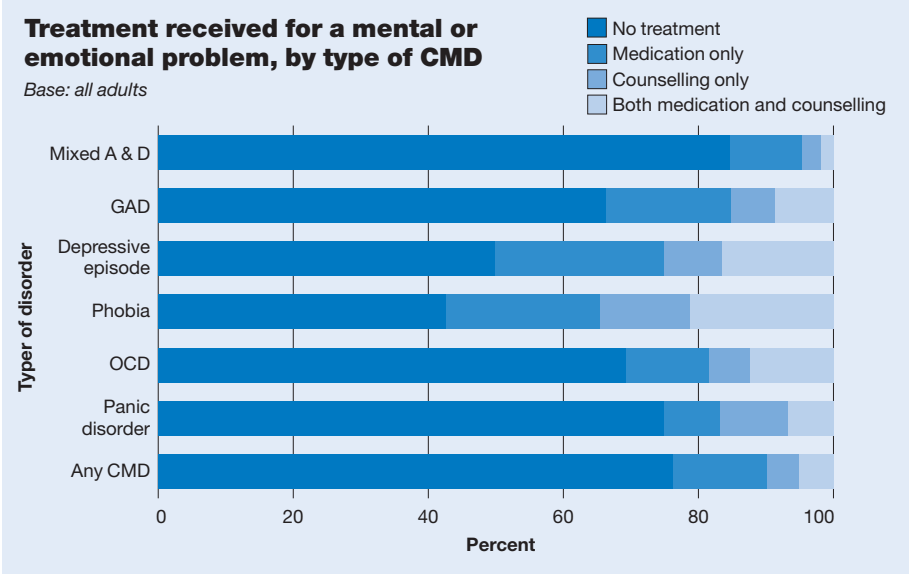
A CIS-R score of 18 or more indicated a severity of neurotic symptoms in the past week likely to warrant treatment: however only 32% of this group were in receipt of any medication or counselling at the time of interview. Among those with a score between 12 and 17, 17% were receiving treatment. **Table 2.9**

Types of treatment

A quarter (24%) of adults with a CMD in the past week were in receipt of treatment for an emotional or mental problem. This was mostly in the form of medication: 14% of adults with a neurotic disorder were taking psychoactive medication only, 5% were in receipt of counselling or therapy, and 5% were in receipt of both (medication and counselling or therapy).

Being treated and the type of treatment varied by type of CMD. While 57% of adults with phobia were in receipt of treatment, this only applied to 15% of those with mixed anxiety and depressive disorder. Panic disorder was the only CMD for which the observed rate of talking therapies was somewhat higher than for medication. However the sample size for this group was small, and the difference was not statistically significant. **Table 2.10, Figure 2F**

Figure 2F



The more CMDs people had, the more likely they were to be receiving treatment. However, more than half with two or more CMDs (52%) were not receiving any treatment for a mental or emotional problem. For those who were accessing treatment, this was more likely to take the form of medication than of counselling or therapy. **Table 2.11**

Types of psychoactive medication

Respondents were asked if they were currently taking any of a comprehensive list of psychoactive medicines (both brand and generic names were given). Medications administered orally or by injection were included. Where possible, interviewers checked packaging to ensure the correct coding. The medications asked about are listed in the Glossary.

Psychoactive medication was being taken by 3% of people identified with no CMD, 16% with one type of CMD, and 38% with two or more CMDs. For each group, antidepressant medication was the most likely to be prescribed. However, anxiolytics were also quite widely taken by people with two or more disorders (11%). **Table 2.12**

Counselling and therapy

All respondents were asked whether they were having any type of counselling or therapy for a mental, nervous or emotional problem. One person in ten (10%) with CMD was in receipt of counselling or therapy around the time of interview. The most common types of talking therapy were counselling (4%), psychotherapy (3%) and behaviour or cognitive therapy (2%). Across the individual types of CMD those with a phobia were most likely to use counselling or therapy services (34%), and those with mixed anxiety and depressive disorder the least (5%). **Table 2.13**

Use of counselling and therapy increased with the number of CMDs identified: 27% of adults with two or more CMDs had used counselling or therapy services in the past year compared with 7% of those with a single common disorder. **Table 2.14**

Use of health care services for mental or emotional reasons

Respondents were asked what types of health care services they had used over various time frames. This included contact with their GP or family doctor in the past year, and hospital inpatient and outpatient episodes in the past quarter. For each of these types of

contact respondents were asked whether this had been for a mental or emotional problem, for a physical problem, or for both. The figures presented here relate to health care service use in relation to mental and emotional problems.

39% of those with a CMD had used some type of health care service for a mental or emotional problem, compared with 6% of men and women without a CMD. GP services were the type of health care most likely to have been used (38%). Depression and phobias (both 67%) were the types of CMD associated with the highest use of health care services for a mental or emotional problem, and mixed anxiety and depression (30%) the lowest. **Table 2.15**

People with two or more disorders (73%) were more than twice as likely as those with one disorder (34%) to have used health care services for a mental or emotional reason. Even in the two weeks prior to interview, about a quarter (24%) of those with two or more CMDs had spoken with their GP about a mental or emotional problem. **Table 2.16**

Use of community care services

All respondents were asked about community and day care services used in the past year. These included contact with a psychiatrist, psychologist, community nurse services, a social worker, self help or support groups, home helps, outreach workers and a community day care centre. Day care centres asked about included community mental health centre, day activity centre, and sheltered workshop.

Community and day care services were used less than health care services. 18% of people with CMD had used one of these services in the past year, compared with 5% of people with no disorder. Those with phobias made most use of community or day care services (49%). Again, mixed anxiety and depressive disorder (12%) was the type of CMD associated with the lowest rate of community or day care service use. **Table 2.17**

The use of community care services increased with increasing numbers of CMDs. Of the services used by those with two or more CMDs, community day care centres were the most frequently cited (16%) followed by psychiatrists (10%) and social workers (10%). **Table 2.18**

2.4 Discussion

Common mental disorders (CMDs) are, as the name implies, the most widespread of mental health conditions: about one adult in six had a CMD in the past week. More than half of these had mixed anxiety and depression disorder, and about a third had generalised anxiety disorder or depression. There are many well established associations with CMDs, although questions remain about the direction of effect, how the factors interact, and how applicable they are to older people.

As in other studies, the APMS 2007 data confirmed that rates of CMDs were higher in women than men: overall, one woman in five had a CMD during the week before interview compared with one man in eight. Explanations previously given for this include the impact of having children,[26] exposure to domestic or sexual violence,[27] adverse experiences in childhood, and women's relative poverty.[29,30]

Unlike APMS 1993 and 2000, the 2007 survey had no upper age limit to participation. This provided a rare opportunity for assessment of CMD in later older age (in those living in private households) and examination of whether the gender disparity in rates persists. Overall, the prevalence of CMD was found to be highest among those aged 45-54, but lowest in those aged 75 or older. Studies in other western countries also show that, although people 55 years and over have more physical disorders and are more likely to face the loss of partners, friends and family, this age group suffers less anxiety and depression than younger people.[31,32,33]

Analysis of previous APM surveys suggested that the gap between men and women in CMD rate declined with increasing age.[34] However the 2007 data, showed the persistence of the impact of sex, with rates of CMD among women over 75 being twice that of their male counterparts.

The APMS series also provides an opportunity to look at changes in the prevalence of CMDs over the past 15 years: analyses presented in this chapter shows an upward trend, both overall and in the separate sexes (albeit non-significant in men).

General population surveys are crude but essential tools for assessing what proportion of people with CMDs are receiving treatment and have contact with services, although correlating reported treatment with current symptoms can be problematic. Some people undertaking medical or psychological treatments for CMDs may not have current symptoms because of recent recovery, while others with CMDs may have developed the disorder so recently that they have not yet sought help. Others who are receiving treatment may not know the exact nature of that treatment. Nevertheless, there is evidence that many people with CMDs do not receive treatment even when their disorders are severe and disabling.[6]

Overall three-quarters of adults with a CMD were not in receipt of medication or counselling, including two thirds of adults assessed by the survey as having a level of neurotic symptoms sufficient to warrant treatment. Severity of symptoms and type of disorder were strong predictors of whether treatment was received.[35,36] In particular, relatively high rates of people with a phobia participate in talking therapies. The UK Government's programme of increasing access to psychological therapies is only now beginning, and it is hoped that increases in the availability of brief, evidence based talking therapies will go some way towards alleviating the distress associated with CMDs.

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Tables

Table 2.1

Clinical Interview Schedule – Revised (CIS-R) score (grouped), by age and sex

All adults *2007*

CIS-R score[a]	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	%	%	%	%	%	%	%	%
Men								
0-5	75.2	70.0	71.7	73.5	76.6	79.5	77.4	74.2
6-11	12.9	16.7	15.0	12.6	13.1	13.8	16.2	14.3
Under 12	**88.1**	**86.7**	**86.7**	**86.2**	**89.8**	**93.3**	**93.7**	**88.4**
12-17	5.5	6.8	6.8	6.4	5.3	4.8	3.7	5.9
18 or more	6.4	6.4	6.5	7.4	5.0	1.9	2.7	5.7
12 or more	**11.9**	**13.3**	**13.3**	**13.8**	**10.2**	**6.7**	**6.3**	**11.6**
Women								
0-5	58.4	60.2	60.9	55.9	64.9	70.8	71.1	62.3
6-11	20.6	18.1	20.7	20.7	19.1	17.0	17.3	19.3
Under 12	**79.0**	**78.2**	**81.6**	**76.6**	**83.9**	**87.8**	**88.4**	**81.6**
12-17	9.0	11.6	8.8	9.6	8.1	8.2	7.4	9.1
18 or more	12.0	10.2	9.6	13.8	8.0	3.9	4.1	9.3
12 or more	**21.0**	**21.8**	**18.4**	**23.4**	**16.1**	**12.2**	**11.6**	**18.4**
All adults								
0-5	66.9	65.0	66.3	64.6	70.7	74.9	73.6	68.1
6-11	16.7	17.4	17.9	16.7	16.1	15.5	16.9	16.9
Under 12	**83.6**	**82.4**	**84.1**	**81.3**	**86.8**	**90.4**	**90.5**	**84.9**
12-17	7.2	9.2	7.8	8.0	6.7	6.6	5.9	7.5
18 or more	9.1	8.3	8.1	10.7	6.5	3.0	3.5	7.5
12 or more	**16.4**	**17.6**	**15.9**	**18.7**	**13.2**	**9.6**	**9.5**	**15.1**
Bases (unweighted)								
Men	*271*	*414*	*613*	*495*	*573*	*462*	*369*	*3197*
Women	*297*	*621*	*800*	*635*	*706*	*566*	*581*	*4206*
All	*568*	*1035*	*1413*	*1130*	*1279*	*1028*	*950*	*7403*
Bases (weighted)								
Men	*530*	*606*	*708*	*590*	*539*	*362*	*257*	*3592*
Women	*517*	*616*	*721*	*603*	*558*	*398*	*389*	*3801*
All	*1047*	*1222*	*1429*	*1193*	*1097*	*760*	*646*	*7393*

[a] See Section 2.2.2 for a description of the CIS-R.

Table 2.2

CIS-R score (grouped) in 1993, 2000 and 2007, by age and sex

Aged 16 to 74 (16 to 64 for 1993) and living in England — *1993, 2000 and 2007*

CIS-R score[a]	Age group																	
	16-34			35-44			45-54			55-64			65-74			All 16-64[b]		
	1993	2000	2007	1993	2000	2007	1993	2000	2007	1993	2000	2007	1993	2000	2007	1993	2000	2007
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Men																		
0-5	73.5	71.8	72.4	72.1	70.0	71.7	75.7	69.7	73.5	76.4	74.2	76.6	-	84.1	79.5	74.0	71.3	73.2
6-11	16.4	17.0	15.0	16.4	14.8	15.0	13.6	14.3	12.6	13.2	13.0	13.1	-	11.1	13.8	15.4	15.3	14.2
Under 12	**89.9**	**88.8**	**87.4**	**88.5**	**84.9**	**86.7**	**89.4**	**84.0**	**86.2**	**89.6**	**87.2**	**89.8**	**-**	**95.2**	**93.3**	**89.5**	**86.6**	**87.4**
12-17	5.7	6.3	6.2	5.0	7.5	6.8	5.0	6.8	6.4	4.6	6.1	5.3	-	3.1	4.8	5.3	6.7	6.2
18 or more	4.4	4.9	6.4	6.5	7.6	6.5	5.7	9.2	7.4	5.7	6.6	5.0	-	1.8	1.9	5.3	6.7	6.4
12 or more	**10.1**	**11.2**	**12.6**	**11.5**	**15.1**	**13.3**	**10.6**	**16.0**	**13.8**	**10.4**	**12.8**	**10.2**	**-**	**4.8**	**6.7**	**10.5**	**13.4**	**12.6**
Women																		
0-5	56.2	57.9	59.4	58.8	59.5	60.9	62.1	60.4	55.9	69.2	69.8	64.9	-	73.1	70.8	59.9	60.8	60.1
6-11	24.9	21.4	19.2	22.8	20.5	20.7	18.9	20.0	20.7	18.8	16.1	19.1	-	16.1	17.0	22.3	20.0	19.8
Under 12	**81.0**	**79.3**	**78.6**	**81.6**	**80.0**	**81.6**	**80.9**	**80.5**	**76.6**	**88.0**	**86.0**	**83.9**	**-**	**89.3**	**87.8**	**82.3**	**80.8**	**79.9**
12-17	10.0	11.4	10.4	8.9	9.4	8.8	9.7	11.2	9.6	6.5	7.3	8.1	-	6.5	8.2	9.1	10.2	9.4
18 or more	9.0	9.4	11.0	9.5	10.6	9.6	9.4	8.3	13.8	5.5	6.8	8.0	-	4.3	3.9	8.6	9.0	10.7
12 or more	**19.0**	**20.7**	**21.4**	**18.4**	**20.0**	**18.4**	**19.1**	**19.5**	**23.4**	**12.0**	**14.0**	**16.1**	**-**	**10.7**	**12.2**	**17.7**	**19.2**	**20.1**
All adults																		
0-5	65.0	65.0	65.9	65.5	64.8	66.3	68.9	65.1	64.6	72.8	72.0	70.7	-	78.3	74.9	67.1	66.1	66.6
6-11	20.6	19.2	17.1	19.6	17.6	17.9	16.2	17.1	16.7	16.0	14.6	16.1	-	13.8	15.5	18.8	17.7	17.0
Under 12	**85.5**	**84.1**	**83.0**	**85.1**	**82.5**	**84.1**	**85.2**	**82.2**	**81.3**	**88.8**	**86.6**	**86.8**	**-**	**92.0**	**90.4**	**85.9**	**83.7**	**83.6**
12-17	7.8	8.8	8.3	7.0	8.5	7.8	7.3	9.0	8.0	5.6	6.7	6.7	-	4.9	6.6	7.2	8.4	7.8
18 or more	6.7	7.1	8.7	8.0	9.1	8.1	7.5	8.8	10.7	5.6	6.7	6.5	-	3.1	3.0	6.9	7.9	8.5
12 or more	**14.5**	**15.9**	**17.0**	**14.9**	**17.5**	**15.9**	**14.8**	**17.8**	**18.7**	**11.2**	**13.4**	**13.2**	**-**	**8.0**	**9.6**	**14.1**	**16.3**	**16.4**
Bases (unweighted)																		
Men	*1671*	*936*	*685*	*940*	*674*	*613*	*815*	*649*	*495*	*749*	*524*	*573*	-	*456*	*462*	*4175*	*2783*	*2366*
Women	*1845*	*1173*	*918*	*1008*	*866*	*800*	*925*	*682*	*635*	*950*	*671*	*706*	-	*616*	*566*	*4728*	*3392*	*3059*
All	*3516*	*2109*	*1603*	*1948*	*1540*	*1413*	*1740*	*1331*	*1130*	*1699*	*1195*	*1279*	-	*1072*	*1028*	*8903*	*6175*	*5425*
Bases (weighted)																		
Men	*2008*	*1324*	*1136*	*950*	*779*	*708*	*845*	*687*	*590*	*682*	*510*	*539*	-	*397*	*362*	*4485*	*3300*	*2973*
Women	*1932*	*1291*	*1132*	*935*	*762*	*721*	*833*	*683*	*603*	*704*	*536*	*558*	-	*446*	*398*	*4403*	*3272*	*3014*
All	*3940*	*2614*	*2268*	*1884*	*1542*	*1429*	*1678*	*1370*	*1193*	*1387*	*1046*	*1097*	-	*843*	*760*	*8888*	*6572*	*5987*

[a] See Section 2.2.2 for a description of the CIS-R.

[b] Based on those aged 16 to 64 and living in England to retain comparability across survey years.

Table 2.3

Prevalence of CMD in past week, by age and sex

All adults *2007*

CMD[a]	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	%	%	%	%	%	%	%	%
Men								
Mixed anxiety and depressive disorder	8.2	7.4	7.4	8.1	6.8	3.9	3.8	6.9
Generalised anxiety disorder	1.9	4.1	4.7	4.1	2.7	2.9	2.2	3.4
Depressive episode	1.5	2.7	2.6	2.6	1.5	0.4	0.5	1.9
All phobias	0.3	1.5	1.5	0.7	0.6	0.3	-	0.8
Obsessive compulsive disorder	1.6	1.5	1.2	0.7	0.4	0.2	0.3	0.9
Panic disorder	1.4	0.9	1.3	0.8	0.6	1.0	0.3	1.0
Any CMD	**13.0**	**14.6**	**15.0**	**14.5**	**10.6**	**7.5**	**6.3**	**12.5**
Women								
Mixed anxiety and depressive disorder	12.3	14.1	9.7	14.3	9.0	8.6	7.2	11.0
Generalised anxiety disorder	5.3	4.3	5.9	8.0	5.5	3.6	2.9	5.3
Depressive episode	2.9	1.7	3.2	4.9	2.2	1.6	2.1	2.8
All phobias	2.7	2.4	2.7	2.2	2.2	0.4	0.2	2.0
Obsessive compulsive disorder	3.0	1.5	1.0	1.6	0.7	0.4	0.5	1.3
Panic disorder	0.8	2.3	1.4	1.1	1.4	0.1	0.6	1.2
Any CMD	**22.2**	**23.0**	**19.5**	**25.2**	**17.6**	**13.4**	**12.2**	**19.7**
All adults								
Mixed anxiety and depressive disorder	10.2	10.8	8.5	11.2	8.0	6.4	5.9	9.0
Generalised anxiety disorder	3.6	4.2	5.3	6.1	4.1	3.3	2.6	4.4
Depressive episode	2.2	2.2	2.9	3.7	1.9	1.0	1.5	2.3
All phobias	1.5	1.9	2.1	1.5	1.4	0.3	0.1	1.4
Obsessive compulsive disorder	2.3	1.5	1.1	1.1	0.5	0.3	0.4	1.1
Panic disorder	1.1	1.6	1.3	0.9	1.0	0.5	0.5	1.1
Any CMD	**17.5**	**18.8**	**17.3**	**19.9**	**14.1**	**10.6**	**9.9**	**16.2**
Bases (unweighted)								
Men	*271*	*414*	*613*	*495*	*573*	*462*	*369*	*3197*
Women	*297*	*621*	*800*	*635*	*706*	*566*	*581*	*4206*
All	*568*	*1035*	*1413*	*1130*	*1279*	*1028*	*950*	*7403*
Bases (weighted)								
Men	*530*	*606*	*708*	*590*	*539*	*362*	*257*	*3592*
Women	*517*	*616*	*721*	*603*	*558*	*398*	*389*	*3801*
All	*1047*	*1222*	*1429*	*1193*	*1097*	*760*	*646*	*7393*

[a] An individual can have more than one CMD.

Table 2.4

Prevalence of CMD in past week in 1993, 2000 and 2007, by age and sex

Aged 16 to 74 (16 to 64 for 1993) and living in England — *1993, 2000 and 2007*

CMD[a]	Age group																	
	16-34			35-44			45-54			55-64			65-74			All 16-64[b]		
	1993	2000	2007	1993	2000	2007	1993	2000	2007	1993	2000	2007	1993	2000	2007	1993	2000	2007
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Men																		
Mixed anxiety and depressive disorder	5.8	6.7	7.8	5.5	9.0	7.4	4.2	7.8	8.1	5.0	6.9	6.8	-	3.1	3.9	5.3	7.5	7.6
Generalised anxiety disorder	2.6	3.1	3.0	5.0	6.0	4.7	4.7	6.9	4.1	4.2	3.8	2.7	-	1.7	2.9	3.7	4.7	3.6
Depressive episode	1.3	1.3	2.1	1.7	3.4	2.6	2.3	3.8	2.6	2.0	2.8	1.5	-	0.4	0.4	1.7	2.6	2.2
All phobias	1.2	1.3	1.0	0.9	1.5	1.5	1.3	2.3	0.7	1.0	1.4	0.6	-	0.2	0.3	1.1	1.6	1.0
Obsessive compulsive disorder	1.0	1.1	1.5	1.2	0.8	1.2	1.1	1.0	0.7	0.6	0.9	0.4	-	0.0	0.2	1.0	1.0	1.1
Panic disorder	1.0	0.5	1.1	0.7	0.3	1.3	1.4	0.8	0.8	0.4	1.1	0.6	-	0.0	1.0	0.9	0.6	1.0
Any CMD	**11.5**	**12.3**	**13.8**	**12.8**	**16.1**	**15.0**	**12.0**	**17.9**	**14.5**	**11.3**	**13.8**	**10.6**	**-**	**5.3**	**7.5**	**11.9**	**14.6**	**13.6**
Women																		
Mixed anxiety and depressive disorder	10.8	13.3	13.3	11.3	10.8	9.7	9.5	10.9	14.3	4.9	8.2	9.0	-	7.1	8.6	9.7	11.4	11.8
Generalised anxiety disorder	3.6	3.1	4.8	4.0	6.1	5.9	7.8	6.4	8.0	7.0	4.8	5.5	-	3.4	3.6	5.0	4.8	5.8
Depressive episode	3.3	2.7	2.2	2.5	3.4	3.2	2.9	2.8	4.9	1.0	3.0	2.2	-	1.0	1.6	2.7	2.9	3.0
All phobias	3.2	2.0	2.5	1.8	3.3	2.7	2.0	2.5	2.2	1.7	1.6	2.2	-	1.0	0.4	2.4	2.3	2.4
Obsessive compulsive disorder	2.0	1.4	2.2	1.9	1.6	1.0	1.8	1.2	1.6	1.4	1.6	0.7	-	0.5	0.4	1.8	1.5	1.5
Panic disorder	0.9	0.6	1.6	1.1	0.6	1.4	1.2	1.4	1.1	0.8	0.6	1.4	-	0.6	0.1	1.0	0.8	1.4
Any CMD	**20.0**	**21.2**	**22.6**	**19.8**	**21.1**	**19.5**	**20.5**	**21.4**	**25.2**	**14.1**	**16.2**	**17.6**	**-**	**12.9**	**13.4**	**19.1**	**20.4**	**21.5**
All adults																		
Mixed anxiety and depressive disorder	8.3	9.9	10.5	8.4	9.9	8.5	6.8	9.3	11.2	5.0	7.5	8.0	-	5.2	6.4	7.5	9.4	9.7
Generalised anxiety disorder	3.1	3.1	3.9	4.5	6.0	5.3	6.2	6.6	6.1	5.6	4.3	4.1	-	2.6	3.3	4.4	4.7	4.7
Depressive episode	2.3	2.0	2.2	2.1	3.4	2.9	2.6	3.3	3.7	1.5	2.9	1.9	-	0.7	1.0	2.2	2.8	2.6
All phobias	2.2	1.6	1.7	1.3	2.4	2.1	1.6	2.4	1.5	1.4	1.5	1.4	-	0.6	0.3	2.2	2.8	2.6
Obsessive compulsive disorder	1.5	1.3	1.9	1.6	1.2	1.1	1.5	1.1	1.1	1.0	1.3	0.5	-	0.3	0.3	1.4	1.2	1.3
Panic disorder	1.0	0.6	1.4	0.9	0.4	1.3	1.3	1.1	0.9	0.6	0.8	1.0	-	0.3	0.5	1.0	0.7	1.2
Any CMD	**15.7**	**16.7**	**18.2**	**16.3**	**18.6**	**17.3**	**16.2**	**19.6**	**19.9**	**12.8**	**15.0**	**14.1**	**-**	**9.3**	**10.6**	**15.5**	**17.5**	**17.6**
Bases (unweighted)																		
Men	*1671*	*936*	*685*	*940*	*674*	*613*	*815*	*649*	*495*	*749*	*524*	*573*	-	*456*	*462*	*4175*	*2783*	*2366*
Women	*1845*	*1173*	*918*	*1008*	*866*	*800*	*925*	*682*	*635*	*950*	*671*	*706*	-	*616*	*566*	*4728*	*3392*	*3059*
All	*3516*	*2109*	*1603*	*1948*	*1540*	*1413*	*1740*	*1331*	*1130*	*1699*	*1195*	*1279*	-	*1072*	*1028*	*8903*	*6175*	*5425*
Bases (weighted)																		
Men	*2008*	*1324*	*1136*	*950*	*779*	*708*	*845*	*687*	*590*	*682*	*510*	*539*	-	*397*	*362*	*4485*	*3300*	*2973*
Women	*1932*	*1291*	*1132*	*935*	*762*	*721*	*833*	*683*	*603*	*704*	*536*	*558*	-	*446*	*398*	*4403*	*3272*	*3014*
All	*3940*	*2614*	*2268*	*1884*	*1542*	*1429*	*1678*	*1370*	*1193*	*1387*	*1046*	*1097*	-	*843*	*760*	*8888*	*6572*	*5987*

[a] An individual can have more than one CMD.

[b] Based on those aged 16 to 64 and living in England to retain comparability across survey years.

Table 2.5

CMD in past week (observed and age-standardised), by ethnicity and sex

All adults *2007*

CMD[a]	Ethnicity			
	White	Black	South Asian	Other[b]
	%	%	%	%
Men				
Observed				
Mixed anxiety and depressive disorder	6.8	6.3	3.2	14.4
Generalised anxiety disorder	3.0	7.5	7.0	3.9
Depressive episode	1.7	5.6	0.7	2.8
All phobias	0.8	1.1	0.7	1.0
Obsessive compulsive disorder	0.7	4.6	0.3	2.8
Panic disorder	0.8	1.8	2.1	1.3
Any CMD	**11.9**	**16.3**	**11.3**	**19.4**
Age-standardised				
Mixed anxiety and depressive disorder	6.9	5.4	3.1	16.6
Generalised anxiety disorder	3.0	5.3	6.6	2.8
Depressive episode	1.7	4.1	1.4	2.0
All phobias	0.8	1.3	1.4	0.8
Obsessive compulsive disorder	0.7	3.1	0.2	2.0
Panic disorder	0.8	1.4	2.2	0.8
Any CMD	**12.0**	**12.9**	**10.3**	**20.2**
Women				
Observed				
Mixed anxiety and depressive disorder	10.8	12.0	12.6	11.9
Generalised anxiety disorder	5.0	10.3	6.9	6.2
Depressive episode	2.7	1.1	4.8	2.5
All phobias	2.0	3.8	-	-
Obsessive compulsive disorder	1.2	1.0	3.2	1.3
Panic disorder	1.0	1.7	5.0	3.4
Any CMD	**19.2**	**25.3**	**23.4**	**21.1**
Age-standardised				
Mixed anxiety and depressive disorder	10.9	10.4	14.8	12.8
Generalised anxiety disorder	5.0	8.4	16.3	5.5
Depressive episode	2.7	1.4	11.8	2.2
All phobias	2.1	2.6	-	-
Obsessive compulsive disorder	1.3	0.6	2.0	1.4
Panic disorder	1.0	1.3	5.3	3.3
Any CMD	**19.3**	**21.0**	**34.3[c]**	**20.6**
Bases (unweighted)				
Men	*2913*	*77*	*109*	*72*
Women	*3894*	*111*	*90*	*87*
Bases (weighted)				
Men	*3182*	*103*	*170*	*112*
Women	*3446*	*121*	*114*	*102*

[a] An individual can have more than one CMD.

[b] Includes Chinese and mixed ethnic groups.

[c] Age-standardised rates should be treated with caution, especially when based on a small sample or when the standardised rate differs greatly from the observed.

Table 2.6

CMD in past week (observed), by marital status and sex

All adults *2007*

CMD[a]	Marital status					
	Married	Cohabiting	Single	Widowed	Divorced	Separated
	%	%	%	%	%	%
Men						
Mixed anxiety and depressive disorder	5.8	9.1	7.8	5.6	11.8	7.3
Generalised anxiety disorder	3.2	3.1	2.9	3.7	10.8	1.2
Depressive episode	1.2	2.0	3.1	2.5	4.2	1.2
All phobias	0.3	1.1	1.4	0.4	3.6	1.2
Obsessive compulsive disorder	0.6	1.4	1.4	-	1.6	0.9
Panic disorder	0.7	-	1.6	1.0	2.8	1.2
Any CMD	**10.1**	**14.0**	**14.8**	**10.4**	**27.7**	**10.5**
Women						
Mixed anxiety and depressive disorder	9.7	11.2	13.6	10.0	13.3	13.8
Generalised anxiety disorder	4.2	7.6	5.7	4.8	7.5	12.8
Depressive episode	2.0	0.6	3.5	3.3	6.3	8.8
All phobias	1.5	3.0	2.6	0.5	4.0	3.8
Obsessive compulsive disorder	0.5	0.9	2.9	0.7	2.8	4.0
Panic disorder	0.9	1.9	1.4	0.9	1.7	2.1
Any CMD	**16.3**	**21.6**	**24.6**	**17.4**	**26.6**	**33.0**
Bases (unweighted)						
Men	*1673*	*279*	*700*	*234*	*232*	*79*
Women	*1846*	*335*	*728*	*715*	*438*	*144*
Bases (weighted)						
Men	*1954*	*398*	*917*	*117*	*151*	*56*
Women	*1919*	*376*	*764*	*398*	*258*	*86*

[a] An individual can have more than one CMD.

Table 2.7

CMD in past week (age-standardised), by equivalised household income and sex

All adults *2007*

CMD[a]	Equivalised household income[b]				
	Highest	2nd	3rd	4th	Lowest
	%	%	%	%	%
Men					
Mixed anxiety and depressive disorder	4.1	4.9	6.7	8.9	9.7
Generalised anxiety disorder	1.3	2.8	2.5	4.3	7.5
Depressive episode	0.2	1.0	1.3	1.6	6.9
All phobias	0.1	-	0.3	0.6	3.2
Obsessive compulsive disorder	1.6	0.2	0.5	1.7	2.6
Panic disorder	1.8	0.9	0.1	1.3	2.6
Any CMD	**8.8**	**8.6**	**10.1**	**16.2**	**23.5**
Women					
Mixed anxiety and depressive disorder	10.9	7.4	13.1	12.5	12.7
Generalised anxiety disorder	2.6	3.9	5.5	6.7	7.8
Depressive episode	1.2	2.3	2.2	3.6	4.6
All phobias	0.5	1.3	2.3	2.8	3.5
Obsessive compulsive disorder	2.9	0.5	0.8	2.0	2.1
Panic disorder	0.7	0.6	0.3	2.7	2.0
Any CMD	**18.1**	**13.1**	**20.1**	**24.0**	**25.1**
Bases (unweighted)					
Men	*629*	*549*	*509*	*446*	*422*
Women	*562*	*602*	*733*	*676*	*744*
Bases (weighted)					
Men	*716*	*612*	*524*	*456*	*461*
Women	*531*	*546*	*624*	*539*	*627*

[a] An individual can have more than one CMD.

[b] For a definition of equivalised household income see the Glossary.

Table 2.8

CMD in past week (observed and age-standardised), by region[a] and sex

All adults *2007*

CMD[b]	Government Office Region									Strategic Health Authority	
	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	London	South West	South East	South East Coast	South Central
	%	%	%	%	%	%	%	%	%	%	%
Men											
Observed											
Mixed anxiety and depressive disorder	7.8	6.8	7.4	7.0	6.5	9.6	7.6	5.4	5.3	6.3	4.2
Generalised anxiety disorder	1.2	3.8	3.4	3.2	4.2	4.6	2.6	4.3	2.7	2.9	2.5
Depressive episode	2.2	2.6	1.6	2.8	1.5	2.7	1.8	1.2	1.3	1.5	1.0
All phobias	1.6	0.8	0.8	0.7	2.3	1.0	0.4	0.2	0.5	0.9	0.0
Obsessive compulsive disorder	1.5	1.0	0.5	0.6	0.9	1.0	0.9	0.4	1.4	1.5	1.4
Panic disorder	-	2.4	0.1	0.2	0.1	0.4	1.1	1.2	1.6	1.9	1.3
Any CMD	**11.6**	**14.7**	**13.0**	**12.5**	**12.3**	**15.8**	**11.6**	**10.8**	**10.3**	**12.3**	**8.4**
Age-standardised											
Mixed anxiety and depressive disorder	7.8	6.9	8.2	6.9	6.6	10.0	8.0	5.4	5.5	6.7	4.3
Generalised anxiety disorder	1.2	4.0	3.4	3.1	4.2	4.7	2.6	4.2	2.7	2.9	2.6
Depressive episode	2.4	2.8	1.7	2.8	1.5	2.9	1.6	1.2	1.3	1.6	1.1
All phobias	1.8	0.9	0.9	0.7	2.2	1.2	0.3	0.2	0.5	0.9	0.0
Obsessive compulsive disorder	1.6	1.0	0.5	0.6	0.8	1.1	0.8	0.5	1.5	1.7	1.3
Panic disorder	-	2.6	0.1	0.3	0.1	0.5	1.1	1.1	1.7	2.1	1.3
Any CMD	**11.7**	**15.1**	**13.9**	**12.3**	**12.4**	**16.5**	**11.8**	**10.8**	**10.8**	**13.1**	**8.6**

Continued…

Table 2.8 continued

All adults *2007*

CMD[b]	Government Office Region									Strategic Health Authority	
	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	London	South West	South East	South East Coast	South Central
	%	%	%	%	%	%	%	%	%	%	%
Women											
Observed											
Mixed anxiety and depressive disorder	16.1	13.2	10.7	10.3	11.5	9.8	10.6	10.0	9.7	9.4	9.9
Generalised anxiety disorder	6.0	3.9	5.7	7.4	5.1	3.1	6.3	6.4	5.0	4.4	5.8
Depressive episode	5.0	1.9	2.1	5.2	3.3	2.2	2.4	2.5	2.4	1.3	3.8
All phobias	2.5	1.1	0.6	3.5	2.9	1.4	2.2	2.3	2.1	2.1	2.1
Obsessive compulsive disorder	1.8	0.4	0.9	1.1	1.9	1.0	1.6	2.2	1.1	1.1	1.0
Panic disorder	1.1	1.6	0.6	1.7	2.6	1.6	1.1	0.3	0.6	1.1	0.0
Any CMD	**26.0**	**20.3**	**18.9**	**23.2**	**22.6**	**15.9**	**19.7**	**18.6**	**17.3**	**16.1**	**18.6**
Age-standardised											
Mixed anxiety and depressive disorder	15.8	13.3	10.7	10.3	11.4	9.9	10.2	10.1	9.7	9.7	9.7
Generalised anxiety disorder	5.9	3.8	5.6	6.6	5.1	3.2	6.5	6.7	5.0	4.4	5.6
Depressive episode	4.9	1.9	2.1	6.0	3.4	2.3	2.6	2.5	2.5	1.2	3.8
All phobias	2.8	1.1	0.6	3.1	2.8	1.4	2.1	2.5	2.0	2.3	1.9
Obsessive compulsive disorder	1.5	0.5	0.9	0.9	1.6	1.1	1.5	2.4	1.1	1.1	1.0
Panic disorder	1.0	1.5	0.6	1.5	2.4	1.8	1.0	0.3	0.6	1.1	0.0
Any CMD	**25.8**	**20.4**	**18.8**	**23.3**	**22.0**	**16.2**	**19.2**	**19.2**	**17.3**	**16.3**	**18.1**
Bases (unweighted)											
Men	*181*	*478*	*333*	*331*	*347*	*377*	*321*	*331*	*498*	*256*	*242*
Women	*259*	*624*	*467*	*350*	*443*	*478*	*471*	*419*	*695*	*370*	*325*
Bases (weighted)											
Men	*172*	*491*	*359*	*342*	*377*	*402*	*512*	*374*	*564*	*280*	*284*
Women	*207*	*508*	*390*	*296*	*398*	*417*	*580*	*374*	*631*	*336*	*295*

[a] This table provides data for regional analysis both by Government Office Region (GOR) and Strategic Health Authorities (SHAs). The first eight columns represent GORs and SHAs of the same name, while the South East GOR (column nine) is divided into South East Coast SHA and South Central SHA, shown in the final two columns.

[b] An individual can have more than one CMD.

Table 2.9

Treatment currently received for a mental or emotional problem (observed), by CIS-R score

All adults *2007*

Type of treatment	CIS-R score			
	0-5	6-11	12-17	18+
	%	%	%	%
All adults				
No treatment	97	91	83	68
Medication only	2	7	12	17
Counselling or therapy only	1	2	4	6
Both medication and counselling	0	1	2	9
Bases (unweighted)	*4946*	*1256*	*587*	*593*
Bases (weighted)	*5026*	*1243*	*556*	*551*

Table 2.10

Treatment currently received for a mental or emotional problem (observed), by CMD in past week

All adults *2007*

Type of treatment	Type of CMD[a]							
	Mixed anxiety and depressive disorder	Generalised anxiety disorder	Depressive episode	Any phobia	Obsessive compulsive disorder	Panic disorder	Any CMD	No CMD
	%	%	%	%	%	%	%	%
All adults								
No treatment	85	66	50	43	69	75	76	96
Medication only	11	18	25	23	12	8	14	3
Counselling or therapy only	3	7	8	13	6	10	5	1
Both medication and counselling	2	9	17	21	12	7	5	0
Bases (unweighted)	*685*	*361*	*206*	*114*	*84*	*80*	*1263*	*6119*
Bases (weighted)	*666*	*323*	*171*	*103*	*80*	*80*	*1190*	*6186*

[a] An individual may have more than one type of CMD.

Table 2.11

Treatment currently received for a mental or emotional problem (observed), by number of CMD in past week

All adults *2007*

Type of treatment	Number of CMDs		
	None	One	Two or more
	%	%	%
All adults			
No treatment	96	80	52
Medication only	3	13	21
Counselling or therapy only	1	4	10
Both medication and counselling	0	3	17
Bases (unweighted)	*6119*	*1070*	*193*
Bases (weighted)	*6186*	*1021*	*169*

Table 2.12

Psychoactive medication currently taken (observed), by number of CMD in past week

All adults *2007*

Type of medication	Number of CMDs		
	None	One	Two or more
	%	%	%
All adults			
Hypnotics	0	2	3
Anxiolytics	0	2	11
Antidepressants	3	13	32
Drugs used in the treatment of psychosis	0	1	4
Drugs used in the treatment of ADHD	0	-	0
Any psychoactive medication	**3**	**16**	**38**
Bases (unweighted)	*6119*	*1070*	*193*
Bases (weighted)	*6186*	*1021*	*169*

[a] Bases shown for those responding to question about psychoactive medication.

Table 2.13

Current counselling or therapy treatment for a mental or emotional problem (observed), by CMD in past week

All adults *2007*

Type of counselling or therapy	Type of CMD[a]							
	Mixed anxiety and depressive disorder	Generalised anxiety disorder	Depressive episode	Any phobia	Obsessive compulsive disorder	Panic disorder	Any CMD	No CMD
	%	%	%	%	%	%	%	%
All adults								
Psychotherapy	1	6	10	11	8	8	3	0
Behaviour or cognitive therapy	1	3	7	11	4	4	2	0
Art, music or drama therapy	0	1	1	2	1	-	0	-
Social skills training	-	1	1	0	1	2	0	0
Marital or family therapy	1	0	0	2	1	1	1	0
Sex therapy	0	0	-	-	1	-	0	0
Counselling	2	7	11	14	10	4	4	1
Other therapy	0	2	4	4	4	1	1	0
Any counselling or therapy	**5**	**15**	**25**	**34**	**18**	**17**	**10**	**1**
Bases (unweighted)[b]	*687*	*363*	*207*	*117*	*86*	*80*	*1270*	*6133*
Bases (weighted)	*668*	*324*	*173*	*105*	*82*	*80*	*1197*	*6197*

[a] An individual may have more than one type of CMD.

[b] Bases shown for those responding to the question on seeing a psychotherapist.

Table 2.14

Current counselling or therapy treatment for a mental or emotional problem (observed), by number of CMD in past week

All adults *2007*

Type of counselling or therapy	Number of CMDs		
	None	One	Two or more
	%	%	%
All adults			
Psychotherapy	0	2	11
Behaviour or cognitive therapy	0	2	5
Art, music or drama therapy	-	0	0
Social skills training	0	0	1
Marital or family therapy	0	1	1
Sex therapy	0	0	1
Counselling	1	2	14
Other therapy	0	1	4
Any counselling or therapy	**1**	**7**	**27**
Bases (unweighted)[a]	*6133*	*1075*	*195*
Bases (weighted)	*6197*	*1026*	*171*

[a] Bases shown for those responding to the question on seeing a psychotherapist.

Table 2.15

Health care services used for a mental or emotional problem (observed), by CMD in past week

All adults *2007*

Type of health care service	Type of CMD[a]							
	Mixed anxiety and depressive disorder	Generalised anxiety disorder	Depressive episode	Any phobia	Obsessive compulsive disorder	Panic disorder	Any CMD	No CMD
	%	%	%	%	%	%	%	%
All adults								
Inpatient stay in past quarter	-	1	2	2	2	1	0	0
Outpatient visit in past quarter	2	8	13	11	10	2	4	0
Spoken with GP in past 2 weeks	7	13	24	22	24	12	10	1
Spoken with GP in past year	30	52	65	67	55	45	38	6
Any health care service	**30**	**53**	**67**	**67**	**59**	**46**	**39**	**6**
Bases (unweighted)[b]	*687*	*363*	*205*	*116*	*85*	*80*	*1268*	*6133*
Bases (weighted)	*668*	*324*	*171*	*104*	*81*	*80*	*1195*	*6197*

[a] An individual may have more than one type of CMD.

[b] Bases shown for those responding to seeing a GP in past 2 weeks.

Table 2.16

Health care services used for a mental or emotional problem (observed), by number of CMD in past week

All adults *2007*

Type of health care service	Number of CMDs		
	None	One	Two or more
	%	%	%
All adults			
Inpatient stay in past quarter	0	0	1
Outpatient visit in past quarter	0	2	12
Spoken with GP in past 2 weeks	1	7	24
Spoken with GP in past year	6	33	71
Any health care service	**6**	**34**	**73**
Bases (unweighted)[a]	*6133*	*1074*	*194*
Bases (weighted)	*6197*	*1025*	*170*

[a] Bases shown for those responding to seeing a GP in past 2 weeks.

Table 2.17

Community and day care services used in past year (observed), by CMD in past week

All adults *2007*

Type of community care service	Type of CMD[a]							
	Mixed anxiety and depressive disorder	Generalised anxiety disorder	Depressive episode	Any phobia	Obsessive compulsive disorder	Panic disorder	Any CMD	No CMD
	%	%	%	%	%	%	%	%
All adults								
Psychiatrist	1	6	12	12	8	2	3	0
Psychologist	1	4	5	9	4	4	2	0
Community Psychiatric Nurse	2	5	7	7	5	4	3	0
Community LD nurse	0	-	-	1	1	-	0	0
Other nursing services	3	4	5	5	5	1	4	3
Social worker	3	5	8	8	9	5	4	1
Self help/support group	2	3	6	10	3	1	3	0
Home help/home care	1	2	3	4	2	1	1	1
Outreach worker	1	2	4	5	5	5	2	0
Community day care centre[b]	1	9	13	20	16	8	5	1
Any community or day care service	**12**	**25**	**37**	**49**	**31**	**16**	**18**	**5**
Bases (unweighted)[c]	*686*	*363*	*207*	*117*	*86*	*80*	*1269*	*6131*
Bases (weighted)	*668*	*363*	*173*	*105*	*82*	*80*	*1196*	*6195*

[a] An individual may have more than one type of CMD.

[b] Includes community mental health centre, day activity centre, sheltered workshop and other day service.

[c] Bases shown for those responding to seeing a psychiatrist.

Table 2.18

Community and day care services used in past year (observed), by number of CMD in past week

All adults *2007*

Type of community care service	Number of CMDs		
	None	One	Two or more
	%	%	%
All adults			
Psychiatrist	0	2	10
Psychologist	0	1	7
Community Psychiatric Nurse	0	2	7
Community LD nurse	0	0	1
Other nursing services	3	4	3
Social worker	1	3	10
Self help/support group	0	2	5
Home help/home care	1	1	3
Outreach worker	0	2	5
Community day care centre[a]	1	3	16
Any community or day care service	**5**	**15**	**38**
Bases (unweighted)[b]	*6131*	*1074*	*195*
Bases (weighted)	*6195*	*1026*	*171*

[a] Includes community mental health centre, day activity centre, sheltered workshop and other day service.

[b] Bases shown for those responding to seeing a psychiatrist.

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Posttraumatic stress disorder 3

Sally McManus, Howard Meltzer and Simon Wessely

Summary

- This chapter presents the first prevalence estimates of screening positive for posttraumatic stress disorder (PTSD) to be based on a large general population sample of adults in England. There are methodological limitations to the data collected. Screening positive indicated that clinical assessment for PTSD was warranted.
- PTSD is a disabling condition characterised by flashbacks and nightmares, avoidance and numbing, and hyper-vigilance. It is different from other psychiatric disorders in that diagnosis requires that symptoms are caused by an external, traumatic event.
- A traumatic event is where an individual experiences, witnesses, or is confronted with life endangerment, death or serious injury or threat to self or close others. Traumatic events are distinct from and more severe than generally stressful life events.
- A third (33.3%) of people reported having experienced a traumatic event since the age of 16. Experience of trauma in adulthood was higher in men (35.2%) than women (31.5%).
- The proportion reporting trauma in adulthood varied with age. It is unsurprising that adult trauma was least likely in the 16-24 age group (23.5%), given the shorter period of time during which they were at risk (between zero and nine years).
- Overall, 3.0% of adults screened positive for current PTSD. While men were more likely than women to have experienced a trauma; there was no significant difference by sex in rates of screening positive for current PTSD (2.6% of men, 3.3% of women).
- 'Conditional probability' was used to indicate the likelihood that current symptoms of PTSD will be present given a respondent has experienced a trauma in adulthood. There are caveats to how this probability can be interpreted and it is not a comparable measure to that used on other studies. It is included in this chapter to facilitate comparison between groups.
- The conditional probability of screening positive for current PTSD given that a trauma had occurred since age 16 was higher for women (10.4%) than for men (7.5%).
- Screening positive for current PTSD declined with age, from 4.7% of 16-24 year olds to 0.6% of adults aged 75 or over.
- The age-standardised rate of trauma in adulthood varied by ethnicity, and was highest in black men (45.7%, compared with 36.0% of white men and 29.3% of South Asian men). Black men were also more likely than men in other ethnic groups to screen positive for current PTSD. This was not just as a result of a higher rate of trauma: their conditional probability of PTSD was also high: 16.3% compared with 7.5% of men overall.
- Marital status was associated with having experienced a trauma and with screening positive for current PTSD. This was likely to be due in part to the age profile of the marital status groups.
- Despite no association being evident between equivalised household income and trauma, an association was found between income and current PTSD. The conditional probability of current PTSD given adulthood trauma ranged from 5.4% of men and 5.5% of women in the highest household income quintile, to 17.9% of men and 12.4% of women in the lowest.
- About a quarter (28%) of people screening positive for PTSD were in receipt of treatment for a mental or emotional problem, compared with 7% of those who screened negative.

3.1 Introduction

Many people will experience one or more major traumatic event in their lifetime, such as a personal assault or a car crash, or witnessing a violent death. While most of these people will feel symptoms such as distress, insomnia, anxiety or unhappiness, only a minority will develop a mental health problem such as posttraumatic stress disorder (PTSD) as a result. Where PTSD does occur, it usually onsets within three months of the event and may persist for months or even years.[1] It is a disabling condition characterised by flashbacks and nightmares, avoidance and numbing, and hyper-vigilance. In a small proportion of cases the disorder can follow a chronic course over many years, with eventual transition to an enduring personality change.

Psychiatric illnesses arising after traumatic events have had many names in the past such as shell shock, combat fatigue and nervous shock. PTSD is currently the most widely used term covering some of the psychiatric complications of trauma. This formal diagnosis was only included in the Diagnostic and Statistical Manual for Mental Disorders (DSM) in its third edition, published in 1980.[2] It is classified among the anxiety disorders. It is different from other psychiatric diagnoses in the Manual because it is not just a description of symptoms but also requires that those symptoms are caused by an external, traumatic event.

'Traumatic events' in the context of PTSD are not merely events that are stressful, they must be of sufficient severity that a person genuinely fears for their own or a loved one's life or safety. Research on trauma and its consequences for mental health relies on self-reports of traumatic events which could be biased for a variety of reasons. An underestimation of rate could result from traumas being repressed or simply forgotten. Furthermore, the victims of traumas might feel ashamed, and therefore might not be prepared to disclose them.[3] The proportion of adults who report having experienced at least one such traumatic event varies greatly by country, ranging from a majority of people in the US (61% of men, 51% of women)[4] to a minority in Zurich, Switzerland (22% of men, 31% of women).[5]

Traumatic events are not evenly distributed in the population and some groups of people have a particularly high risk of exposure.[6] One community based survey found 90% of people aged 18-45 living in inner-city Detroit had experienced trauma,[7] and regions affected by natural disaster also have a high population prevalence.[8] People working in occupations engaged in combat,[9] and civilians (including refugees) who have experienced war or torture, have also been identified with high rates of exposure.[10]

The community based prevalence of PTSD has also been estimated in a number of countries, and the proportion screening positive for the disorder varies greatly. In the US a lifetime rate of 6.8% was identified,[11] compared with 0.0% in Zurich.[12] Some of this variation is accounted for by differences in method, for example the Zurich study did not rely on a screening tool but used a full clinical structured interview administered by a psychiatrist. Even given the impact of this, PTSD still appears to be far more common in the US than in other countries. The US rate of PTSD is even higher than that found in South Africa, where the 12 month prevalence of PTSD was 0.6%.[13] Precisely why there is this variation is not entirely clear, as it is not simply about different rates or types of trauma or crime. For example, the level of reported crime in Australia is comparable to the USA, while the Australian rates of PTSD are much lower.[14]

The association between exposure to trauma and the development of symptoms of posttraumatic stress is not fully understood. It involves a complex interplay between factors related to the trauma, neurobiology, and psychosocial influences. All of these inform an individual's vulnerability or resilience to developing PTSD as a result of exposure to trauma.[15] Some socio-demographic factors, such as sex, age, ethnicity and income have also been shown to be associated with different risk factors for developing PTSD after trauma exposure. Apart from PTSD, trauma also increases the risk of several other disorders, including depression, psychosis and substance use.[16] However, there are difficulties in determining whether the symptoms of a given condition are attributable to a specific traumatic event.[17] Comorbidity, including with PTSD, is discussed in Chapter 12.

In this chapter the general population prevalence of major trauma in adulthood and of screening positive for PTSD in the past week (also referred to as 'current PTSD'), are presented. Associations with age, sex, ethnicity, marital status, household income, and levels of service use and treatment are also included.

3.2 Definition and assessment

3.2.1 Traumatic stressors and posttraumatic stress disorder (PTSD)

Traumatic stressors

Both the International Classification of Disease (ICD-10)[18] and the DSM-IV[19] definitions of PTSD are distinct from definitions of other psychiatric disorders in that diagnosis requires exposure to an external, traumatic stressor. ICD-10 describes a traumatic stressor as: 'a stressful event or situation (of either brief or long duration) of an exceptionally threatening or catastrophic nature, which is likely to cause pervasive distress in almost anyone.'

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.

Posttraumatic stress disorder (PTSD)

Individuals responding to a traumatic stressor with feelings of fear, horror or helplessness may develop PTSD symptoms as a result. Symptoms can develop within weeks, but according to ICD-10, onset is almost always within six months. It may take many more months or even years before a person will choose to present to services: delay in seeking help is very common in PTSD although true delay in the onset of symptoms much less so. The symptoms are grouped into three clusters:

- Re-experiencing (reliving the trauma through intrusive memories, dreams or nightmares);
- Avoidance and numbing (avoidance of activities and situations reminiscent of the trauma and a general sense of numbness and emotional blunting); and
- Hyperarousal (including angry outbursts, hyper-vigilance, and an exaggerated startled response).

DSM-IV requires that symptoms from each cluster be present for a full diagnosis of PTSD to be made. The ICD-10 criteria for 'Post-traumatic stress disorder' (F43.1) are similar, but place less emphasis on emotional numbing.

3.2.2 Trauma Screening Questionnaire (TSQ)

APMS 2007 included the Trauma Screening Questionnaire (TSQ), a short screening tool designed to identify likely cases of current PTSD, as in those exhibiting symptoms in the past week at or above the threshold for PTSD.[20] It was felt that respondents with PTSD would be more likely to report a trauma and any associated symptoms if asked in a self-completion format, rather than face to face. The TSQ was therefore incorporated into the computer assisted self-completion interview (CASI).

Respondents were first asked whether or not 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.'

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

was in part because the direct enquiry required to gather this information can be long and the space available for new questions on the 2007 survey was strictly limited.[21] Those stating that they had experienced a major trauma were asked when this had last occurred; if this was since the age of 16 they were asked to consider the following reactions that sometimes occur after a traumatic experience:

The Trauma Screening Questionnaire (TSQ)

Have you experienced, ***at least twice in the past week...*** *yes/no*

- Upsetting memories or thoughts about the event that have come into your mind against your will?
- Upsetting dreams about the event?
- Acting or feeling as though the event were happening again?
- Feeling upset by reminders of the event?
- Bodily reactions (such as fast heartbeat, stomach churning, sweatiness, dizziness) when reminded of the event?
- Difficulty falling or staying asleep?
- Irritability or outbursts of anger?
- Difficulty concentrating?
- Heightened awareness of potential dangers to yourself and others?
- Being jumpy or being startled at something unexpected?

The TSQ consists of the re-experiencing and arousal items from the Posttraumatic Stress Symptom Scale – Self-Report, which is aligned to DSM-IV criteria.[22] It does not cover the DSM-IV criteria related to avoidance and numbing.[23] However, unlike true diagnostic measures such as structured clinical interviews, screening instruments need not include all items corresponding to specific diagnostic criteria but may be based on any measures that best predict the criterion diagnosis.[17] NICE guidelines identify the TSQ as one of two screens with the greatest potential for use in primary care.[24] It was selected from the screens available for the following reasons, it:

- Performs well: it has been validated on independent samples, after different types of traumatic stressor,[25] and has been used on a major general population survey;[26]
- Was the only screen identified that used two response options: yes/no coding is the preferred format for computer assisted self-completion;[27]and
- Was one of the shortest.

The TSQ is scored by giving one point to each item experienced twice or more in the past week: a total of six or more out of the possible ten indicated a positive screen for PTSD. All respondents with a score of five or less were designated as screen negative. The TSQ was not designed or validated to assess posttraumatic stress responses to events occurring in childhood. Only respondents who reported a traumatic event since age 16 were filtered to the screening questions: those with a traumatic event only in childhood were coded as screen negative for current PTSD.

It should also be noted that diagnosis of PTSD would require a full clinical assessment. In this chapter reference is made to 'screening positive' for PTSD. Screen-positive rates are likely to represent an overestimate of the true prevalence of a disorder.

3.2.3 Estimation of conditional probability

Conditional probability is the probability of one event, given that another has occurred. The conditional probability of having PTSD given exposure to a trauma has been calculated in different ways in different studies. Ideally, the psychiatric consequences of every major

trauma experienced by a respondent should be detailed. Given the burden that this would present, conditional probability has been calculated based on a randomly selected trauma or the trauma rated by respondents' as the 'most distressing'.[28] In relation to the trauma selected, lifetime experience of PTSD is gathered and a conditional probability estimated by simply dividing the number of respondents who screened positive by the number exposed to trauma.

The main function of the APMS series is to estimate the level of poor mental health in the general population at any one time. Lifetime prevalence is not assessed for most of the disorders covered, including PTSD. Screening positive for current PTSD was based on the presence of symptoms in the past week: this has an impact on what measure of conditional probability can be calculated.

The conditional probability presented in this chapter is the probability of screening positive for current PTSD given that a trauma has occurred in adulthood. It is based on the most recent trauma, but for some respondents that could be an event that occurred many years ago. It is quite possible that a respondent experienced PTSD as a result of their most recent trauma, are now in remission and no longer symptomatic, and therefore not identified as currently symptomatic.[29] The measure of conditional probability presented here therefore will be an underestimate compared with that used on most other studies and should not be compared. It will be most misleading for analysis by age, but more useful for comparing vulnerability to development of PTSD given exposure in other groups, especially where the results are age-standardised.

3.3 Results

3.3.1 Prevalence of trauma, by age and sex

Lifetime experience of trauma

42.2% of adults reported having experienced a major trauma at some point in their life (44.1% of men and 40.4% of women).

Adulthood experience of trauma

A third (33.3%) of adults reported having had their most recent experience of trauma since the age of 16. The experience of trauma in adulthood was higher in men (35.2%) than women (31.5%).

The proportion reporting a major trauma in adulthood varied with age. It is unsurprising that adult trauma was least likely to have occurred in the 16-24 age group (23.5%), given the shorter period of time during which they were at risk (between zero and nine years).

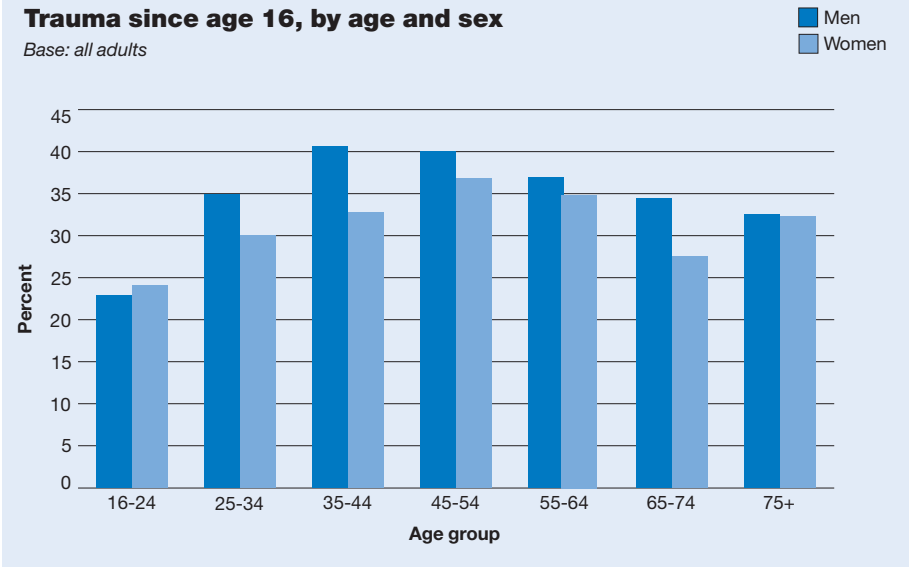
The level of trauma in adulthood reported by those aged 65 and over was similar to that of 25-34 year olds, which may seem counterintuitive. This is a similar pattern to that observed for the reporting of some other lifetime experiences, such as having ever attempted suicide (see Chapter 4). The relatively low rate among older people may be the combined result of cohort differences in experience and perception, and the impact of passage of time since the most recent trauma on recall. **Table 3.1, Figure 3A**

3.3.2 Screening positive for current PTSD, by age and sex

Overall, 3.0% of adults screened positive for current PTSD. This equated to a conditional probability of 8.9% of those who had experience of trauma in adulthood.

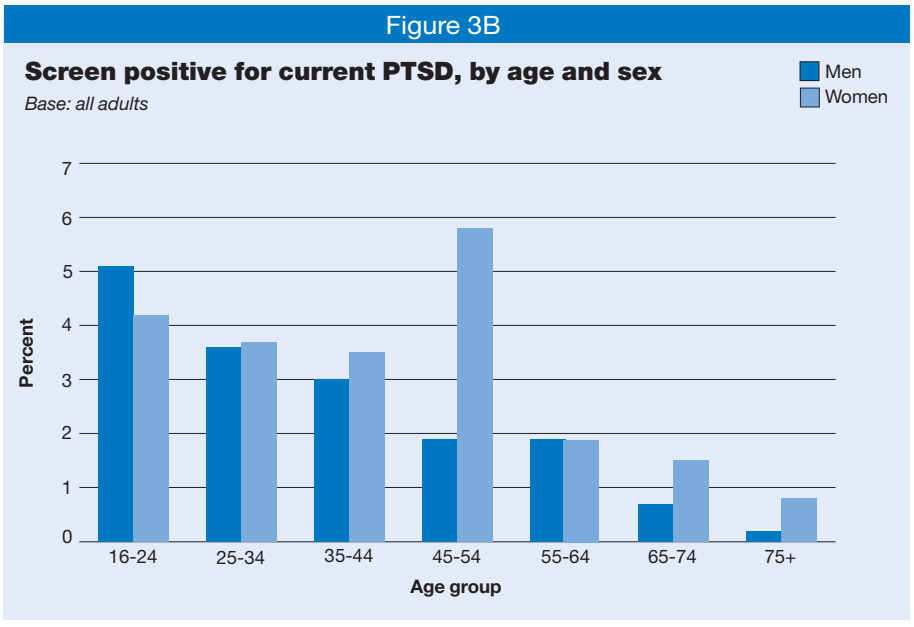
While men were more likely than women to have experienced a trauma in adulthood; there was no significant difference by sex in the rates of screening positive for current PTSD (2.6% of men, 3.3% of women). The conditional probability of screening positive for current PTSD given that a trauma had occurred since age 16 was higher for women (10.4%) than for men (7.5%).

Figure 3A



The prevalence of screening positive for current PTSD broadly declined with age, from 4.7% of 16-24 year olds to 0.6% of adults aged 75 or over. This is likely to be a product of complex interaction of age, period and cohort effects.[30] It is also worth noting the high rate of screening positive for current PTSD among women aged 45-54. Across the disorders measured by the APMS 2007 survey, rates have tended to be high in this group, even where that did not fit with the general age trend in the data. (For examples, see Chapters 2, CMD, and 4, Suicidal thoughts, attempts and self-harm). **Figure 3B**

Figure 3B



The conditional probability of current PTSD given trauma in adulthood also declined with age, from 19.8% of 16-24 year olds with experience of trauma to 1.7% of those aged 75 or more with experience of trauma. However, this association was confounded by the fact that on average less time would have elapsed since the most recent trauma had been experienced by younger people than older people. Older people would have been more likely to have experienced PTSD in the past, something not captured in the APMS survey. In addition, it is known that younger people are more likely to have recent experience of violent assault, a trauma known to be associated with high rates of resultant PTSD. **Table 3.1**

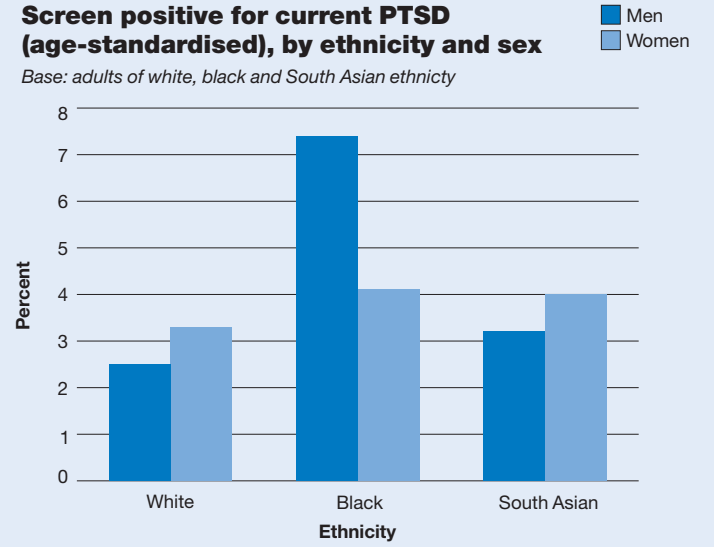
3.3.3 Variation by other characteristics

Ethnicity

The age-standardised rate of trauma in adulthood was highest among black men (45.7%, compared with 36.0% of white men and 29.3% of South Asian men). Black men were also more likely to screen positive for current PTSD. Their age-standardised rate (7.4%) was twice that of South Asian men (3.1%) and three times that of white men (2.5%). Their conditional probability of current PTSD was 16.3%, compared with 7.5% of men overall.

After age-standardisation, South Asian women appeared to be more likely than other women to have experienced a trauma (43.9%, compared with 31.4% of both white and black women). Despite this apparent increased trauma rate among South Asian women, the rate of screening positive for current PTSD did not vary in women by ethnicity. It should be noted here that age-standardised rates can be unreliable when base sizes are small, and they should be considered alongside the observed rates. **Table 3.2, Figure 3C**

Figure 3C



Marital status

Marital status was associated both with having experienced a trauma and with screening positive for current PTSD.

The prevalence of screening positive for current PTSD was lowest for married men (1.5%) and women (2.1%). A relatively high rate of screening positive for current PTSD was observed among divorced women (6.8%), and this may be related to the high rate of PTSD screen positives in women aged 45-54.

Single people were the least likely to report an adult trauma (30.7% of men, 28.4% of women), but had the highest conditional probability of current PTSD (15.1% of men with experience of trauma, 18.0% of women with experience of trauma). This is likely to be due largely to the age profile of the single group: younger people were also found to have relatively low rates of trauma in adulthood combined with relatively high rates of screening positive for current PTSD. (See the definition of age-standardisation in the Glossary for an explanation of why marital status was not standardised). **Table 3.3**

Equivalised household income

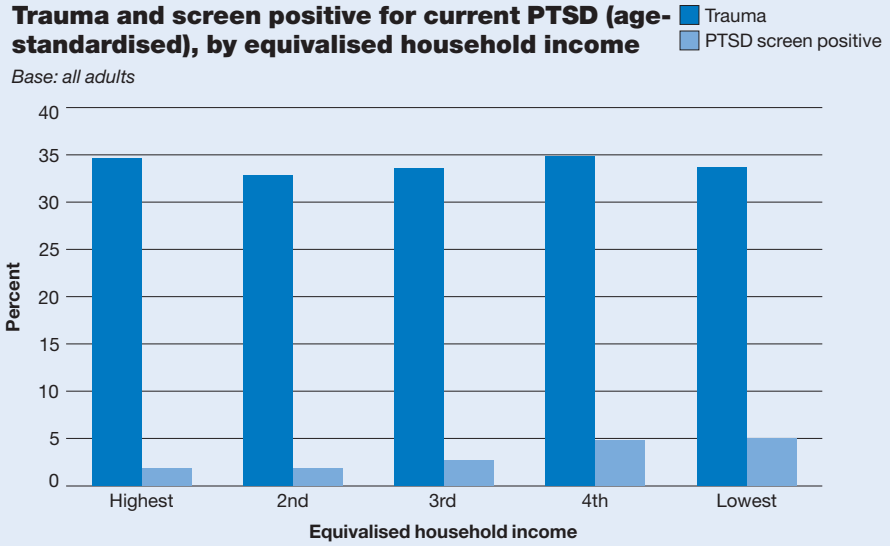
No association was found between the rate of having experienced a trauma and age-standardised equivalised household income (see the Glossary for a definition). Despite no association being evident between income and trauma, an association was found between income and current PTSD. Screening positive for PTSD was more likely in lower income households: 6.2% of men and 4.1% of women in the lowest income quintile screened positive, compared with 2.0% of men and 1.7% of women in the highest income quintile.

The conditional probability of current PTSD given adulthood trauma ranged from 5.4% of men and 5.5% of women in the highest household income quintile, to 17.9% of men and 12.4% of women in the lowest. Because household income rates were age-standardised this difference was not a product of differing age profiles across the quintiles.

Table 3.4, Figure 3D

Figure 3D

Trauma and screen positive for current PTSD (age-standardised), by equivalised household income



3.3.4 Treatment and service use

Respondents were asked about a range of types of treatment and services. These included current use of psychoactive medication and counselling and therapy for a mental or emotional problem, as well as use of a range of health, community and day care services over the past year. These are all defined in more detail, including variations in the time frame referred to, in the Glossary. These analyses were age-standardised.

About a quarter (28%) of people screening positive for PTSD were in receipt of treatment for a mental or emotional problem. This compares with 7% of those who screened negative. 24% of screen-positive adults were on medication and 10% in counselling (including 6% in receipt of both).

Compared with other adults, those screening positive for PTSD were four times more likely to have made use of health care services for a mental or emotional reason (44% compared with 10%), or to have used community care services (22% compared with 6%), and more than twice as likely to have used a day care service in the past year (10% compared with 4%).

Table 3.6

3.4 Discussion

This chapter presents the first prevalence estimates of screening positive for PTSD to be based on a general population sample of adults in England. There are methodological limitations to the data collected, mainly due to the lack of space on the APMS 2007 survey for coverage of this new topic. Further epidemiological measurement of trauma and PTSD in England should seek to establish trauma type and number of traumas experienced, and would benefit from an assessment to diagnostic criteria if space permitted. Data more comparable with that collected on surveys in several other countries would be possible if PTSD was assessed in relation to the trauma identified by the respondent as the most distressing that they had experienced, rather than the most recent one.[31] Covering lifetime experience of PTSD in relation to the selected trauma would improve the measure of conditional probability that could be generated.[32] PTSD resulting from childhood trauma could also be covered.

Despite these methodological limitations the data provide great insight into the prevalence of current psychiatric distress attributable to trauma in the English population and the clear variations by age, sex, ethnicity, marital status and income in having experienced a trauma and of current PTSD.

35.2% of men and 31.5% of women in England reported a major trauma in adulthood that made them fear for their own or a loved one's life and safety. Men and women were equally likely to screen positive for current PTSD. But given the higher rate of trauma among men, the conditional probability of current PTSD was slightly higher in women than men. This fits with the distribution by sex found in some studies, which has been attributed to differences in the nature of traumas experienced by men and women and rates of prior mental disorder.[33]

Young people were less likely than older people to have experienced a trauma in adulthood because of the short amount of time for which they had been adults. Given this, it is notable that the rate of trauma experienced by young people, 23.5%, was as high as it was. In addition, the probability of screening positive for current PTSD was also high at 19.8% of 16-24 year olds exposed to a trauma. These associations with age have been reported in research from other countries. The high conditional probability for PTSD among younger people may also reflect the high rate of violent assault experienced by this group, particularly for men. Violent assault is a type of trauma that has been identified with high rates of PTSD. The British Crime Survey has consistently shown that young men, in particular aged 16–24, are at highest risk of becoming a victim of violent crime.[34]

There was a particularly high rate of trauma, a high rate of PTSD screen-positive, and a high conditional probability of PTSD among black men. While it should be noted that this finding is based on a very small sample, it still warrants further investigation and may be associated with the high rates of social adversity in this group that are reported elsewhere.[35] While this association has also been reported in urban samples in the United States and attributed to the high levels of assaultive violence experienced by black men in that country, the British Crime Survey does not find elevated rates of violent crime victimisation among black men.

The high rates of trauma and current PTSD among divorced women and women aged 45-54 are also noteworthy. Other studies have observed higher rates of trauma and PTSD among those who are not married.[15] This elevated rate among divorced women does not necessarily mean that women are (incorrectly) including divorce as a major trauma: rather it could indicate that women who have experienced a trauma (including domestic violence) may be more likely to become divorced.

It is interesting to note that while the likelihood of having experienced a trauma did not vary with household income, rates of current PTSD did. However it is not possible from a cross sectional survey of this kind to discern whether the development of PTSD is more likely among those with reduced financial resources or whether the presence of PTSD has had a negative impact on household finances. It is also possible that type of trauma varies by household income, with the types of trauma most likely to cause PTSD being experienced by people living in lower income households.

Currently, specialist treatment units are being developed to help people experiencing PTSD. NICE guidelines state that people with such symptoms should be offered trauma focused talking treatment, with less emphasis placed on medication.[24] The treatment data collected here shows that three quarters of people screening positive for current PTSD are in receipt of no treatment, and among those that are the majority are in receipt of medication only.

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27 See the summary of the 13 available PTSD screening tools in the NICE clinical guidelines. All other tools have response scales with between four and seven items.
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28 Breslau has argued that focus on the worst trauma has overstated the conditional risk of PTSD given exposure because thesetraumas represent the extreme end of the distribution of experiences regarded as potential causes of PTSD. (Bresalu N, Kessler R, Chilcoat H, Schultz L, Davis G, Andreski P (1998) Trauma and Posttraumatic Stress disorder in the Community: the 1996 Detroit Area Survey of Trauma. *Arch Gen Psychiatry*. 55:626-632).

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Tables

Table 3.1

Trauma and screen positive for current posttraumatic stress disorder (PTSD), by age and sex

All adults *2007*

Trauma[a], current PTSD screen positive[b] and conditional probability of current PTSD given trauma since 16[c]	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	%	%	%	%	%	%	%	%
Men								
Trauma ever[a]	39.5	45.0	48.1	46.3	43.4	41.4	40.1	44.1
Trauma since 16[a]	22.9	34.9	40.6	40.1	37.0	34.5	32.5	35.2
PTSD screen positive[b]	5.1	3.6	3.0	1.9	1.9	0.7	0.2	2.6
Probability of current PTSD given trauma since 16[c]	**22.3**	**10.4**	**7.3**	**4.6**	**5.3**	**2.1**	**0.5**	**7.5**
Women								
Trauma ever[a]	42.0	38.4	41.9	44.1	38.8	35.7	39.9	40.4
Trauma since 16[a]	24.1	30.0	32.8	36.8	34.9	27.6	32.3	31.5
PTSD screen positive[b]	4.2	3.7	3.5	5.8	1.9	1.5	0.8	3.3
Probability of current PTSD given trauma since 16[c]	**17.5**	**12.3**	**10.5**	**15.8**	**5.4**	**5.3**	**2.5**	**10.4**
All adults								
Trauma ever[a]	40.8	41.6	45.0	45.2	41.1	38.4	40.0	42.2
Trauma since 16[a]	23.5	32.4	36.6	38.4	35.9	30.9	32.4	33.3
PTSD screen positive[b]	4.7	3.7	3.2	3.9	1.9	1.1	0.6	3.0
Probability of current PTSD given trauma since 16[c]	**19.8**	**11.3**	**8.7**	**10.1**	**5.3**	**3.6**	**1.7**	**8.9**
Bases (unweighted)								
Men	*258*	*403*	*601*	*486*	*562*	*447*	*353*	*3110*
Women	*289*	*613*	*777*	*626*	*685*	*550*	*557*	*4097*
All	*547*	*1016*	*1378*	*1112*	*1247*	*997*	*910*	*7207*
Bases (weighted)								
Men	*508*	*591*	*692*	*578*	*528*	*352*	*246*	*3495*
Women	*507*	*607*	*701*	*597*	*540*	*387*	*373*	*3711*
All	*1015*	*1198*	*1393*	*1174*	*1067*	*738*	*619*	*7205*

[a] A 'trauma' is an event of such severity that a person fears for their own or a loved one's life or safety. See Section 3.2.1 for examples.

[b] Screening positive for current PTSD requires the most recent trauma to have been experienced since the age of 16, plus endorsement of six or more items on the Trauma Screening Questionnaire (TSQ) relating to symptoms in the past week.

[c] The conditional probability of screening positive for current PTSD given that the most recent experience of trauma had occurred since the age of 16 is presented. See Section 3.2.3 for a discussion of how this was calculated and its limitations.

Table 3.2

Trauma in adulthood and screen positive for current PTSD (observed and age-standardised), by ethnicity and sex

All adults *2007*

Trauma[a], current PTSD screen positive[b] and conditional probability of current PTSD given trauma since 16[c]	Ethnicity			
	White	Black	South Asian	Other[d]
	%	%	%	%
Men				
Observed				
Trauma since 16[a]	36.0	42.6	26.5	17.5
PTSD screen positive[b]	2.4	8.2	3.1	1.6
Probability of current PTSD given trauma in adulthood[c]	**6.7**	**19.2**	**11.7**	**9.2**
Age-standardised				
Trauma since 16[a]	36.0	45.7	29.3	17.4
PTSD screen positive[b]	2.5	7.4	3.2	1.3
Probability of current PTSD given trauma in adulthood[c]	**6.9**	**16.3**	**11.0**	**7.3**
Women				
Observed				
Trauma since 16[a]	31.5	32.8	30.1	32.1
PTSD screen positive[b]	3.3	5.3	2.5	1.5
Probability of current PTSD given trauma in adulthood[c]	**10.5**	**16.0**	**8.3**	**4.6**
Age-standardised				
Trauma since 16[a]	31.4	31.4	43.9	35.2
PTSD screen positive[b]	3.3	4.1	4.0	1.8
Probability of current PTSD given trauma in adulthood[c]	**10.6**	**13.2**	**9.1**	**5.0**
Bases (unweighted)				
Men	*2861*	*70*	*101*	*68*
Women	*3805*	*108*	*83*	*87*
Bases (weighted)				
Men	*3131*	*91*	*157*	*107*
Women	*3379*	*117*	*102*	*102*

[a] A 'trauma' is an event of such severity that a person fears for their own or a loved one's life or safety. See Section 3.2.1 for examples.

[b] Screening positive for current PTSD requires the most recent trauma to have been experienced since the age of 16, plus endorsement of six or more items on the Trauma Screening Questionnaire (TSQ) relating to symptoms in the past week.

[c] The conditional probability of screening positive for current PTSD given that the most recent experience of trauma had occurred since the age of 16 is presented. See Section 3.2.3 for a discussion of how this was calculated and its limitations.

[d] Includes Chinese and mixed ethnic groups.

Table 3.3

Trauma in adulthood and screen positive for current PTSD (observed), by marital status and sex

All adults *2007*

Trauma[a], current PTSD screen positive[b] and conditional probability of current PTSD given trauma since 16[c]	Marital status					
	Married	Cohabiting	Single	Widowed	Divorced	Separated
	%	%	%	%	%	%
Men						
Trauma since 16[a]	36.1	36.4	30.7	43.8	39.9	40.9
PTSD screen positive[b]	1.5	2.8	4.6	3.8	3.9	2.5
Probability of current PTSD given trauma in adulthood[c]	**4.1**	**7.7**	**15.1**	**8.8**	**9.7**	**6.1**
Women						
Trauma since 16[a]	30.1	30.1	28.4	37.8	42.4	34.2
PTSD screen positive[b]	2.1	3.4	5.1	2.6	6.8	5.8
Probability of current PTSD given trauma in adulthood[c]	**6.9**	**11.3**	**18.0**	**7.0**	**16.0**	**17.1**
Bases (unweighted)						
Men	*1633*	*272*	*674*	*226*	*228*	*77*
Women	*1798*	*331*	*712*	*690*	*427*	*139*
Bases (weighted)						
Men	*1908*	*388*	*882*	*113*	*149*	*54*
Women	*1870*	*372*	*751*	*384*	*252*	*81*

[a] A 'trauma' is an event of such severity that a person fears for their own or a loved one's life or safety. See Section 3.2.1 for examples.

[b] Screening positive for current PTSD requires the most recent trauma to have been experienced since the age of 16, plus endorsement of six or more items on the Trauma Screening Questionnaire (TSQ) relating to symptoms in the past week.

[c] The conditional probability of screening positive for current PTSD given that the most recent experience of trauma had occurred since the age of 16 is presented. See Section 3.2.3 for a discussion of how this was calculated and its limitations.

Table 3.4

Trauma in adulthood and screen positive for current PTSD (age-standardised), by equivalised household income and sex

All adults *2007*

Trauma[a], current PTSD screen positive[b] and conditional probability of current PTSD given trauma since 16[c]	Equivalised household income[d]				
	Highest	2nd	3rd	4th	Lowest
	%	%	%	%	%
Men					
Trauma since 16[a]	37.5	32.8	35.9	37.4	34.7
PTSD screen positive[b]	2.0	1.8	2.0	3.5	6.2
Probability of current PTSD given trauma in adulthood[c]	**5.4**	**5.4**	**5.5**	**9.3**	**17.9**
Women					
Trauma since 16[a]	30.6	32.8	31.7	32.8	33.0
PTSD screen positive[b]	1.7	2.1	3.4	5.8	4.1
Probability of current PTSD given trauma in adulthood[c]	**5.5**	**6.5**	**10.7**	**17.8**	**12.4**
Bases (unweighted)					
Men	*621*	*542*	*500*	*432*	*413*
Women	*557*	*596*	*719*	*660*	*723*
Bases (weighted)					
Men	*708*	*604*	*514*	*445*	*453*
Women	*527*	*540*	*613*	*528*	*609*

[a] A 'trauma' is an event of such severity that a person fears for their own or a loved one's life or safety. See Section 3.2.1 for examples.

[b] Screening positive for current PTSD requires the most recent trauma to have been experienced since the age of 16, plus endorsement of six or more items on the Trauma Screening Questionnaire (TSQ) relating to symptoms in the past week.

[c] The conditional probability of screening positive for current PTSD given that the most recent experience of trauma had occurred since the age of 16 is presented. See Section 3.2.3 for a discussion of how this was calculated and its limitations.

[d] See the Glossary for a definition of equivalised household income.

Table 3.5

Trauma in adulthood and screen positive for current PTSD (observed and age-standardised), by region[a] and sex

All adults *2007*

Trauma[b] and current PTSD screen positive[c]	Government Office Region									Strategic Health Authority	
	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	London	South West	South East	South East Coast	South Central
	%	%	%	%	%	%	%	%	%	%	%
Men											
Observed											
Trauma since 16[b]	31.4	33.6	32.5	36.3	39.6	34.6	33.7	39.1	35.5	33.0	38.0
PTSD screen positive[c]	2.4	3.3	3.0	1.6	4.7	1.9	2.8	1.8	2.0	2.5	1.7
Age-standardised											
Trauma since 16[b]	31.4	33.6	32.5	36.3	39.6	34.6	33.7	39.1	35.5	33.0	38.0
PTSD screen positive[c]	2.5	3.5	3.1	1.7	4.9	1.9	2.5	2.1	2.1	2.5	1.7
Women											
Observed											
Trauma since 16[b]	29.1	30.6	29.5	32.3	32.9	32.1	29.7	32.5	33.6	31.4	36.2
PTSD screen positive[c]	4.7	3.2	2.8	2.4	5.0	2.4	3.9	2.8	2.9	2.6	3.2
Age-standardised											
Trauma since 16[b]	29.1	30.6	29.5	32.3	32.9	32.1	29.7	32.5	33.6	31.4	36.2
PTSD screen positive[c]	4.5	3.3	2.8	2.7	4.6	2.6	3.7	2.8	2.9	2.6	3.2
Bases (unweighted)											
Men	*177*	*467*	*326*	*317*	*335*	*374*	*313*	*319*	*482*	*250*	*232*
Women	*254*	*609*	*453*	*339*	*428*	*473*	*462*	*403*	*676*	*364*	*312*
Bases (weighted)											
Men	*168*	*482*	*352*	*323*	*363*	*397*	*502*	*362*	*546*	*273*	*273*
Women	203	498	380	286	386	414	569	360	616	331	285

[a] This table provides data for regional analysis both by Government Office Region (GOR) and Strategic Health Authority (SHA). The first eight columns represent GORs and SHAs of the same name, while the South East GOR (column nine) is divided into South East Coast SHA and South Central SHA, shown in the final two columns.

[b] A 'trauma' is an event of such severity that a person fears for their own or a loved one's life or safety. See Section 3.2.1 for examples.

[c] Screening positive for current PTSD requires the most recent trauma to have been experienced since the age of 16, plus endorsement of six or more items on the Trauma Screening Questionnaire (TSQ) relating to symptoms in the past week.

Table 3.6

Treatment and service use (age-standardised), for people with and without a positive screen for current PTSD

All adults *2007*

Treatment and services	Current PTSD screen	
	Screen negative for PTSD	Screen positive for PTSD
	%	%
All adults		
Current treatment for a mental or emotional problem		
No treatment	93	72
Medication only	4	18
Counselling or therapy only	1	4
Medication and counselling	1	6
Service use		
Any current counselling or therapy	2	10
Any health care service use for a mental or emotional problem[a]	10	44
Any community care service in past year	6	22
Any day care service in past year	4	10
Bases (unweighted)[b]	*6976*	*212*
Bases (weighted)	*6980*	*210*

[a] Inpatient stay or outpatient visit in past quarter, or spoken with GP in past year, for a mental or emotional reason.

[b] Bases shown are for those with valid response to the questions about receiving any treatment. Bases for health care and services used in the past year vary but are of a similar magnitude.

Suicidal thoughts, suicide attempts and self-harm

4

Soazig Nicholson, Rachel Jenkins and Howard Meltzer

Summary

- This chapter provides estimates of the prevalence of suicidal thoughts, non-fatal suicide attempts and self-harm among the English general population. Comparisons are made with data from the 2000 survey. Findings are also presented on sources of help following suicide attempts, and the types of treatment received by those who have self-harmed.
- Respondents were asked questions about suicidal thoughts, suicide attempts and self-harm in the face to face interview: three of these questions were then asked again in the self-completion.
- A higher proportion of people reported suicidal thoughts, attempts and self-harm when asked as self-completion questions than when asked face to face. Prevalence estimates from both methods are presented in this chapter, but only the self-completion results are analysed by other characteristics.
- Overall 16.7% of people said that they had thought about committing suicide at some point in their life, 5.6% said that they had attempted suicide, and 4.9% said that they had engaged in self-harm. The rate of each of these broadly declined with age.
- The proportion of women reporting suicidal thoughts in the past year increased between the 2000 and 2007 surveys. There was also an increase in the proportion of people reporting that they had engaged in self-harm, especially among women aged 16-24.
- Rates of suicidal thoughts and suicide attempts varied by ethnicity, marital status, and equivalised household income. The attributes found to have the strongest association were being white, divorced or separated, and in the lowest household income quintile. Self-harming also varied by marital status and equivalised household income. The attributes which were most related to self-harm were being single and in the lowest household income quintile.
- 63% of men and 58% of women who reported having attempted suicide said that they had sought help following the last attempt. The most common sources of help sought were from a GP or family doctor; hospital or other specialist medical or psychiatric services; and family, friends or neighbours.
- Younger adults were more likely than older adults to have sought help after their most recent suicide attempt: 70% of those aged 16-34 reported that they had sought help, compared with 51% of those aged 55 or over.
- Of those who reported self-harm, 42% of men and 53% of women had received either medical or psychiatric help.

4.1 Introduction

Suicidal thoughts, suicide attempts and self-harm are of particular interest because of their power in predicting who is most likely to go on to commit suicide. These thoughts and behaviours are also associated with high levels of distress, both for the people engaging in them and for those around them. They frequently co-occur but are in fact distinct. While much of the literature on self-harm combines suicide attempts with non-suicidal self-harming, this chapter will examine these two behaviours separately.

A National Suicide Strategy for England was published in 2002.[1,2] This strategy was developed to implement the target set out in the 1999 Department of Health White Paper 'Saving lives: Our healthier nation': to reduce the death rate by suicide by at least a fifth by 2010.[3] The suicide rate among the UK population has fallen since the 1990s and in 2006 was the lowest on record (17.4 per 100,000 men and 5.3 per 100,000 women, compared with 21.0 per 100,000 men and 6.7 per 100,000 women in 1991). However, in spite of the progress made towards the Department of Health target, the rate of decline has slowed and suicide is still a significant cause of mortality and remains a key area of concern.[4]

Knowledge of the epidemiology of suicide is essential to plan services and target interventions at the right groups. One way to identify groups at risk from suicide is to examine national data about those who have died by suicide. Mortality statistics show that suicide rates for women have been consistently lower than those for men.[5]

Official statistics on recorded suicides (official suicides and undetermined deaths) provide a profile of people who have committed suicide, but cannot provide detail about their lifetime experiences or precise socio-demographic circumstances. Research with people who have attempted suicide can provide more in-depth data, but excludes those people, mostly male, who commit suicide at the first attempt.[6] There is therefore a need to look at suicidal thoughts, as well as attempts.

Among those who engaged in non-fatal self-harming (with suicidal intent or not) many either do not consult health services or, if they do, are not identified as being suicidal. Data collected routinely for administrative health datasets cannot therefore provide a complete profile of this group. A general population survey may give a more representative picture of the epidemiology of suicidal thoughts, attempts and self-harm than studies among only those who have contacted health services.

Nearly all people who commit suicide have a diagnosable psychiatric condition, such as major depressive episodes, schizophrenia, post traumatic stress disorder and anxiety.[7,8,9,10,11,12] Previous national surveys have also shown that most people who have suicidal thoughts and have made suicide attempts also experience psychiatric illness.[13,14] (The comorbidity of suicide attempts in the past year with psychiatric disorders is considered in Chapter 12). However, most people with a psychiatric disorder do not attempt suicide, and other factors as well as mental disorder can play a role in suicidal behaviour, including social factors and physical illness.

This chapter provides nationally representative estimates of the prevalence of suicidal thoughts, suicide attempts and self-harm, and their relationship with age, sex and other characteristics. This chapter also presents change in prevalence since the 2000 survey. Finally, results are presented on the help-seeking behaviour of adults who have attempted suicide, and the types of professional help received by those who have self-harmed.

4.2 Definition and assessment

4.2.1 Suicidal thoughts, suicide attempts and self-harm

The term 'suicidal thoughts' used in this analysis has a narrow definition – it includes only those respondents who reported thinking about taking their own life. The suicidal thoughts variable was not derived from reporting feelings about 'life not being worth living' or 'wishing to be dead' (which were also asked in the APMS questionnaire).

Self-harm without suicidal intent included acts such as cutting, burning, swallowing objects, and other self-inflicted injuries.

4.2.2 Assessment

Face to face questions

As in APMS 2000, all respondents were asked a number of questions about suicidal thoughts, suicide attempts, and self-harm without suicide intent, in the face to face section of the interview.[15] The 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:

- 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 suicidal thoughts or attempts was followed up with a question on whether this last occurred in the past week, past year or longer ago.[16]

Self-completion questions

While questions about suicidal thoughts, attempts and self-harm needed to be asked face to face in order to retain comparability with the previous APMS survey, it was also recognised that some respondents may choose not to report if asked face to face. For this reason, in the 2007 survey, the three lifetime prevalence questions listed above (a subset of the full section administered face to face) were also asked of all respondents a second time, later on in the interview, using a self-completion method (Computer Assisted Self Interview).

For all three questions the overall proportion of respondents giving a positive response was higher when asked as a self-completion question than when asked face to face (this difference was not significant for suicide attempts). **Table 4A**

Table 4A

Prevalence of suicidal thoughts, suicide attempts and self-harm ever, using face to face and self-completion methods

All adults		*2007*
	Face to face	**Self-completion**
	%	%
Suicidal thoughts (ever)	13.7	16.7
Suicide attempts (ever)	4.8	5.6
Self-harm (ever)	3.4	4.9
Bases (unweighted)[a]	*7389*	*7323*
Bases (weighted)	*7381*	*7316*

[a] Bases shown for respondents who answered questions about suicidal thoughts. The base size for self-completion is smaller than for face to face as a small number of respondents did not complete the self-completion section. The higher reporting in self-completion holds even where the base for the face to face is restricted to those also doing the self-completion.

Questions used for results in this chapter

To retain comparability of method with the 2000 survey, data collected in the face to face interviews were used to assess change since 2000. Additionally, because questions about

when these thoughts or behaviours last occurred was only asked in the face to face interview, data on timing also draws on information reported face to face.

All further analyses of the data on suicidal thoughts, attempts and self-harm in this chapter draw on data collected in the self-completion only, as we believe these to be the more accurate.

4.3 Results

4.3.1 Suicidal thoughts, suicide attempts and self-harm by age and sex

Suicidal thoughts

Face to face questions

In the face to face interview, 13.7% of adults reported that they had thought about suicide at some point in their life. About a third of these (4.3% of all adults) said that they had last thought about suicide at some point in the past year. For 0.8% of adults, this had been in the week prior to interview.

Self-completion questions

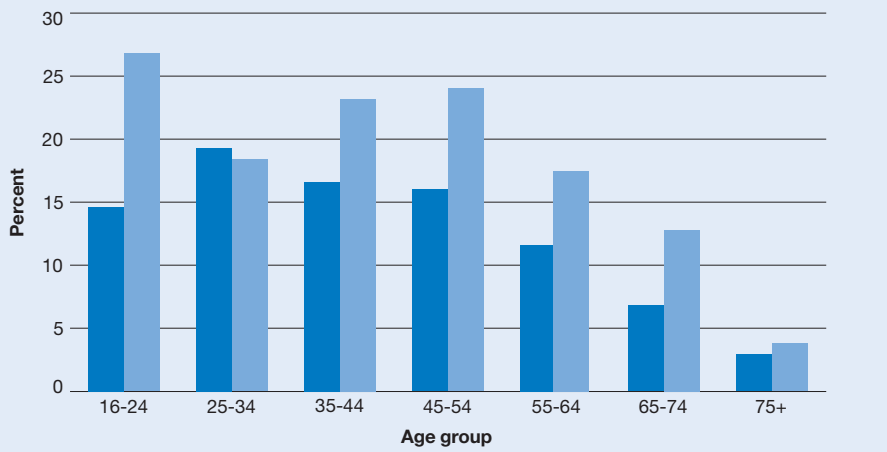
The lifetime prevalence of suicidal thoughts measured by the self-completion questions was higher than for the face to face questions, with 16.7% of adults reporting that they had thought about suicide at some point in their lives.

Women were more likely than men to have thought about suicide (19.2% of women, 14.0% of men). Lifetime suicidal thoughts were more commonly reported by younger than older people. 20.6% of those aged 16-24 reported having ever thought about suicide, compared with 10.0% of those aged 65-74 and 3.5% of those aged 75 or over. This may seem counter-intuitive, given that the questions referred to suicidal thoughts over the lifetime, and older adults have a longer period to refer to. This could be a generational issue, explained by more young people having suicidal thoughts now than in the past. However, this result could also reflect variation by age group in recall or perception. **Figure 4A**

Figure 4A

Suicidal thoughts ever (self-completion), by age and sex

Base: all adults



Suicidal attempts

Face to face questions

Overall, 4.8% of adults said that they had attempted suicide at some point in their life with 0.7% saying that they had attempted suicide over the past year. Less than 0.1% of adults reported having attempted suicide in the week leading up to the interview.

Self-completion questions

Of those who said that they had ever thought about suicide, a third (32%) also reported that they had attempted suicide at some point (data not shown). The lifetime prevalence of suicide attempts according to the self completion data was 5.6%.

As with suicidal thoughts, suicide attempts were more common in women than in men (6.9%, compared with 4.3%). Suicide attempts were also more common among younger adults than older adults. 7.3% of those aged 16-24 had ever attempted suicide, compared with 2.7% of those aged 65-74 and 1.3% of those aged 75 or over.

Self-harm

Face to face questions

Overall, 3.4% of adults said in the face to face interview that they had, at some point in their life, deliberately harmed themselves without intending to kill themselves.

Self-completion questions

Self-harm without suicidal intent was reported by 4.9% of adults completing the self completion module. Half (51%) of these respondents also said that they had attempted suicide at some point in their life (data not shown).

There was no significant difference in the overall prevalence of self-harm between men and women. However, young women were more likely than young men to report having ever deliberately harmed themselves: 17.0% of women aged 16-24 reported this behaviour, compared with 7.9% of men in the same age group. This variation by sex was not evident in subsequent age groups. This corresponds with data from other sources about changes to the sex ratio in the occurrence of self-harm across the lifecycle.[17] **Table 4.1**

4.3.2 Change in suicidal thoughts, attempts and self-harm since 2000

Suicidal thoughts in the past year

To assess change in the proportion of people thinking about committing suicide between the surveys conducted in 2000 and 2007, we compared rates in the past year among people age 16-74 and living in England (APMS 2000 covered Great Britain).

Overall, there was a slight but significant increase in reporting of suicidal thoughts in the past year, from 3.8% of adults in 2000 to 4.5% in 2007. This change was entirely accounted for by an increase among women (4.2% in 2000, 5.5% in 2007). There was no change in the proportion of men who reported suicidal thoughts (3.5% in 2000, 3.5% in 2007).

Suicide attempts in the past year

There was no significant change between 2000 and 2007 for reporting of suicide attempts in the past year. It was 0.5% of adults aged 16-74 in 2000 and 0.7% in 2007.

Self-harm ever

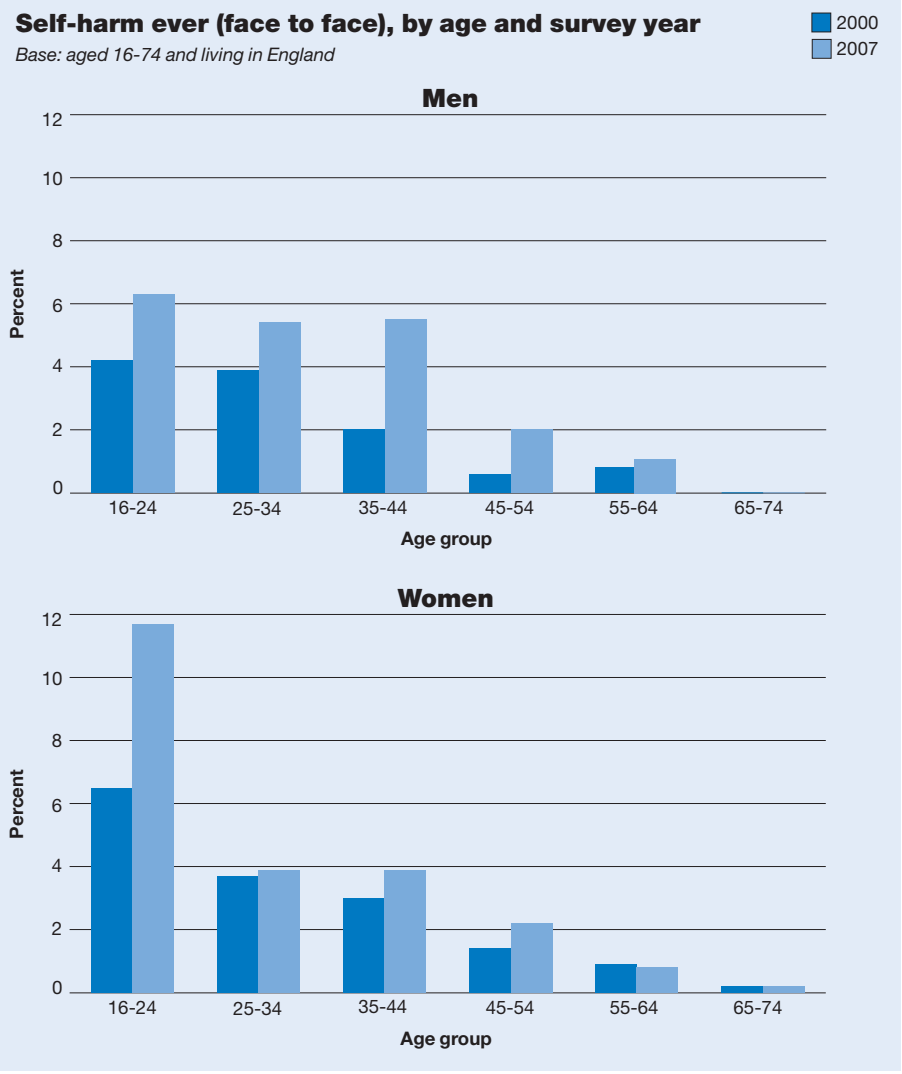
The reporting of self-harm (ever in the lifetime) increased between 2000 and 2007 (2.4% in 2000, 3.8% in 2007). Among women, this increase was concentrated in the youngest age group, with 6.5% of women aged 16-24 reporting self-harm in 2000 compared with 11.7% in 2007. For men the increase between the two survey years was spread across age groups. **Table 4.2, Figure 4B**

4.3.3 Variation in suicidal thoughts, attempts and self-harm by other characteristics

Ethnicity

Prevalence of suicidal thoughts, attempts and self-harm were compared for three ethnic groups: White; Black; and South Asian. Both observed and age-standardised data are presented in Table 4.3.

Figure 4B



Suicidal thoughts varied significantly by ethnic group. The highest age-standardised prevalence of suicidal thoughts was seen among white men and women (15.0% and 20.0% respectively), and the lowest among South Asian men and women (6.1% and 7.7% respectively). This pattern was present irrespective of whether or not the data was standardised to control for the differing age profiles of the ethnic groups.

The prevalence of suicide attempts also varied with ethnicity, but with no significant difference in rates between White and Black adults. As for suicidal thoughts, the lowest prevalence was among South Asian adults. Age-standardising the data did not appreciably change this pattern. **Table 4.3**

Marital status

Variation was also seen in the rate of suicidal thoughts, suicide attempts and self-harm by current marital status. Adults who were divorced at the time of interview were the most likely to have thought about suicide at some point in their life. Divorced men were three times as likely as married men to have thought about suicide (31.0% of divorced men, compared with 10.4% of married men), and divorced women twice as likely as married women (33.5%, compared with 15.3%). For both men and women, those who were separated were the next marital group most likely to have thought about suicide (19.9% of separated men, 30.0% of separated women) followed by those who were single (17.8% of single men, 26.4% of single women).

Suicide attempts were also more common in divorced adults than among other adults (14.2% of men and women). The lowest prevalence rates were observed among those who were widowed (2.7% of men, 4.5% of women) or married (3.0% of men, 5.0% of women).

However, these relatively low rates are likely to be due in some part to the age profiles of these groups. (See the Glossary for an explanation of why marital status data was not age-standardised)

Unlike suicidal thoughts and suicide attempts, self-harm was most common among those who were single. In particular, the rate for single women was much higher than for women in the other marital status groups. Again this association is likely to be confounded by age.

Table 4.4

Equivalised household income

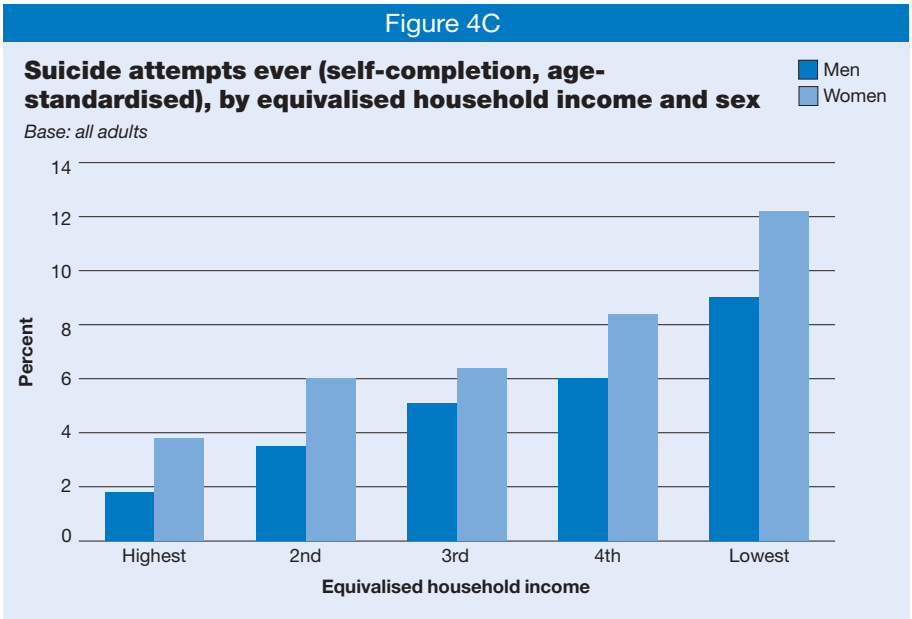
Among men, suicidal thoughts were more common in the lowest equivalised household income quintile than in the highest. (See the Glossary for a definition of equivalised household income and a description of how it was derived). After age-standardisation, 19.5% of men in the lowest quintile reported that they had ever thought about killing themselves, compared with 11.0% of men from the highest quintile. The association between household income and suicidal thoughts was less clear in women.

The pattern of association with household income was more pronounced for suicide attempts: 9.0% of men and 12.2% of women from the lowest income quintile reported having attempted suicide, compared with 1.8% of men and 3.8% of women from the highest quintile.

Similarly, self-harm was more common among those in the lowest equivalised household income quintile (9.0% of men, 8.2% of women) than those in the highest (2.8% men, 3.3% women).

Table 4.5, Figure 4C

Figure 4C



4.3.4 Help seeking behaviour

Help seeking behaviour following a suicide attempt

All adults who stated in the face to face interview that they had ever attempted suicide were asked whether they had sought help from anyone following the most recent attempt. 63% of men and 58% of women who reported having attempted suicide said that they had sought help.

Among men who had ever attempted suicide, 35% had gone to a hospital or specialist medical or psychiatric service; 30% had sought help from a GP or family doctor; and 23% had sought help from friends, family or neighbours. These were also the three most common sources of help reported by women. Relatively few people reported seeking help from a voluntary service or a community or local authority service, including social workers, support workers and community psychiatric nurses. 20% of adults who had attempted suicide reported that they had sought help from more than one source (data not shown).

The pattern of help-seeking behaviour after the most recent suicide attempt varied by age. Younger adults were more likely than older adults to have sought help: 70% of those aged 16-34 reported that they had sought help after a suicide attempt, compared with 51% of those aged 55 or over. **Tables 4.7 and 4.8**

Help-seeking behaviour following self-harm

Respondents who reported face to face that they had engaged in self-harm were asked whether they had received any medical attention for physical injuries and whether they had seen a psychiatrist, psychologist or counsellor because they had self-harmed. About half had received help of some sort (42% of men, 53% of women): 30% of men and 29% of women received attention for physical injuries and 35% of men and 47% of women had psychological help. **Table 4.9**

4.4 Discussion

The findings outlined in this chapter present the prevalence of suicidal thoughts and attempts, and self-harm without suicidal intent. 16.7% of people reported having ever had suicidal thoughts, 5.6% had made a suicide attempt and 4.9% had self-harmed.

Overall, lifetime suicidal thoughts were more commonly reported by younger adults than older adults. They were also more common in women than men for nearly all age groups. The same pattern was true for suicide attempts. Self-harm was also more common in younger adults: young women were more likely to have engaged in self-harm than young men, but sex differences evened out in the older age groups.

These results indicate that there are likely to be differences between the characteristics of people who think about committing suicide or make an unsuccessful attempt, and those who complete suicide. For example the national mortality data consistently show that men are more likely than women to commit suicide. However APMS results, and those from other surveys looking at suicidal thoughts and unsuccessful attempts, show a higher prevalence among women.[12,18] This could be explained by the finding of Isometä and Lönnqvist that men are more likely than women to die in their first suicide attempt.[6] Therefore women who have previously attempted suicide were more likely to be sampled for a survey than men who had previously attempted suicide. Furthermore, national mortality data show that the overall prevalence of suicide has decreased in England between 1991 and 2006.[5] However, APMS data do not show a decrease in the prevalence of suicidal thoughts and attempts between 2000 and 2007, indicating that the relationship between suicidal thoughts, attempts and completed suicides may not be straightforward.

APMS found a higher prevalence of suicidal thoughts and attempts than the recent European Study on the Epidemiology of Mental Disorders (ESEMED).[12] Like APMS, ESEMED is a cross-sectional household survey of non-institutionalised adults, except carried out in Belgium, France, Germany, Italy, the Netherlands and Spain. The survey asked questions about suicidal thoughts and attempts face to face. The lifetime prevalence of suicidal thoughts given by ESEMED was 7.8% (average for all 6 countries), with rates for the different countries ranging from 3.0% in Italy to 12.4% in France, compared with the APMS face to face prevalence of 13.6%.[19] The average lifetime prevalence of suicide attempts given by ESEMED was 1.8%, with rates for the different countries ranging from 0.5% in Italy to 3.4% in France. This compares with 4.8% from APMS.

It is important to establish how many and which adults seek help following suicide attempts, especially given that many unsuccessful suicide attempts are followed by a completed suicide within the next year.[6] APMS data show that overall 60% of respondents (63% of men and 58% of women) sought help following a suicide attempt. This is higher than the figure reported for the 2000 Adult Psychiatric Morbidity Survey (52%). It appears that younger people may now be more likely to seek help (70% in 2007, compared with 54% in 2000). However, there seems to have been little change in the proportion of older adults seeking help following a suicide attempt.[20]

Much of the literature on suicidal behaviour refers to its relationship with socioeconomic factors such as educational and social disadvantage.[9,13,21] The Department of Health National Suicide Prevention Strategy[1] identified unemployment as a known risk factor for suicide. APMS data on equivalised household income, which is adjusted to take account of the number of adults and children in the household, demonstrates that this association also holds, in the expected direction, in relation to household income.

Previous research has found that being divorced or separated is associated with suicidal thoughts and attempts.[13,22,23] This is supported by the findings presented in this chapter and may be linked to the wider association of suicidal thoughts and attempts with stressful life events, including those involving loss of status or relationship problems.[9] This highlights the need for preventive interventions to be targeted at people experiencing such events. Self-harm also varied by marital status, but unlike suicidal thoughts and attempts, those who were single were the most likely to have engaged. This was particularly evident for women. However, the analysis by marital status has not be age-standardised, and the associations with marital status groups are likely to be confounded by their age profiles.

This chapter also raises methodological issues regarding the measurement of suicidal thoughts, suicide attempts and self-harm. A higher proportion of respondents reported these when asked using a self-completion method than when asked face to face. This suggests that surveys that only ask these questions face to face may underestimate the true prevalence.

References and notes

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13 Meltzer H, Lader D, Corbin T, Singleton N, Jenkins R, Brugha T (2002) *Non-fatal suicidal behaviour among adults aged 16 to 74 in Great Britain*. The Stationary Office, London.

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15 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 comparisons are only made here with the 2000 data.

16 Respondents who said that they had engaged in deliberate self-harm were also asked a series of follow-up questions about how they had harmed themselves and for what reasons. This data is not reported on in this chapter.

17 Hawton K, Harriss L (2008) The changing gender ratio in occurrence of deliberate self-harm across the lifecycle. *Crisis*. 29(1):4-10.

18 Kessler RC, Borges G, Walters EE (1999) Prevalence of and risk factors for Lifetime Suicide Attempts in the National Comorbidity Survey. *Archives of General Psychiatry*. 56: 617-626.

19 The ESEMED study consisted of interviews with adults aged 18 or over. APMS prevalence estimates have been reproduced for this age group in the discussion to allow comparison with ESEMED estimates.

20 In 2000, 52% of those aged 45-64, and 51% of those aged 55 or over who had attempted suicide sought help.

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Tables

Table 4.1

Prevalence and recency of suicidal thoughts, suicide attempts and self-harm (face to face and self-completion), by age and sex

All adults *2007*

Suicidal thoughts, suicide attempts and self-harm	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	Cumulative percentages[a]							
Men								
Suicidal thoughts								
Past week	0.7	0.5	1.2	0.5	0.3	0.4	0.5	0.6
Past year	5.4	3.7	4.4	3.1	1.9	1.7	1.8	3.4
Lifetime	12.6	15.5	14.8	14.2	9.0	6.9	3.1	12.0
Lifetime (self-completion)[b]	*14.6*	*19.3*	*16.6*	*16.4*	*11.6*	*6.8*	*2.9*	*14.0*
Suicide attempts								
Past week	-	-	0.1	-	-	-	-	0.0
Past year	1.0	-	1.1	0.5	-	-	-	0.5
Lifetime	4.4	5.5	3.5	4.2	3.6	1.4	0.8	3.7
Lifetime (self-completion)	*4.7*	*6.3*	*4.7*	*5.0*	*3.9*	*1.5*	*1.2*	*4.3*
Self-harm (lifetime)	6.3	5.4	5.5	2.0	1.1	-	-	3.4
Self-harm (lifetime, self-completion)	*7.9*	*7.5*	*5.9*	*3.2*	*1.3*	*0.1*	*0.7*	*4.4*
Women								
Suicidal thoughts								
Past week	1.7	0.4	1.0	2.2	0.7	0.4	-	1.0
Past year	8.5	3.5	7.0	7.1	3.3	2.6	2.4	5.2
Lifetime	22.2	12.6	19.5	18.6	13.9	10.4	5.3	15.4
Lifetime (self-completion)[b]	*26.8*	*18.4*	*23.2*	*24.2*	*17.5*	*12.8*	*3.8*	*19.2*
Suicide attempts								
Past week	-	-	-	-	-	-	-	-
Past year	2.4	0.6	1.2	0.8	0.6	0.1	-	0.9
Lifetime	8.0	5.3	7.0	6.8	6.5	3.6	1.4	5.8
Lifetime (self-completion)[b]	*10.0*	*7.0*	*7.8*	*8.0*	*7.3*	*3.7*	*1.3*	*6.9*
Self-harm (lifetime)	11.7	3.9	3.9	2.2	0.8	0.2	-	3.5
Self-harm (lifetime, self-completion)	*17.0*	*5.8*	*5.6*	*4.0*	*2.1*	*0.7*	*0.3*	*5.4*
All Adults								
Suicidal thoughts								
Past week	1.2	0.5	1.1	1.3	0.5	0.4	0.2	0.8
Past year	7.0	3.6	5.7	5.1	2.6	2.2	2.2	4.3
Lifetime	17.3	14.0	17.2	16.5	11.5	8.7	4.5	13.7
Lifetime (self-completion)[b]	*20.6*	*18.8*	*19.9*	*20.4*	*14.6*	*10.0*	*3.5*	*16.7*
Suicide attempts								
Past week	-	-	0.0	-	-	-	-	0.0
Past year	1.7	0.3	1.2	0.6	0.3	0.1	-	0.7
Lifetime	6.2	5.4	5.3	5.5	5.1	2.6	1.1	4.8
Lifetime (self-completion)	*7.3*	*6.6*	*6.3*	*6.5*	*5.6*	*2.7*	*1.3*	*5.6*
Self-harm (lifetime)	8.9	4.6	4.7	2.1	0.9	0.1	-	3.4
Self-harm (lifetime, self-completion)	*12.4*	*6.6*	*5.8*	*3.6*	*1.7*	*0.4*	*0.5*	*4.9*
Bases (unweighted)[c]								
Men	*271*	*414*	*612*	*494*	*573*	*461*	*367*	*3192*
Women	*296*	*620*	*797*	*635*	*706*	*564*	*579*	*4197*
All	*567*	*1034*	*1409*	*1129*	*1279*	*1025*	*946*	*7389*
Bases (weighted)								
Men	*530*	*606*	*707*	*588*	*539*	*362*	*256*	*3588*
Women	*515*	*615*	*718*	*603*	*558*	*397*	*388*	*3793*
All	*1045*	*1221*	*1425*	*1191*	*1097*	*759*	*643*	*7381*

[a] Cumulative percentages. For example, the figures for those who have ever attempted suicide will include those who have attempted suicide in the past year and week.

[b] There are a couple of instances where the rate decreased in the self-completion, compared with face to face. This was likely to be due to slight changes in the base size as a result of some mostly older people not completing the self-completion questions.

[c] Base sizes shown are for those who answered the face to face question about suicidal thoughts; other base sizes may vary slightly.

Table 4.2

Suicidal thoughts and suicide attempts in the past year and self-harm ever in 2000 and 2007 (face to face), by age and sex

Aged 16 to 74 and living in England — *2000 and 2007*

Suicidal thoughts, suicide attempts and self-harm	Age group													
	16-24		25-34		35-44		45-54		55-64		65-74		All aged 16-74[a]	
	2000	2007	2000	2007	2000	2007	2000	2007	2000	2007	2000	2007	2000	2007
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Men														
Suicidal thoughts (past year)	4.9	5.4	4.4	3.7	3.8	4.4	3.9	3.1	2.3	1.9	0.4	1.7	3.5	3.5
Suicide attempts (past year)	0.9	1.0	1.1	-	0.3	1.1	0.2	0.5	-	-	-	-	0.5	0.5
Self-harm (ever)	4.2	6.3	3.9	5.4	2.0	5.5	0.6	2.0	0.8	1.1	-	-	2.1	3.7
Women														
Suicidal thoughts (past year)	9.1	8.5	4.2	3.5	5.1	7.0	3.0	7.1	1.9	3.3	1.2	2.6	4.2	5.5
Suicide attempts (past year)	1.6	2.4	0.7	0.6	0.5	1.2	0.1	0.8	0.2	0.6	0.1	0.1	0.5	1.0
Self-harm (ever)	6.5	11.7	3.7	3.9	3.0	3.9	1.4	2.2	0.9	0.8	0.2	0.2	2.7	3.8
All adults														
Suicidal thoughts (past year)	7.0	7.0	4.3	3.6	4.5	5.7	3.4	5.1	2.1	2.6	0.8	2.2	3.8	4.5
Suicide attempts (past year)	1.3	1.7	0.9	0.3	0.4	1.2	0.2	0.6	0.1	0.3	0.1	0.1	0.5	0.7
Self-harm (ever)	5.3	8.9	3.8	4.6	2.5	4.7	1.0	2.1	0.9	0.9	0.1	0.1	2.4	3.8
Bases (unweighted)[b]														
Men	*318*	*271*	*616*	*414*	*674*	*611*	*649*	*493*	*524*	*573*	*456*	*462*	*3235*	*2825*
Women	*347*	*296*	*826*	*621*	*866*	*798*	*682*	*635*	*670*	*705*	*615*	*565*	*4005*	*3618*
All	*665*	*567*	*1442*	*1035*	*1540*	*1409*	*1331*	*1128*	*1194*	*1278*	*1071*	*1027*	*7240*	*6443*
Bases (weighted)														
Men	*547*	*530*	*775*	*606*	*779*	*706*	*687*	*587*	*510*	*539*	*397*	*362*	*3693*	*3332*
Women	*540*	*515*	*751*	*616*	*762*	*719*	*683*	*603*	*535*	*557*	*445*	*397*	*3715*	*3406*
All	*1087*	*1045*	*1526*	*1222*	*1542*	*1425*	*1370*	*1190*	*1045*	*1096*	*842*	*760*	*7408*	*6738*

[a] Based on those aged 16 to 74 and living in England, to retain comparability between survey years.

[b] Base sizes shown are for those who answered the face to face question about suicidal thoughts; other bases may vary slightly.

Table 4.3

Lifetime suicidal thoughts, suicide attempts and self-harm (self-completion, observed and age-standardised), by ethnicity and sex

All adults *2007*

Suicidal thoughts, suicide attempts and self-harm	Ethnicity			
	White	Black	South Asian	Other[a]
	%	%	%	%
Men				
Observed				
Suicidal thoughts	14.7	9.6	5.2	9.4
Suicide attempts	4.4	6.3	1.0	4.6
Self-harm	4.5	4.5	1.7	3.0
Age-standardised				
Suicidal thoughts	15.0	7.1	6.1	7.3
Suicide attempts	4.4	4.6	0.6	4.0
Self-harm	4.7	3.3	2.2	2.3
Women				
Observed				
Suicidal thoughts	19.9	12.4	9.7	17.1
Suicide attempts	7.1	8.4	1.9	4.1
Self-harm	5.5	1.6	1.4	9.6
Age-standardised				
Suicidal thoughts	20.0	11.4	7.7	12.3
Suicide attempts	7.1	7.8	1.5	3.3
Self-harm	5.7	1.2	0.9	6.7
Bases (unweighted)[b]				
Men	*2896*	*76*	*105*	*69*
Women	*3871*	*108*	*88*	*85*
Bases (weighted)				
Men	*3164*	*101*	*166*	*108*
Women	*3430*	*118*	*109*	*100*

[a] Includes Chinese and mixed ethnic groups.

[b] Bases shown are for age standardised estimates and are for those who responded to the question about suicidal thoughts (self-completion); other bases may vary slightly.

Table 4.4

Lifetime suicidal thoughts, suicide attempts and self-harm (self-completion, observed), by marital status and sex

All adults *2007*

Suicidal thoughts, suicide attempts and self-harm	Marital status					
	Married	Cohabiting	Single	Widowed	Divorced	Separated
	%	%	%	%	%	%
Men						
Suicidal thoughts	10.4	16.9	17.8	10.6	31.0	19.9
Suicide attempts	3.0	5.9	4.9	2.7	14.2	6.5
Self-harm	3.0	5.5	7.0	0.5	5.6	5.7
Women						
Suicidal thoughts	15.3	21.8	26.4	10.2	33.5	30.0
Suicide attempts	5.0	9.0	9.0	4.5	14.2	9.8
Self-harm	3.5	4.6	12.6	0.5	5.5	8.4
Bases (unweighted)[a]						
Men	*1654*	*275*	*691*	*231*	*230*	*78*
Women	*1832*	*333*	*724*	*697*	*435*	*143*
Bases (weighted)						
Men	*1931*	*392*	*908*	*115*	*149*	*54*
Women	*1904*	*374*	*758*	*388*	*256*	*85*

[a] Bases shown are for those responding to the question about suicidal thoughts (self-completion); other bases may vary slightly.

Table 4.5

Lifetime suicidal thoughts, suicide attempts and self-harm (self-completion, age-standardised), by equivalised household income and sex

All adults *2007*

Suicidal thoughts, suicide attempts and self-harm	Equivalised household income[a]				
	Highest	2nd	3rd	4th	Lowest
	%	%	%	%	%
Men					
Suicidal thoughts	11.0	14.8	14.3	14.0	19.5
Suicide attempts	1.8	3.5	5.1	6.0	9.0
Self-harm	2.8	4.7	4.8	4.7	9.0
Women					
Suicidal thoughts	20.1	17.9	19.9	20.9	23.7
Suicide attempts	3.8	6.0	6.4	8.4	12.2
Self-harm	3.3	3.8	4.5	6.0	8.2
Bases (unweighted)[b]					
Men	*627*	*546*	*507*	*444*	*418*
Women	*561*	*597*	*732*	*671*	*741*
Bases (weighted)					
Men	*713*	*608*	*522*	*455*	*457*
Women	*529*	*541*	*623*	*536*	*623*

[a] See the Glossary for a definition of equivalised household income.

[b] Bases shown are for those responding to the question about suicidal thoughts (self-completion); other bases may vary slightly.

Table 4.6

Lifetime suicidal thoughts, suicide attempts and self-harm (self-completion, observed and age-standardised), by region[a] and sex

All adults *2007*

Suicidal thoughts, suicide attempts and self-harm	Government Office Region									Strategic Health Authority	
	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	London	South West	South East	South East Coast	South Central
	%	%	%	%	%	%	%	%	%	%	%
Men											
Observed											
Suicidal thoughts	9.5	15.8	14.7	14.4	13.1	15.0	13.4	10.9	15.7	18.1	13.3
Suicide attempts	4.5	4.4	5.9	6.6	3.2	5.2	3.4	2.0	4.3	5.1	3.5
Self-harm	6.6	4.7	4.9	6.1	3.6	3.3	3.9	4.6	3.7	4.3	3.0
Age-standardised											
Suicidal thoughts	9.8	16.0	15.1	13.9	13.0	15.8	12.2	10.3	16.3	19.1	13.6
Suicide attempts	4.7	4.3	6.0	6.3	3.1	5.8	3.1	2.0	4.4	5.5	3.3
Self-harm	6.6	4.5	4.8	6.0	3.3	3.7	3.5	5.4	3.8	4.7	2.9
Women											
Observed											
Suicidal thoughts	19.0	19.2	19.1	21.3	21.9	18.6	17.9	20.2	17.9	15.2	20.6
Suicide attempts	6.1	6.9	7.5	7.3	7.4	6.0	8.2	7.0	5.5	5.6	5.5
Self-harm	6.4	4.7	5.6	4.6	6.6	3.5	5.2	7.0	5.6	4.6	6.6
Age-standardised											
Suicidal thoughts	18.8	19.1	19.3	21.8	21.6	19.0	17.7	20.9	17.4	15.2	19.7
Suicide attempts	6.3	6.7	7.5	7.6	7.2	6.0	8.1	7.3	5.4	5.7	5.2
Self-harm	6.4	4.3	5.6	5.6	6.2	3.5	5.0	7.9	5.7	5.2	6.1
Bases (unweighted)[b]											
Men	*178*	*475*	*328*	*328*	*342*	*377*	*321*	*325*	*485*	*252*	*233*
Women	*258*	*620*	*462*	*347*	*437*	*474*	*466*	*412*	*688*	*368*	*320*
Bases (weighted)											
Men	*169*	*488*	*353*	*338*	*372*	*402*	*512*	*368*	*549*	*276*	*273*
Women	*206*	*506*	*386*	*292*	*394*	*415*	*573*	*369*	*625*	*334*	*291*

[a] This table provides data for regional analysis both by Government Office Region (GOR) and Strategic Health Authorities (SHAs). The first eight columns represent GORs and SHAs of the same name, while the South East GOR (column nine) is divided into South East Coast SHA and South Central SHA, shown in the final two columns.

[b] Bases shown are for those responding to the question about suicidal thoughts (self-completion); other bases may vary slightly.

Table 4.7

Sources sought help from following last suicide attempt (face to face), by sex

Adults who reported face to face having ever attempted suicide — *2007*

From whom sought help[a]	Sex	
	Male	Female
	%	%
GP / family doctor	30	30
Hospital / specialist medical or psychiatric service	35	24
Friends / family / neighbours	23	22
Community / local authority service[b]	2	5
Voluntary service	1	0
Someone else	2	2
Sought help	**63**	**58**
Did not seek help	**37**	**42**
Bases (unweighted)	*124*	*262*
Bases (weighted)	*132*	*221*

[a] Respondents could give more than one answer.

[b] Community/local authority service included health visitors, support workers, social workers, community psychiatric nurses, care workers and youth workers.

Table 4.8

Sources sought help from following last suicide attempt (face to face), by age

Adults who reported face to face having ever attempted suicide — *2007*

From whom sought help[a]	Age group		
	16-34	35-54	55+
	%	%	%
GP / family doctor	34	27	29
Hospital / specialist medical or psychiatric service	38	23	21
Friends / family / neighbours	26	18	23
Community / local authority service[b]	7	1	3
Voluntary service	1	2	2
Someone else	-	2	-
Sought help	**70**	**55**	**51**
Did not seek help	**30**	**45**	**49**
Bases (unweighted)	*105*	*167*	*114*
Bases (weighted)	*130*	*140*	*83*

[a] Respondents could give more than one answer.

[b] Community/local authority service included health visitors, support workers, social workers, community psychiatric nurses, care workers and youth workers.

Table 4.9

Whether received medical and/or psychological help after self-harm (face to face), by sex

Adults who reported face to face having ever self-harmed — *2007*

Type of help received[a]	Sex	
	Male	Female
	%	%
Medical help	30	29
Psychological help[b]	35	47
Received medical and/or psychiatric help	**42**	**53**
Neither medical nor psychiatric help received	**58**	**47**
Bases (unweighted)	*98*	*131*
Bases (weighted)	*121*	*131*

[a] Respondents could give more than one answer.

[b] Psychological help includes help from psychologists, psychiatrists and counsellors.

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Psychosis

5

Katharine Sadler and Paul Bebbington

Summary

- Psychoses are disorders that produce disturbances in thinking and perception severe enough to distort perception of reality. The main types are schizophrenia and affective psychosis, such as bi-polar disorder.
- This chapter presents prevalence estimates of both 'psychotic disorder' and 'probable psychosis' in the adult general population.
- Respondents were diagnosed with 'psychotic disorder' 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 did not do a SCAN.
- A diagnosis of 'probable psychosis' was given for a positive SCAN interview, or where no SCAN was conducted if two or more psychosis screening criteria were endorsed in the phase one interview. The 'probable psychosis' measure was included so that comparisons with APMS 2000 could be made, otherwise the 'psychotic disorder' variable was used.
- The key difference between these variables was that a positive diagnosis was only possible for 'psychotic disorder' if the respondent had a positive SCAN; while a positive diagnosis of 'probable disorder' could also be made on the basis of responses to the phase one screening questions.
- The overall prevalence of psychotic disorder in the past year was 0.4% (0.3% of men, 0.5% of women). In both men and women the highest prevalence was observed in those aged 35 to 44 years (0.7% and 1.1% respectively).
- There was no change in the overall prevalence of probable psychosis between the 2000 and 2007 surveys: the rate was 0.5% of 16-74 year olds in both years. In both surveys the highest prevalence was observed among those aged 35 to 44 years (1.0% in 2000, 0.8% in 2007).
- The age standardised prevalence of psychotic disorder was significantly higher among black men (3.1%) than men from other ethnic groups (0.2% of white men, no cases observed among men in the South Asian or 'other' ethnic group). There was no significant variation by ethnicity among women.
- The prevalence of psychotic disorder varied by equivalised household income, increasing from 0.1% of adults in the highest income quintile to 0.9% of adults in the lowest income quintile. This trend was more prominent among men than women.
- The level and nature of treatment and service use among people with probable psychosis in 2000 and 2007 was very similar. The proportion receiving some form of treatment (medication and/or counselling) was 85% in 2000, and 81% in 2007.
- In contrast with this high proportion of people with 'probable psychosis' who were receiving treatment, just two-thirds (65%) of people with 'psychotic disorder' in the past year were in receipt of treatment.
- The lower treatment levels among people with psychotic disorder - who are less likely to have had a previous episode of psychosis compared with those identified with probable psychosis - suggests a need for a continued focus on improving early intervention and support for people with a first episode.

5.1 Introduction

Psychoses are disorders that 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.[1]

The adult psychiatric morbidity surveys carried out in 2000[2] and 2007 both measured functional psychosis by assessing the presence of disorders such as schizophrenia, bipolar disorder and manic depression.[3] Organic psychoses, such as dementia and Alzheimer's disease, are not discussed in this chapter.[4] It can be difficult to compare the community based prevalence of psychotic disorder from different surveys because of variations in the diagnostic categories,[5] assessment methods,[6] and reference periods used.[7] For example, reported rates include 0.12% (for a lifetime prevalence of schizophrenia) to 3.06% (for a lifetime prevalence of all psychotic disorders).[8,9]

Despite being relatively uncommon, psychotic illness results in high service and societal costs.[10] The World Health Organisation calculates that the burden and human suffering associated with psychosis at the family level is exceeded only by dementia and quadriplegia.[11] People with a psychotic illness and living in the community are known to have low rates of employment,[12] and when employed are often in poorly paid and less secure jobs.[13]

Treatment options include anti-psychotic medication, neuroleptics, tranquilisers and antidepressants; hospitalisation; and more recently, cognitive behavioural and family therapy for the management of psychotic symptoms.[14,15] 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.[16]

In this chapter prevalence estimates of psychotic disorder in the past year in the general population is presented, and rates of probable psychosis from the APMS 2000 and 2007 surveys are compared. Association with factors such as age, sex, socio-demographic characteristics, and levels of service use and treatment are also discussed.

5.2 Definition and assessment

5.2.1 Psychotic disorders

The disorders discussed in this chapter are based on the World Health Organisation International Classification of Diseases chapter on Mental and Behavioural Disorders Diagnostic Criteria for Research (ICD-10).[17] They consist of two main types: Schizophrenia and affective psychosis, such as bi-polar disorder.

The chosen reference period for psychotic disorder was the year prior to interview.

5.2.2 Case Assessment

To produce estimates of psychotic disorder and probable psychosis in the non-institutionalised adult population a two-phase approach was adopted consisting of a phase one screen followed by a phase two clinical assessment for a subset of respondents.

Phase one screen

Respondents with experiences or symptoms indicative of psychosis were identified by meeting one or more of the psychosis screening criteria at the phase one, lay interview. These were:

- Currently taking any anti-psychotic medication (orally administered Largactil, Stelazine, Haldol, Seranace, Risperdal, Zyprexa, Clozaril, Priadel, Dolmatil, Seroquel or Abilify; or depot injections Depixol, Modecate, Haldol, Clopixol or Risperdal consta).
- 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).[18] 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.
- A self-reported diagnosis, or symptoms suggestive, of psychotic disorder such as mood swings. Self-reported diagnosis or symptoms of psychotic disorder included those discussed with a GP in the past year.

Phase two clinical assessment

Of the 7403 respondents who completed a phase one interview, 313 (4%) met at least one of the psychosis screening criteria, being thereby eligible for a phase two clinical assessment for psychosis. Of these, 64 (20%) refused to be followed up at a phase two interview. Of the 249 respondents approached for a phase two interview, 59 (24%) refused or could not be contacted. This left 190 respondents (76% of those approached, 61% of the selected phase one respondents) who provided a productive phase two interview.

The clinical assessment of psychosis was made using the Schedule for Clinical Assessment in Neuropsychiatry version 2.1 (SCAN), a semi-structured interview that provides ICD-10 diagnoses of psychotic disorder.[19] Because SCAN involves interviewer judgement of whether symptoms are present (as opposed to self-reporting), the interviews were conducted by clinical 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 (CATEGO) to the SCAN generated symptom ratings. Using combinations of phase one and phase two data, two differently calculated measures of psychotic illness in the past year were generated: psychotic disorder and probable psychosis.

The 'psychotic disorder' variable

For the identification of psychotic disorder 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 190 respondents assessed at phase two were weighted to reflect the profile of all 313 respondents identified as eligible.

The 'probable psychosis' variable

In the 2000 survey a measure of 'probable psychosis' was used.[2] This outcome has been replicated with the 2007 data so that comparisons can be made between the 2000 and 2007 rates for those aged 16 to 74 (the upper age limit of the 2000 survey). The difference between the 'psychotic disorder' and 'probable psychosis' variables, is the way in which non-response to phase two is accounted for. While psychotic disorder uses a weighting strategy, probable psychosis assigns an outcome according to phase one screening criteria.

For the measure of probable psychosis 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) those meeting just one psychosis screen criterion at phase one were assigned a negative probable psychosis outcome, and those meeting two or more psychosis screening criteria were assigned a positive outcome.

While the screening criteria used in the in the 2000 and 2007 surveys were the same, the way in which the data was collected changed in two key ways. Firstly, in APMS 2000 respondents were asked to name all the medications that they were currently taking, whereas in APMS 2007 prompt cards were used that listed all mental health related medications of interest to the survey. Secondly, in APMS 2000 full ICD-10 coding of all health conditions were collected, whereas in APMS 2007 a prompt card approach was used listing 22 categories of health condition (see the Glossary). The changes were made to generate space in the questionnaire for coverage of new topics. Despite changes in the methods of collecting these data, comparability has been broadly preserved.

'Psychotic disorder' and 'probable psychosis'

The essential difference between these two variables was that a positive diagnosis was only possible for 'psychotic disorder' if the respondent had a positive SCAN; while a positive diagnosis of 'probable disorder' could also be made on the basis of responses to the phase one screening questions, where no SCAN interview was undertaken.

The psychotic disorder variable was selected as the main psychosis outcome variable on APMS 2007 because of concerns about the reliability of assigning a positive assessment to those meeting two or more phase one psychosis screening criteria but not having a SCAN interview. Using APMS 2007 data for those completing both phase one and phase two, 75% of men and 59% of women meeting two or more psychosis screening criteria at phase one were assessed by SCAN as negative for psychosis (data not shown). The probable psychosis outcome is likely to include people with a history of psychosis and current treatment, even where there had been no symptoms in the past year. It is also likely to exclude those at an early stage of onset (and thus not yet in contact with services). Using the probable psychosis measure is likely to overestimate treatment and service use among people with psychotic illness in the past year, as three of the four phase one screening criteria relate to access to services.

Using the weighting approach also has potential drawbacks. For example there are 43 respondents identified with probable psychosis, compared with an unweighted base size of just 23 for psychotic disorder. Having a small sample makes looking at the profile of this group problematic. It was decided to present prevalence estimates for psychotic disorder, use probable psychosis for comparisons with the 2000 data, and produce the treatment tables for both psychotic disorder and probable psychosis. The latter was done to facilitate comparison with the treatment data reported on from APMS 2000, and because treatment and medication use differs between the people identified by these two measures.

5.3 Results

5.3.1 Prevalence of psychotic disorder by age and sex

The overall prevalence of psychotic disorder in the past year was 0.4% of the adult general population (0.3% of men, 0.5% of women). In both men and women the highest prevalence was observed among those aged 35 to 44 years (0.7% and 1.1% respectively). Mean age of onset is known to be earlier in men than women, a pattern consistent with the distribution of

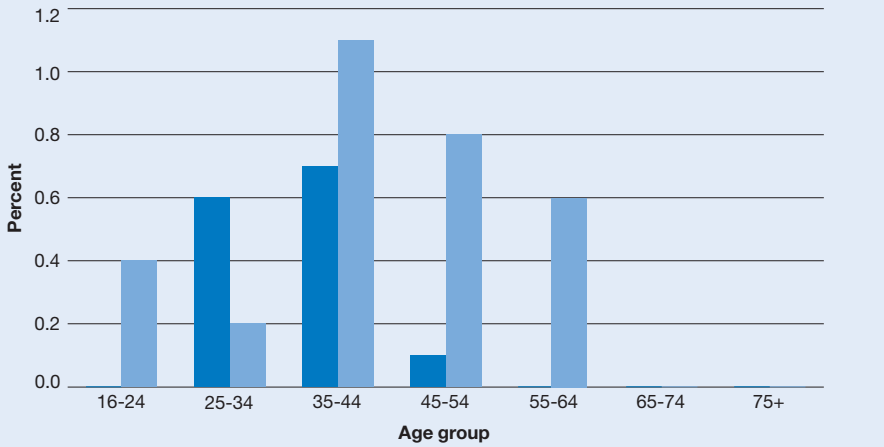
psychotic disorder in the past year by age and sex shown in figure 5.1.[20] No cases of psychotic disorder were observed in men aged over 54 and women aged over 64: while the presence of organic psychoses is known to increase with age, it is not covered in this report.

Table 5.1, Figure 5A

Figure 5A

Prevalence of psychotic disorder in the past year, by age and sex

Base: all adults



5.3.2 Change in probable psychosis since 2000

As described in Section 5.2.2, as well as psychotic disorder 'probable psychosis' rates were also produced using the APMS 2000 and 2007 data and based only on those aged 16-74 and living in England, so that the rate could be compared across survey years.

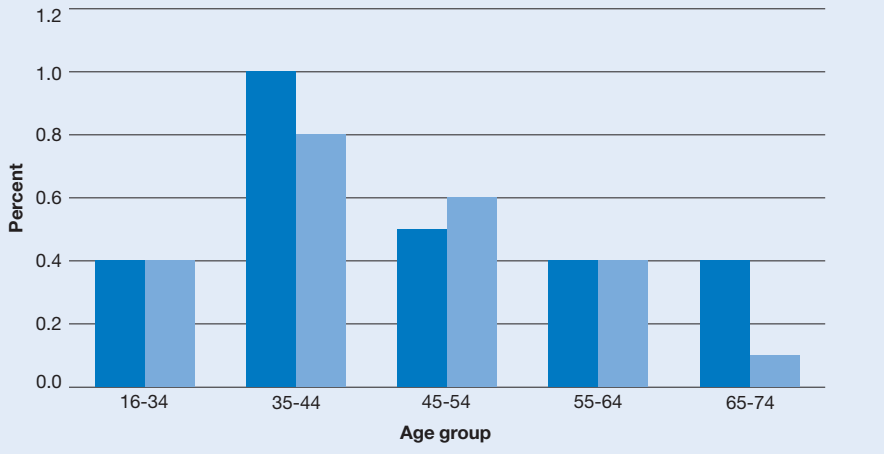
There was no change in the overall rate of probable psychosis between the 2000 and 2007 surveys: 0.5% of 16-74 year olds screened positive in both years. In neither survey year was the difference in rate between men and women significant. However, in 2000 the observed rate of probable psychosis was slightly higher in men (0.6% of men, 0.5% of women) and in 2007 it was slightly higher in women (0.4% of men, 0.6% of women). In both survey years the highest prevalence was observed among those aged 35 to 44 years (1.0% in 2000, 0.8% in 2007).

Table 5.2, Figure 5B

Figure 5B

Prevalence of probable psychosis in 2000 and 2007, by age

Base: aged 16-74 and living in England



5.3.3 Variation in psychotic disorder by other characteristics

Ethnicity

The prevalence of psychotic disorder in the past year was higher among black men (3.0%) than men from other ethnic groups (0.2% of white men, no cases observed among South Asian or other ethnic groups). When compared with men in all other ethnic groups combined, both the observed and age-standardised prevalence among black men was significantly higher. However given the small base sizes, caution should be taken when interpreting this. There was no significant variation by ethnicity among women. **Table 5.3**

Marital status

Although there was no significant variation by marital status, the pattern observed fits with the pattern found in other studies.[2] The lowest rate was observed among married people, and the highest rate among those who were divorced. **Table 5.4**

Equivalised household income

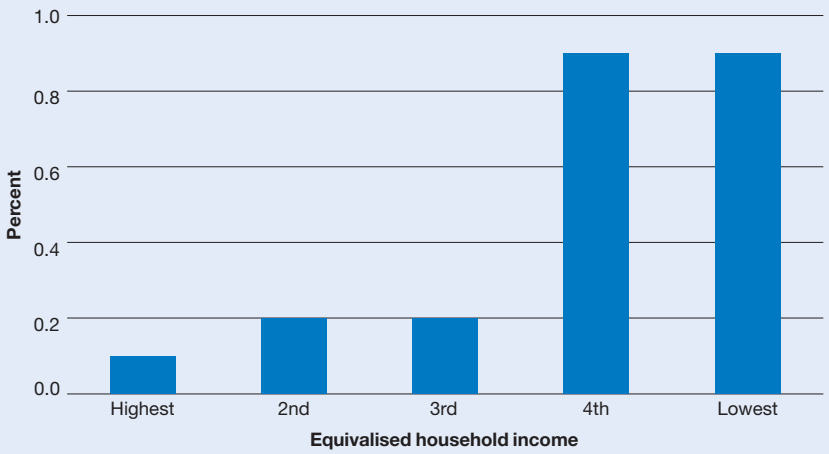
The prevalence of psychotic disorder varied significantly by equivalised household income (see the Glossary for a definition of equivalised household income). The age-standardised rate increased from 0.1% of adults in the highest income quintile to 0.9% of adults in the lowest income quintile. This trend was more prominent among men than women.

Table 5.5, Figure 5C

Figure 5C

Prevalence of psychotic disorder in the past year (age-standardised), by equivalised household income

Base: all adults



5.3.4 Treatment and services

Psychotic disorder

Two-thirds (65%) of adults with a psychotic disorder in the past year were receiving some form of medication and/or counselling at the time of the phase one interview, compared with 7% of those without a psychotic disorder. Levels of medication use were about ten times higher in adults with psychotic disorder than in those with no psychotic disorder (56% and 6% respectively). Types of medication currently taken by people with a psychotic illness included antidepressants (44%), drugs used in the treatment of psychosis (including anti-mania medication) (36%), anxiolytics (20%) and hypnotics (9%). Use of these drug types in those without psychotic disorder was 5%, 0%, 1% and 0% respectively. **Tables 5.7, 5.9**

Half (48%) of adults with a psychotic disorder in the past year were currently in counselling or therapy, compared with 2% without a psychotic disorder. The main type reported was psychotherapy: a third (32%) of people with psychotic disorder were currently receiving this, compared with 1% of those without. One in five (21%) were receiving behaviour or cognitive

therapy (compared with 0% of adults without psychosis). Other types of counselling or therapy were relatively little-used. **Table 5.11**

Of adults with psychotic disorder, two thirds (67%) had spoken with their GP about a mental or emotional problem in the past year and a quarter (23%) had had an outpatient visit for a mental health reason in the previous three months. Half (53%) of adults with psychosis had been admitted to a mental health ward or hospital at some point in their life, and two-thirds (66%) had used community or day care services in the past year. The main types of community care services used were contact with a psychiatrist (21%) or a community psychiatric nurse (22%). **Tables 5.13, 5.15**

Change in treatment and service use since 2000: probable psychosis

Treatment and service use data are also presented by the 'probable psychosis' variable to facilitate comparison with published data from APMS 2000. Some of the treatment data from the 2000 survey is also cited in the text here to further assist comparison.

The level and nature of treatment and service use among people aged 16-74 with probable psychosis in 2000 and 2007 was very similar. The proportion receiving some form of treatment was 85% in 2000 and 80% in 2007. Three quarters (74%) were on medication (84% in 2000), and 58% specifically on antipsychotics (56% in 2000). 43% were in receipt of talking therapies (40% in 2000). **Tables 5.8, 5.10**

With respect to use of health care services for a mental or emotional reason, 70% of adults with probable psychosis spoke with their GP in the past year (71% in 2000), and 29% had an outpatient and 6% an inpatient stay in the last quarter. The figures for 2000 were effectively the same (28% and 6% respectively). **Table 5.14**

The observed proportion of adults accessing community or day care services in the year prior to interview appeared higher in 2007 than 2000, but this was not a significant increase. Given the small number of respondents screening positive for probable psychosis any changes in the profile of treatment and service use are unlikely to be significant. However, it is interesting how similar the rates of treatment and service use among people with probable psychosis are between the two survey years. **Table 5.16**

5.4 Discussion

The prevalence of probable psychosis in the past year was the same in APMS 2000 and 2007: 0.5% of the general population aged 16-74. The two surveys found a similar distribution by age. Where an association with ethnicity was observed but not significant in the 2000 data, a significantly higher rate of psychosis among black men compared with other men combined was present in 2007. This is consistent with findings from other surveys.[21] The fact that psychotic disorder varied significantly by equivalised household income reflects the 2000 survey[2] finding that those with probable psychosis were more likely to be in social classes IV (semi-skilled manual) or V (unskilled manual).

Neither the 2000 nor the 2007 surveys found the rate of psychosis 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. This might suggest both that of people living in private households, women with current psychosis may be more likely than men to take part in a survey and also 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.[22] It is to be expected that people experiencing a psychotic episode will 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 hard to recruit a representative sample of people with the disorder.[8,23] 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.[9,24]

Nonetheless, the estimates in this chapter provide epidemiological and service use data that can be used to monitor trends and inform policy and service planning. The data provides evidence of broad stability in the prevalence of psychotic illness and in the level and nature of treatment and service use amongst those with the disorder in the past year.

The lower treatment levels those identified with the 'psychotic disorder' variable - who are more likely to include people who have not had a previous episode of psychosis compared with those identified with 'probable psychosis' - illustrates the need for a continued focus on improving early intervention and support for people with a first episode.[16]

References and notes

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2 Singleton N, Bumpstead R, O'Brien M et al (2001). *Psychiatric morbidity among adults living in private households*. National Statistics 154. London: The Stationery Office.

3 APMS 1993 also focused on the measurement of functional psychosis. However that survey used methods significantly different to those employed on the 2000 and 2007 surveys.

4 APMS 2007 included the TICS-M and animal naming, which can be used as proxy indicators of possible dementia, and dementia and Alzheimer's disease can be recorded at the general health section of the interview. These data on organic psychoses will be reported on elsewhere.

5 Some studies focus on schizophrenia only, others include all functional psychoses, and others combine functional and organic psychoses. As part of the Psychosis in Finland (PIF) study, Perala *et al*. (*Arch Gen Psychiatry*. 2007; 64:19-28) reports the prevalence of all specific psychotic disorders, highlighting the variation in prevalence between diagnostic disorders.

6 For example the Composite International Diagnostic Interview (CIDI) is used in the US National Comorbidity Survey Replication (NCS-R) (Kessler *et al*.) and the Norwegian Psychiatric Epidemiological Study (Kringlen *et al*., (2001) *Am J Psychiatry* 158:1091-1098).

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Tables

Table 5.1

Prevalence of psychotic disorder in past year, by age and sex

All adults *2007*

Psychotic disorder[a]	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	%	%	%	%	%	%	%	%
Men	-	0.6	0.7	0.1	-	-	-	0.3
Women	0.4	0.2	1.1	0.8	0.6	-	-	0.5
All adults	0.2	0.4	0.9	0.5	0.3	-	-	0.4
Bases (unweighted)								
Men	*267*	*404*	*610*	*488*	*567*	*456*	*367*	*3159*
Women	*290*	*607*	*785*	*622*	*694*	*550*	*571*	*4119*
All	*557*	*1011*	*1395*	*1110*	*1261*	*1006*	*938*	*7278*
Bases (weighted)								
Men	*528*	*606*	*710*	*589*	*539*	*363*	*259*	*3593*
Women	*519*	*616*	*720*	*604*	*558*	*392*	*392*	*3801*
All	*1047*	*1222*	*1429*	*1193*	*1097*	*755*	*651*	*7393*

[a] See Section 5.2.2 for a definition of psychotic disorder and a description of how the variable was derived.

Table 5.2

Prevalence of probable psychosis in 2000 and 2007, by age and sex

Aged 16 to 74 and living in England *2000 and 2007*

Probable psychosis[a]	Age group											
	16-34		35-44		45-54		55-64		65-74		All aged 16-74[b]	
	2000	2007	2000	2007	2000	2007	2000	2007	2000	2007	2000	2007
	%	%	%	%	%	%	%	%	%	%	%	%
Men	0.4	0.4	0.9	0.7	0.7	0.3	0.7	0.2	0.2	0.1	0.6	0.4
Women	0.3	0.3	1.1	1.0	0.3	0.9	0.1	0.6	0.5	0.1	0.5	0.6
All adults	0.4	0.4	1.0	0.8	0.5	0.6	0.4	0.4	0.4	0.1	0.5	0.5
Bases (unweighted)												
Men	*936*	*692*	*674*	*616*	*649*	*499*	*524*	*574*	*456*	*464*	*3239*	*2845*
Women	*1173*	*921*	*866*	*803*	*682*	*639*	*671*	*708*	*616*	*570*	*4008*	*3641*
All	*2109*	*1613*	*1540*	*1419*	*1331*	*1138*	*1195*	*1282*	*1072*	*1034*	*7247*	*6486*
Bases (weighted)												
Men	*1324*	*1150*	*779*	*713*	*687*	*596*	*510*	*540*	*397*	*364*	*3697*	*3363*
Women	*1291*	*1137*	*762*	*725*	*683*	*608*	*536*	*560*	*446*	*403*	*3718*	*3432*
All	*2614*	*2287*	*1542*	*1438*	*1370*	*1204*	*1046*	*1100*	*843*	*767*	*7414*	*6795*

[a] See Section 5.2.2 for a definition of probable psychosis and a description of how the variable was derived.

[b] Based on those aged 16 to 64 and living in England to retain comparability across survey years.

Table 5.3

Prevalence of psychotic disorder in past year (observed and age-standardised), by ethnicity and sex

All adults *2007*

Psychotic disorder	Ethnicity			
	White	Black	South Asian	Other[a]
	%	%	%	%
Observed				
Men	0.2	3.0	-	-
Women	0.5	-	1.3	-
All adults	0.4	1.4	0.5	-
Age-standardised				
Men	0.2	3.1	-	-
Women	0.5	-	0.6	-
All adults	0.4	1.4	0.2	-
Bases (unweighted)				
Men	*2882*	*75*	*107*	*72*
Women	*3817*	*109*	*88*	*84*
All	*6699*	*184*	*195*	*156*
Bases (weighted)				
Men	*3186*	*103*	*169*	*112*
Women	*3450*	*121*	*114*	*100*
All	*6635*	*225*	*283*	*212*

[a] Includes Chinese and mixed ethnic groups.

Table 5.4

Prevalence of psychotic disorder in past year (observed), by marital status and sex

All adults *2007*

Psychotic disorder	Marital status					
	Married	Cohabiting	Single	Widowed	Divorced	Separated
	%	%	%	%	%	%
Men	0.1	0.6	0.3	-	1.5	-
Women	0.4	0.5	0.8	0.3	0.6	1.1
All adults	0.2	0.5	0.5	0.3	0.9	0.6
Bases (unweighted)						
Men	*1666*	*272*	*691*	*230*	*222*	*78*
Women	*1825*	*329*	*703*	*700*	*425*	*137*
All	*3491*	*601*	*1394*	*930*	*647*	*215*
Bases (weighted)						
Men	*1960*	*393*	*920*	*117*	*145*	*58*
Women	*1926*	*379*	*756*	*399*	*256*	*85*
All	*3886*	*772*	*1676*	*515*	*401*	*143*

Table 5.5

Prevalence of psychotic disorder in past year (age-standardised), by equivalised household income and sex

All adults *2007*

Psychotic disorder	Equivalised household income[a]				
	Highest	2nd	3rd	4th	Lowest
	%	%	%	%	%
Men	-	-	0.4	0.6	1.2
Women	0.2	0.4	0.1	1.2	0.7
All adults	0.1	0.2	0.2	0.9	0.9
Bases (unweighted)					
Men	*627*	*542*	*505*	*440*	*412*
Women	*558*	*595*	*720*	*663*	*725*
All	*1185*	*1137*	*1225*	*1103*	*1137*
Bases (weighted)					
Men	*718*	*612*	*524*	*459*	*461*
Women	*533*	*550*	*623*	*541*	*635*
All	*1251*	*1162*	*1147*	*1000*	*1096*

[a] See the Glossary for a definition of equivalised household income.

Table 5.6

Prevalence of psychotic disorder (observed and age-standardised), by grouped region and sex

All adults *2007*

Psychotic disorder	Region of England[a]		
	North England	Midlands and East England	South England
	%	%	%
Observed			
Men	0.1	0.6	0.2
Women	0.9	0.3	0.4
All adults	0.5	0.4	0.3
Age-standardised			
Men	0.1	0.6	0.1
Women	0.8	0.3	0.4
All adults	0.5	0.5	0.3
Bases (unweighted)			
Men	*980*	*1045*	*1134*
Women	*1327*	*1244*	*1548*
All	*2307*	*2289*	*2682*
Bases (weighted)			
Men	*1031*	*1031*	*1117*
Women	*1113*	*1113*	*1102*
All	*2144*	*2219*	*3031*

[a] This table provides data for grouped regional analysis. 'North' consists of the following Government Office Regions: North East, North West and Yorkshire & Humberside; Midlands and 'East England' combines East Midlands, West Midlands and East of England; and 'South England' combines London, South West and South East.

Table 5.7

Treatment currently received for a mental or emotional problem (observed), by people with and without psychotic disorder

All adults *2007*

Current treatment for a mental or emotional problem	Presence of psychotic disorder	
	Psychotic disorder present	No psychotic disorder present
	%	%
All adults		
No treatment	35	93
Medication only	17	5
Counselling or therapy only	8	1
Both medication and counselling	40	1
Bases (unweighted)[a]	*23*	*7237*
Bases (weighted)	*29*	*7351*

[a] Bases shown are for those asked about receiving any treatment. Bases for services used vary but are of a similar magnitude.

Table 5.8

Treatment currently received for a mental or emotional problem (observed), by people with and without probable psychosis

Aged 16-74 *2007*

Current treatment for a mental or emotional problem	Presence of probable pyschosis	
	Probable psychosis present	No probable psychosis present
	%	%
All adults		
No treatment	20	93
Medication only	36	5
Counselling or therapy only	6	2
Both medication and counselling	37	1
Bases (unweighted)[a]	*40*	*6435*
Bases (weighted)	*33*	*6750*

[a] Bases shown are for those asked about receiving any treatment. Bases for services used vary but are of a similar magnitude.

Table 5.9

Psychoactive medication taken (observed), by people with and without psychotic disorder

All adults *2007*

Type of medication[a]	Presence of psychotic disorder	
	Psychotic disorder present	No psychotic disorder present
	%	%
All adults		
Hypnotics	9	0
Anxiolytics	20	1
Antidepressants	44	5
Drugs used in the treatment of psychosis	36	0
Drugs used in the treatment of ADHD	-	0
Any psychoactive medication	**56**	**6**
Bases (unweighted)[b]	*23*	*7237*
Bases (weighted)	*29*	*7351*

[a] See the Glossary for details of psychoactive medications asked about.

[b] Bases shown are for those with a valid response for taking any medication.

Table 5.10

Psychoactive medication taken (observed), by people with and without probable psychosis

Aged 16-74 *2007*

Type of medication[a]	Presence of probable pyschosis	
	Probable psychosis present	No probable psychosis present
	%	%
All adults		
Hypnotics	5	0
Anxiolytics	18	1
Antidepressants	35	5
Drugs used in the treatment of psychosis	58	0
Drugs used in the treatment of ADHD	-	0
Any psychoactive medication	**74**	**6**
Bases (unweighted)[b]	*40*	*6435*
Bases (weighted)	*33*	*6750*

[a] See the Glossary for details of psychoactive medications asked about.

[b] Bases shown are for those with a valid response for taking any medication.

Table 5.11

Current counselling or therapy treatment (observed), by people with and without psychotic disorder

All adults *2007*

Type of counselling or therapy	Presence of psychotic disorder	
	Psychotic disorder present	No psychotic disorder present
	%	%
All adults		
Psychotherapy	32	1
Behaviour or cognitive	21	0
Art, music or drama	2	0
Social skills training	2	0
Marital or family	8	0
Sex	4	0
Counselling	7	1
Other	-	0
Any counselling or therapy	**48**	**2**
Bases (unweighted)[a]	*23*	*7255*
Bases (weighted)	*29*	*7365*

[a] Bases shown are for those responding to the question about receiving any counselling or therapy.

Table 5.12

Current counselling or therapy treatment (observed), by people with and without probable psychosis

Aged 16-74 *2007*

Type of counselling or therapy	Presence of probable pyschosis	
	Probable psychosis present	No probable psychosis present
	%	%
All adults		
Psychotherapy	26	1
Behaviour or cognitive	16	0
Art, music or drama	1	0
Social skills training	6	0
Marital or family	5	0
Sex	3	0
Counselling	4	1
Other	-	0
Any counselling or therapy	**43**	**3**
Bases (unweighted)[a]	*40*	*6446*
Bases (weighted)	*33*	*6761*

[a] Bases shown are for those responding to the question about receiving any counselling or therapy.

Table 5.13

Health care services used for mental or emotional problem (observed), by people with and without psychotic disorder

All adults *2007*

Type of health care service	Presence of psychotic disorder	
	Psychotic disorder present	No psychotic disorder present
	%	%
All adults		
Inpatient stay in past quarter	3	0
Outpatient visit in past quarter	23	1
Spoken with GP in past year	67	11
Spoken with GP in past 2 weeks	32	2
Any health care service use for mental or emotional problem[a]	**67**	**11**
Ever admitted to ward/ hospital specialising in mental health	53	2
Bases (unweighted)[b]	*23*	*7252*
Bases (weighted)	*29*	*7362*

[a] Inpatient stay or outpatient visit in past quarter, or spoken with GP in past year, for a mental or emotional problem.

[b] Bases shown are for those responding to the question spoken with a GP in the past year. Bases for other health services vary but are of a similar magnitude.

Table 5.14

Health care services used for mental or emotional problem (observed), by people with and without probable psychosis

Aged 16-74 *2007*

Type of health care service	Presence of probable pyschosis	
	Probable psychosis present	No probable psychosis present
	%	%
All adults		
Inpatient stay in past quarter	6	0
Outpatient visit in past quarter	30	1
Spoken with GP in past year	74	11
Spoken with GP in past 2 weeks	25	2
Any health care service use for mental or emotional problem[a]	**75**	**11**
Ever admitted to ward/ hospital specialising in mental health	65	2
Bases (unweighted)[b]	*40*	*6444*
Bases (weighted)	*33*	*6760*

[a] Inpatient stay or outpatient visit in past quarter, or spoken with GP in past year, for a mental or emotional problem.

[b] Bases shown are for those responding to the question spoken with a GP in the past year. Bases for other health services vary but are of a similar magnitude.

Table 5.15

Community care services used in past year (observed), by people with and without psychotic disorder

All adults *2007*

Type of community care service	Presence of psychotic disorder	
	Psychotic disorder present	No psychotic disorder present
	%	%
All adults		
Psychiatrist	21	1
Psychologist	7	1
Community Psychiatric Nurse	22	1
Community learning disability nurse	-	0
Other nursing services	2	3
Social worker	17	1
Self help/support group	12	1
Home help/home care	-	1
Outreach worker	10	1
Any day care service[a]	45	4
Any community or day care service	**66**	**7**
Bases (unweighted)[b]	*23*	*7252*
Bases (weighted)	*29*	*7362*

[a] Includes community mental health centre, sheltered workshop, and day activity centre.

[b] Bases shown are for those with a valid response to accessing any community or day care service.

Table 5.16

Community care services used in past year (observed), by people with and without probable psychosis

Aged 16-74 *2007*

Type of community care service	Presence of probable pyschosis	
	Probable psychosis present	No probable psychosis present
	%	%
All adults		
Psychiatrist	35	1
Psychologist	12	1
Community Psychiatric Nurse	33	1
Community learning disability nurse	-	0
Other nursing services	3	2
Social worker	18	1
Self help/support group	12	1
Home help/home care	1	1
Outreach worker	7	1
Any day care service[a]	45	4
Any community or day care service	**73**	**7**
Bases (unweighted)[b]	*40*	*6443*
Bases (weighted)	*33*	*6759*

[a] Includes community mental health centre, sheltered workshop, and day activity centre.

[b] Bases shown are for those with a valid response to accessing any community or day care service.

Antisocial and borderline personality disorders

6

Sally McManus, Susan Purdon, Jane Smith, Mike Crawford, Peter Tyrer and Jeremy Coid

Summary

- Personality disorders are longstanding, ingrained distortions of personality that interfere with the ability to make and sustain relationships. Antisocial personality disorder (ASPD) and borderline personality disorder (BPD) are two types with particular public and mental health policy relevance.
- 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. They account for a disproportionately large proportion of crime and violence committed.
- BPD is characterised by high levels of personal and emotional instability associated with significant impairment. People with BPD have severe difficulties with sustaining relationships, and self-harm and suicidal behavioural is common.
- In this chapter, estimates of the one-year prevalence of ASPD and BPD in the English general population are presented, and the rates obtained in the 2000 and 2007 surveys are compared.
- There were just nine cases of ASPD and 16 cases of BPD identified in the sample. These were weighted up to represent the projected 23 and 33 cases respectively that would have been identified if everyone in the sample had had a phase two assessment.
- ASPD was present in 0.3% of adults aged 18 or over (0.6% of men and 0.1% of women). 1.7% of men aged 18-34 had ASPD, while no cases were identified in men aged 55 or over. 0.4% of women aged 16-34 had ASPD, while no cases were identified in those aged 35 or over.
- The overall prevalence of BPD was similar to that of ASPD, at 0.4% of adults aged 16 or over. While the association with sex was nonsignificant, the observed pattern fits with the expected profile (0.3% of men, 0.6% of women).
- The prevalence of ASPD in adults aged 16-74 and living in England was similar in 2000 (0.6%) and 2007 (0.4%), despite some differences in the sampling approach used.
- Likewise, the rate of BPD in those aged 16-74 and living in England did not change significantly between the 2000 (0.8%) and 2007 (0.5%) surveys.

6.1 Introduction

Personality disorders are longstanding, ingrained distortions of personality that interfere with the ability to make and sustain relationships. Antisocial personality disorder (ASPD) and borderline personality disorder (BPD) are two types with particular public and mental health policy relevance.[1] They are associated with substantial burden on affected individuals, their families and wider society, both in their own right and because of their substantial comorbidity with mood and anxiety disorders, substance use, suicidal behaviour and other personality disorders.[2]

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.[3] 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.[4,5] 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.[1] Despite these differences, there is great similarity in the estimates generated by community surveys of personality disorder based on clinical assessment: 0.7% of 18-65 year olds in Oslo, Norway,[6] 0.6% in the US,[7] and 0.6% of 16-74 year olds in Britain (APMS 2000). 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.[8] Resultant truancy, delinquent peer groups and substance misuse contribute to low educational attainment, and to unemployment, unstable housing and inconsistency in relationships in adulthood.[9] While ASPD is distinct from general antisocial behaviour, Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)[10] 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.[11]

Criminality is central to the definition of ASPD. The APMS prisoners' survey identified ASPD in a very high proportion of inmates: 63% of male remand prisoners and 49% of male sentenced prisoners.[12] People with the disorder account for a disproportionately large proportion of crime and violence committed.[13]

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.[14] 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.[15] Most people with the disorder first show symptoms in late adolescence or early adult life. The symptoms fluctuate but generally improve over time. Among those receiving treatment, as many as half improve sufficiently not to meet the criteria for BPD five to ten years after first diagnosis.[16]

As with ASPD, the prevalence of borderline personality 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,[6] 1.4% in the US,[7] and 0.7% in APMS 2000.[1,17] The rate is generally reported as higher in women than men, or similar in both sexes.

A considerable proportion of people with BPD are known to have experienced some form of

physical, emotional or sexual abuse or neglect in childhood.[18] 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.[19] It is rare for a patient to have BPD without comorbid conditions, and because of this considerable overlap some have argued that BPD should not be classed as a personality disorder.[20] Chapter 12 in this report considers comorbidity across psychiatric disorders, including for BPD and ASPD.

In this chapter, estimates of the one-year prevalence of ASPD and BPD in the English general population are presented, and the rates obtained in the APMS 2000 and 2007 surveys are compared. We also discuss the associations between these two types of personality disorder and age, sex, and levels of service use and treatment.

6.2 Definition and assessment

6.2.1 Antisocial and Borderline personality disorders

Personality disorder

The 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'*.[21]

Personality disorders were made a separate diagnostic axis under the DSM-III classification of mental disorders.[22] The current classification (DSM-IV) identifies ten types of personality disorder grouped into three clusters:[23]

- 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.[1]

Three methodologically rigorous surveys have covered all ten types of personality disorder,[24] including APMS 2000 which used the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II).[25,26] There are issues with all the available screening tools, and no 'gold standard' has emerged.[27,28] 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 the inclusion of new topics, the 2007 survey only measured ASPD and BPD.[29] This was made possible by the modular structure of the SCID-II, which covers each personality disorder type separately.

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 2007 survey.[30]

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:

- 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.[31]

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, respondents 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.[32] 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; and
- 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 respondents aged 16 and over.[33]

6.2.2 Case assessment

In line with the 1997 APM Prisons' survey and APMS 2000, APMS 2007 adopted the DSM-IV classification of personality disorder and used 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. The process of case assessment for personality disorder involved several stages which are described in detail below. The stages were:

A. Phase one SCID-II self-completion screen

B. Selection of cases for phase two assessment

C. Phase two SCID-II clinical assessment of a subset of cases

D. Weighting to adjust for selection and non-response.

A. Phase one SCID-II self-completion screen

The modules of the self-completion SCID-II covering BPD and ASPD were included in the Computer Assisted Self Interview (CASI) at phase one. The ASPD module covered conduct disorder and adult antisocial personality, as a diagnosis of ASPD requires both to be present. The questions used to assess each criterion for these disorders are listed in Appendix A.

Each question asked the respondent 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.

B. Selection of cases for phase two assessment

The responses provided by respondents to the SCID-II self-completion screen conducted at phase one then informed their likelihood of selection for a phase two clinical assessment, as outlined below.

Selection of cases for phase two assessment of ASPD

The ASPD probability of selection for a phase two assessment depended on an individual's phase one scores for adult antisocial personality and childhood conduct disorder. Based on these two scores each respondent was assigned to one of nine 'strata'. The 'cells' in Table 6A were assigned to a stratum based on a modelled estimate of the probability of a respondent being assessed at phase two as having ASPD. (The modelling was done using 2000 data.) Cells in the same stratum have a similar modelled probability, and the probability increases across the strata.[1]

Table 6A

Table 6A

Definition of ASPD strata from combinations of phase one conduct disorder and adult antisocial personality scores

Childhood conduct disorder score	Adult antisocial personality score						
	0	1	2	3	4	5	6
0	1	1	1	3	4	6	7
1	1	1	2	3	5	6	7
2	1	1	3	3	5	6	7
3	1	1	3	4	5	7	8
4	1	2	3	5	6	7	8
5	1	3	3	5	6	7	9
6	1	3	4	5	7	7	9
7	2	3	5	6	7	8	9
8	3	4	5	6	7	9	9
9	3	4	6	7	7	9	9
10	4	5	6	7	8	9	9
11	4	5	6	7	9	9	9
12	5	6	7	8	9	9	9
13	6	6	7	8	9	9	9
14	6	7	8	9	9	9	9
15	7	7	8	9	9	9	9

After each respondent was assigned to one of the nine strata, the probabilities of selection for phase two were applied as follows:

- Stratum 1 (or aged 16/17) = 0
- Stratum 2 = 0.13
- Stratum 3 = 0.18
- Stratum 4 = 0.29
- Stratum 5 = 0.38
- Stratum 6 = 0.54
- Stratum 7 = 0.76
- Stratum 8 = 1
- Stratum 9 = 1

Thus, respondents in stratum one were rejected for a phase two assessment on the basis of their ASPD responses (on the grounds that the rate of ASPD in this group was expected to be very low). For all other respondents, the sampling fraction increased as the stratum number increased. All respondents in strata 8 and 9 were selected for a phase two assessment.

[1] The estimated probabilities of being positive for ASPD per strata are: Stratum 1: Up to 0.007; Stratum 2: 0.007-0.01; Stratum 3: 0.01-0.03; Stratum 4: 0.03-0.05; Stratum 5: 0.05-0.1; Stratum 6: 0.1-0.2; Stratum 7: 0.2-0.4; Stratum 8: 0.4-0.5; Stratum 9: 0.5 and over.

Selection of cases for phase two assessment of BPD

For BPD, the total score for the phase one BPD screen was used to inform the probability of selection for a phase two assessment. Respondents with a score of 0-3 were excluded from the BPD phase two sampling frame (again on the grounds that analysis of the 2000 survey data suggested the prevalence of BPD in this group would be very low[2]). The following sampling fractions were applied:

- Score 0-3 = 0
- Score 4 = 0.25
- Score 5 = 0.40
- Score 6 = 0.52
- Score 7 = 0.63
- Score 8 = 1
- Score 9 = 1

If a respondent was eligible for a phase two assessment on the basis of screens for more than one disorder (e.g. both BPD and psychosis) then the higher sampling fraction was applied.

C. Phase two SCID-II clinical assessment

In the phase two interview, the ASPD and BPD modules from the full semi-structured SCID-II interview were carried out, and the recommended cut-off points used for assigning personality disorder assessments. The clinically trained interviewers had to make a judgement of the rating for each item on a four point scale: 'inadequate information', 'negative', 'sub-threshold', and 'threshold'. Each criterion was explored in turn with standard probes and thresholds for marking a criterion as present. The number of criteria required for a positive phase two assessment of ASPD and BPD were:

ASPD:

- Age 18 or over; and
- 2 or more conduct disorder criteria met; and
- 3 or more adult antisocial personality criteria met.

BPD:

- 5 or more criteria met

The accuracy of the clinical assessment for personality disorder probably benefited from the fact that interviewers were also assessing autism spectrum disorder and psychosis as part of the same interview. However, not assessing for other personality disorders could have had a negative impact.

D. Weighting to adjust for selection and non-response

For the designation of ASPD outcomes the following approach was used:

- For those whose responses at phase one placed them in stratum two or above and who had a SCID-II assessment for ASPD, the results of the SCID-II were used.
- Those whose responses at phase one placed them in stratum one, were assumed to not have the disorder, regardless of whether or not a SCID-II assessment was completed.
- Those whose responses at phase one placed them in stratum two or above but who did not have a SCID-II 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. The weighting strategy meant that the SCID-II results for the respondents assessed at phase two were weighted to reflect the profile of all respondents identified as eligible for a phase two assessment.

[2] In 2000 no respondents with a score of 0-3 at the phase one BPD screen were identified with BPD at the phase two clinical interview.

A similar strategy was applied for the identification of BPD cases:

- For those who scored four or more at phase one and had a SCID-II assessment for BPD, the results of the SCID-II were used.
- Those who scored less than four at phase one were assumed not to have the disorder, regardless of whether or not a SCID-II assessment was completed.
- For those who scored four or more at phase one but did not have a SCID-II assessment (e.g. due to non-selection, refusal or non-contact) a weighting strategy was applied to take account of their absence from the base. The weighting strategy meant that the SCID-II results for the respondents assessed at phase two were weighted to reflect the profile of all respondents identified as eligible for a phase two assessment.

6.3 Results

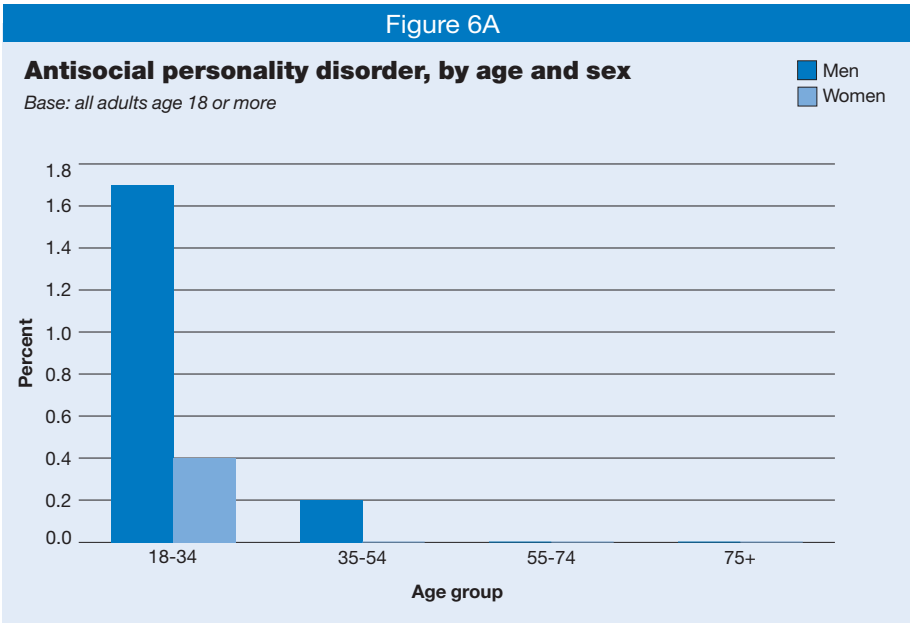
It should be noted that both ASPD and BPD are disorders of relatively low prevalence to capture in an epidemiological survey of this kind. The numbers of positive cases were particularly small given the sampling fractions applied to select respondents for a phase two assessment. A positive identification was only made if a phase two interview was conducted. There were just nine cases of ASPD and 16 cases of BPD in the sample (weighted up to represent the projected 23 and 33 cases respectively that would have been identified if everyone in the initial sample had had a phase two assessment). Any apparent variations by age and sex should therefore be treated with great caution and analyses by other characteristics are not presented in this chapter.

6.3.1 Prevalence of ASPD by age and sex

ASPD was present in 0.3% of adults aged 18 or over. As in other published studies, the observed rate was higher in men (0.6%) than women (0.1%), although this difference was not significant. As expected, the likelihood of having ASPD was associated with age. 1.7% of men aged 18-34 had ASPD, while no cases were identified in men aged 55 or over. 0.4% of women aged 16-34 had ASPD, whereas no cases were identified in those aged over 35.

Table 6.1, Figure 6A

Figure 6A



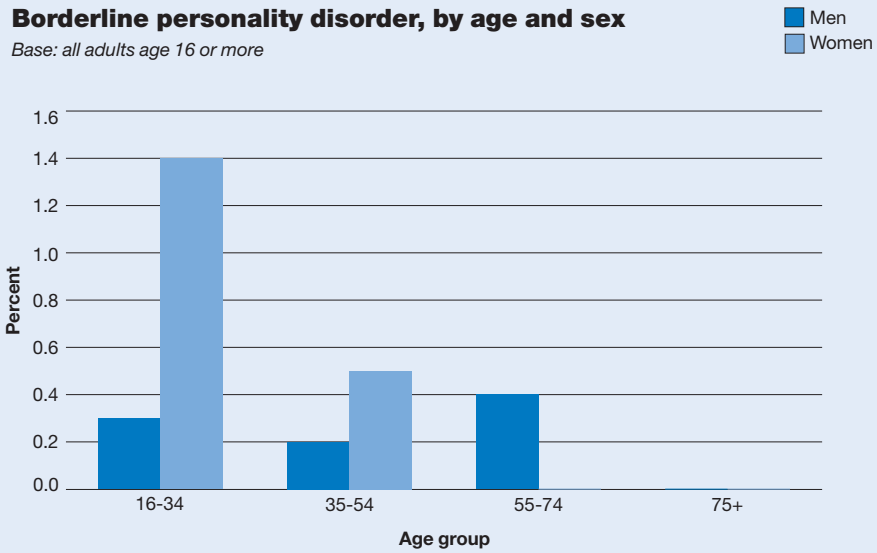
6.3.2 Prevalence of BPD by age and sex

The overall prevalence of BPD was very similar to that of ASPD, at 0.4% of adults aged 16 or over. While the association with sex was nonsignificant, the observed pattern fits with the expected profile (0.3% of men, 0.6% of women). Younger women were more likely to have BPD than older women, but no association with age was observed in men. **Table 6.1, Figure 6B**

Figure 6B

Borderline personality disorder, by age and sex

Base: all adults age 16 or more



6.3.3 Change since 2000

The APMS 2000 estimates of ASPD and BPD were recalculated using the England sample only, and the APMS 2007 data were restricted to adults in the age range 16-74, so that rates could be compared between the survey years.

The prevalence of ASPD in adults aged 16-74 and living in England[34] was similar in 2000 (0.6%) and 2007 (0.4%), despite differences in the sampling approach used. Men had a higher observed rate of ASPD than women in both surveys. However, while the 2007 data showed the expected association between age and ASPD, this was less evident in the 2000 data.

Likewise, the rate of BPD in those aged 16-74 and living in England did not change significantly between the 2000 (0.8%) and 2007 (0.5%) surveys. **Table 6.2**

6.3.4 Treatment and service use

As mentioned previously, the number of people identified with a personality disorder was very small, so any analysis of their use of treatment and services needs to be treated with particular caution. The data is only discussed here in general terms and is not presented in the tables due to the small base sizes.

Most people with ASPD or BPD were not receiving any treatment (such as medication or counselling) for a mental or emotional problem.

People with ASPD or BPD did appear to make use of health and community services for a mental or emotional reason. However, people with personality disorders are known to have high levels of comorbidity with other psychiatric disorders, and other analyses have suggested that the high levels of service contact is confounded by the presence of other conditions.[35]

6.4 Discussion

This is the second time that estimates of ASPD and BPD have been assessed in the English general population. The rates produced by APMS 2000 and APMS 2007 are similar, and are also close to the estimates generated in other countries.

The number of cases positively identified in the APMS 2007 sample was small (nine with ASPD and 16 with BPD). This makes identification of significant variation by subgroups problematic. However the data did conform to some expected patterns: that ASPD appears

to be more likely in men than women and in younger people than older people. The age association was also observed in women for BPD.

Stability is a defining feature of both the tenth International Classification of Disease (ICD-10) and DSM-IV definitions of personality disorder.[37] The association with age is therefore interesting as it suggests that the condition may not persist lifelong at or above threshold levels. There is evidence of fluctuation over time in the presence of criteria within individuals,[20] and the course of the disorder seems to be susceptible to treatment.[38,39] Clinical trials have shown that some talking therapies can be effective in the treatment of a number of personality disorders, while the results of pharmacological trials have been less conclusive.[40] However, most people with personality disorder identified in the APMS sample were not receiving treatment, and of those that were, few cited counselling or talking therapies. As noted previously, the sample size requires us to treat these findings with great caution, but they suggest that improvements are required in order to achieve the levels of therapeutic approach recommended by the National Institute for Health and Clinical Excellence (NICE).

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Tables

Table 6.1

Antisocial and borderline personality disorders in past year, by age and sex

18+ for ASPD, 16+ for BPD *2007*

Type of personality disorder[a]	Age group				
	16/18-34	35-54	55-74	75+	All
	%	%	%	%	%
Men					
Antisocial	1.7	0.2	-	-	0.6
Borderline	0.3	0.2	0.4	-	0.3
Women					
Antisocial	0.4	-	-	-	0.1
Borderline	1.4	0.5	-	-	0.6
All adults					
Antisocial	1.1	0.1	-	-	0.3
Borderline	0.8	0.4	0.2	-	0.4
Bases (unweighted)[b]					
Men	*624*	*1059*	*1013*	*378*	*3074*
Women	*807*	*1309*	*1216*	*589*	*3921*
All	*1431*	*2368*	*2229*	*967*	*6995*
Bases (weighted)					
Men	*1136*	*1313*	*900*	*265*	*3614*
Women	*1143*	*1319*	*956*	*403*	*3821*
All	*2279*	*2633*	*1856*	*668*	*7436*

[a] The base for BPD includes respondents who scored 0-3 on the self-completion SCID-II at phase one, plus those with a score of 4 or more at phase one and completed a clinician administered SCID-II at phase two. Those screened out at phase one were given a negative outcome. Respondents with screen positive for increased likelihood of a personality disorder but not assessed by a clinician were excluded from the analysis. The sample with outcomes was then weighted to reflect the population as a whole. (See Section 6.2.2 for details). The approach to assessment of ASPD was similar to that for BPD.

[b] The bases shown are for BPD. Bases are not shown for ASPD in this table but are presented in Table 6.2.

Table 6.2

Antisocial and borderline personality disorders in 2000 and 2007, by age and sex

Aged 16-74 and living in England *2000 and 2007*

Type of personality disorder[a]	Age group							
	16-34		35-54		55-74		All aged 16-74[a]	
	2000	2007	2000	2007	2000	2007	2000	2007
	%	%	%	%	%	%	%	%
Men								
Antisocial	1.0	1.5	1.8	0.2	-	-	1.1	0.6
Borderline	0.1	0.3	2.8	0.2	-	0.4	1.1	0.3
Women								
Antisocial	0.6	0.4	0.1	-	-	-	0.2	0.1
Borderline	0.5	1.4	0.8	0.5	-	-	0.5	0.7
All adults								
Antisocial	0.8	1.0	0.9	0.1	-	-	0.6	0.4
Borderline	0.3	0.8	1.8	0.4	-	0.2	0.8	0.5
Bases (unweighted)[b]								
Men	*60*	*511*	*109*	*928*	*60*	*919*	*229*	*2358*
Women	*75*	*750*	*131*	*1263*	*85*	*1199*	*291*	*3212*
All	*135*	*1261*	*240*	*2191*	*145*	*2118*	*520*	*5570*
Bases (weighted)								
Men	*81*	*1065*	*92*	*1288*	*62*	*893*	*235*	*3246*
Women	*83*	*1025*	*90*	*1232*	*62*	*928*	*235*	*3185*
All	*164*	*2090*	*182*	*2520*	*125*	*1821*	*470*	*6431*

[a] For comparability across survey years age range is 16-74 for both disorders, and includes only people living in England. The sample size presented for 2000 is smaller as the approach in that survey was to base personality disorder analysis on the phase two subsample only.

[b] The bases shown are for ASPD. Bases are not shown for BPD in this table but are presented in Table 6.1.

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Attention deficit hyperactivity disorder

7

Dhriti Jotangia and Traolach Brugha

Summary

- This chapter presents data on the prevalence of possible attention deficit hyperactivity disorder (ADHD) in the adult general population. The association between screening positive for ADHD and sociodemographic factors is covered, as well as the use of treatment and services.
- Overall, 8.2% of the adult population in England screened positive on the Adult Self-Report Scale-v1.1 (ASRS) for ADHD characteristics. In this chapter a threshold score of four or more was considered to be a positive screen indicating that a clinical assessment for ADHD may be warranted. 2.3% of all adults reported five characteristics of ADHD and 0.6% reported all six characteristics of ADHD.
- Screening positive for ADHD did not vary significantly between men and women.
- The prevalence of screening positive for the disorder decreased with age. The proportion of men and women scoring four or more on the ASRS screen was highest among those aged 16-24 (13.8%) and lowest among those aged 75 and over (4.2%).
- Prevalence of ADHD characteristics varied by marital status. Single men and women were most likely to screen positive (11.4% and 13.3% respectively). This observed variation is likely to be due in part to the younger age profile of single adults.
- The proportion of men and women scoring four or more on the ASRS scale generally increased as household income decreased. Being in the lowest household income quintile was strongly associated with a positive screen for ADHD (17.3% of men and 11.6% of women).
- Employment status was associated with the presence of ADHD characteristics. Economically inactive men and women were most likely to screen positive for the disorder (21.9% and 12.9% respectively).
- The proportion of men and women scoring four or more on the ASRS screen varied by highest educational qualifications. Adults with no qualifications were more likely to screen positive for ADHD characteristics than those with a degree or equivalent qualification.
- 80% of adults who screened positive for ADHD were not in receipt of medication, counselling or therapy for a mental health or emotional problem.
- Among adults screening positive for ADHD, antidepressant medication was the most common type of medication taken in the past year. Two of the most commonly prescribed types of ADHD medication, Ritalin and Straterra, were asked about. No women screening positive and 0.2% of men screening positive for the disorder were currently taking either of these.

7.1 Introduction

Attention deficit hyperactivity disorder (ADHD) is a widely recognised complex developmental disorder in childhood. Prevalence estimates for childhood ADHD are thought to be in the region of 3% to 9%.[2] The disparity in estimates is largely due to methodological factors, in particular variation in inclusion of impairment and pervasiveness criteria. In recent years, the persistence of ADHD characteristics into adulthood has gained some recognition and become the focus of research and clinical attention.[1]

At present, there is a lack of epidemiological data on the prevalence of ADHD in the adult population, particularly for England. The National Institute for Health and Clinical Excellence (NICE) reports that ADHD can persist into adulthood and cause impairment, although questions remain over the level of ADHD symptoms that should be considered grounds for intervention and whether symptoms take a different form in adulthood. As many as 2% of adults worldwide may currently be affected by the disorder.[2,3] Longitudinal studies have demonstrated the persistence of ADHD into adulthood, suggesting that 15% of adults diagnosed with ADHD as children retain the full diagnosis at the age of 25 and a further 50% are in partial remission with persistence of some impairing symptoms of ADHD.[2] Survey respondents reporting both childhood ADHD and adult persistence vary widely within and between countries, with US general population surveys suggesting a prevalence between 3% and 5%.[4,5,6]

Existing studies have also indicated that prevalence may be higher among particular population subgroups, most notably men, adults of white ethnic origin, unemployed people, and previously married individuals.[5]

ADHD in adults may go unrecognised or be misdiagnosed by mental health professionals. One difficulty with diagnosis is that the characteristics of ADHD often overlap with other psychiatric conditions such as personality disorder (particularly antisocial and borderline), depression, anxiety, to a lesser degree psychotic disorders, and other developmental disorders, which may result in alternative diagnoses.[2] (See Chapter 12, Comorbidity). Furthermore, mental health and behavioural problems such as substance misuse disorders, antisocial behaviour, anxiety and depression occur at increased rates in adults with ADHD. As a result, if ADHD in adulthood is unrecognised this could result in the ineffective provision of treatment and services.

If left untreated the presence of ADHD can result in educational and occupational disadvantage, and in significant social impairments. Adults with ADHD tend to have fewer academic qualifications, probably because of difficulties with organising time, prioritising tasks and meeting deadlines.[2] The persistence of ADHD characteristics into adulthood can incur high economic costs to society associated with absenteeism, reduced productivity and poor work performance.[8] The social consequences of the adult form of ADHD are also marked, with dysfunctional patterns of behaviour including poor interpersonal relationships, marital failure and a higher risk of car accidents.[5]

Although advances in treatment and service provision for ADHD have been made for children, this is less evident for adults diagnosed with the condition. Many ADHD drugs considered effective for children and adolescents are not licensed for use in adults.[2] Furthermore, mental health services for adult ADHD are uncommon in the UK and across Europe, potentially resulting in high levels of the disorder being untreated even where identified.[7]

Information about the prevalence and treatment use of adults with characteristics of ADHD in the English population is needed to inform planning for improved diagnosis and service provision. This chapter presents the general population distribution of the characteristic behaviours associated with ADHD, and examines their association with factors such as age, sex, sociodemographic characteristics, and the use of treatment and services. Comorbidity with ADHD is addressed in Chapter 12.

7.2 Definition and assessment

7.2.1 Attention deficit hyperactivity disorder (ADHD)

ADHD is defined as a developmental disorder consisting of core dimensions of inattention, hyperactivity and impulsiveness. Characteristic symptoms and behaviours may include excessive problems with organisation, difficulties with activities requiring cognitive involvement, hyperactivity, restlessness and impulsiveness to an extent that causes significant distress and/or significantly interferes with everyday functioning. Although some of these difficulties may also occur in other mental conditions, ADHD does not involve significant emotional, perceptual or memory problems.

Two official sets of diagnostic criteria are in current use, the International Classification of Diseases 10th Revision (ICD-10)[10] and the Diagnostic and Statistical Manual of Mental Disorders fourth edition (DSM-IV).[11] The ICD-10 uses a more restricted set of criteria, where ADHD symptoms are grouped as hyperkinetic disorders and diagnosed when all three characteristics of inattention, hyperactivity and impulsivity are present. This stricter classification excludes comorbid cases with conditions such as anxiety, personality disorder and pervasive developmental disorder (see the Glossary). A limitation of the ICD-10 classification is that it may lead to an under-identification of adult ADHD when it is present with other conditions. The Diagnostic DSM-IV includes a broader definition of the disorder and permits the presence of comorbid disorders in diagnosing and treating the condition, but a limitation of this approach may be an over identification in individuals who are primarily suffering from other disorders.[2]

7.2.2 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 the APMS 2007 survey to estimate the prevalence of possible ADHD.[12] 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.[13] Evidence has shown the six item screen to have greater sensitivity, specificity and stronger concordance with clinical diagnosis than the extended 18 item scale.[13] The screen's use and validity has been established predominantly in community samples, though it is suggested that the scale could prove to be a useful measure complementing more accurate clinical diagnostic assessments.[5,14,15]

The ASRS screen was administered face to face to all respondents. The screen consists of six questions assessing the ADHD characteristics of inattention, hyperactivity and impulsivity, during the six months prior to interview. Respondents 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 the proportion of adults reporting four or more characteristics at or above the specified frequency threshold, as well as the proportion reporting all six characteristics, are shown. Indicating four or more ASRS items is the threshold recommended to indicate that a clinical assessment for ADHD is warranted.[4] However, the developers of the scale also state that the higher the score the more likely it is that ADHD is present. Therefore the proportion of the sample meeting the threshold frequency for all six items is also shown on the tables. Showing the proportion meeting all six items indicates subgroups with the greatest likelihood of a positive diagnosis at clinical assessment.

It can be assumed that the proportion of adults with a score of four or more will be an overestimate of the true prevalence of adult ADHD, and the proportion with a score of six may be an underestimate. No clinical assessment of ADHD was undertaken as part of this study, and the validity of self evaluation of ADHD characteristics should be regarded with some caution.

The below shows the questions in the ASRS scale used to screen for possible adult ADHD and the threshold frequencies. Table 7.1 shows the distribution of responses for each of the six items.

Adult ADHD Self-Report Scale-v1.1 (ASRS-V1.1) screen items and frequency thresholds

Thinking about now and the past six months…	Responses indicating whether symptom is significant
… 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 is known to have strong concordance with clinical diagnosis, caution should be taken when interpreting findings based on it. First, self-reported information is subject to social desirability biases.[16] Furthermore, the ASRS does not include an overall assessment of the level of impairment resulting from the symptoms of hyperactivity and inattention, pervasiveness across situations such as home and work, and childhood age of onset; key additional criteria for the diagnosis of ADHD.

It is important to note that in this chapter, it is the distribution of the ADHD characteristics measured by ASRS that is presented and not the actual prevalence of ADHD disorder, which would require a clinical evaluation.

7.3 Results

7.3.1 Possible ADHD characteristics, by age and sex

The overall proportion of adults scoring four or more (the threshold at which clinical assessment for ADHD is warranted) on the ASRS scale was 8.2%. A much smaller proportion of adults (0.6%) reported all six characteristics on the ASRS screen. **Table 7.1**

There was no significant association between sex and scoring four or more (8.8% men, 7.7% women) or scoring six (0.7% men, 0.5% women) on the ASRS screen. This differs from associations reported from other sources, which have generally found that ADHD may be two to four times more likely to be found in men than women.[5]

Screening positive on the ASRS scale broadly decreased with age. This pattern was observed in both women and men. The proportion scoring four or more was highest among adults aged 16-24 (13.8%), and lowest among adults aged 75 and over (4.2%).

Table 7.2, Figure 7A

7.3.2 Variation in screening positive for ADHD by other characteristics

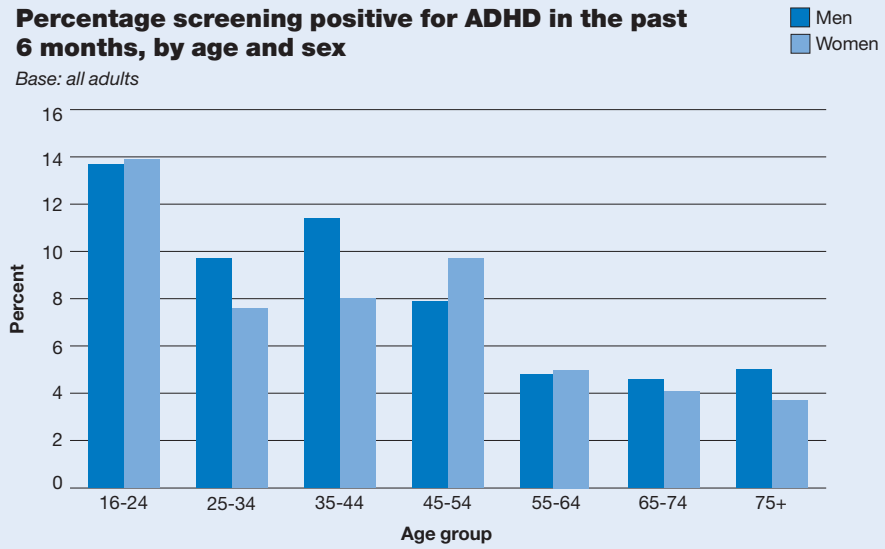
Ethnicity

There was no significant variation by ethnic group in the proportion of adults screening positive on the ASRS. Previous research suggested that the rate may be higher in the white population than in other ethnic groups,[5] but this was not supported by data from APMS 2007 for possible ADHD, whether age-standardised or not. **Table 7.3**

Figure 7A

Percentage screening positive for ADHD in the past 6 months, by age and sex

Base: all adults



Marital status

For both men and women, scoring positive on the ASRS varied by marital status. This variation was most marked among women, where those who were single or separated (13.3% and 13.9% respectively) were more likely to screen positive for ADHD compared with married or widowed women (5.0% and 5.1% respectively). It should be noted that the age profiles of these groups were not standardised (see the Glossary for an explanation of why), and the observed variations will reflect, for example, that single people are likely to be younger than the population as a whole, and widows and widowers are likely to be older.

Table 7.4

Equivalised household income

There was a non-linear pattern in the distribution of people screening positive on the ASRS by equivalised household income (see the Glossary for a definition of equivalised household income). The proportion scoring four or more increased as the household income decreased. It is interesting to note the exception to this pattern: a relatively high proportion of people in the highest income quintile screened positive for ADHD characteristics. This pattern was observed among both men and women. Being in the lowest household income quintile was strongly associated with a positive screen for ADHD (17.3% men, 11.6% women).

Table 7.5

Educational qualifications

The ASRS score varied somewhat by educational qualifications, although this was less pronounced than with employment status. Men and women with no qualifications comprised the group with the highest proportion scoring four or more (10.9% men, 10.6% women). This is compared with an ASRS score of four or more among 7.0% of men and 5.6% of women with a degree or equivalent vocational level of qualification.

Table 7.7

Employment status

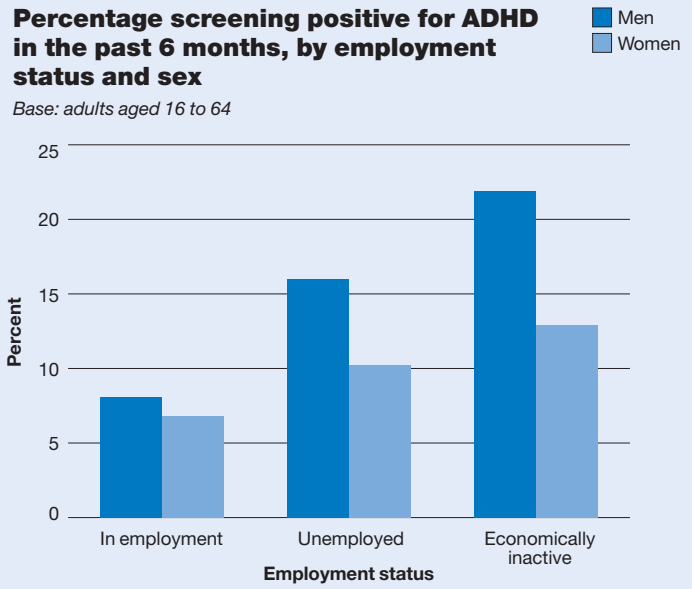
Screening positive for ADHD on the ASRS was also strongly associated with employment status, particularly among men. As would be expected, rates were lower among men and women in employment (8.1% men, 6.8% women) and higher among unemployed adults. However the group with the highest rate comprised adults defined as 'economically inactive'. This heterogeneous category includes students, people looking after the home, those who are long term sick or disabled, and those taking early retirement (this analysis was run on adults aged 16-64 only). One in five economically inactive men (21.9%) and one in eight economically inactive women (12.9%) had an ASRS score of 4 or more. (See the Glossary for a definition of economic activity).

Table 7.8, Figure 7B

Figure 7B

Percentage screening positive for ADHD in the past 6 months, by employment status and sex

Base: adults aged 16 to 64



7.3.3 Treatment and service use

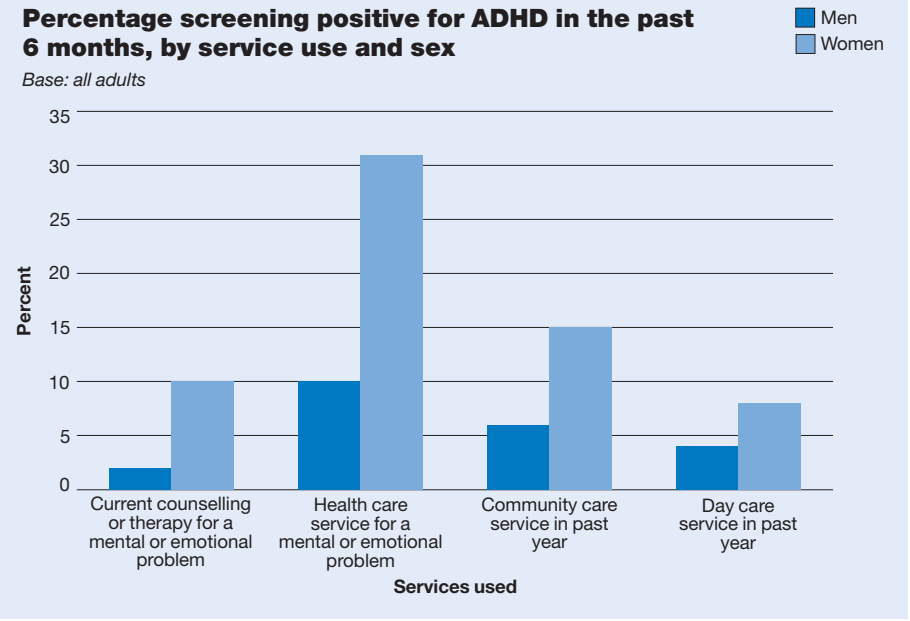
Respondents were asked about a range of types of treatment and services. These included current use of psychoactive medication, counselling and therapy for any mental or emotional reason together with use of a range of health, community and day care services over the past year. Two of the most commonly prescribed ADHD medications were asked about: Ritalin (methylphenidate) and Straterra (atomoxetine). The treatment and service use variables are described in more detail, including variation in their reference periods, in the Glossary.

One in five adults (20%) screening positive on the ASRS for possible ADHD was in receipt of current medication, counselling or therapy for a mental health or emotional problem. This contrasts with 6% of those with an ASRS score of less than four. Adults screening positive for ADHD were five times more likely than those not screening positive to be in receipt of counselling or therapy (10%, compared with 2%). This was a bigger differential than that observed for medication: 16% of those with a score of four or more were taking psychoactive medication in the past year, compared with 5% of those scoring less than four. **Table 7.9**

Among those screening positive, antidepressants were the psychoactive drugs most likely to be taken in the past year, as with the general population. 0.2% of men who screened positive for ADHD were currently taking the ADHD medication Ritalin or Straterra. No women screening positive for the disorder were on these medication. However it is possible that some respondents may have been taking an ADHD preparation not asked about. **Table 7.10**

Adults who scored four or more on the ASRS were more likely to have used all types of services in the past year than those who had screened negative. About one in three adults who had screened positive for ADHD (31%) reported using health care services for a mental or emotional reason, compared with one in ten of those who had screened negative for the disorder (10%). The increase in reporting of community care and day care services among those screening positive was significant but less pronounced than health care services used. **Table 7.9, Figure 7C**

Figure 7C



7.4 Discussion

There is a lack of survey data describing the presence of 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 characteristics as measured by the six item ASRS screen.

8.2% of the population were identified as having ADHD characteristics in the past six months frequently enough to warrant clinical assessment for ADHD. No comparable screening data are as yet available for other general population samples. As expected this proportion was higher than the estimated prevalence of adult ADHD reported in other adult general population studies.[4,5,6]

The higher rate of possible ADHD observed in the APMS 2007 survey is not directly comparable with previous adult surveys that were based on respondents reporting childhood ADHD criteria and adult persistence.[6] Some respondents screening positive on the ASRS may have had an adult onset of ADHD symptoms, most likely related to another adult onset condition. Additionally, the ASRS does not include a measure of situational pervasiveness or resultant impairment. The APMS 2007 findings are valuable however in identifying the population distribution of characteristics associated with possible ADHD that warrant recognition and assessment.

Previous research has identified variation in rates of ADHD by particular socio-demographic factors. Only some of these factors were consistent with the APMS 2007 data.[5] For example, although no significant variation by sex and ethnic origin was observed, a positive screen for the disorder was found to be concentrated among younger age groups, those not in employment, those with the lowest household income, and among people with low educational attainment.

While the great majority of people screening positive for ADHD do not access treatment or services, the APMS findings do show that a higher proportion access these for a mental or emotional reason than among those screening negative for ADHD. This may reflect the fact that adults screening positive for ADHD also have comorbid diagnoses with other psychiatric conditions (such as depression, anxiety and personality disorders) or that their ADHD characteristics are being 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 respondents screening positive for ADHD, together with their high levels of antidepressant use. Although the data presented helps to identify factors

associated with the increased risk of ADHD, it cannot estimate how many adults are likely to benefit from treatment.

The APMS findings have identified that further work is needed 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.

Progress is being made with the development of best practice advice and guidelines on the care of adults with ADHD, which identifies key priorities for treatment and management of the disorder.[2]

References and notes

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11 American Psychiatric Association (1994) *The fourth edition of the Diagnostic and Statistical Manual of mental Disorders* (DSM-IV).

12 Adult ADHD Self-Report Scale-V1.1 (ASRS-V1.1) Screen. WHO Composite International Diagnostic Interview. World Health Organization (2003, WHO).

13 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.

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Tables

Table 7.1

Number of ADHD characteristics present in the past six months, by age and sex

All adults *2007*

Number of ADHD characteristics on the ASRS[a] scale at or above threshold frequency in past 6 months	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	%	%	%	%	%	%	%	%
Men								
0	26.4	29.8	32.7	38.8	42.5	48.5	50.5	36.6
1	24.2	27.3	28.3	22.9	28.5	27.9	24.2	26.3
2	19.6	22.1	17.4	20.1	13.8	14.5	15.1	18.0
3	16.1	11.1	10.2	10.3	10.4	4.4	5.2	10.3
4	8.6	5.9	7.1	4.6	4.0	3.2	3.9	5.6
5	3.8	2.8	3.3	2.8	0.6	1.4	1.1	2.4
6	1.3	1.1	1.0	0.5	0.2	-	-	0.7
Women								
0	28.9	38.1	34.3	39.5	43.2	52.1	53.6	40.2
1	19.4	26.9	28.3	24.0	29.3	24.4	22.7	25.4
2	25.2	17.4	18.3	17.3	13.3	12.1	12.7	17.0
3	12.6	10.0	11.0	9.6	9.2	7.3	7.3	9.8
4	10.3	5.2	4.4	5.1	4.1	3.2	3.0	5.1
5	2.8	2.3	2.8	3.9	0.7	0.9	0.5	2.2
6	0.8	0.2	0.8	0.8	0.2	-	0.2	0.5
All adults								
0	27.7	34.0	33.5	39.1	42.8	50.4	52.4	38.4
1	21.8	27.1	28.3	23.4	28.9	26.1	23.3	25.8
2	22.3	19.7	17.9	18.7	13.6	13.2	13.6	17.5
3	14.4	10.5	10.6	9.9	9.8	5.9	6.5	10.1
4	9.5	5.5	5.7	4.8	4.0	3.2	3.3	5.4
5	3.3	2.5	3.1	3.3	0.7	1.1	0.8	2.3
6	1.1	0.6	0.9	0.6	0.2	-	0.1	0.6
Bases (unweighted)								
Men	*271*	*414*	*613*	*495*	*573*	*462*	*365*	*3193*
Women	*297*	*620*	*800*	*635*	*706*	*566*	*580*	*4204*
All	*568*	*1034*	*1413*	*1130*	*1279*	*1028*	*945*	*7397*
Bases (weighted)								
Men	*530*	*606*	*708*	*590*	*539*	*362*	*254*	*3589*
Women	*517*	*615*	*721*	*603*	*558*	*398*	*388*	*3800*
All	*1047*	*1221*	*1429*	*1193*	*1097*	*760*	*642*	*7389*

[a] The ASRS (Adult ADHD Self-Report Scale) is described in Section 7.2.2.

Table 7.2

Screen positive for ADHD in the past six months, by age and sex

All adults *2007*

ASRS score[a]	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	%	%	%	%	%	%	%	%
Men								
4 or more[b]	13.7	9.7	11.4	7.9	4.8	4.6	5.0	8.8
All 6	1.3	1.1	1.0	0.5	0.2	-	-	0.7
Women								
4 or more[b]	13.9	7.6	8.0	9.7	5.0	4.1	3.7	7.7
All 6	0.8	0.2	0.8	0.8	0.2	-	0.2	0.5
All adults								
4 or more[b]	13.8	8.7	9.7	8.8	4.9	4.4	4.2	8.2
All 6	1.1	0.6	0.9	0.6	0.2	-	0.1	0.6
Bases (unweighted)								
Men	*271*	*414*	*613*	*495*	*573*	*462*	*365*	*3193*
Women	*297*	*620*	*800*	*635*	*706*	*566*	*580*	*4204*
All	*568*	*1034*	*1413*	*1130*	*1279*	*1028*	*945*	*7397*
Bases (weighted)								
Men	*530*	*606*	*708*	*590*	*539*	*362*	*254*	*3589*
Women	*517*	*615*	*721*	*603*	*558*	*398*	*388*	*3800*
All	*1047*	*1221*	*1429*	*1193*	*1097*	*760*	*642*	*7389*

[a] The ASRS (Adult ADHD Self-Report Scale) is described in Section 7.2.2.

[b] The '4 or more' group includes those with a score of 6 on the ASRS.

Table 7.3

Screen positive for ADHD in the past six months (observed and age-standardised), by ethnicity and sex

All adults *2007*

ASRS score	Ethnicity			
	White	Black	South Asian	Other[a]
	%	%	%	%
Men				
Observed				
4 or more[b]	8.7	9.4	6.6	12.7
All 6	0.7	1.1	-	-
Age-standardised				
4 or more[b]	8.9	8.2	8.3	11.8
All 6	0.8	1.3	-	-
Women				
Observed				
4 or more[b]	7.6	9.5	6.9	10.8
All 6	0.5	-	-	-
Age-standardised				
4 or more[b]	7.7	10.4	9.8	8.1
All 6	0.5	-	-	-
Bases (unweighted)				
Men	*2910*	*77*	*109*	*72*
Women	*3892*	*111*	*90*	*87*
Bases (weighted)				
Men	*3179*	*103*	*170*	*112*
Women	*3445*	*121*	*114*	*102*

[a] Includes Chinese and mixed ethnic groups.

[b] The '4 or more' group includes those with a score of 6 on the ASRS (see Section 7.2.2).

Table 7.4

Screen positive for ADHD in the past six months (observed), by marital status and sex

All adults *2007*

ASRS score	Marital status					
	Married	Cohabiting	Single	Widowed	Divorced	Separated
	%	%	%	%	%	%
Men						
4 or more[a]	7.3	10.9	11.4	6.3	9.7	2.4
All 6	0.4	0.8	1.2	1.9	0.4	-
Women						
4 or more[a]	5.0	9.6	13.3	5.1	11.1	13.9
All 6	0.1	1.2	0.8	0.2	0.5	1.9
Bases (unweighted)						
Men	*1672*	*279*	*699*	*232*	*232*	*79*
Women	*1846*	*335*	*727*	*714*	*438*	*144*
Bases (weighted)						
Men	*1953*	*398*	*916*	*115*	*151*	*56*
Women	*1919*	*376*	*763*	*398*	*258*	*86*

[a] The '4 or more' group includes those with a score of 6 on the ASRS (see Section 7.2.2).

Table 7.5

Screen positive for ADHD in the past six months (age-standardised), by equivalised household income and sex

All adults *2007*

ASRS score	Equivalised household income[a]				
	Highest	2nd	3rd	4th	Lowest
	%	%	%	%	%
Men					
4 or more[b]	9.8	5.2	7.1	8.2	17.3
All 6	1.6	0.5	0.7	0.5	2.1
Women					
4 or more[b]	6.7	4.5	7.5	9.5	11.6
All 6	-	0.3	0.3	0.9	0.8
Bases (unweighted)					
Men	*629*	*549*	*509*	*446*	*422*
Women	*562*	*602*	*733*	*676*	*744*
Bases (weighted)					
Men	*716*	*612*	*524*	*456*	*461*
Women	*531*	*546*	*624*	*539*	*627*

[a] For a definition of equivalised income see the Glossary.

[b] The '4 or more' group includes those with a score of 6 on the ASRS (see Section 7.2.2).

Table 7.6

Screen positive for ADHD in the past six months (observed and age-standardised), by region[a] and sex

All adults *2007*

ASRS score	Government Office Region									Strategic Health Authority	
	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	London	South West	South East	South East Coast	South Central
	%	%	%	%	%	%	%	%	%	%	%
Men											
Observed											
4 or more[b]	10.7	9.5	9.2	8.0	9.2	10.6	7.9	6.6	8.3	9.6	7.1
All 6	1.0	0.3	-	0.7	0.2	1.0	0.6	1.7	0.9	1.0	0.8
Age-standardised											
4 or more[b]	10.4	9.5	8.8	7.9	9.3	11.1	7.6	6.1	8.7	9.9	7.5
All 6	1.2	0.3	-	0.7	0.1	1.1	0.5	1.7	1.0	1.0	0.8
Women											
Observed											
4 or more[b]	10.6	8.8	8.1	7.4	8.4	6.8	8.0	6.8	6.4	5.0	8.0
All 6	1.2	1.5		0.4	0.2	-	0.4	0.4	0.2	0.1	0.2
Age-standardised											
4 or more[b]	11.1	8.6	8.0	7.1	7.9	7.0	7.8	7.0	6.4	4.9	7.6
All 6	1.4	1.5	-	0.4	0.2	-	0.4	0.4	0.2	0.1	0.2
Bases (unweighted)											
Men	*181*	*477*	*333*	*331*	*347*	*377*	*321*	*330*	*496*	*3193*	*181*
Women	*259*	*624*	*467*	*349*	*443*	*478*	*470*	*419*	*695*	*4204*	*259*
Bases (weighted)											
Men	*172*	*490*	*359*	*342*	*377*	*402*	*512*	*373*	*562*	*278*	*283*
Women	*207*	*508*	*390*	*295*	*398*	*417*	*579*	*374*	*631*	*336*	*295*

[a] This table provides data for regional analysis both by Government Office Region (GOR) and Strategic Health Authorities (SHAs). The first eight columns represent GORs and SHAs of the same name, while the South East GOR (column nine) is divided into South East Coast SHA and South Central SHA, shown in the final two columns.

[b] The '4 or more' group includes those with a score of 6 on the ASRS (see Section 7.2.2).

Table 7.7

Screen positive for ADHD in the past six months (age-standardised), by highest educational qualification and sex

All adults *2007*

ASRS score	Highest educational qualification				
	Degree, teaching, HND, nursing	A Level	GCSE or equivalent	Foreign or other	No qualifications
	%	%	%	%	%
Men					
4 or more[a]	7.0	9.3	10.0	5.2	10.9
All 6	1.2	0.3	0.9	1.9	0.6
Women					
4 or more[a]	5.6	8.5	7.5	3.5	10.6
All 6	0.3	0.1	0.3	-	1.7
Bases (unweighted)					
Men	*866*	*475*	*763*	*137*	*867*
Women	*1049*	*463*	*1053*	*148*	*1410*
Bases (weighted)					
Men	*1010*	*613*	*949*	*131*	*800*
Women	*1004*	*479*	*1043*	*114*	*1093*

[a] The '4 or more' group includes those with a score of 6 on the ASRS (see Section 7.2.2).

Table 7.8

Screen positive for ADHD in the past six months (age-standardised), by employment status and sex

Aged 16 to 64 *2007*

ASRS score	Employment status		
	In employment	Unemployed	Economically inactive[a]
	%	%	%
Men			
4 or more[b]	8.1	16.0	21.9
All 6	0.4	1.7	3.9
Women			
4 or more[b]	6.8	10.2	12.9
All 6	0.4	-	1.0
Bases (unweighted)			
Men	*1835*	*89*	*442*
Women	*1996*	*74*	*988*
Bases (weighted)			
Men	*1933*	*107*	*416*
Women	*1588*	*65*	*730*

[a] The 'economically inactive' group includes students, and those looking after home, long term sick or disabled, or retired.

[b] The '4 or more' group includes those with a score of 6 on the ASRS (see Section 7.2.2).

Table 7.9

Treatment and service use (observed), by grouped ASRS score

All adults *2007*

Treatment and services	ASRS Score 0-3	4 or more[a]	All 6
	%	%	%
All adults			
Current treatment for a mental or emotional problem			
No treatment	94	80	[66]
Medication only	4	10	[4]
Counselling or therapy only	1	4	[4]
Medication and counselling	1	6	[26]
Service use			
Any current counselling or therapy	2	10	[30]
Any health care service use for a mental or emotional problem[b]	10	31	[61]
Any community care service in past year	6	15	[24]
Any day care service in past year	4	8	[13]
Bases (unweighted)[c]	*6794*	*583*	*39*
Bases (weighted)	*6769*	*604*	*42*

[a] The '4 or more' group includes those with a score of 6 on the ASRS (see Section 7.2.2).

[b] Inpatient stay or outpatient visit in past quarter, or spoken with GP in past year, for a mental or emotional reason.

[c] Base sizes are shown for those with valid answers to questions about receiving treatment. Base sizes for different services used in the past year vary but are of a similar magnitude.

Table 7.10

Psychoactive medication currently taken (observed), by grouped ASRS score

All adults *2007*

Type of psychoactive medication currently taken	ASRS Score 0-3	4 or more[a]	All 6
	%	%	%
All adults			
Hypnotics	0	1	[1]
Anxiolytics	1	3	[9]
Antidepressants	4	14	[27]
Drugs used in the treatment of psychosis	1	2	[2]
Drugs used in the treatment of ADHD[b]	0	0	[-]
Any psychoactive medication	**5**	**16**	**[30]**
Bases (unweighted)[c]	*6794*	*583*	*39*
Bases (weighted)	*6769*	*604*	*42*

[a] The '4 or more' group includes those with a score of 6 on the ASRS (see Sechion 7.2.2).

[b] Two, but not all, of the most commonly prescribed ADHD medications were asked about: Ritalin (methylphenidate) and Straterra (atomoxetine).

[c] Bases shown are for those responding to questions about any psychoactive medication. Bases for each type of medication may vary slightly.

Eating disorders

8

Joanne Thompson, Traolach Brugha and Bob Palmer

Summary

- This chapter describes the distribution of possible eating disorder in the adult general population in England. Eating disorders include a variety of types of disordered eating, and range greatly in severity. The relationship between screening positive for an eating disorder and various characteristics is covered, as well as the use of treatment and services.
- The SCOFF screening tool for eating disorders was administered to respondents as part of the self-completion section of the interview. Endorsement of two or more items represented a positive screen for eating disorder. This threshold indicates that clinical assessment for eating disorder is warranted.
- Overall, 6.4% of adults screened positive for a possible eating disorder in the past year. The proportion who screened positive and also reported that their feelings about food had a significant negative impact on their life was 1.6%.
- At 9.2%, women were more likely than men (3.5%) to screen positive for an eating disorder.
- The prevalence of screening positive for an eating disorder decreased with age and the pattern was particularly pronounced for women. One woman in five (20.3%) aged 16-24 screened positive compared with one woman in a hundred (0.9%) aged 75 and over.
- Prevalence of possible eating disorder varied by marital status. Positive screens were most common among single men and women and least among the widowed group. This variation is likely to be due at least in part to the age profile of the different marital status groups.
- Ethnicity and equivalised household income were not significantly associated with screening positive for an eating disorder.
- The proportion of men and women who screened positive for an eating disorder varied by estimated Body Mass Index (BMI). Adults with a normal BMI (18.5 to 25) were the least likely to screen positive, and obese men and women (BMI 30+) and underweight women (BMI <18.5) were the most likely.
- 81% of adults who screened positive for a possible eating disorder were not in receipt of any treatment for a mental or emotional problem at the time of interview. Around one in four adults who screened positive (24%) reported using health care services for a mental or emotional reason, compared with one in ten (10%) of those who screened negative.

8.1 Introduction

Eating disorders, including anorexia nervosa, bulimia nervosa and related conditions, generally have an onset in childhood or adolescence.[1] They include a variety of types of disordered eating, and range greatly in severity. People with eating disorders often experience acute psychological distress, as well as severe physical complications such as gastrointestinal problems and osteoporosis.[2] The disorders often become chronic, with poor rates of recovery. Eating disorders and their resulting complications may be fatal and some studies have identified them as having the highest mortality rate of all mental disorders.[3,4] Even in those who recover, the negative impacts on employment, relationships, fertility and parenting can persist for a long time.[5]

Policy responses to eating disorders, including those covered by standards two and three of the Department of Health's *National Service Framework for mental health*, outline the harmful consequences that can result from eating disorders and recommend approaches to improve detection and treatment.[6] Guidelines for the identification, management and treatment of eating disorders were also issued by the National Institute for Clinical Excellence in 2004.[7] These highlighted the variability that exists in service provision and stressed the need for early identification and effective screening.

Although the evidence is increasing, there are major gaps in the epidemiological data in this field. It is widely recognised that there is a general under-detection of eating disorders in research and clinical practice, resulting in part from a tendency for people with these conditions to conceal them and avoid seeking help.[8,9] Existing studies have focussed on particular subgroups (such as young women, ballet dancers or athletes) or have been conducted in particular locations (such as schools or health care settings). It has been argued that eating disorders are becoming more common, both in England and internationally, but currently too few epidemiological data exist to confirm this.[10]

However, there is a consensus that the rate of eating disorders is substantially higher among women than men and among younger than older people.[11] Eating disorders are known to be relatively rare in the general population as a whole, but for anorexia nervosa and bulimia nervosa average rates of around 0.3% and 1% respectively have been found for adolescent and young adult women in European countries.[12] The prevalence of 'eating disorders, not otherwise specified' (EDNOS) is thought to be higher still.[13]

This chapter presents the general population distribution of characteristic attitudes and behaviours associated with possible eating disorder and examines their association with factors such as age, sex, socio-demographic characteristics, Body Mass Index and the use of treatment and services.

8.2 Definitions and assessment

8.2.1 Eating disorders

Eating disorders are syndromes characterised by a persistent and severe disturbance in eating attitudes and behaviour, to an extent that significantly interferes with everyday functioning.[14]

There are two primary sets of diagnostic criteria in current use: the International Classification of Diseases 10th Revision (ICD-10)[15] and the Diagnostic and Statistical Manual of Mental Disorders fourth edition (DSM-IV).[16] The ICD-10 lists eight categories of eating disorder: anorexia nervosa, atypical anorexia nervosa, bulimia nervosa, atypical bulimia nervosa, overeating associated with other psychological disturbances, vomiting associated with other psychological disturbances, other eating disorders and eating disorder unspecified.

Three main subtypes of eating disorder are identified by the DSM-IV: anorexia nervosa, bulimia nervosa and eating disorder not otherwise specified (EDNOS). According to DSM-

IV, people with a combination of symptoms that cannot be categorised as either anorexia nervosa or bulimia nervosa may meet the diagnostic criteria for EDNOS.

The criteria for anorexia nervosa include: an abnormally low body weight; an absence of menstruation in women; an intense fear of gaining weight; and a disturbance in perception of own body weight or shape. People with anorexia nervosa very carefully restrict their intake of calories and may exercise to excess. The DSM-IV distinguishes *restricting* and *purging* types within this subgroup.

DSM-IV criteria for bulimia nervosa include: recurrent episodes of binge eating; compensatory behaviour such as vomiting, misuse of laxatives, fasting or excessive exercise; and self-evaluation being unduly influenced by body shape and weight. People with bulimia nervosa may maintain a more normal body weight, but can also have severe physical complications.

8.2.2 SCOFF screening schedule

The SCOFF screening tool was used in the APMS 2007 survey to estimate the prevalence of attitudes and behaviours associated with possible eating disorder in the English non-institutional adult population. The questions were developed and validated in the UK to strengthen the suspicion that an eating disorder might exist, rather than to make a diagnosis.[17] The core features measured by the SCOFF are not the specific DSM-IV or ICD-10 criteria, but were instead developed using focus groups of patients with eating disorders and specialists in eating disorders.[18] The screen was found to have good specificity and sensitivity, as demonstrated by strong concordance with clinical diagnosis. However, as with other lay administered screening tools, the prevalence obtained is likely to be an overestimate of the rates of eating disorder that would be found through clinical investigation. Diagnosis of an eating disorder requires a full clinical examination.[11] Nevertheless, the NICE guidelines on eating disorders identified the SCOFF as the preferred short screening tool for identication of possible cases of eating disorder in community samples.[19]

The SCOFF was administered to all APMS 2007 respondents as part of the computer based self-completion section of the interview.[20] The tool uses five questions from which the word SCOFF was devised, with yes/no response codes. The letters included in SCOFF represent the first letter of the words; Sick, Control, One stone, Fat, and Food (see below table) which are part of the questions used to screen for a possible eating disorder. The word SCOFF is intended to act as a memory prompt for the screening items. Responding positively to two or more items indicated a case of possible eating disorder, warranting further clinical assessment. The scale enables the prevalence and distribution of attitudes and behaviours associated with disordered eating to be measured.

The table below lists the questions used in APMS 2007. The original SCOFF wording was amended slightly to relate the questions to a specified time frame: the last year. The order of presentation was also amended.[21] These changes mean that the APMS 2007 data is not directly comparable with other studies that have used the scale.

The SCOFF screening items, amended for use on APMS 2007

In the last year…	
…have you lost more than **one** stone in a three month period?	Yes/No
…have you made yourself be **sick** because you felt uncomfortably full?	Yes/No
…did you worry you had lost **control** over how much you eat?	Yes/No
…did you believe yourself to be **fat** when others said you were too thin?	Yes/No
…would you say that **food** dominated your life?	Yes/No

For the APMS 2007 questionnaire, an additional question was developed and asked of respondents scoring two or more on the SCOFF: 'Did your feelings about food interfere with

your ability to work, meet personal responsibilities and/or enjoy a social life?' This question was asked in order to get an indication of whether the presence of attitudes and behaviours associated with eating disorder were having an impact on social participation and integration.

In this chapter, a positive screen for eating disorder is a SCOFF score of two or more. The proportion of respondents screening positive and reporting that food interferes with life is also presented in the tables.

8.2.3 Estimation of Body Mass Index (BMI)

In the face to face component of the APMS 2007 interview, respondents were asked about their height and weight. Where provided, this information has been used to calculate an estimation of each respondent's Body Mass Index (BMI). BMI is defined as body weight in kilograms divided by the square of height in metres (kg/m^2). Self-reported height and weight is recognised to be less accurate than direct measurement, however it can still provide a useful indication of BMI.[22]

In this chapter BMI is grouped into the following four categories; less than 18.5 (underweight), 18.5 to less than 25 (normal), 25 to less than 30 (overweight) and 30 or more (obese). WHO and NICE recommend a BMI of 18.5 be used as the upper threshold for underweight, while a BMI of 17.5 is an indication of anorexia nervosa. Here we have applied the higher threshold of 18.5 in order to have sufficient numbers of underweight respondents to be able to comment on this category.[23]

8.3 Results

8.3.1 Prevalence of positive response to individual SCOFF items

The table below shows the proportion of respondents who answered positively to each of the SCOFF screening items. Of the five, the most commonly endorsed was loss of more than one stone in three months in the last year (9.3% of men, 12.1% of women). Women were more likely than men to report each of the items. **Table 8A**

Table 8A

Proportion responding positively to each SCOFF item, by sex

	Men	Women
	%	%
All adults		
In the last year…		
Lost more than one stone in three months	9.3	12.1
Lost control over how much ate	4.2	10.3
Believed fat when others say too thin	3.2	7.9
Food dominated life	1.5	5.6
Made self be sick because felt full	2.0	4.0
Food interfered with work, personal responsibilities, or social life[a]	0.6	2.5
Base (unweighted)[b]	*3176*	*4174*
Base (weighted)	*3571*	*3775*

[a] Asked of those scoring 2 or more on the SCOFF. Rate presented imputes a negative response for those with a SCOFF score of zero or one.

[b] Bases are shown for those answering the first screening item 'Lost more than one stone in three months'; bases for other statements may vary but are of a similar magnitude.

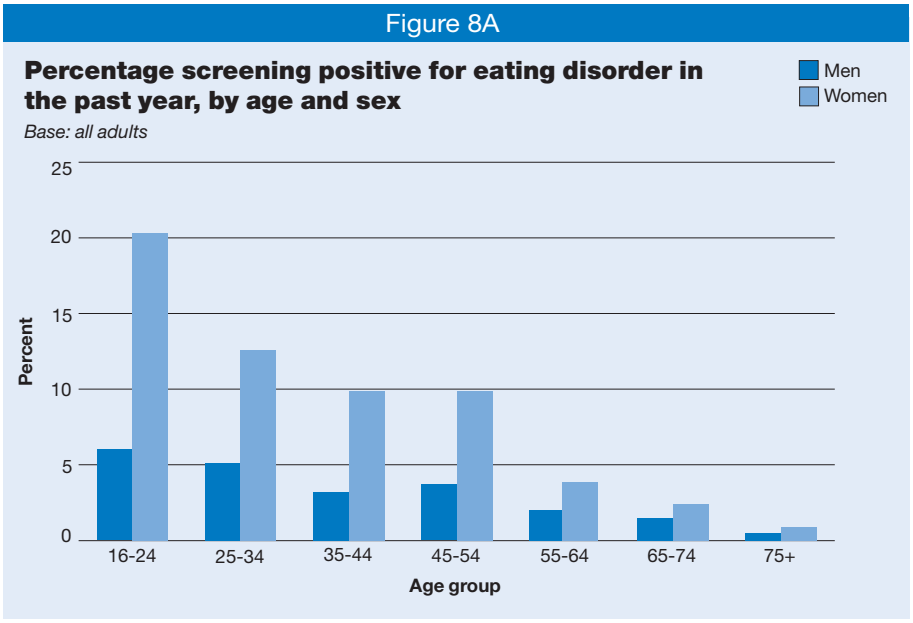
8.3.2 Prevalence of a positive screen for possible eating disorder

The overall proportion of adults scoring two or more (the threshold at which clinical assessment for eating disorder becomes appropriate) on the SCOFF scale was 6.4%. Among those who screened positive, a quarter (24.3%, data not shown) also reported that their feelings about food interfered with their ability to work, meet personal responsibilities and/or enjoy a social life. This group – with a SCOFF score of two or more and reported significant negative impact on life – made up 1.6% of adults overall.

As expected, there was a strong association between sex and screening positive for an eating disorder. 3.5% of men and 9.2% of women scored two or more on the SCOFF and 0.6% of men and 2.5% of women also reported significant negative impact on life.

Also in line with the expected population distribution of eating disorder, the prevalence of screening positive on the SCOFF decreased with age. The proportion scoring two or more was highest among adults aged 16-24 (13.1%) and lowest among adults aged 75 and over (0.8%). This pattern was observed in both men and women, however it was particularly pronounced among women. One woman in five (20.3%) aged 16-24 screened positive for an eating disorder, compared with one woman in a hundred (0.9%) aged 75 and over. When significant negative impact on life was also factored in, the rate ranged from one woman in twenty (5.4%) aged 16-24, to one in a thousand aged 75 and over (0.1%). **Table 8.1, Figure 8A**

Figure 8A



8.3.3 Variation by other characteristics

Ethnicity

There was no significant variation by ethnic group in the proportion of adults screening positive on the SCOFF. This was the case whether or not the data was age standardised. **Table 8.2**

Marital status

The proportion of adults with a SCOFF score of two or more did vary with marital status. Single men and women had the highest rate of positive screens (5.1% of men, 17.2% of women) and the lowest rate was observed in the widowed group (0.4% of men, 1.8% of women). This association with marital status remained significant even when self-reported impact on social functioning was taken into account. However, variation by marital status is likely to be due at least in part to the age profile of the marital status groups (see the Glossary for a discussion of why this variable was not age standardised). **Table 8.3**

Equivalised household income

There was no significant variation in screening positive for an eating disorder by household income quintile (see the Glossary for a definition of equivalised household income). **Table 8.4**

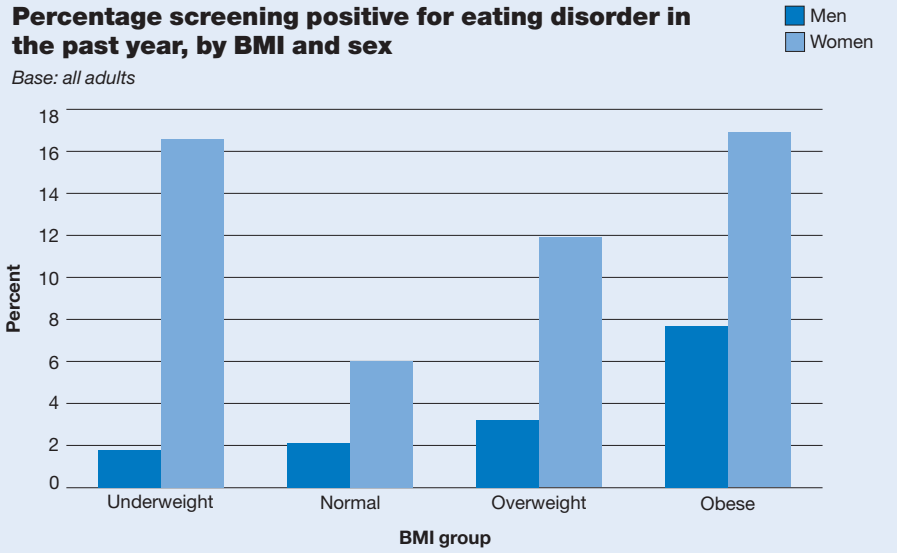
Body Mass Index (BMI)

Screening positive for an eating disorder varied by estimated BMI. It was lowest among adults with a normal BMI (2.1% of men, 6.0% of women) and highest among men and women classed as obese (7.7% of men, 16.9% of women) and women classed as underweight (16.6%). The number of respondents with a BMI of less than 18.5 was small, although the proportion was consistent with that found on other studies.[24] **Table 8.6, Figure 8B**

Figure 8B

Percentage screening positive for eating disorder in the past year, by BMI and sex

Base: all adults



8.3.4 Treatment and services

Respondents were asked about a range of treatments and services. These included current use of psychoactive medication and counselling and therapy for a mental or emotional reason, together with use of a range of health, community and day care services over the past year. These are all defined in more detail, including variation in the time frame referred to, in the Glossary.

Four in five adults (81%) screening positive for an eating disorder were not receiving medication, counselling or therapy for a mental health or emotional problem. This compares with 93% of those who screened negative. Adults screening positive were five times more likely than those screening negative to be in receipt of counselling or therapy (11%, compared with 2%). 15% of those screening positive and reporting significant impact were in receipt of talking therapy. This disparity was somewhat greater than that observed for medication: 15% of those with a positive screen were taking psychoactive medication, compared with 5% of those screening negative. 19% of those screening positive and reporting a negative impact on life were taking psychoactive medication.

Adults screening positive for eating disorder were also more likely to have used all types of services than those who had screened negative. About one in four adults who had screened positive (24%) reported using health care services for a mental or emotional reason, compared with one in ten of those who had screened negative (10%). The increase in reporting of community care and day care services in the past year among those screening positive was significant but less pronounced. **Table 8.7**

8.4 Discussion

There is a lack of survey data on the prevalence of possible eating disorder which either spans the adult age range or draws on a general population sample in England. The profile of the population with an eating disorder is not therefore well understood, particularly given the under identification of this group in clinical practice. This chapter presents the general

population distribution of possible eating disorder, and examines its association with factors such as age, sex, socio-demographic characteristics, Body Mass Index and the use of treatment and services.

The data was collected via the SCOFF screening tool. This tool was designed to strengthen suspicion that a case warrants clinical investigation, rather than to provide a diagnosis. It was found to be easy to administer and acceptable to respondents. However there are some issues regarding what the screen is measuring.

Using the SCOFF score as a whole does not allow for different types of eating disorder to be disentangled. In this chapter the prevalence of possible anorexia nervosa, bulimia nervosa and EDNOS are presented as combined. This could mean that some variation in rate by, for example, income and ethnicity might be masked. Some previous research has suggested the socio-demographic profiles of these different types of eating disorder might vary.

In addition, it is easy to imagine a case that meets two SCOFF items, but has only very mild symptoms, without relevance to NHS services. The SCOFF scale may therefore be screening in a quite inclusive spectrum of 'disordered eating'.

To some extent, these concerns are allayed somewhat by factoring in the question on significant negative impact of feelings about food on life, added to the APMS 2007 questionnaire. This brought the overall prevalence down from 6.4% screening positive on the SCOFF alone, to 1.6% also reporting that feelings about food had a significant negative impact on their life.

The SCOFF scale (with and without negative impact factored in) strongly confirmed the expected associations between possible eating disorder and age and sex. The rate among young women (aged 16-24) was found to be 20 times that observed among older women (75 and over) and three times that observed among young men. While this does confirm that cases of possible eating disorder are concentrated among women, it also demonstrates that a quarter of cases among young people are to be found in men. Men with eating disorders are a group that have been neglected in research, policy and clinical practice in this area, although recent research is beginning to redress this gap.[25]

An interesting pattern to emerge from the SCOFF data is the relationship between disordered eating and BMI. SCOFF positive cases have a strong presence in the overweight and obese. This may indicate a serious and relatively common disturbance in the overweight that is not often the focus of attention and warrants further attention.

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17 Morgan J, Reid F and Lacey JH (1999) The SCOFF questionnaire: assessment of a new screening tool for eating disorders BMJ Volume 319(7223), 4 December 1999, pp 1467-1468.; Perry L, Morgan J, Reid F, O'Brien A, Brunton J, Luck A. (2002) Oral versus written administration of the SCOFF *International Journal of Eating Disorders*, 32(4): 466–472.

18 Morgan, Reid and Lacey (1999) The SCOFF questionnaire: assessment of a new screening tool for eating disorders BMJ Volume 319(7223), 4 December 1999: 1467-1468.

19 National Institute for Clinical Excellence (2004) *Eating Disorders: Core Interventions in the Treatment and Management of Anorexia Nervosa, Bulimia Nervosa and Related Eating Disorders*, London: National Institute for Clinical Excellence, Clinical Guideline 9.

20 While much previous use of the SCOFF has used face to face administration, it has also been validated for self-completion: Perry, L., Morgan, J., Reid, F., Brunton, J., O'Brien, A., Luck, A. & Lacey, H. (2002). Screening for symptoms of eating disorders: Reliability of the SCOFF screening tool with written compared to oral delivery. *International Journal of Eating Disorders*, 32(4): 466–472.

21 Question testing undertaken as part of development work for APMS 2007 identified that confusion could result from the fact that the first question in the SCOFF series asked whether 'you had made yourself sick because you felt uncomfortably full', as the word sick can mean both to vomit and to feel ill. 'Made yourself sick' was amended to 'made yourself be sick'. Placing this question later in the series of SCOFF items further avoided confusion as the subject context (disordered eating) became more clear. The subject context also reduced the shock that a respondent might feel regarding being asked about induced vomiting. The introduction of a reference period was made because the existing questions were not time limited. This meant that inconsistency could arise in how the questions were interpreted, for example one respondent might include only behaviours if they had occurred in the past week while another respondent might include behaviours that had last occurred many months ago.

22 Little P (1998) GP documentation of obesity: what does it achieve? *British Journal of General Practice*, 1998, 48: 890-894.

23 World Health Organisation Body Mass Index (BMI) classification. www.who.int/bmi/index.jsp?introPage=intro_3.html

24 On APMS 2007 2% of men and 3% of women had a BMI of less than 18.5, according to self reported data. Health Survey for England data, which is based on anthropometric measurements, finds broadly comparable rates with 1% of men and 2% of women classed as underweight. Craig R and Mindell J (eds) (2008) *Health Survey for England 2006: Volume 1: Cardiovascular disease and risk factors in adults* The Information Centre. http://www.ic.nhs.uk/pubs/hse06cvdandriskfactors

25 For example, Professor Hubert Lacey's work on treatment and men with eating disorder http://www.independent.co.uk/life-style/health-and-wellbeing/health-news/male-eating-disorder-rise-blamed-on-social-pressure-937568.html

Tables

Table 8.1

Screen positive for eating disorder in past year, by age and sex

All adults *2007*

SCOFF score[a]	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	%	%	%	%	%	%	%	%
Men								
2 or more[b]	6.1	5.1	3.3	3.7	2.0	1.5	0.5	3.5
2 or more with significant impact	1.7	0.7	0.3	0.8	0.1	0.3	-	0.6
Women								
2 or more[b]	20.3	12.6	10.0	9.9	3.9	2.4	0.9	9.2
2 or more with significant impact	5.4	3.6	2.5	3.1	0.9	0.6	0.1	2.5
All adults								
2 or more[b]	13.1	8.9	6.6	6.8	3.0	1.9	0.8	6.4
2 or more with significant impact	3.5	2.1	1.4	1.9	0.5	0.4	0.1	1.6
Bases (unweighted)[c]								
Men	*269*	*410*	*610*	*494*	*571*	*460*	*362*	*3176*
Women	*295*	*618*	*796*	*634*	*704*	*564*	*566*	*4177*
All	*564*	*1028*	*1406*	*1128*	*1275*	*1024*	*928*	*7353*
Bases (weighted)								
Men	*528*	*600*	*704*	*588*	*537*	*361*	*253*	*3571*
Women	*513*	*613*	*718*	*603*	*556*	*396*	*380*	*3777*
All	*1040*	*1213*	*1422*	*1191*	*1093*	*757*	*633*	*7348*

[a] See Section 8.2.2 for a description of the SCOFF screen for eating disorder.

[b] The '2 or more' group includes those with a SCOFF score of 2 or more and reporting significant impact.

[c] Bases shown are for those with a valid SCOFF score.

Table 8.2

Screen positive for eating disorder in the past year (observed and age-standardised), by ethnicity and sex

All adults *2007*

SCOFF score	Ethnicity			
	White	Black	South Asian	Other[a]
	%	%	%	%
Men				
Observed				
2 or more[b]	3.4	4.0	5.1	2.4
2 or more with significant impact	0.6	-	0.4	-
Age-standardised				
2 or more[b]	3.5	3.0	4.5	1.7
2 or more with significant impact	0.6	-	0.3	-
Women				
Observed				
2 or more[b]	9.0	12.5	8.9	10.4
2 or more with significant impact	2.5	3.5	0.6	4.8
Age-standardised				
2 or more[b]	9.3	10.7	7.6	7.9
2 or more with significant impact	2.5	4.3	0.2	3.5
Bases (unweighted)[c]				
Men	*2909*	*77*	*107*	*70*
Women	*3879*	*111*	*88*	*87*
Bases (weighted)				
Men	*3178*	*103*	*168*	*110*
Women	*3436*	*121*	*109*	*102*

[a] Includes Chinese and mixed ethnic groups.

[b] The '2 or more' group includes those with a SCOFF score of 2 or more and reporting significant impact (see Section 8.2.2).

[c] Bases shown are for those with a valid SCOFF score.

Table 8.3

Screen positive for eating disorder in the past year (observed), by marital status and sex

All adults *2007*

SCOFF score	Marital status					
	Married	Cohabiting	Single	Widowed	Divorced	Separated
	%	%	%	%	%	%
Men						
2 or more[a]	3.0	2.9	5.1	0.4	4.6	3.2
2 or more with significant impact	0.3	0.7	1.2	-	1.1	-
Women						
2 or more[a]	6.4	12.4	17.2	1.8	11.4	13.3
2 or more with significant impact	1.7	2.9	5.0	0.6	2.9	2.8
Bases (unweighted)[b]						
Men	*1661*	*277*	*696*	*231*	*232*	*79*
Women	*1839*	*334*	*725*	*700*	*436*	*143*
Bases (weighted)						
Men	*1940*	*395*	*914*	*115*	*151*	*56*
Women	*1911*	*375*	*758*	*390*	*257*	*85*

[a] The '2 or more' group includes those with a SCOFF score of 2 or more and reporting significant impact (see Section 8.2.2).

[b] Bases shown are for those with a valid SCOFF score.

Table 8.4

Screen positive for eating disorder in the past year (age-standardised), by equivalised household income and sex

All adults *2007*

SCOFF score	Equivalised household income[a]				
	Highest	2nd	3rd	4th	Lowest
	%	%	%	%	%
Men					
2 or more[b]	2.9	3.1	3.7	3.9	4.9
2 or more with significant impact	0.3	0.4	0.2	0.8	0.2
Women					
2 or more[b]	9.2	6.5	9.2	10.6	10.5
2 or more with significant impact	1.4	1.0	2.3	3.9	3.1
Bases (unweighted)[c]					
Men	*629*	*548*	*508*	*444*	*421*
Women	*562*	*600*	*733*	*673*	*743*
Bases (weighted)					
Men	*716*	*611*	*523*	*455*	*460*
Women	*531*	*544*	*624*	*537*	*626*

[a] See the Glossary for a definition of equivalised household income.

[b] The '2 or more' group includes those with a SCOFF score of 2 or more and reporting significant impact (see Section 8.2.2).

[c] Bases shown are for those with a valid SCOFF score.

Table 8.5

Screen positive for eating disorder in the past year (observed and age-standardised), by region[a] and sex

All adults *2007*

SCOFF score	Government Office Region									Strategic Health Authority	
	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	London	South West	South East	South East Coast	South Central
	%	%	%	%	%	%	%	%	%	%	%
Men											
Observed											
2 or more[b]	3.0	4.8	2.7	2.7	4.6	3.1	2.8	3.7	3.6	3.1	4.1
2 or more with significant impact	0.6	0.9	0.4	-	1.0	0.4	0.6	1.0	0.4	0.8	-
Age-standardised											
2 or more[b]	3.1	4.9	2.9	2.7	4.7	3.1	2.4	3.6	3.8	3.3	4.1
2 or more with significant impact	0.6	0.9	0.4	-	1.0	0.3	0.5	1.1	0.4	1.0	-
Women											
Observed											
2 or more[b]	6.8	9.6	9.1	10.6	10.4	7.5	10.3	9.2	8.4	9.3	7.4
2 or more with significant impact	2.5	2.7	2.2	1.6	3.5	1.3	2.4	3.5	2.6	2.4	2.7
Age-standardised											
2 or more[b]	7.1	9.2	9.4	11.9	9.7	7.7	9.4	10.1	8.4	9.7	7.0
2 or more with significant impact	2.6	2.6	2.3	2.4	3.3	1.4	2.2	3.8	2.6	2.8	2.7
Bases (unweighted)[c]											
Men	*178*	*477*	*332*	*330*	*343*	*377*	*321*	*326*	*492*	*254*	*238*
Women	*258*	*622*	*462*	*349*	*438*	*475*	*469*	*414*	*690*	*369*	*321*
Bases (weighted)											
Men	*169*	*490*	*359*	*340*	*373*	*402*	*512*	*369*	*557*	*278*	*279*
Women	*206*	*507*	*386*	*294*	*395*	*416*	*576*	*370*	*627*	*336*	*292*

[a] This table provides data for regional analysis both by Government Office Region (GOR) and Strategic Health Authorities (SHAs). The first eight columns represent GORs and SHAs of the same name, while the South East GOR (column nine) is divided into South East Coast SHA and South Central SHA, shown in the final two columns.

[b] The '2 or more' group includes those with a SCOFF score of 2 or more and reporting significant impact (see Section 8.2.2).

[c] Bases shown are for those with a valid SCOFF score.

Table 8.6

Screen positive for eating disorder (age-standardised), by BMI and sex

All adults *2007*

SCOFF score	BMI			
	Under-weight (Less than 18.5)	Normal (18.5 and less than 25)	Over-weight (25 and less than 30)	Obese (30+)
	%	%	%	%
Men				
2 or more[a]	1.8	2.1	3.2	7.7
2 or more with significant impact	-	0.4	0.4	1.4
Women				
2 or more[a]	16.6	6.0	11.9	16.9
2 or more with significant impact	10.9	1.6	3.1	4.8
Bases (unweighted)[b]				
Men	*50*	*1225*	*1277*	*544*
Women	*110*	*1847*	*1209*	*735*
Bases (weighted)				
Men	*63*	*1448*	*1376*	*590*
Women	*109*	*1724*	*1036*	*645*

[a] The '2 or more' group includes those with a SCOFF score of 2 or more and reporting significant impact (see Section 8.2.2).

[b] Bases shown are for those with a valid SCOFF score.

Table 8.7

Treatment and service use (age-standardised), by eating disorder screen

All adults *2007*

Treatment and services	SCOFF Score		
	SCOFF score 0-1	SCOFF score 2 or more[a]	SCOFF score 2 or more and signifi-cant impact
	%	%	%
All adults			
Current treatment for a mental or emotional problem			
No treatment	93	81	77
Medication only	4	8	8
Counselling or therapy only	1	4	4
Medication and counselling	1	7	11
Service use			
Any current counselling or therapy	2	11	15
Any health care service use for a mental or emotional problem[b]	10	24	33
Any community care service in past year	6	16	14
Any day care service in past year	4	7	5
Bases (unweighted)[c]	*6883*	*449*	*107*
Bases (weighted)	*6860*	*470*	*109*

[a] The '2 or more' group includes those with a SCOFF score of 2 or more and reporting significant impact (see Section 8.2.2).

[b] Inpatient stay or outpatient visit in past quarter, or spoken with GP in past year, for a mental or emotional reason.

[c] Bases shown are for those responding to questions about treatment. Bases for other variables may vary slightly.

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Alcohol misuse and dependence

9

Elizabeth Fuller, Dhriti Jotangia and Michael Farrell

Summary

- Hazardous drinking is a pattern of alcohol consumption carrying risks of physical and psychological harm to the individual. Harmful drinking denotes the most hazardous use of alcohol, at which damage to health is likely. One possible outcome of harmful drinking is alcohol dependence, a cluster of behavioural, cognitive, and physiological phenomena that typically include a strong desire to consume alcohol, and difficulties in controlling drinking.
- This chapter presents prevalence estimates of hazardous and harmful drinking, and of alcohol dependence in the adult general population. It should be noted that a survey of the household population such as this is likely to under-represent dependent adults, who are more likely to be homeless or in an institutional setting. Moreover, problem drinkers who do live in private households may, like problem drug users, be less available, able or willing to participate in surveys.
- Hazardous and harmful drinking was measured using the AUDIT (Alcohol Use Disorders Identification Test). An AUDIT score of eight or more indicated hazardous drinking, and 16 or more indicated harmful drinking. Alcohol dependence was assessed using the SADQ-C (Severity of Alcohol Dependence Questionnaire, community version). A SADQ-C score of four to 19 indicated mild dependence; a score of 20 to 34, moderate dependence; and a score of 35 or more, severe dependence.
- The prevalence of hazardous drinking identified by APMS 2007 was 24.2% (33.2% of men, 15.7% of women). This included 3.8% of adults (5.8% of men, 1.9% of women) whose drinking could be categorised as harmful. In men, the highest prevalence of both hazardous and harmful drinking was in 25 to 34 year olds, in women in 16 to 24 year olds.
- The prevalence of alcohol dependence was 5.9% (8.7% of men, 3.3% of women). For men, the highest levels of dependence were identified in those between the ages of 25 and 34 (16.8%), for women in those between the ages of 16 and 24 (9.8%). Most recorded dependence was categorised as mild (5.4%), with relatively few adults reporting symptoms of moderate or severe dependence (0.4% and 0.1% respectively).
- The prevalence of alcohol dependence was lower for men in 2007 than in 2000, whereas it remained at a similar level in women.
- Alcohol dependence was more common in white men and women than in those from minority ethnic groups. There were no significant variations in the prevalence of dependence by region or income. However, the likelihood of being a hazardous drinker did vary between regions.
- 14% of alcohol dependent adults were currently receiving treatment for a mental or emotional problem. Dependent women (26%) were more likely than dependent men (9%) to be in receipt of such treatment.

9.1 Introduction

Alcohol plays an ambivalent role in English life. Most adults drink alcohol at least occasionally; in 2006, 89% of men and 84% of women reported drinking in the past year.[1] At the same time there is increasing concern about the damage caused to individuals and society by alcohol misuse.

Current government recommendations are that men should drink no more than three to four units of alcohol a day, and that women should drink no more than two to three units a day. Men who regularly drink more than eight units a day or 50 units a week could be seen as harmful drinkers; the corresponding thresholds for women are six units a day or 35 units a week.[2,3] The 2004 *Alcohol Harm Reduction Strategy for England* identified two particularly risky patterns of drinking.[4] Binge drinkers are men or women most likely to be aged under 25. They tend to drink with the intention of getting drunk, and are at risk from accidents, assault and alcohol poisoning. Chronic drinkers tend to be older, and are more likely to be male. They are at risk of cumulative health harms, and are also more likely to drive while under the influence of alcohol and to commit domestic violence. A subset of this group will meet the diagnostic criteria for alcohol dependence syndrome, one of the most prevalent types of substance use disorder. It is associated with high levels of physical morbidity and premature mortality.

Drinking alcohol above recommended levels has been linked to a number of negative health outcomes, including increased risks of hypertension, stroke, coronary heart disease, liver cirrhosis and some cancers.[5,6] Between 1995/1996 and 2006/2007 the number of admissions to NHS hospitals in England with a primary diagnosis specifically related to alcohol rose by 52% to more than 200,000, the majority with a primary diagnosis involving mental or behavioural disorders.[7] In addition, it has been estimated that there are around 600,000 hospital admissions annually for other causes related to alcohol.[8] Alcohol-related death rates also increased substantially between 1991 and 2006.[9]

There is evidence that heavy drinkers have poorer levels of mental health. Alcohol misuse often co-exists with common mental disorders, such as depression, as well as with misuse of other substances. 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.[6,10]

Alcohol misuse does not only harm those who drink. It is implicated in almost half of violent assaults in England and Wales.[11] In 2007, 6% of road casualties and 16% of road fatalities in Britain involved someone driving while over the legal limit for alcohol.[12] Alcohol misuse is associated with violence and marital breakdown, and children of problem drinkers are likely to suffer emotional and behavioural problems, and to perform poorly at school.[4,10] In 2003, it was estimated that the cost of alcohol misuse in England was around £20 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.[6]

In recent years the government has made alcohol misuse a strategic priority. The 2004 *Alcohol Harm Reduction Strategy for England* identified ways to reduce the harm caused by alcohol: by changing behaviour, improving the early identification and treatment of those with alcohol problems, and addressing alcohol-related crime and disorder.[4] The 2007 strategy update aims to build on this by reviewing the cost to the NHS of alcohol-related harm in order to encourage more efficient direction of resources to support people who need help. In 2007, a Public Service Agreement 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.[13]

In 2006, the Health Survey for England (HSE) reported that 71% of men and 56% of women had drunk alcohol in the last week.[1] Men also drank more frequently than women; 23% of men and 13% of women had drunk alcohol on five or more days in the week. Young adults

were least likely to drink on five or more days (8% of men and 5% of women aged 16 to 24). Frequent drinking was most common in middle-aged men and women; 33% of men and 19% of women aged between 55 and 64 had drunk on more than five days in the last week.

HSE collects data on the highest consumption in any one day in the last week. 41% of men and 33% of women reported drinking more than the maximum recommended amounts on at least one day. 24% of men and 16% of women had drunk more than twice recommended daily limits. In men, drinking more than eight units in a day was most common in those aged 16 to 24 (31%) and 25 to 44 (34%). In women, drinking more than six units in a day was most common in 16 to 24 year olds (28%). The proportions of men and women drinking at these levels thereafter declined with age. Drinking more than twice recommended limits was least common in men and women aged 75 or over (3% of men, 1% of women in this age group).[1]

APMS builds on these survey data on alcohol quantity and consumption patterns, by providing measures of hazardous use and harmful use that are based on psychiatric screening tools. It also assesses alcohol dependency according to diagnostic criteria. This chapter presents the prevalence of these measures as identified by a household survey of the English adult general population, and examines some of the associations.

9.2 Definitions and assessment

9.2.1 Alcohol use disorders

The term 'alcohol use disorders' encompasses a range of physical, mental and behavioural conditions associated with alcohol use.[14] The Department of Health's Alcohol Needs Assessment Research Project refers to three primary categories of alcohol use disorder:

- Hazardous alcohol use;
- Harmful alcohol use; and
- Alcohol dependence.[15]

Hazardous alcohol use is defined as an established pattern of drinking which brings the risk of physical and psychological harm. Harmful alcohol users are those with the most hazardous use of alcohol, where damage to health is likely. The damage may be physical (for example in terms of liver damage or alcohol induced falls) or mental (for example depressive episodes after heavy consumption of alcohol).

Diagnostic criteria for harmful use of alcohol and alcohol dependency are covered by the substance dependency codes F10 to F19 of the International Classification of Diseases Tenth Revision (ICD-10).[16] Dependence is defined by the 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 substance, 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.

9.2.2 Measuring alcohol use and dependence

Initial questions about any alcohol consumption were asked by the interviewer face to face. All respondents who drank alcohol, even if just occasionally, were 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 survey.

Hazardous drinking was assessed using the Alcohol Use Disorders Identification Test (AUDIT), a well established and widely used indicator of hazardous drinking.[17] The AUDIT takes the year before the interview as a reference period, consists of 10 items and covers the following areas:

- Hazardous alcohol consumption (frequency of drinking, typical quantity, frequency of heavy drinking);
- Harmful alcohol consumption (feeling of guilt or remorse after drinking, blackouts, alcohol-related injury, other concern about alcohol consumption); and
- Symptoms of 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 zero to 40. A total score of eight or more indicates hazardous use of alcohol, a score of 16 or more, hazardous use that is also harmful to health.

Alcohol dependence was further assessed using the community version of the Severity of Alcohol Dependence Questionnaire (SADQ-C)[18] to enable an estimate of the prevalence of alcohol dependence in the past six months. This measure is comparable with the version used in the 2000 survey (SADQ), but has been developed specifically for use in the general population. The SADQ-C, asked of all respondents with an AUDIT score of 10 or more, 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. Established thresholds indicate different levels of alcohol dependence:

- No dependence (scores of three or less);
- Mild dependence (scores ranging from four to 19);
- Moderate dependence (scores ranging from 20 to 34); and
- Severe dependence (scores ranging from 35 to 60).

Further details of how the AUDIT and SADQ-C questionnaires were scored are provided in Appendix A.

9.3 Results

9.3.1 Prevalence of hazardous and harmful drinking by age and sex

In 2007 a quarter (24.2%) of adults were hazardous drinkers, as indicated by an AUDIT score of 8 or more. Men were twice as likely as women to be hazardous drinkers (33.2% of men, 15.7% of women). Younger men and women were more likely to be hazardous drinkers than older adults, though the pattern by age varied with sex. In men, hazardous drinking was most common between the ages of 25 and 34 (46.0%), whereas in women it was most common between the ages of 16 and 24 (32.0%). For both men and women, hazardous drinking became less likely with increasing age, with the smallest proportions found in adults aged 75 or more (16.6% of men, 6.4% of women).

There was a similar pattern by age and sex for hazardous drinking that is also harmful, as identified by an AUDIT score of 16 or more. 5.8% of men and 1.9% of women drank at harmful levels. For men, this was most common between the ages of 25 and 34 (11.6%), for women, between the ages of 16 and 24 (4.8%). **Table 9.1, Figure 9A**

9.3.2 Hazardous and harmful drinking by other characteristics

Ethnicity

Analysis of variation in rates of hazardous and harmful drinking was standardised to account for differences in the age profile of the different ethnic groups. Men in all minority ethnic groups had lower rates of hazardous drinking than white men. 35.8% of white men were hazardous drinkers, compared with 18.6% of black men and 12.0% of South Asian men.[19] Black and South Asian women were also less likely to be hazardous drinkers than white women (4.6% and 3.1%, compared with 16.6%). A similar pattern was observed for hazardous drinking that is also harmful. **Table 9.2, Figure 9B**

Figure 9A

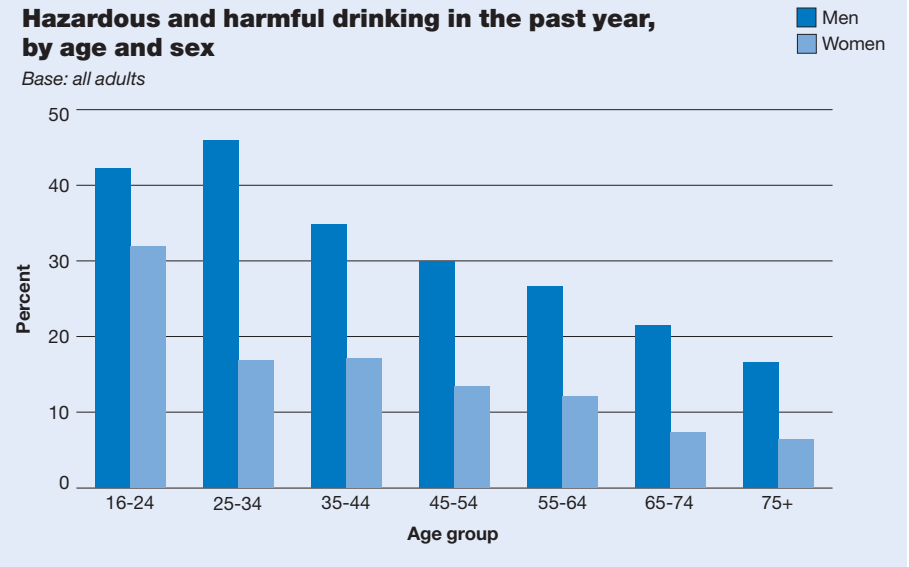
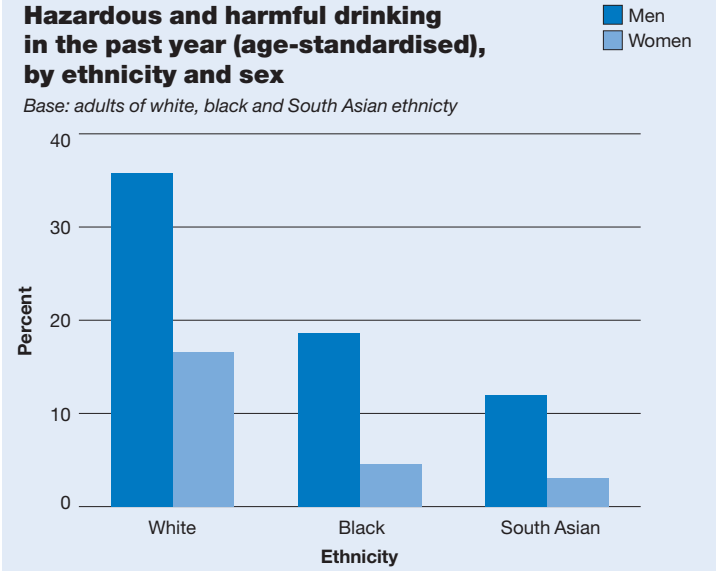


Figure 9B



Region

The likelihood of being a hazardous drinker varied between regions. The proportion of hazardous drinkers ranged from 27.8% of men in the East Midlands to 42.4% of men in the North East, and from 12.2% of women in the East of England to 21.1% of women in Yorkshire and the Humber. This regional distribution fits with the patterns identified by other studies.[20]

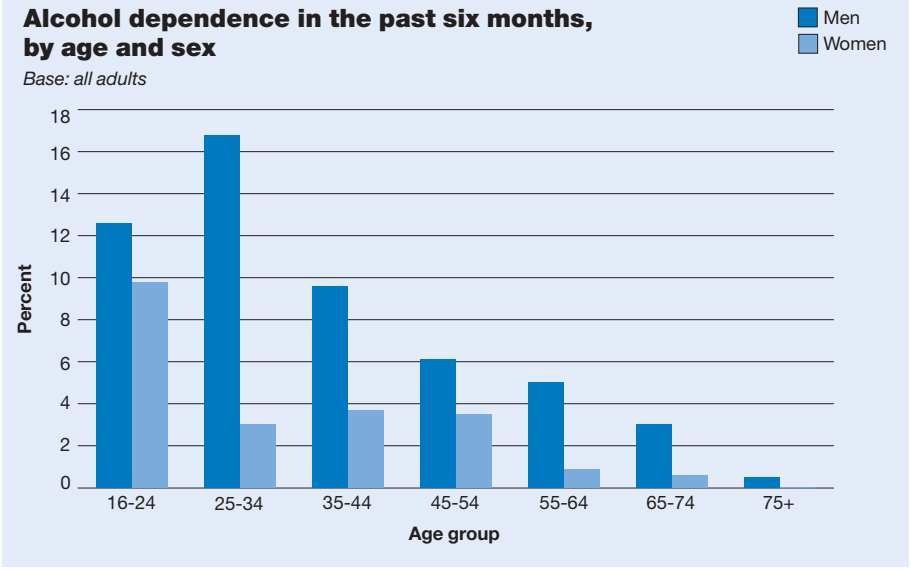
Table 9.3

9.3.3 Prevalence of alcohol dependence by age and sex

The prevalence of alcohol dependence was measured by the SADQ-C, and defined in terms of mild, moderate and severe dependence (see Section 9.2.2). Alcohol dependence was higher in men than in women and varied with age in a similar way to hazardous and harmful drinking. 8.7% of men showed some degree of alcohol dependence: 7.8% with mild dependence, 0.8% with moderate dependence, and 0.1% with severe dependence. In women, 3.3% showed some dependence: 3.2% with mild dependence, and less than 0.1% with either moderate or severe dependence. For men, the highest rates of dependence were in 25 to 34 year olds (15.0% mildly dependent, 1.8% moderately dependent), and for women in 16 to 24 year olds (9.6% mildly dependent, 0.3% moderately dependent). However, all cases of severe dependence were found in adults aged between 35 and 64.

Table 9.4, Figure 9C

Figure 9C



9.3.4 Change in alcohol dependence since 2000

The prevalence of alcohol dependence declined slightly between 2000 and 2007; this decline was seen in men, but not in women. 11.5% of men in England aged 16 to 74 in 2000 were dependent on alcohol, mostly at the mild level; in 2007, the corresponding figure was 9.3%. The proportion of women dependent on alcohol stayed at a similar level over this period; 2.8% in 2000 and 3.6% in 2007.

The decline in dependence levels in men was most marked in those aged between 16 and 24, the group with the highest level of dependence in 2000; the proportion of young men of this age dependent on alcohol fell from 19.8% in 2000 to 12.6% in 2007. Alcohol dependence was also significantly lower in 2007 for men aged between 35 and 44 and women aged between 25 and 34. Variations over time for other age groups were not significant. **Table 9.5**

9.3.5 Alcohol dependence by other characteristics

Ethnicity

White men and women were more likely to be dependent on alcohol (9.6% and 3.7% respectively, age-standardised) than those in minority ethnic groups. No cases of alcohol dependence were identified in black or South Asian women, and no cases of severe alcohol dependence were found in any minority ethnic adult.[19] **Table 9.6**

Marital status

The likelihood of alcohol dependence was related to marital status. Levels of dependence were lower in married men (5.2%) and widowers (1.2%) than in cohabiting (13.6%), single (13.6%), divorced (14.5%) or separated (13.7%) men. In women, there were smaller differences according to marital status, with single (9.2%) women most likely to be dependent on alcohol, and widows the least likely (0.8%). It should be noted however that the age profiles of these groups were not standardised (see the Glossary for an explanation of why), and these patterns of dependence will reflect, for example, that single people are likely to be younger than the population as a whole, and widows and widowers are likely to be older than average. **Table 9.7**

Income and region

There was no significant variation in the prevalence of alcohol dependence by income or region.[21] **Tables 9.8, 9.9**

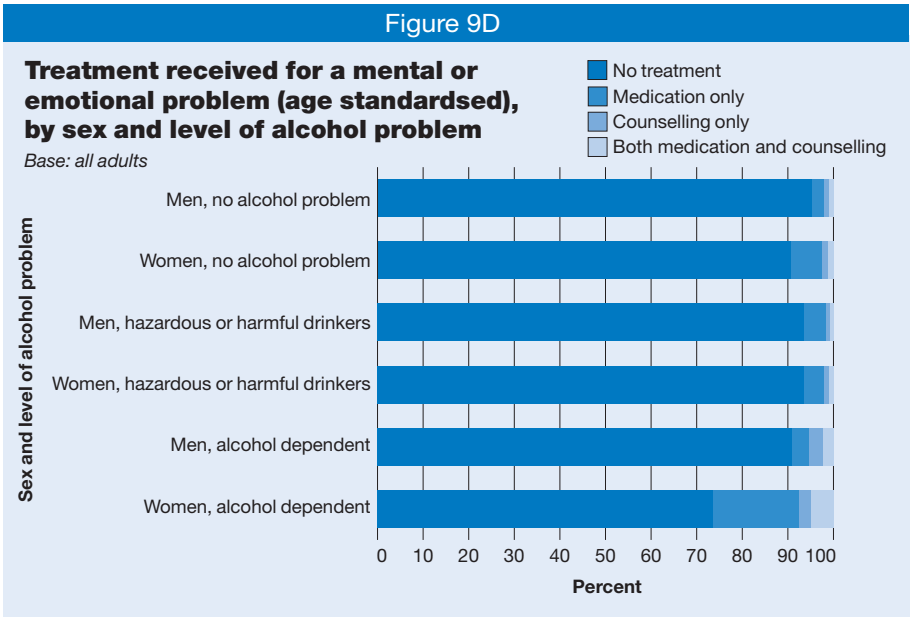
9.3.6 Treatment and service use by level of alcohol problem

Because alcohol dependence has a relatively high prevalence (compared with some of the disorders considered in this report) and because it is strongly associated with age, the relationship of treatment and service use with the level of alcohol problem has been age-standardised to help identify real differences between groups.

7% of adults without alcohol problems were receiving treatment – such as counselling or medication – for a mental or emotional problem. Hazardous drinkers (7% of men and 6% women) and even men with alcohol dependence (9%), were no more likely to receive such treatment than adults without alcohol problems. However, women who were dependent on alcohol were much more likely to be receiving treatment (26%), predominantly medication. This treatment contact was not necessarily related to their drinking, which respondents may well not regard as an emotional or mental problem, and might reflect treatment for comorbid psychiatric conditions. **Table 9.10**

6% of adults without alcohol problems were taking psychoactive medicine. As with treatment as a whole, the proportions of hazardous drinkers and alcohol dependent men taking medication were at similar levels to people without alcohol problems, whereas the proportion of alcohol dependent women taking medication (24%) was much higher. 6% of alcohol dependent adults were in counselling or therapy; compared with 2% of adults without dependency. **Tables 9.11, 9.12, Figure 9D**

Figure 9D



A similar pattern to that observed for treatment was also evident for use of health care services for a mental or emotional problem and for use of community care services in the past year. Health care service use did not vary between people with no alcohol problem (11%) and those with hazardous use but no dependency (10%). However, it was somewhat higher in those identified as alcohol dependent (21%). **Table 9.13**

90% of alcohol dependent adults had had no contact with any community or day care service in the past year, a rate similar to non-dependent adults (93%). Just 2% of alcohol dependent adults had accessed a self help or support group and 3% had attended a community day care centre. **Table 9.14**

9.4 Discussion

The prevalence of hazardous drinking identified by the AUDIT is broadly similar by age and sex to the levels of drinking at more than twice the daily recommended limits as identified by the Health Survey for England (HSE).[1] The prevalence of hazardous and harmful drinking was highest in young adults, men aged 25 to 34 and women aged 16 to 24, and declined

with increasing age. This corresponds to patterns of drinking recorded in recent years by the HSE and other surveys, and it also supports the theory that many young drinkers 'mature out' of heavy drinking as they grow older and settle down into family and career responsibilities.[22]

The pattern of alcohol dependence is similar; men are more likely to be alcohol dependent than women, and alcohol dependence is higher in younger age groups, and declines with age. Alcohol dependence is relatively unusual in adults in minority ethnic groups. Its prevalence varies with marital status, with single, cohabiting, separated and divorced men and single women being most at risk.

Few alcohol dependent adults within this survey were more than mildly dependent. The age profile of moderately and severely dependent adults indicates that higher levels of dependence may take time to develop (perhaps corresponding to the chronic pattern of alcohol misuse identified in the 2004 *Alcohol Harm Reduction Strategy for England*[4] – see Section 9.1). However, it is likely that the true prevalence of severe alcohol problems is understated here. As with disorders such as psychosis, a survey of the household population of this kind is likely to under-represent dependent adults, who in the case of alcohol dependence are more likely to be homeless or in an institutional setting. Moreover, problematic drinkers who do live in private households may, like problematic drug users, be relatively less likely to respond to surveys, as they may lead chaotic lives which make them less available, able or willing to answer survey questions.

Overall the prevalence of alcohol dependence declined slightly between the 2000 and 2007 surveys. There is also some evidence that the profile of alcohol dependent adults may be changing. The decline in rate of dependence was seen in men (but not in women) and was most marked in men aged between 16 and 24, the group with the highest level of dependence in 2000.

Alcohol dependence, but not hazardous drinking, is associated with somewhat higher levels of use of services for mental or emotional problems. At the same time, only a minority of alcohol dependent adults make use of such services. Encouraging the early identification of alcohol problems and the timely provision of appropriate support and treatment is a central policy goal;[3,13] these findings suggest that this objective is far from being met.

References and notes

1 Fuller E (2008) *Alcohol consumption* in Craig R, Mindell J (eds) *Health Survey for England 2006. Volume 1: Cardiovascular disease and risk factors in adults*. The Information Centre, Leeds. http://www.ic.nhs.uk/pubs/HSE06CVDandriskfactors

2 A unit of alcohol is defined as 10ml of pure alcohol.

3 Department of Health, Home Office *et al.* (2007) *Safe. Sensible. Social. The next steps in the national alcohol strategy*. http://www.homeoffice.gov.uk/documents/Alcohol-strategy.pdf?view=Binary

4 Strategy Unit (2004) *Alcohol Harm Reduction Strategy*. Cabinet Office. http://www.cabinetoffice.gov.uk/strategy/work_areas/alcohol_misuse.aspx

5 Department of Health (1995) *Sensible drinking: the report of an inter-departmental working group*. http://www.dh.gov.uk/en/publicationsandstatistics/publications/publicationspolicyandguidance/dh_4084701

6 Strategy Unit (2003) Alcohol Harm Reduction project *Interim analytical report*. http://www.pm.gov.uk/files/pdf/SU%20interim_report2.pdf

7 Hospital Episode Statistics, quoted in The Information Centre *Statistics on Alcohol: England 2008*, available at www.ic.nhs.uk/pubs/alcohol08

8 Department of Health/North West Public Health Observatory (2008) *Hospital admissions for alcohol-related harm: understanding the dataset*. http://www.dh.gov.uk/en/Consultations/Liveconsultations/DH_086412

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10 Coulthard M, Farrell M, Singleton N, Meltzer H (2002) *Tobacco, alcohol and drug use and mental health*. ONS. http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_4081090

11 Nicholas S, Kershaw C and Walker A (2008) *Crime in England and Wales 2007/2008*. Home Office, available at www.homeoffice.gov.uk/rds/pdfs08/hosb0708.pdf

12 Department for Transport *Road Casualties: Great Britain 2007*. http://www.dft.gov.uk/pgr/statistics/datatablespublications/accidents/casualtiesgbar/roadcasualtiesgreatbritain20071

13 Public Service Agreement: Delivery Agreement 25. http://www.hm-treasury.gov.uk/media/b/1/pbr_csr07_psa25.pdf

14 NICE *Alcohol Use Disorder Consultation Scope.* http://www.nice.org.uk/guidance/index.jsp?action=folder&o=40304

15 Alcohol Needs Assessment Research Project (ANARP) *The 2004 national alcohol needs assessment for England*. http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4122341.

16 World Health Organisation (1992) The ICD-10 *'Classification of Mental and Behavioural Disorders: Clinical descriptions and diagnostic guidelines'* WHO: Geneva.

17 Saunders JB, Aasland OG, Babor TF, Dela Fuente JR, Grant M. (1993) Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption, part II. *Addiction*, 88, 791-804.

18 Stockwell T, Sitharan T, McGrath D & Lang (1994). The measurement of alcohol dependence and impaired control in community samples. *Addiction*, 89: 167–174.

19 The 'other' category shown in Tables 9.2 and 9.6 has been omitted from this analysis as it is based on a small and heterogeneous sample.

20 For example, regional analysis of drinking patterns conducted by the North West Public Health Observatory found that levels of hazardous and harmful drinking were consistently highest in the north of England and that the central and eastern regions have lower levels of consumption. North West Public Health Observatory (2007) *Indications of public health in the English regions: Alcohol*.

21 The interactions between social class – which is strongly related to household income - and alcohol use more generally are known to be complex, e.g. see Goddard, E. (2006) *General household survey 2006, smoking and drinking among adults*. London: Office for National Statistics.

22 Bachman JG, Schulenberg JE (2002) *The Decline of Substance Use in Young Adulthood: Changes in Social Activities, Roles, and Beliefs*. Lawrence Erlbaum Associates, New Jersey and London.

Tables

Table 9.1

Prevalence of hazardous and harmful drinking in the past year, by age and sex

All adults *2007*

AUDIT score[a]	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	%	%	%	%	%	%	%	%
Men								
0-7: not hazardous	57.7	54.0	65.1	70.0	73.3	78.5	83.4	66.8
8-15: hazardous, not harmful	33.6	34.4	28.3	26.8	23.8	19.8	15.6	27.4
16-40: harmful	8.8	11.6	6.6	3.2	2.9	1.7	1.0	5.8
8 or more: hazardous or harmful drinking	**42.3**	**46.0**	**34.9**	**30.0**	**26.7**	**21.5**	**16.6**	**33.2**
Women								
0-7: not hazardous	68.0	83.2	82.9	86.6	87.9	92.6	93.6	84.3
8-15: hazardous, not harmful	27.2	15.2	14.2	11.3	11.8	6.8	6.4	13.8
16-40: harmful	4.8	1.6	2.9	2.0	0.3	0.5	-	1.9
8 or more: hazardous or harmful drinking	**32.0**	**16.8**	**17.1**	**13.4**	**12.1**	**7.4**	**6.4**	**15.7**
All adults								
0-7: not hazardous	62.8	68.7	74.0	78.4	80.7	85.9	89.5	75.8
8-15: hazardous, not harmful	30.4	24.7	21.2	19.0	17.7	13.0	10.1	20.4
16-40: harmful	6.8	6.6	4.8	2.6	1.6	1.1	0.4	3.8
8 or more: hazardous or harmful drinking	**37.2**	**31.3**	**26.0**	**21.6**	**19.3**	**14.1**	**10.5**	**24.2**
Bases (unweighted)								
Men	*271*	*412*	*613*	*495*	*573*	*462*	*367*	*3193*
Women	*297*	*621*	*799*	*635*	*706*	*565*	*576*	*4199*
All	*568*	*1033*	*1412*	*1130*	*1279*	*1027*	*943*	*7392*
Bases (weighted)								
Men	*530*	*602*	*708*	*590*	*539*	*362*	*256*	*3588*
Women	*517*	*616*	*720*	*603*	*558*	*397*	*386*	*3796*
All	*1047*	*1218*	*1428*	*1193*	*1097*	*759*	*642*	*7384*

[a] The Alcohol Use Disorders Identification Test (AUDIT) is described in Section 9.2.2.

Table 9.2

Prevalence of hazardous and harmful drinking in the past year (age-standardised), by ethnicity and sex

All adults *2007*

AUDIT score[a]	Ethnicity			
	White	Black	South Asian	Other[b]
	%	%	%	%
Men				
0-7: not hazardous	64.2	81.4	88.0	84.1
8-15: hazardous, not harmful	29.6	15.6	9.9	13.8
16-40: harmful	6.2	3.0	2.1	2.1
8 or more: hazardous or harmful drinking	**35.8**	**18.6**	**12.0**	**15.9**
Women				
0-7: not hazardous	83.4	95.4	96.9	84.5
8-15: hazardous, not harmful	14.5	4.6	3.1	13.9
16-40: harmful	2.0	-	-	1.6
8 or more: hazardous or harmful drinking	**16.6**	**4.6**	**3.1**	**15.5**
Bases (unweighted)				
Men	*2911*	*77*	*109*	*72*
Women	*3889*	*111*	*90*	*87*
Bases (weighted)				
Men	*3179*	*103*	*170*	*112*
Women	*3443*	*121*	*114*	*102*

[a] The Alcohol Use Disorders Identification Test (AUDIT) is described in Section 9.2.2.

[b] Includes Chinese and mixed ethnic groups.

Table 9.3

Prevalence of hazardous and harmful drinking in the past year (age-standardised), by region[a] and sex

All adults *2007*

AUDIT score[b]	Government Office Region									Strategic Health Authority	
	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	London	South West	South East	South East Coast	South Central
	%	%	%	%	%	%	%	%	%	%	%
Men											
0-7: not hazardous	57.6	61.9	59.4	72.2	67.0	65.9	70.0	68.9	71.2	71.6	71.0
8-15: hazardous, not harmful	32.2	31.7	34.4	23.8	26.2	27.9	25.6	25.5	23.4	23.5	23.3
16-40: harmful	10.2	6.4	6.2	4.0	6.7	6.2	4.4	5.7	5.4	4.8	5.7
8 or more: hazardous or harmful drinking	**42.4**	**38.1**	**40.6**	**27.8**	**33.0**	**34.1**	**30.0**	**31.1**	**28.8**	**28.4**	**29.0**
Women											
0-7: not hazardous	79.2	80.6	78.9	82.9	84.5	87.8	86.2	85.7	87.7	89.8	85.6
8-15: hazardous, not harmful	17.0	17.1	18.4	15.0	13.5	11.5	12.5	12.7	10.4	9.3	11.8
16-40: harmful	3.7	2.3	2.7	2.2	2.0	0.6	1.3	1.7	1.9	0.9	2.7
8 or more: hazardous or harmful drinking	**20.8**	**19.4**	**21.1**	**17.1**	**15.5**	**12.2**	**13.8**	**14.3**	**12.3**	**10.2**	**14.4**
Bases (unweighted)											
Men	*181*	*478*	*332*	*330*	*347*	*377*	*321*	*330*	*497*	*256*	*241*
Women	*258*	*622*	*466*	*350*	*443*	*478*	*471*	*418*	*693*	*370*	*323*
Bases (weighted)											
Men	*172*	*491*	*359*	*340*	*377*	*402*	*512*	*373*	*562*	*280*	*282*
Women	*206*	*507*	*389*	*296*	*398*	*417*	*580*	*373*	*630*	*336*	*294*

[a] This table provides data for regional analysis both by Government Office Region (GOR) and Strategic Health Authority (SHA). The first eight columns represent GORs and SHAs of the same name, while the South East GOR (column nine) is divided into South East Coast SHA and South Central SHA, shown in the final two columns.

[b] The Alcohol Use Disorders Identification Test (AUDIT) is described in Section 9.2.2.

Table 9.4

Prevalence of alcohol dependence in the past six months, by age and sex

All adults *2007*

SADQ-C score[a]	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	%	%	%	%	%	%	%	%
Men								
0-3: no dependence	87.4	83.2	90.4	93.9	95.0	97.0	99.5	91.3
4-19: mild dependence	11.6	15.0	7.7	5.9	4.8	3.0	0.5	7.8
20-34: moderate dependence	1.0	1.8	1.6	0.1	0.1	-	-	0.8
35-60: severe dependence	-	-	0.2	0.1	0.1	-	-	0.1
Any dependence	**12.6**	**16.8**	**9.6**	**6.1**	**5.0**	**3.0**	**0.5**	**8.7**
Women								
0-3: no dependence	90.2	97.0	96.3	96.5	99.1	99.4	100.0	96.7
4-19: mild dependence	9.6	3.0	3.7	3.3	0.9	0.6	-	3.2
20-34: moderate dependence	0.3	-	-	-	-	-	-	0.0
35-60: severe dependence	-	-	0.1	0.2	-	-	-	0.0
Any dependence	**9.8**	**3.0**	**3.7**	**3.5**	**0.9**	**0.6**	**-**	**3.3**
All adults								
0-3: no dependence	88.8	90.2	93.4	95.2	97.1	98.3	99.8	94.1
4-19: mild dependence	10.6	8.9	5.7	4.6	2.8	1.7	0.2	5.4
20-34: moderate dependence	0.6	0.9	0.8	0.0	0.0	-	-	0.4
35-60: severe dependence	-	-	0.2	0.1	0.0	-	-	0.1
Any dependence	**11.2**	**9.8**	**6.6**	**4.8**	**2.9**	**1.7**	**0.2**	**5.9**
Bases (unweighted)								
Men	*271*	*411*	*613*	*495*	*573*	*462*	*367*	*3192*
Women	*297*	*621*	*799*	*635*	*706*	*565*	*576*	*4199*
All	*568*	*1032*	*1412*	*1130*	*1279*	*1027*	*943*	*7391*
Bases (weighted)								
Men	*530*	*602*	*708*	*590*	*539*	*362*	*256*	*3587*
Women	*517*	*616*	*720*	*603*	*558*	*397*	*386*	*3796*
All	*1047*	*1217*	*1428*	*1193*	*1097*	*759*	*642*	*7383*

[a] The Severity of Alcohol Dependence Questionnaire (SADQ-C) is described in Section 9.2.2.

Table 9.5

Prevalence of alcohol dependence in the past six months in 2000 and 2007, by age and sex

Aged 16-74 and living in England — *2000, 2007*

SADQ-C score[a]	Age group													
	16-24		25-34		35-44		45-54		55-64		65-74		All 16-74[b]	
	2000	2007	2000	2007	2000	2007	2000	2007	2000	2007	2000	2007	2000	2007
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Men														
0-3: no dependence	80.2	87.4	84.2	83.2	85.9	90.4	93.2	93.9	94.4	95.0	97.3	97.0	88.5	90.7
4-19: mild dependence	18.8	11.6	15.1	15.0	12.6	7.7	6.1	5.9	5.3	4.8	2.7	3.0	10.8	8.3
20-34: moderate dependence	1.0	1.0	0.6	1.8	1.2	1.6	0.5	0.1	0.1	0.1	-	-	0.6	0.9
35-60: severe dependence	-	-	0.1	-	0.2	0.2	0.2	0.1	0.1	0.1	-	-	0.1	0.1
Any dependence	**19.8**	**12.6**	**15.8**	**16.8**	**14.1**	**9.6**	**6.8**	**6.1**	**5.6**	**5.0**	**2.7**	**3.0**	**11.5**	**9.3**
Women														
0-3: no dependence	93.9	90.2	95.5	97.0	97.1	96.3	98.5	96.5	99.4	99.1	99.5	99.4	97.2	96.4
4-19: mild dependence	6.1	9.6	4.3	3.0	2.8	3.7	1.4	3.3	0.6	0.9	0.5	0.6	2.7	3.6
20-34: moderate dependence	-	0.3	0.1	-	0.2	-	-	-	-	-	-	-	0.1	0.0
35-60: severe dependence	-	-	-	-		0.1	0.1	0.2	-	-	-	-	0.0	0.0
Any dependence	**6.1**	**9.8**	**4.5**	**3.0**	**2.9**	**3.7**	**1.5**	**3.5**	**0.6**	**0.9**	**0.5**	**0.6**	**2.8**	**3.6**
All adults														
0-3: no dependence	87.0	88.8	89.8	90.2	91.4	93.4	95.8	95.2	97.0	97.1	98.5	98.3	92.8	93.6
4-19: mild dependence	12.5	10.6	9.8	8.9	7.8	5.7	3.8	4.6	2.9	2.8	1.5	1.7	6.7	5.9
20-34: moderate dependence	0.5	0.6	0.4	0.9	0.7	0.8	0.3	0.0	0.1	0.0	-	-	0.4	0.4
35-60: severe dependence	-	-	0.0	-	0.1	0.2	0.1	0.1	0.1	0.0	-	-	0.1	0.1
Any dependence	**13.0**	**11.2**	**10.2**	**9.8**	**8.6**	**6.6**	**4.2**	**4.8**	**3.0**	**2.9**	**1.5**	**1.7**	**7.2**	**6.4**
Bases (unweighted)														
Men	*317*	*271*	*615*	*411*	*671*	*613*	*647*	*495*	*524*	*573*	*449*	*462*	*3223*	*2825*
Women	*347*	*297*	*822*	*621*	*861*	*799*	*681*	*635*	*667*	*706*	*609*	*565*	*3987*	*3623*
All	*664*	*568*	*1437*	*1032*	*1532*	*1412*	*1328*	*1130*	*1191*	*1279*	*1058*	*1027*	*7210*	*6448*
Bases (weighted)														
Men	*546*	*530*	*775*	*602*	*776*	*708*	*686*	*590*	*510*	*539*	*391*	*362*	*3683*	*3331*
Women	*540*	*517*	*748*	*616*	*759*	*720*	*682*	*603*	*534*	*558*	*440*	*397*	*3702*	*3410*
All	*1086*	*1047*	*1523*	*1217*	*1534*	*1428*	*1368*	*1193*	*1043*	*1097*	*831*	*759*	*7386*	*6741*

[a] The Severity of Alcohol Dependence Questionnaire (SADQ-C) is described in Section 9.2.2.

[b] Based only on those aged 16 to 74 and living in England to retain comparability across survey years.

Table 9.6

Prevalence of alcohol dependence in the past six months (age-standardised), by ethnicity and sex

All adults *2007*

SADQ-C score[a]	Ethnicity			
	White	Black	South Asian	Other[b]
	%	%	%	%
Men				
0-3: no dependence	90.4	97.0	99.0	96.5
4-19: mild dependence	8.7	-	1.0	3.5
20-34: moderate dependence	0.8	3.0	-	-
35-60: severe dependence	0.1	-	-	-
Any dependence	**9.6**	**3.0**	**1.0**	**3.5**
Women				
0-3: no dependence	96.3	100.0	100.0	98.6
4-19: mild dependence	3.6	-	-	1.4
20-34: moderate dependence	0.0	-	-	-
35-60: severe dependence	0.0	-	-	-
Any dependence	**3.7**	**-**	**-**	**1.4**
Bases (unweighted)				
Men	*2911*	*77*	*109*	*72*
Women	*3443*	*111*	*90*	*87*
Bases (weighted)				
Men	*3179*	*103*	*170*	*112*
Women	*3889*	*121*	*114*	*102*

[a] The Severity of Alcohol Dependence Questionnaire (SADQ-C) scale is described in Section 9.2.2.

[b] Includes Chinese and mixed ethnic groups.

Table 9.7

Prevalence of alcohol dependence in the past six months (observed), by marital status and sex

All adults *2007*

SADQ-C score[a]	Marital status					
	Married	Cohabiting	Single	Widowed	Divorced	Separated
	%	%	%	%	%	%
Men						
0-3: no dependence	94.8	86.4	86.4	98.8	85.5	86.3
4-19: mild dependence	4.9	12.0	11.7	1.2	13.4	12.5
20-34: moderate dependence	0.3	1.1	1.9	-	0.4	1.3
35-60: severe dependence	-	0.4	-	-	0.7	-
Any dependence	**5.2**	**13.6**	**13.6**	**1.2**	**14.5**	**13.7**
Women						
0-3: no dependence	98.6	97.0	90.8	99.2	96.2	94.9
4-19: mild dependence	1.4	3.0	8.9	0.8	3.3	5.1
20-34: moderate dependence	-	-	0.2	-	-	-
35-60: severe dependence	-	-	0.1	-	0.4	-
Any dependence	**1.4**	**3.0**	**9.2**	**0.8**	**3.8**	**5.1**
Bases (unweighted)						
Men	*1671*	*279*	*698*	*233*	*232*	*79*
Women	*1846*	*335*	*727*	*709*	*438*	*144*
Bases (weighted)						
Men	*1951*	*398*	*915*	*116*	*151*	*56*
Women	*1919*	*376*	*762*	*395*	*258*	*86*

[a] The Severity of Alcohol Dependence Questionnaire (SADQ-C) is described in Section 9.2.2.

Table 9.8

Prevalence of alcohol dependence in the past six months (age-standardised), by equivalised annual household income and sex

All adults *2007*

SADQ-C score[a]	Equivalised household income[b]				
	Highest	2nd	3rd	4th	Lowest
	%	%	%	%	%
Men					
0-3: no dependence	88.4	91.0	91.7	95.5	91.5
4-19: mild dependence	11.1	7.9	7.7	4.1	6.0
20-34: moderate dependence	0.5	1.1	0.6	0.3	1.8
35-60: severe dependence	-	-	-	-	0.7
Any dependence	**11.6**	**9.0**	**8.3**	**4.5**	**8.5**
Women					
0-3: no dependence	94.0	98.3	98.0	95.4	97.0
4-19: mild dependence	6.0	1.7	2.0	3.9	3.0
20-34: moderate dependence	-	-	-	0.3	-
35-60: severe dependence	-	-	-	0.3	0.1
Any dependence	**6.0**	**1.7**	**2.0**	**4.6**	**3.0**
Bases (unweighted)					
Men	*629*	*549*	*509*	*446*	*422*
Women	*562*	*601*	*733*	*675*	*744*
Bases (weighted)					
Men	*716*	*612*	*524*	*456*	*461*
Women	*531*	*545*	*624*	*539*	*627*

[a] The Severity of Alcohol Dependence Questionnaire (SADQ-C) is described in Section 9.2.2.

[b] See the Glossary for a definition of equivalised household income.

Table 9.9

Prevalence of alcohol dependence in the past six months (age-standardised), by region[a] and sex

All adults *2007*

SADQ-C score[b]	Government Office Region									Strategic Health Authority	
	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	London	South West	South East	South East Coast	South Central
	%	%	%	%	%	%	%	%	%	%	%
Men											
0-3: no dependence	92.3	87.4	88.8	91.9	92.1	90.9	93.9	93.1	92.1	92.2	92.0
4-19: mild dependence	6.9	11.9	10.4	8.1	6.0	7.6	5.5	5.2	7.5	7.0	8.0
20-34: moderate dependence	0.9	0.6	0.8	-	1.9	1.0	0.5	1.7	0.3	0.5	-
35-60: severe dependence	-	0.1	-	-	-	0.5	-	-	0.1	0.2	-
Any dependence	**7.7**	**12.6**	**11.2**	**8.1**	**7.9**	**9.1**	**6.1**	**6.9**	**7.9**	**7.8**	**8.0**
Women											
0-3: no dependence	93.3	95.9	96.9	94.9	96.7	98.3	97.8	97.0	97.2	96.7	97.5
4-19: mild dependence	6.5	4.1	3.1	5.1	3.1	1.4	2.1	3.0	2.8	3.3	2.5
20-34: moderate dependence	-	-	-	-	-	0.3	-	-	-	-	-
35-60: severe dependence	0.2	-	-	-	0.1	-	0.1	-	-	-	-
Any dependence	**6.7**	**4.1**	**3.1**	**5.1**	**3.3**	**1.7**	**2.2**	**3.0**	**2.8**	**3.3**	**2.5**
Bases (unweighted)											
Men	*181*	*478*	*332*	*330*	*347*	*377*	*321*	*330*	*496*	*279*	*282*
Women	*258*	*622*	*466*	*350*	*443*	*478*	*471*	*418*	*693*	*336*	*294*
Bases (weighted)											
Men	*172*	*491*	*359*	*340*	*377*	*402*	*512*	*373*	*561*	*255*	*241*
Women	*206*	*507*	*389*	*296*	*398*	*417*	*580*	*373*	*630*	*370*	*323*

[a] This table provides data for regional analysis both by Government Office Region (GOR) and Strategic Health Authorities (SHAs). The first eight columns represent GORs and SHAs of the same name, while the South East GOR (column nine) is divided into South East Coast SHA and South Central SHA, shown in the final two columns.

[b] The Severity of Alcohol Dependence Questionnaire (SADQ-C) is described in Section 9.2.2.

Table 9.10

Treatment currently received for a mental or emotional problem (age-standardised), by level of alcohol problem and sex[a]

All adults *2007*

Current treatment for a mental or emotional problem	Level of alcohol problem		
	No hazardous alcohol use	Hazardous use but no dependence	Alcohol dependent
	%	%	%
Men			
No treatment	95	93	91
Medication only	2	5	4
Counselling or therapy only	1	1	3
Both medication and counselling	1	1	2
Women			
No treatment	91	94	74
Medication only	7	4	19
Counselling or therapy only	2	1	3
Both medication and counselling	1	1	5
All adults			
No treatment	93	94	86
Medication only	5	5	8
Counselling or therapy only	1	1	3
Both medication and counselling	1	1	3
Bases (unweighted)			
Men	*2527*	*410*	*250*
Women	*3810*	*258*	*115*
All	*6337*	*668*	*365*
Bases (weighted)			
Men	*2795*	*478*	*310*
Women	*3420*	*242*	*121*
All	*6214*	*720*	*432*

[a] The treatment tables in this chapter present data for men and women separately, as well as for all adults. This was done because of the large size of the dependent group and because of the notable variation in treatment rates by sex.

Table 9.11

Psychoactive medication currently taken (age-standardised), by level of alcohol problem and sex

All adults *2007*

Type of medication	Level of alcohol problem: No hazardous alcohol use	Hazardous use but no dependence	Alcohol dependent
	%	%	%
Men			
Hypnotics	0	1	1
Anxiolytics	0	1	2
Antidepressants	2	4	4
Drugs used in the treatment of psychosis	1	1	0
Drugs used in treatment of ADHD	0	-	
Any psychoactive medication	**3**	**6**	**6**
Women			
Hypnotics	1	1	
Anxiolytics	1	0	7
Antidepressants	6	4	15
Drugs used in the treatment of psychosis	1	0	3
Drugs used in treatment of ADHD	0	-	-
Any psychoactive medication	**8**	**5**	**24**
All adults			
Hypnotics	0	1	0
Anxiolytics	1	1	3
Antidepressants	5	4	7
Drugs used in the treatment of psychosis	1	1	1
Drugs used in treatment of ADHD	0	-	-
Any psychoactive medication	**6**	**6**	**11**
Bases (unweighted)[a]			
Men	*2527*	*410*	*250*
Women	*3810*	*258*	*115*
All	*6337*	*668*	*365*
Bases (weighted)			
Men	*2795*	*478*	*310*
Women	*3420*	*242*	*121*
All	*6214*	*720*	*432*

[a] Bases shown are for those responding to questions about psychoactive medication. Bases for each type of medication may vary slightly.

Table 9.12

Current counselling or therapy treatment for a mental or emotional problem (age-standardised), by level of alcohol problem

All adults *2007*

Type of counselling or therapy	Level of alcohol problem		
	No hazardous alcohol use	Hazardous use but no dependence	Alcohol dependent
	%	%	%
All adults			
Psychotherapy	1	0	2
Behaviour or cognitive therapy	0	0	1
Art, music, drama therapy	0	0	-
Social skills training	0	-	-
Marital or family therapy	0	0	1
Sex therapy	0	-	-
Counselling	1	1	2
Other therapy	0	1	1
Any counselling or therapy	**2**	**2**	**6**
Bases (unweighted)[a]	*6356*	*668*	*367*
Bases (weighted)	*6228*	*720*	*435*

[a] Bases shown are for those responding to question about counselling or therapy.

Table 9.13

Health care services used for a mental or emotional problem (age-standardised), by level of alcohol problem

All adults *2007*

Type of health care service	Level of alcohol problem		
	No hazardous alcohol use	Hazardous use but no dependence	Alcohol dependent
	%	%	%
All adults			
Inpatient stay in the past quarter	0	0	0
Outpatient visit in the past quarter	1	1	2
Spoken with GP in the past 2 weeks	2	2	5
Spoken with GP in the past year	11	10	21
Any health care service	**11**	**10**	**21**
Bases (unweighted)[a]	*6355*	*667*	*367*
Bases (weighted)	*6228*	*719*	*435*

[a] Bases shown are for those responding to whether spoken with GP in past two weeks.

Table 9.14

Community and day care services used in past year (age-standardised), by level of alcohol problem

All adults *2007*

Type of community or day care service	Level of alcohol problem		
	No hazardous alcohol use	Hazardous use but no dependence	Alcohol dependent
	%	%	%
All adults			
Psychiatrist	1	0	3
Psychologist	1	0	1
Community Psychiatric Nurse	1	1	1
Community learning difficulty nurse	0	-	-
Other nursing services	3	3	2
Social worker	1	1	1
Self help/support group	1	0	2
Home help/home care worker	1	1	0
Outreach worker	1	0	1
Community day care centre[a]	1	1	3
Any community or day care service	**7**	**7**	**10**
Bases (unweighted)[b]	*6353*	*668*	*367*
Bases (weighted)	*6226*	*720*	*435*

[a] Includes community mental health centre, day activity centre, sheltered workshop and other day service.

[b] Bases shown are for those responding to question about psychiatrist in the past year.

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Drug misuse and dependence

10

Elizabeth Fuller, Dhriti Jotangia and Michael Farrell

Summary

- Drug misuse has been defined as the use of a substance for purposes not consistent with legal or medical guidelines. In a small proportion of users, this may lead to dependence, a cluster of behavioural, cognitive, and physiological phenomena, such as a sense of need or dependence, impaired capacity to control substance-taking behaviour and persistent use despite evidence of harm.
- This chapter presents prevalence estimates of illicit drug use and drug dependence in the adult general population.
- Dependence on specified drugs was measured using questions based on the Diagnostic Interview Schedule, as used in the 1993 and 2000 surveys. Use of a drug and the presence of one of five symptoms of dependence in the past year were used to indicate drug dependence, a lower threshold than recommended elsewhere. Dependence was further classified into dependence on cannabis only and dependence on other drugs (with or without cannabis dependence).
- In 2007, the prevalence of drug use in the last year was 9.2% (12.0% of men, 6.7% of women). Drug use was most common in young men aged between 16 and 34 (27.8%) and young women aged between 16 and 24 (21.9%).
- Most of those who had taken drugs in the last year had used cannabis. The prevalence of cannabis use in the last year was 7.5% (10.1% of men, 5.0% of women).
- The prevalence of drug dependence was 3.4% (4.5% of men, 2.3% of women). Most dependence was on cannabis only (2.5%), rather than other drugs (0.9%). Symptoms of dependence were most commonly reported by adults aged between 16 and 24 (13.3% of men, 7.0% of women in this age group).
- The prevalence of drug dependence was found to be higher in 2000 than in 1993, but has not significantly changed since.
- The prevalence of drug dependence varied with ethnicity and income. In men, black men were most likely and South Asian men least likely to report symptoms of dependence; the same pattern was seen for women. The prevalence of drug dependence was greater in men and women from lower income groups. There were no significant differences between regions.
- 14% of adults who were dependent on cannabis only and 36% of those dependent on other drugs were receiving treatment for a mental or emotional problem.

10.1 Introduction

The United Kingdom has one of the highest rates of illicit drug use in the developed world.[1] In 2007, 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 over three million who had taken an illicit drug in the past year.[2] Many drug users have taken cannabis only a few times in their lives and no other drugs.[1] For a minority, drug use becomes regular and prolonged, and is associated with a high degree of harm to themselves and others.[3]

Drug misuse is defined by the World Health Organisation 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.[4] Drug misuse is not necessarily problematic, though it can never be considered risk-free.[5,6] More people take cannabis than any other drug, but problematic drug use, particularly dependence, is most frequently associated with opiates.[7] For example, the National Treatment Agency for Substance Misuse report that heroin is the main drug misused by 66% of their clients aged 18 or over, with a further 8% naming other opiates as their main drug of misuse.[8] 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 users.[3]

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.[7] Frequent cannabis use has also been associated with respiratory problems.[6]

There is significant comorbidity between drug misuse and poor mental health. Problematic use of one drug often co-occurs with misuse of or dependence on other drugs and alcohol.[9] 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.[9] 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.[6,10] 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.[11] 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.[12,13,14] Psychiatric comorbidity, including with drug dependence, is considered in Chapter 12 of this report.

The number of admissions to NHS hospitals with a primary or secondary diagnosis of drug-related mental health or behavioural disorder has risen from 19,018 episodes in 1996/97 to 38,170 in 2006/07.[15] In the same period, the number of admissions with a primary diagnosis of poisoning by drugs rose from 7057 to 10,047. Between 1993 and 1999, deaths in England attributable to drug misuse rose from 786 to 1538.[16] Since then the level has remained constant; in 2006, 1469 deaths were attributable to drug misuse.[17] In 2007/08, 202,666 individuals were in contact with structured drug treatment services in England.[8]

Though the health impacts of drug dependence are significant, the harm to society of drug-related crime is also great.[18] 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.[3] 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.[19] Other types of crime are less strongly linked to drug use, although drug dealing may be linked to high levels of community violence.[1,20]

The risk factors for drug use are similar to those for criminal behaviour, including social and economic deprivation and family breakdown.[1] 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.[21,22] The harm caused by problem drug use also extends to the families of drug users and to the communities in which they live. The children of people with problematic drug use 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.[23] 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.[3]

Increasing concern about the harm caused by drug misuse and dependence during the 1990s led to the publication of the first ten-year drugs strategy in 1998, updated in 2002.[5,24] Its overall aim was to 'reduce the harm caused by illegal drugs', with objectives relating to four themes: preventing young people from becoming drug users, treatment of problem drug users, reducing the supply of drugs, and reducing drug-related crime.

The first drug strategy could claim some successes, including a reduction in the prevalence of lifetime drug use, a doubling between 1998 and 2008 of the numbers of drug users receiving treatment, and a reduction in recorded acquisitive crime. In 2008 the second ten year drug strategy was published.[3] This strategy focused on:

- Protecting communities through tackling drug supply, drug-related crime and anti-social behaviour;
- Preventing harm to children, young people and families affected by drug misuse;
- Delivering new approaches to drug treatment and social re-integration; and
- Public information campaigns, communications and community engagement.

The major source of data on the prevalence of drug use by adults aged 16 and over in England is the annual British Crime Survey (BCS). The 2006/07 BCS estimated that 35.5% of adults in England and Wales aged between 16 and 59 had taken illegal drugs at some time, including 13.8% of adults who had taken one or more Class A drugs.[2,25] 10.0% of adults had taken drugs in the past year. Cannabis was the most commonly used drug; 8.2% of adults had taken cannabis in the past year. 3.4% of adults had taken a Class A drug in the past year.

Men were more likely than women to have taken drugs. Drug use in the past year was most common in 16 to 19 year olds (23.3%) and 20 to 24 year olds (24.8%), but declined sharply with age thereafter. Around half of adults in their twenties had taken drugs at some time in their lives. This was increasingly less likely in older adults; among 55 to 59 year olds, the oldest age group for whom data were available, 18.1% had taken drugs at least once.[2]

It is acknowledged that using a household survey of this kind to measure drug use may 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 in institutions, including hospitals and prisons.[26] Additionally, drug dependent people living in private households may be relatively 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.[2] Comparisons of the BCS with the numbers of drug users in treatment confirm that surveys significantly underestimate the number of dependent drug users.[1]

This chapter presents the prevalence of reported drug misuse and dependence in the English adult general population and examines some associations, including those with use of treatment and services.

10.2 Definitions and assessment

10.2.1 Drug misuse disorders

Drug misuse is defined by the World Health Organisation 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.[4] 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'.[27] 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 DSM-IV.[27] A threshold of three or more of the following occurring in the past 12 months is required for a diagnosis:

- Preoccupation with substance use;
- A sense of need or dependence;
- Impaired capacity to control substance-taking behaviour ;
- Increased tolerance;
- Withdrawal symptoms; and
- Persistent substance use despite evidence of harm.

10.2.2 Measuring drug use and dependence

Questions about drug use were asked using a computer-assisted self-completion interview (CASI), as in the 2000 survey.[28] They covered lifetime experience of 13 types of named drug, together with use in the past year.

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[29] and designed to assess drug dependence.

These questions asked about the past month and year, and covered:

- Daily use for 2 weeks or more;
- A sense of need or dependence;
- An inability to abstain;
- Increased tolerance; and
- Withdrawal symptoms.

A positive response to any of the items in the past year was used to indicate drug dependence. This was a lower threshold than that recommended by ICD-10 and DSM-IV, and did not include preoccupation and persistence despite evidence of harm. However the same approach and wording was used in the 1993 and 2000 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,[30] dependence was grouped into three categories. These categories were:

- Those with no dependence;
- Those who were dependent on cannabis only; and
- Those who were dependent on another drug (including those who were also dependent on cannabis).

10.3 Results

10.3.1 Prevalence of illicit drug use by age and sex

Lifetime experience of illicit drug use was strongly related to age and sex. Overall, 29.9% of

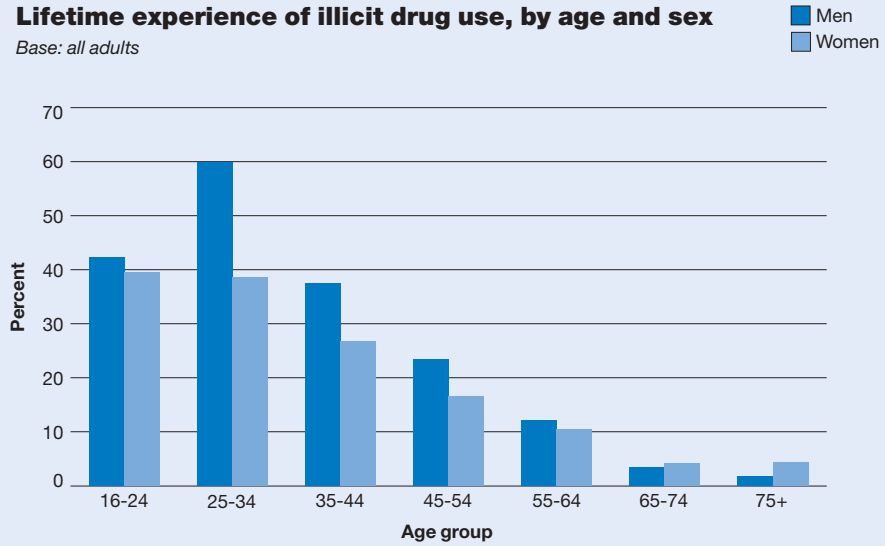
men and 21.8% of women had taken an illicit drug at least once. Men aged between 25 and 34 were most likely to have ever used illicit drugs (59.9%); for older age groups this was much less likely, declining to 1.7% of men aged 75 or more. Among women, those aged 16 to 34 were most likely to have taken illicit drugs (39.1%, data not shown), and this proportion also decreased with increasing age, to 4.3% of women aged 75 or more.

Figure 10A

Figure 10A

Lifetime experience of illicit drug use, 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, 27.8% of men had used cannabis, compared with 8.7% who had used cocaine, 8.6% who had used amphetamines, and 7.7% who had used ecstasy, the next most commonly used drugs. 18.6% of women had used cannabis. Women were relatively unlikely to have tried other drugs; for example, the next most commonly used drug, amphetamines, had been taken by 4.3% of women. **Table 10.1**

A smaller proportion of men and women had taken illicit drugs in the past year: 12.0% of men and 6.7% of women. Illicit drug use in the past year was most common in young people, specifically in men aged 16 to 34 (27.8%) and women aged 16 to 24 (21.9%). In other age groups, the proportions who had taken illicit drugs in the past year were smaller, lowest in men aged 75 or over (0.5%) and women aged 65 to 74 (1.1%).

Again, cannabis was the most commonly used drug in the past year; 10.1% of men and 5.0% of women had used it, including 23.7% of men aged between 16 and 34 and 18.9% of women aged between 16 and 24. The use of other drugs in the past year was relatively uncommon, except in young adults. **Table 10.2**

10.3.2 Illicit drug use in the past year in the past year by other characteristics

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 men were the most likely to have taken drugs in the past year (21.8%), and South Asian men were the least likely to have done so (3.5%). Among women, drug use in the past year was most common in white women (6.8%), and least common in South Asian women (0.8%).[31]

Table 10.3

The proportion of adults who had taken illicit drugs in the past year varied between regions. Among men it ranged from 7.9% in the East of England to 14.5% in the North West and 14.8% in London, and among women from 2.4% in the East of England to 8.1% in the North West and 8.9% in London. About one man in twenty in London (4.9%) and the North West (4.8%) had used cocaine in the past year. **Table 10.4**

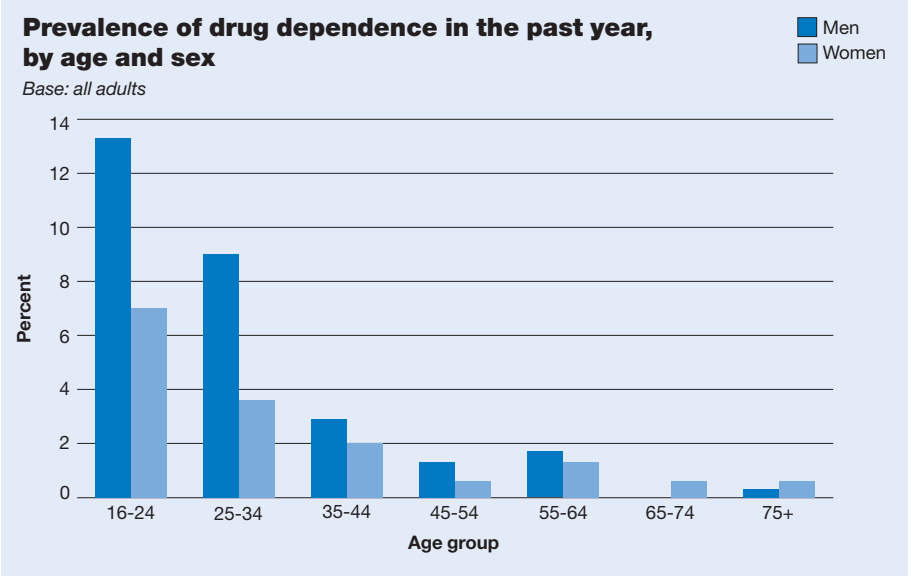
10.3.3 Prevalence of drug dependence in the past year by age and sex

The prevalence of drug dependence in the past year was measured for each of eight types

of drug: cannabis, amphetamines, cocaine, crack, ecstasy, heroin and methadone, tranquillisers and volatile substances (glue, gas, aerosols or solvents). For each drug, dependence was defined as having answered 'yes' to at least one of five questions about symptoms of drug dependence (see Section 10.2.2). 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, 3.4% of adults showed signs of dependence on drugs in the past year, including 2.5% who were dependent on cannabis only and 0.9% who were dependent on other drugs. Rates of dependence varied with age and sex, and were greatest in men and in the youngest age group. 4.5% of all men showed signs of dependence on drugs (compared with 2.3% of women), including 13.3% aged between 16 and 24 and 9.0% of men aged 25 to 34. For men in other age groups, rates of dependence were markedly lower, and no cases of dependence were recorded in men aged between 65 and 74. **Table 10.5, Figure 10B**

Figure 10B



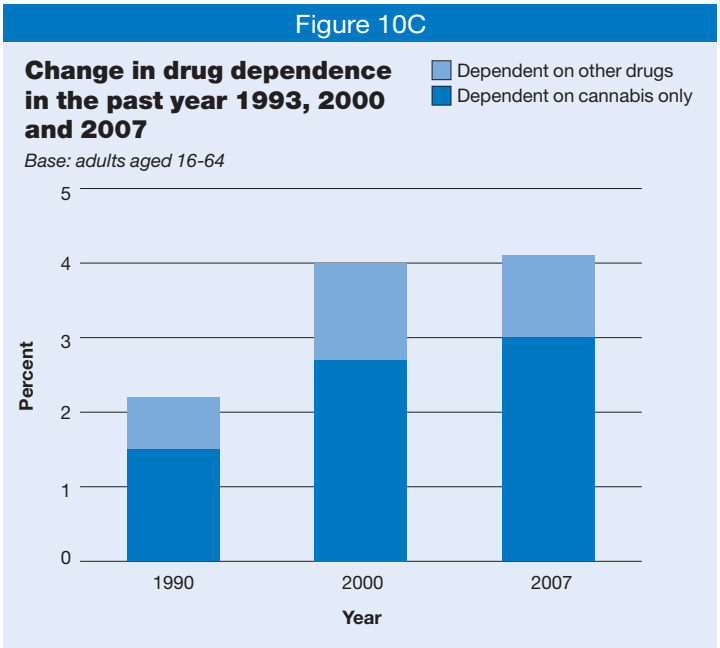
The highest rates of dependence were on cannabis: 3.7% of men and 1.7% of women. 0.7% of men were dependent on cocaine. Otherwise rates of dependence in the survey sample were lower than 0.5% for other drugs. No respondents reported signs of dependence on volatile substances, and only men reported signs of dependence on crack or ecstasy.

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 dependence on cannabis and on other drugs. However, in women aged 45 and over, rates of dependence on tranquillisers, though low (between 0.1% and 0.5%), were at similar levels to rates of dependence on cannabis. Although the questions specified use of drugs 'not prescribed by a doctor', there was the potential for misreporting, and daily use of tranquillisers would identify the informant as dependent by the definition used here.

10.3.4 Change in drug dependence in the past year since 1993

The prevalence of drug dependence in 1993, 2000 and 2007 can be compared for adults aged between 16 and 64 (the upper age limit of the 1993 survey). Between 1993 and 2000, there were increases in the proportions of drug-dependent adults and those dependent on cannabis but not other drugs. Between 2000 and 2007 the levels of both types of dependence remained similar. Within age groups, levels of drug dependence have varied over time, but not in a consistent way. **Table 10.6, Figure 10C**

Figure 10C

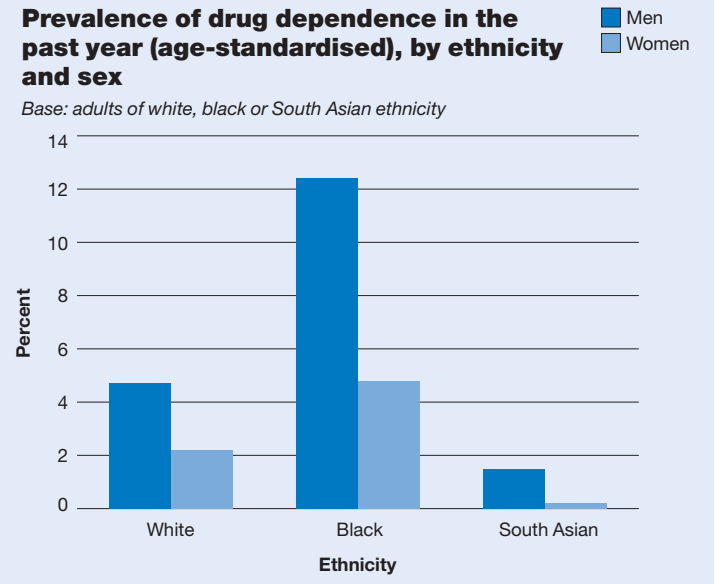


10.3.5 Drug dependence in the past year by other characteristics

Ethnicity

The prevalence of drug dependence varied between ethnic groups. Using age-standardised data: in men the proportion showing signs of dependence ranged from 1.5% of South Asian men to 12.4% of black men. In women, it ranged from 0.2% of South Asian women to 4.8% of black women.[31] **Table 10.7, Figure 10D**

Figure 10D



Marital status

Marital status was also related to levels of drug dependence, which was highest in single men and women (10.7% and 5.5% respectively) and lowest in those who were widowed; no widowed men in the sample showed signs of dependence and just 0.4% of widowed women. It is likely that, to a great extent, these differences reflect the different age profiles of the groups, as these data are not age-standardised. (See the Glossary for a discussion of why these data were not standardised). **Table 10.8**

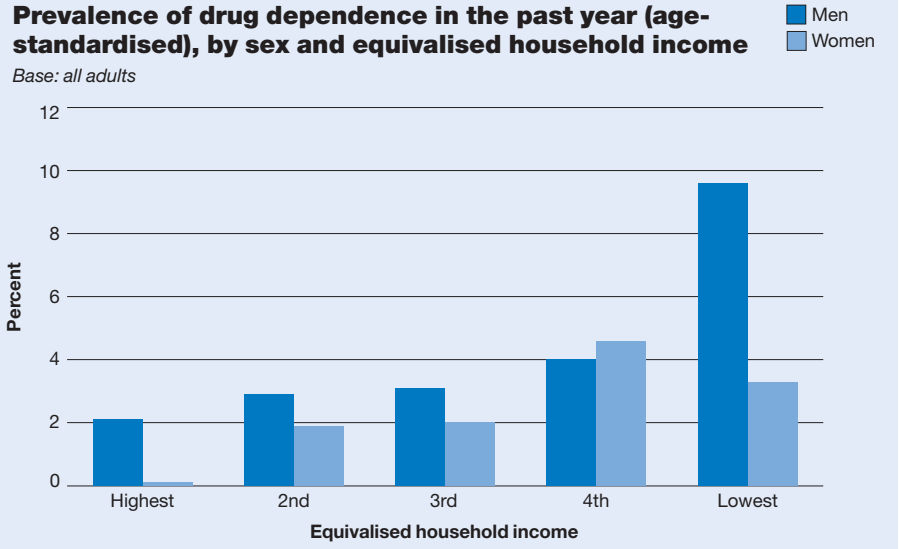
Equivalised household income

Drug dependence was examined in relation to equivalised household income, after standardising for the different age profiles of the household income quintiles. (See the Glossary for a definition of equivalised household income). In men, the prevalence of drug dependence increased as equivalised household income decreased, ranging from 2.1% of those in the highest income quintile to 9.6% of those in the lowest. The pattern for women was broadly similar, although the highest prevalence was found in women in the second lowest income quintile (4.6%). Just 0.1% of women in the highest income quintile were assessed as drug dependent. **Table 10.9, Figure E**

Figure 10E

Prevalence of drug dependence in the past year (age-standardised), by sex and equivalised household income

Base: all adults



Region

The differences in levels of drug dependence between regions were not statistically significant. **Table 10.10**

10.3.6 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 small, in particular for those dependent on drugs other than cannabis. For this reason the treatment tables were not age-standardised, despite drug dependence being strongly associated with age.

Adults who were dependent on drugs were more likely than other adults to be receiving treatment for mental or emotional problems, although this treatment was not necessarily for a drug problem. 14% of adults who were dependent on cannabis and 36% of those dependent on other drugs were receiving counselling or medication, compared with 7% of those reporting no signs of drug dependence. **Table 10.11**

Compared with other adults, drug-dependent adults were more likely to be taking psychoactive medication; 10% of those dependent on cannabis and 25% of those dependent on other drugs. Drug-dependent adults were also more likely to be currently receiving counselling or therapy; 7% of those dependent on cannabis and 22% of those dependent on other drugs. **Tables 10.12, 10.13**

Drug-dependent adults were also more likely than others to access health care services for a mental or emotional problem. 27% of cannabis-dependent adults and 32% of adults dependent on other drugs had spoken with a GP for this reason in the past year, while 4% of cannabis-dependent adults and 15% of adults who were dependent on other drugs had spoken with a GP about a mental or emotional problem in the past two weeks. Larger proportions of drug-dependent adults had attended hospital as an outpatient for a mental or emotional problem in the past three months than adults who were not dependent on

drugs: 4% of cannabis-dependent adults and 3% of those dependent on other drugs, compared with 1% of other adults. The proportion of adults who had been inpatients in the past three months for a mental or emotional reason was too small for analysis. **Table 10.14**

A similar pattern was seen for the use of community and day care services in the past year; 12% of cannabis-dependent adults and 22% of those dependent on other drugs had used at least one of the services asked about. Drug-dependent adults had distinct patterns of service use; in particular, those dependent on drugs other than cannabis were more likely than others to access community day care centres (15%), social workers (8%) and psychiatrists (6%). **Table 10.15**

10.4 Discussion

The pattern of drug use reported here is similar to that reported in the British Crime Survey. Men were more likely than women to take drugs, the prevalence of drug use was highest in early adulthood and declined thereafter, almost certainly a cohort effect; in other words, successive generations were more likely to have taken drugs at least once. By far the most commonly used drug was cannabis.

Drug use and drug dependence increased between 1993 and 2000, and have remained steady since. This reflects trends in drug use reported in the British Crime Survey since 1998.[2]

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 women, and most common in young adults. The prevalence of drug dependence measured here varies with ethnicity, marital status and income. These variations need further investigation.

The majority of drug users in this sample who could be described as dependent tended to be dependent only on cannabis. This was not the same as the pattern of dependence in adults receiving treatment reported by the National Treatment Agency for Substance Misuse; rather, it is closer to the pattern of dependence reported to the agency by young people aged under 18.[8,32]

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 a majority of these adults, whatever the nature of their dependence, were not in contact with any 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 are only likely to be on the edge of dependence. Ultimately, a survey of this kind cannot provide a fully representative insight into drug dependent adults.

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Tables

Table 10.1

Lifetime experience of illicit drug use, by age and sex

All adults *2007*

Drugs ever used	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	%	%	%	%	%	%	%	%
Men								
Cannabis	40.6	56.5	33.6	22.0	11.2	2.8	1.2	27.8
Amphetamines	8.0	23.7	11.4	4.7	2.5	-	-	8.6
Amyl nitrite (poppers)	4.2	11.5	9.8	3.6	0.7	0.1	-	5.2
Anabolic steroids	0.1	0.9	0.7	-	0.4	-	-	0.4
Cocaine	12.7	24.2	9.8	4.1	1.3	0.1	-	8.7
Crack	0.4	3.2	2.3	0.5	0.3	-	-	1.2
Ecstasy	9.2	24.1	9.3	2.3	0.6	-	-	7.7
Heroin	0.5	2.7	1.8	0.8	0.6	-	-	1.1
LSD	1.2	15.1	8.2	4.5	1.7	-	-	5.3
Magic mushrooms	6.7	17.1	10.3	4.0	2.0	0.2	0.7	6.9
Methadone	0.4	1.8	1.2	0.6	0.2	-	-	0.7
Tranquillisers	1.7	6.3	2.4	2.0	0.9	0.6	0.5	2.3
Volatile substances	1.6	5.5	2.7	0.8	0.1	-	-	1.8
Any drug	**42.3**	**59.9**	**37.5**	**23.4**	**12.2**	**3.5**	**1.7**	**29.9**
Women								
Cannabis	37.0	34.3	23.4	14.3	6.9	1.2	1.6	18.6
Amphetamines	6.0	11.1	5.2	2.9	1.2	-	0.4	4.3
Amyl nitrite (poppers)	6.4	5.8	3.9	0.8	0.1	-	-	2.7
Anabolic steroids	0.4	0.3	0.1	0.2	0.1	0.1	-	0.2
Cocaine	11.5	7.5	4.5	1.7	0.4	-	-	4.0
Crack	0.2	0.8	0.2	-	-	0.1	-	0.2
Ecstasy	9.2	8.8	3.9	0.3	-	-	-	3.5
Heroin	0.4	0.1	0.2	0.4	-	-	-	0.2
LSD	1.3	5.5	2.2	1.7	0.5	-	-	1.8
Magic mushrooms	3.5	5.8	5.2	2.7	1.5	0.1	1.3	3.2
Methadone	0.2	0.7	0.2	0.2	0.1	-	-	0.2
Tranquillisers	1.3	1.7	1.6	2.2	4.0	2.7	1.7	2.1
Volatile substances	2.7	2.5	0.7	-	0.2	-	0.3	1.0
Any drug	**39.6**	**38.6**	**26.8**	**16.5**	**10.5**	**4.1**	**4.3**	**21.8**
All adults								
Cannabis	38.8	45.3	28.4	18.1	9.0	1.9	1.5	23.1
Amphetamines	7.0	17.3	8.3	3.8	1.8	-	0.2	6.4
Amyl nitrite (poppers)	5.3	8.6	6.8	2.2	0.4	0.1	-	3.9
Anabolic steroids	0.3	0.6	0.4	0.1	0.2	0.1	-	0.3
Cocaine	12.1	15.7	7.1	2.9	0.8	0.1	-	6.3
Crack	0.3	2.0	1.2	0.3	0.1	0.1	-	0.7
Ecstasy	9.2	16.4	6.5	1.3	0.3	-	-	5.5
Heroin	0.5	1.4	1.0	0.6	0.3	-	-	0.6
LSD	1.3	10.2	5.2	3.1	1.1	-	-	3.5
Magic mushrooms	5.1	11.4	7.8	3.4	1.7	0.2	1.1	5.0
Methadone	0.3	1.3	0.7	0.4	0.1	-	-	0.5
Tranquillisers	1.5	4.0	2.0	2.1	2.4	1.7	1.2	2.2
Volatile substances	2.1	4.0	1.7	0.4	0.2	-	0.2	1.4
Any drug	**41.0**	**49.2**	**32.1**	**19.9**	**11.3**	**3.8**	**3.2**	**25.7**
Bases (unweighted)[a]								
Men	*268*	*409*	*609*	*495*	*572*	*459*	*362*	*3174*
Women	*295*	*619*	*797*	*634*	*705*	*565*	*567*	*4182*
All	*563*	*1028*	*1406*	*1129*	*1277*	*1024*	*929*	*7356*
Bases (weighted)								
Men	*525*	*600*	*704*	*590*	*538*	*360*	*253*	*3570*
Women	*513*	*613*	*718*	*602*	*556*	*397*	*381*	*3780*
All	*1038*	*1213*	*1423*	*1191*	*1095*	*757*	*634*	*7350*

[a] Bases shown are for those who responded to questions about having ever taken any drugs.

Table 10.2

Illicit drug use in the past year, by age and sex

All adults *2007*

Drugs used in the past year	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	%	%	%	%	%	%	%	%
Men								
Cannabis	23.7	23.6	8.0	4.1	1.9	0.4	0.3	10.1
Amphetamines	2.5	2.7	1.3	0.2	-	-	-	1.1
Amyl nitrite (poppers)	1.7	1.4	1.2	0.6	0.2	0.1	-	0.9
Anabolic steroids	0.1	-	0.1	-	0.2	-	-	0.1
Cocaine	9.2	9.2	3.0	0.9	-	-	-	3.6
Crack	0.4	1.2	0.7	-	-	-	-	0.4
Ecstasy	5.1	4.8	1.5	-	-	-	-	1.9
Heroin	0.1	1.1	0.5	-	-	-	-	0.3
LSD	1.1	1.0	0.1	-	-	-	-	0.4
Magic mushrooms	2.0	1.1	0.2	0.1	0.5	-	0.3	0.6
Methadone	-	0.9	0.6	-	-	-	-	0.3
Tranquillisers	0.4	2.8	1.1	-	0.3	0.5	0.2	0.9
Volatile substances	0.3	-	0.2	-	-	-	-	0.1
Any drug in the past year	**26.6**	**28.9**	**10.0**	**4.5**	**2.4**	**0.8**	**0.5**	**12.0**
Women								
Cannabis	18.9	6.9	4.1	1.9	1.0	0.2	0.7	5.0
Amphetamines	1.4	0.6	0.4	0.1	0.1	-	-	0.4
Amyl nitrite (poppers)	2.8	0.6	0.5	-	-	-	-	0.6
Anabolic steroids	-	0.3	-	-	-	0.1	-	0.1
Cocaine	4.3	3.6	1.0	0.3	0.1	-	-	1.4
Crack	-	-	-	-	-	-		-
Ecstasy	1.7	1.4	0.5	-	-	-	-	0.6
Heroin	-	-	-	-	-	-	-	-
LSD	-	-	0.1	-	-	-	-	0.0
Magic mushrooms	0.5	1.5	0.2	-	0.3	0.1	0.9	0.5
Methadone	-	0.1	-	-	-	-	-	0.0
Tranquillisers	0.4	0.4	0.5	0.3	0.8	0.7	0.3	0.5
Volatile substances	0.3	0.2	-	-	-	-	-	0.0
Any drug in the past year	**21.9**	**10.5**	**5.7**	**2.3**	**1.9**	**1.1**	**1.3**	**6.7**
All adults								
Cannabis	21.4	15.2	6.0	3.0	1.4	0.3	0.5	7.5
Amphetamines	1.9	1.6	0.9	0.1	0.1	-	-	0.7
Amyl nitrite (poppers)	2.2	1.0	0.8	0.3	0.1	0.1	-	0.7
Anabolic steroids	0.1	0.2	0.0	-	0.1	0.1	-	0.1
Cocaine	6.7	6.4	2.0	0.6	0.0	-	-	2.5
Crack	0.2	0.6	0.3	-	-	-	-	0.2
Ecstasy	3.4	3.1	1.0	-	-	-	-	1.2
Heroin	0.1	0.6	0.3	-	-	-	-	0.2
LSD	0.5	0.5	0.1	-	-	-	-	0.2
Magic mushrooms	1.3	1.3	0.2	0.1	0.4	0.1	0.7	0.6
Methadone	-	0.5	0.3	-	-	-	-	0.1
Tranquillisers	0.4	1.6	0.8	0.2	0.6	0.6	0.3	0.7
Volatile substances	0.3	0.1	0.1	-	-	-	-	0.1
Any drug in the past year	**24.3**	**19.6**	**7.9**	**3.4**	**2.2**	**1.0**	**1.0**	**9.2**
Bases (unweighted)[a]								
Men	*268*	*409*	*609*	*495*	*572*	*459*	*362*	*3174*
Women	*295*	*619*	*797*	*634*	*705*	*565*	*567*	*4182*
All	*563*	*1028*	*1406*	*1129*	*1277*	*1024*	*929*	*7356*
Bases (weighted)								
Men	*525*	*600*	*704*	*590*	*538*	*360*	*253*	*3570*
Women	*513*	*613*	*718*	*602*	*556*	*397*	*381*	*3780*
All	*1038*	*1213*	*1423*	*1191*	*1095*	*757*	*634*	*7350*

[a] Bases shown are for those who responded to questions about taking drugs in the past year.

Table 10.3

Illicit drug use in the past year (age-standardised),[a] by ethnicity and sex

All adults *2007*

Drugs used in the past year	Ethnicity			
	White	Black	South Asian	Other[b]
	%	%	%	%
Men				
Cannabis	10.4	17.1	2.2	8.7
Amphetamines	1.2	-	-	2.2
Amyl nitrite (poppers)	0.9	-	-	1.5
Anabolic steroids	0.1	-	-	-
Cocaine	3.8	4.7	1.0	4.3
Crack	0.4	1.3	-	-
Ecstasy	1.9	2.8	-	3.1
Heroin	0.4	-	-	-
LSD	0.4	-	-	-
Magic mushrooms	0.7	-	0.4	1.0
Methadone	0.3	-	-	-
Tranquillisers	1.0	3.4	-	-
Volatile substances	0.1	-	-	-
Any drug in the past year	**12.4**	**21.8**	**3.5**	**9.2**
Women				
Cannabis	5.0	5.0	0.8	10.9
Amphetamines	0.4	-	-	0.9
Amyl nitrite (poppers)	0.6	-	-	0.9
Anabolic steroids	0.1	-	-	-
Cocaine	1.5	-	0.5	1.5
Crack	-	-	-	-
Ecstasy	0.6	0.3	-	0.9
Heroin	-	-	-	-
LSD	-	-	-	0.9
Magic mushrooms	0.4	3.0	-	1.8
Methadone	0.0	-	-	-
Tranquillisers	0.5	0.3	-	-
Volatile substances	0.1	-	-	-
Any drug in the past year	**6.8**	**5.6**	**0.8**	**11.5**
Bases (unweighted)[b]				
Men	*2903*	*77*	*107*	*69*
Women	*3879*	*111*	*88*	*87*
Bases (weighted)				
Men	*3172*	*103*	*168*	*109*
Women	*3436*	*121*	*109*	*102*

[a] Only age-standardised data presented because the table is large, showing observed as well could make it confusing.

[b] Includes Chinese and mixed ethnic groups.

Table 10.4

Illicit drug use in the past year (age-standardised),[a] by region[b] and sex

All adults — *2007*

Drugs used in the past year	Government Office Region									Strategic Health Authority	
	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	London	South West	South East	South East Coast	South Central
	%	%	%	%	%	%	%	%	%	%	%
Men											
Cannabis	8.4	12.0	7.3	8.3	9.7	7.6	13.5	9.7	10.5	10.7	10.1
Amphetamines	2.0	0.9	1.4	0.8	1.3	1.6	-	2.7	1.1	1.6	0.7
Amyl nitrite (poppers)	1.4	0.1	1.3	0.7	1.6	0.4	0.5	1.8	0.9	1.0	1.0
Anabolic steroids	-	0.2	0.2	-	0.1	-	-	-	-	-	-
Cocaine	3.9	4.8	4.5	1.5	2.3	2.4	4.9	2.6	4.1	4.1	4.1
Crack	-	0.4	-	0.2	1.0	1.0	0.3	0.4	0.2	0.3	-
Ecstasy	3.1	2.3	1.6	0.4	3.1	1.0	1.9	2.0	1.8	2.0	1.6
Heroin	-	0.2	0.2	0.6	1.0	0.4	0.4	-	-	-	-
LSD	2.0	0.4	0.2	0.4	-	1.0	-	0.3	0.3	-	0.5
Magic mushrooms	-	0.6	0.7	0.8	0.3	0.4	-	1.0	1.4	1.4	1.4
Methadone	-	0.2	-	0.6	1.0	-	0.4	-	0.1	-	0.2
Tranquillisers	1.5	0.5	0.8	0.9	2.4	1.1	1.0	0.6	0.3	0.1	0.5
Volatile substances	-	0.1	-	-	-	0.4	-	0.2	-	-	-
Any drug in the past year	**11.6**	**14.5**	**12.4**	**9.4**	**11.8**	**7.9**	**14.8**	**10.8**	**12.3**	**12.3**	**12.0**
Women											
Cannabis	3.7	5.6	5.4	3.2	4.5	2.3	6.9	5.2	5.7	6.1	5.3
Amphetamines	-	1.5	0.2	-	0.2	0.4	-	0.6	0.2	0.2	0.3
Amyl nitrite (poppers)	1.0	1.8	0.5	-	0.9	-	-	0.2	0.3	-	0.6
Anabolic steroids	-	0.2	-	-	-	-	0.2	-	-	-	-
Cocaine	0.8	2.3	1.2	0.9	2.0	-	1.6	1.1	1.3	2.1	0.7
Crack	-	-	-	-	-	-	-	-	-	-	-
Ecstasy	-	1.2	1.1	-	-	-	0.7	1.2	0.1	0.3	-
Heroin	-	-	-	-	-	-	-	-	-	-	-
LSD	-	0.2	-	-	-	-	-	-	-	-	-
Magic mushrooms	-	0.8	-	0.3	-	-	1.3	0.4	0.7	0.5	0.7
Methadone	0.4	-	-	-	-	-	-	-	-	-	-
Tranquillisers	0.4	1.3	0.6	-	0.6	0.1	0.4	0.4	0.5	0.5	0.4
Volatile substances	-	0.2	-	0.8	-	-	-	-	-	-	-
Any drug in the past year	**4.1**	**8.1**	**7.3**	**4.6**	**6.7**	**2.4**	**8.9**	**5.8**	**7.6**	**7.8**	**7.3**
Bases (unweighted)[c]											
Men	*179*	*476*	*328*	*330*	*344*	*377*	*321*	*327*	*492*	*255*	*237*
Women	*258*	*622*	*463*	*349*	*438*	*476*	*469*	*417*	*690*	*369*	*321*
Bases (weighted)											
Men	*170*	*489*	*354*	*340*	*375*	*402*	*512*	*370*	*558*	*279*	*279*
Women	*206*	*507*	*387*	*294*	*395*	*416*	*576*	*372*	*627*	*336*	*292*

[a] Only age-standardised data presented because the table is large, showing observed as well could make it confusing.

[b] This table provides data for regional analysis both by Government Office Region (GOR) and Strategic Health Authority (SHA). The first eight columns represent GORs and SHAs of the same name, while the South East GOR (column nine) is divided into South East Coast SHA and South Central SHA, shown in the final two columns.

[c] Bases shown are for those who responded to questions about taking drugs in the past year.

Table 10.5

Prevalence of drug dependence in the past year, by age and sex

All adults *2007*

Signs of dependence on…[a]	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	%	%	%	%	%	%	%	%
Men								
Cannabis	12.0	6.9	2.3	0.8	1.4	-	0.3	3.7
Amphetamines	1.2	0.5	0.2	0.1	-	-	-	0.3
Cocaine	2.4	0.7	0.7	0.4	-	-	-	0.7
Crack	-	0.8	-	-	-	-	-	0.1
Ecstasy	0.7	0.1	-	-	-	-	-	0.1
Heroin/ methadone	-	1.1	0.4	-	-	-	-	0.3
Tranquillisers	-	1.2	0.3	-	0.3	-	-	0.3
Volatile substances	-	-	-	-	-	-	-	-
Cannabis only	10.4	6.5	1.5	0.8	1.4	-	0.3	3.3
Another drug(s) with or without cannabis dependence	2.9	2.6	1.4	0.5	0.3	-	-	1.3
Any drug dependence	**13.3**	**9.0**	**2.9**	**1.3**	**1.7**	**-**	**0.3**	**4.5**
Women								
Cannabis	5.3	3.0	1.8	0.3	0.5	0.1	0.4	1.7
Amphetamines	0.2	0.2	-	-	-	-	-	0.1
Cocaine	1.3	0.2	-	-	-	-	-	0.2
Crack	-	-	-	-	-	-	-	-
Ecstasy	-	-	-	-	-	-	-	-
Heroin/ methadone	-	0.1	-	-	-	-	-	0.0
Tranquillisers	0.3	0.2	0.3	0.2	0.7	0.5	0.2	0.3
Volatile substances	-	-	-	-	-	-	-	-
Cannabis only	5.3	3.0	1.8	0.3	0.5	0.1	0.4	1.7
Another drug(s) with or without cannabis dependence	1.7	0.5	0.3	0.2	0.7	0.5	0.2	0.6
Any drug dependence	**7.0**	**3.6**	**2.0**	**0.6**	**1.3**	**0.6**	**0.6**	**2.3**
All adults								
Cannabis	8.7	5.0	2.0	0.5	0.9	0.1	0.4	2.7
Amphetamines	0.7	0.3	0.1	0.0	-	-	-	0.2
Cocaine	1.8	0.4	0.4	0.2	-	-	-	0.4
Crack	-	0.4	-	-	-	-	-	0.1
Ecstasy	0.3	0.1	-	-	-	-	-	0.1
Heroin/ methadone	-	0.6	0.2	-	-	-	-	0.1
Tranquillisers	0.1	0.7	0.3	0.1	0.5	0.2	0.1	0.3
Volatile substances	-	-	-	-	-	-	-	-
Cannabis only	7.9	4.7	1.6	0.5	0.9	0.1	0.4	2.5
Another drug(s) with or without cannabis dependence	2.3	1.5	0.8	0.4	0.5	0.2	0.1	0.9
Any drug dependence	**10.2**	**6.3**	**2.5**	**0.9**	**1.5**	**0.3**	**0.5**	**3.4**
Bases (unweighted)								
Men	*268*	*409*	*609*	*495*	*572*	*459*	*362*	*3174*
Women	*295*	*619*	*797*	*634*	*705*	*565*	*567*	*4182*
All	*563*	*1028*	*1406*	*1129*	*1277*	*1024*	*929*	*7356*
Bases (weighted)								
Men	*525*	*600*	*704*	*590*	*538*	*360*	*253*	*3570*
Women	*513*	*613*	*718*	*602*	*556*	*397*	*381*	*3780*
All	*1038*	*1213*	*1423*	*1191*	*1095*	*757*	*634*	*7350*

[a] Dependency questions were not asked about LSD, magic mushrooms, amyl nitrite, and anabolic steroids, as these types of drugs are less associated with the development of dependency. Heroin and methadone were asked about together.

Table 10.6

Prevalence of drug dependence in the past year in 1993, 2000 and 2007, by age and sex

Aged 16 to 64 (74 for 2000 and 2007) and living in England — *1993, 2000 and 2007*

Signs of dependence on…[b]	Age group																			
	16-24			25-34			35-44			45-54			55-64			65-74		All 16-64[a]		
	1993	2000	2007	1993	2000	2007	1993	2000	2007	1993	2000	2007	1993	2000	2007	2000	2007	1993	2000	2007
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Men																				
Cannabis only	8.1	7.7	10.4	1.4	7.1	6.5	1.0	1.8	1.5	0.1	1.7	0.8	0.1	0.2	1.4	-	-	2.2	3.8	3.9
Other drug(s)[c]	3.1	5.8	2.9	0.7	2.6	2.6	0.1	1.1	1.4	0.2	0.3	0.5	0.3	0.3	0.3	0.1	-	0.9	1.9	1.5
Any drug dependence	**11.3**	**13.5**	**13.3**	**2.1**	**9.7**	**9.0**	**1.1**	**2.9**	**2.9**	**0.3**	**1.9**	**1.3**	**0.4**	**0.5**	**1.7**	**0.1**	**-**	**3.1**	**5.7**	**5.4**
Women																				
Cannabis only	2.9	5.0	5.3	0.7	2.4	3.0	0.4	0.8	1.8	0.1	0.2	0.3		0.1	0.5	-	0.1	0.8	1.6	2.1
Other drug(s)[c]	0.8	2.1	1.7	0.5	0.6	0.5	0.3	0.5	0.3	0.3	0.2	0.2	0.9	0.4	0.7	0.5	0.5	0.6	0.7	0.7
Any drug dependence	**3.7**	**7.0**	**7.0**	**1.3**	**3.0**	**3.6**	**0.7**	**1.2**	**2.0**	**0.3**	**0.4**	**0.6**	**0.9**	**0.4**	**1.3**	**0.5**	**0.6**	**1.4**	**2.3**	**2.8**
All adults																				
Cannabis only	5.6	6.3	7.9	1.1	4.8	4.7	0.7	1.3	1.6	0.1	0.9	0.5	0.0	0.1	0.9	-	0.1	1.5	2.7	3.0
Other drug(s)[c]	2.0	4.0	2.3	0.6	1.6	1.5	0.2	0.8	0.8	0.2	0.2	0.4	0.6	0.3	0.5	0.3	0.2	0.7	1.3	1.1
Any drug dependence	**7.5**	**10.3**	**10.2**	**1.7**	**6.4**	**6.3**	**0.9**	**2.1**	**2.5**	**0.3**	**1.2**	**0.9**	**0.6**	**0.5**	**1.5**	**0.3**	**0.3**	**2.2**	**4.0**	**4.1**
Bases (unweighted)																				
Men	*536*	*317*	*268*	*1064*	*616*	*409*	*880*	*673*	*609*	*770*	*648*	*495*	*715*	*524*	*572*	*451*	*459*	*3965*	*2778*	*2353*
Women	*613*	*346*	*295*	*1176*	*822*	*619*	*983*	*862*	*797*	*904*	*682*	*634*	*921*	*667*	*705*	*606*	*565*	*4597*	*3379*	*3050*
All	*1149*	*663*	*563*	*2240*	*1438*	*1028*	*1863*	*1535*	*1406*	*1674*	*1330*	*1129*	*1636*	*1191*	*1277*	*1057*	*1024*	*8562*	*6157*	*5403*
Bases (weighted)																				
Men	*825*	*546*	*525*	*1094*	*775*	*600*	*884*	*778*	*704*	*791*	*687*	*590*	*647*	*510*	*538*	*392*	*360*	*4241*	*3295*	*2957*
Women	*802*	*540*	*513*	*1062*	*747*	*613*	*910*	*760*	*718*	*815*	*683*	*602*	*682*	*534*	*556*	*437*	*397*	*4270*	*3263*	*3002*
All	*1627*	*1086*	*1038*	*2156*	*1523*	*1213*	*1793*	*1537*	*1423*	*1606*	*1369*	*1191*	*1329*	*1043*	*1095*	*829*	*757*	*8511*	*6558*	*5959*

[a] Based only on those aged 16 to 64 and living in England to retain comparability across survey years.

[b] Dependency questions were not asked about LSD, magic mushrooms, amyl nitrite, and anabolic steroids, as these types of drugs are less associated with the development of dependency. Heroin and methadone were asked about together.

[c] With or without cannabis dependence.

Table 10.7

Prevalence of drug dependence in the past year (age-standardised), by ethnicity and sex

All adults *2007*

Signs of dependence on…[a]	Ethnicity			
	White	Black	South Asian	Other[b]
	%	%	%	%
Men				
Cannabis	4.0	6.9	0.5	2.3
Amphetamines	0.3	-	-	1.0
Cocaine	0.6	0.8	1.0	1.0
Crack	0.1	1.3	-	-
Ecstasy	0.1	-	-	1.0
Heroin/ methadone	0.3	-	-	-
Tranquillisers	0.3	3.4	-	-
Volatile substances	-	-	-	-
Cannabis only	3.4	6.9	0.5	1.3
Other drug(s)[c]	1.3	5.5	1.0	1.0
Any drug dependence	**4.7**	**12.4**	**1.5**	**2.3**
Women				
Cannabis	1.6	4.5	0.2	5.0
Amphetamines	0.1	-	-	-
Cocaine	0.2	-	-	-
Crack	-	-	-	-
Ecstasy	-	-	-	-
Heroin/ methadone	0.0	-	-	-
Tranquillisers	0.4	0.3	-	-
Volatile substances	-	-	-	-
Cannabis only	1.5	4.5	0.2	5.0
Other drug(s)[c]	0.6	0.3	-	-
Any drug dependence	**2.2**	**4.8**	**0.2**	**5.0**
Bases (unweighted)[d]				
Men	*2904*	*77*	*107*	*69*
Women	*3879*	*111*	*88*	*87*
Bases (weighted)				
Men	*3173*	*103*	*168*	*109*
Women	*3436*	*121*	*109*	*102*

[a] Dependency questions were not asked about LSD, magic mushrooms, amyl nitrite, and anabolic steroids, as these types of drugs are less associated with the development of dependency. Heroin and methadone were asked about together.

[b] Includes Chinese and mixed ethnic groups.

[c] With or without cannabis dependence.

[d] Bases shown are for those responding to questions about cannabis dependence. Bases for other drug dependence may vary slightly.

Table 10.8

Prevalence of drug dependence in the past year (observed), by marital status and sex

All adults *2007*

Signs of dependence on…[a]	Marital status					
	Married	Cohabiting	Single	Widowed	Divorced	Separated
	%	%	%	%	%	%
Men						
Cannabis	1.0	7.2	9.2	-	1.7	1.1
Amphetamines	-	-	0.8	-	1.8	1.3
Cocaine	0.1	1.2	1.4	-	2.1	3.7
Crack	-	-	0.5	-	-	-
Ecstasy	-	-	0.5	-	-	-
Heroin/ methadone	-	0.3	0.9	-	-	-
Tranquillisers	0.1	0.4	0.9	-	-	-
Volatile substances	-	-	-	-	-	-
Cannabis only	1.0	6.2	7.7	-	1.7	1.1
Other drug(s)[b]	0.2	1.6	3.1	-	3.8	3.7
Any drug dependence	**1.1**	**7.8**	**10.7**	**-**	**5.5**	**4.8**
Women						
Cannabis	0.7	2.7	4.1	0.1	3.5	1.6
Amphetamines	-	-	0.2	-	0.2	-
Cocaine	-	-	1.0	-	-	-
Crack	-	-	-	-	-	-
Ecstasy	-	-	-	-	-	-
Heroin/ methadone	-	-	0.1	-	-	-
Tranquillisers	0.4	-	0.4	0.3	-	0.8
Volatile substances	-	-	-	-	-	-
Cannabis only	0.7	2.7	4.0	0.1	3.5	1.6
Other drug(s)[b]	0.4	-	1.5	0.3	0.2	0.8
Any drug dependence	**1.2**	**2.7**	**5.5**	**0.4**	**3.7**	**2.3**
Bases (unweighted)						
Men	*1664*	*279*	*694*	*229*	*231*	*79*
Women	*1840*	*335*	*725*	*702*	*436*	*144*
Bases (weighted)						
Men	*1944*	*395*	*911*	*115*	*150*	*56*
Women	*1912*	*376*	*758*	*391*	*257*	*86*

[a] Dependency questions were not asked about LSD, magic mushrooms, amyl nitrite, and anabolic steroids, as these types of drugs are less associated with the development of dependency. Heroin and methadone were asked about together.

[b] With or without cannabis dependence.

[d] Bases shown are for those responding to questions about cannabis dependence. Bases for other drug dependence may vary slightly.

Table 10.9

Prevalence of drug dependence in the past year (age-standardised), by equivalised household income and sex

All adults *2007*

Signs of dependence on...[a]	Equivalised household income[b]				
	Highest	2nd	3rd	4th	Lowest
	%	%	%	%	%
Men					
Cannabis	1.4	1.8	3.1	4.0	7.6
Amphetamines	-	-	0.5	-	0.5
Cocaine	0.4	1.1	0.6	-	1.2
Crack	0.2	-	-	-	0.6
Ecstasy	-	-	0.4	-	0.2
Heroin/ methadone	0.2	-	-	-	1.6
Tranquillisers	0.3	-	-	-	1.1
Volatile substances	-	-	-	-	-
Cannabis only	1.4	1.8	2.4	4.0	6.2
Other drug(s)[c]	0.7	1.1	0.7	-	3.4
Any drug dependence	**2.1**	**2.9**	**3.1**	**4.0**	**9.6**
Women					
Cannabis	0.1	1.5	0.9	4.1	2.0
Amphetamines	-	0.1	-	-	0.2
Cocaine	-	0.1	0.6	0.5	-
Crack	-	-	-	-	-
Ecstasy	-	-	-	-	-
Heroin/ methadone	-	-	-	-	0.1
Tranquillisers	-	0.3	0.4	-	1.1
Volatile substances	-	-	-	-	-
Cannabis only	0.1	1.5	0.9	4.1	2.0
Other drug(s)[c]	-	0.4	1.0	0.5	1.3
Any drug dependence	**0.1**	**1.9**	**2.0**	**4.6**	**3.3**
Bases (unweighted)[d]					
Men	*629*	*548*	*507*	*442*	*419*
Women	*562*	*601*	*733*	*672*	*743*
Bases (weighted)					
Men	*716*	*611*	*522*	*453*	*457*
Women	*531*	*545*	*624*	*536*	*626*

[a] Dependency questions were not asked about LSD, magic mushrooms, amyl nitrite, and anabolic steroids, as these types of drugs are less associated with the development of dependency. Heroin and methadone were asked about together.

[b] See the Glossary for a definition of equivalised household income.

[c] With or without cannabis dependence.

[d] Bases shown are for those responding to questions about cannabis dependence. Bases for other drug dependence may vary slightly.

Table 10.10

Prevalence of drug dependence in the past year (age-standardised), by region[a] and sex

All adults *2007*

Signs of dependence on…[b]	Government Office Region									Strategic Health Authority	
	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	London	South West	South East	South East Coast	South Central
	%	%	%	%	%	%	%	%	%	%	%
Men											
Cannabis	3.4	4.6	2.9	3.3	4.0	3.1	3.6	3.6	4.8	5.4	4.3
Amphetamines		0.3	0.7	-	0.7	1.0	-	-	0.3	0.7	-
Cocaine	0.3	0.8	0.8	-	0.6	0.6	0.7	0.4	1.2	1.1	1.3
Crack	-	0.2	-	-	0.6	-	0.2	-	-	-	-
Ecstasy	-	0.1	-	-	-	0.6	-	-	0.3	0.7	-
Heroin/ methadone	-	0.2	-	0.6	0.6	0.4	0.4	-	0.1	-	0.2
Tranquillisers	-	0.2	0.4	0.6	1.1	0.4	0.4	-	-	-	-
Volatile substances	-	-	-	-	-	-	-	-	-	-	-
Cannabis only	3.4	3.8	2.7	3.1	3.5	1.6	3.4	3.3	4.2	4.8	3.6
Other drug(s)[c]	0.3	1.4	1.9	0.6	2.3	1.4	1.4	0.4	1.3	1.1	1.5
Any drug dependence	**3.7**	**5.3**	**4.6**	**3.7**	**5.7**	**3.1**	**4.8**	**3.6**	**5.5**	**5.9**	**5.1**
Women											
Cannabis	1.0	2.6	1.8	0.7	0.7	0.6	3.7	1.3	1.4	1.3	1.5
Amphetamines	-	0.2	-	-	-	-	-	-	0.1	0.2	-
Cocaine	-	0.1	0.6	-	0.8	-	0.1	-	-	-	-
Crack	-	-	-	-	-	-	-	-	-	-	-
Ecstasy	-	-	-	-	-	-	-	-	-	-	-
Heroin/ methadone	0.4	-	-	-	-	-	-	-	-	-	-
Tranquillisers	0.4	0.9	0.4	-	0.6	0.1	0.3	0.3	0.2	0.2	0.1
Volatile substances	-	-	-	-	-	-	-	-	-	-	-
Cannabis only	1.0	2.5	1.8	0.7	0.7	0.6	3.7	1.3	1.4	1.3	1.5
Other drug(s)[c]	0.4	1.1	1.0		1.4	0.1	0.4	0.3	0.3	0.4	0.1
Any drug dependence	**1.4**	**3.6**	**2.8**	**0.7**	**2.1**	**0.7**	**4.1**	**1.6**	**1.7**	**1.7**	**1.7**
Bases (unweighted)[d]											
Men	*179*	*476*	*328*	*330*	*344*	*377*	*321*	*327*	*492*	*255*	*237*
Women	*258*	*622*	*463*	*349*	*438*	*476*	*469*	*417*	*690*	*369*	*321*
Bases (weighted)											
Men	*170*	*489*	*354*	*340*	*375*	*402*	*512*	*370*	*558*	*279*	*279*
Women	*206*	*507*	*387*	*294*	*395*	*416*	*576*	*372*	*627*	*336*	*292*

[a] This table provides data for regional analysis both by Government Office Region (GOR) and Strategic Health Authority (SHA). The first eight columns represent GORs and SHAs of the same name, while the South East GOR (column nine) is divided into South East Coast SHA and South Central SHA, shown in the final two columns.

[b] Dependency questions were not asked about LSD, magic mushrooms, amyl nitrite, and anabolic steroids, as these types of drugs are less associated with the development of dependency. Heroin and methadone were asked about together.

[c] With or without cannabis dependence.

[d] Bases shown are for those responding to questions about cannabis dependence. Bases for other drug dependence may vary slightly.

Table 10.11

Treatment currently received for a mental or emotional problem (observed), by drug dependence

All adults *2007*

Current treatment for a mental or emotional problem	Type of dependence: No dependence	Cannabis only	Other drugs(s) with or without cannabis
	%	%	%
All adults			
No treatment	93	86	64
Medication only	5	7	14
Counselling or therapy only	1	4	12
Both medication and counselling	1	3	10
Bases (unweighted)	*7139*	*138*	*58*
Bases (weighted)	*7086*	*180*	*68*

Table 10.12

Psychoactive medication currently taken (observed), by drug dependence

All adults *2007*

Type of medication	Type of dependence: No dependence	Cannabis only	Other drugs(s) with or without cannabis
	%	%	%
All adults			
Hypnotics	0	1	8
Anxiolytics	1	2	10
Antidepressants	5	8	12
Drugs used in the treatment of psychosis	1	1	6
Drugs used in the treatment of ADHD	0	0	-
Any medication	**6**	**10**	**25**
Bases (unweighted)[a]	*7136*	*138*	*58*
Bases (weighted)	*7084*	*180*	*68*

[a] Bases shown are those responding to the questions about psychoactive medication. Bases for different types of medication may vary slightly.

Table 10.13

Current counselling or therapy treatment for a mental or emotional problem (observed), by drug dependence

All adults *2007*

Type of counselling or therapy	Type of dependence: No dependence	Cannabis only	Other drugs(s) with or without cannabis
	%	%	%
All adults			
Psychotherapy	1	4	11
Behaviour or cognitive therapy	0	1	6
Art, music, drama therapy	0	-	4
Social skills training	0	-	1
Marital or family therapy	0	0	2
Sex therapy	-	0	0
Counselling	1	3	6
Other therapy	0	0	5
Any counselling or therapy	**2**	**7**	**22**
Bases (unweighted)[a]	*7159*	*139*	*58*
Bases (weighted)	*7101*	*181*	*68*

[a] Bases shown are for those responding to the question about counselling or therapy.

Table 10.14

Health care services used for a mental or emotional problem (observed), by drug dependence

All adults *2007*

Type of health care service	Type of dependence: No dependence	Cannabis only	Other drugs(s) with or without cannabis
	%	%	%
All adults			
Inpatient stay in past quarter	0	0	-
Outpatient visit in past quarter	1	4	3
Spoken with GP in past 2 weeks	2	4	15
Spoken with GP in past year	10	27	32
Any health care service	**11**	**29**	**32**
Bases (unweighted)[a]	*7157*	*139*	*58*
Bases (weighted)	*7099*	*181*	*68*

[a] Bases shown are for those responding to the question about GP in past 2 weeks.

Table 10.15

Community and day care services used in the past year (observed), by drug dependence

All adults *2007*

Type of community care service	Type of dependence		
	No dependence	Cannabis only	Other drugs(s) with or without cannabis
	%	%	%
All adults			
Psychiatrist	1	2	6
Psychologist	1	1	2
Community Psychiatric Nurse	1	3	2
Community learning difficulty nurse	0	-	-
Other nursing services	3	3	1
Social worker	1	3	8
Self help/support group	1	1	2
Home help/home care worker	1	1	1
Outreach worker	0	3	2
Community day care centre[a]	1	3	15
Any community or day care service	**7**	**12**	**22**
Bases (unweighted)[b]	*7156*	*139*	*58*
Bases (weighted)	*7099*	*181*	*68*

[a] Includes community mental health centre, day activity centre, sheltered workshop and other day service.

[b] Bases shown are for those responding to question about community/day care service.

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Gambling behaviour 11

Heather Wardle, John D'Souza and Michael Farrell

Summary

- 'Problem gambling' is gambling to a degree that compromises, disrupts or damages family, personal or recreational pursuits.
- This chapter provides an overview of gambling behaviour and problem gambling, and their socio-demographic associations.
- Overall around two-thirds (65.9%) of adults spent money on a gambling activity in the past year. Men were more likely than women to gamble. The highest rate for men was observed in those aged 25-34 (75.4%), while for women it was in those aged 55-64 (69.5%).
- 3.2% of adults met one or more of the criteria for problem gambling, and so were considered to be at least 'at risk' of problem gambling.
- While participation in gambling in the past year was relatively low in men aged 16-24, in those who did gamble, the proportion at risk of problem gambling was higher than for any other age group.
- 0.7% of people met three or more of the diagnostic criteria, the threshold for problem gambling. 0.3% of people met the threshold of five or more criteria, indicative of pathological gambling. Men were more likely than women to meet both of these thresholds. These figures are in line with results from the British Gambling Prevalence Survey.
- Data were standardised to take account of the different age profiles within ethnic groups. Participation in gambling in the past year was highest in white adults (73.5% men, 63.1% women) and lowest in South Asian adults (53.5% for men, 30.1% for women). Ethnicity was not significantly associated with meeting criteria for problem gambling, although this may be due to small sample sizes.
- In men, past year gambling was most likely in those in the highest equivalised household income quintile (75.7%) and least likely in those in the lowest income quintile (63.4%). This is in line with findings from previous studies. However, in women, the pattern was different. Past year participation was lowest in women in the highest income quintile (56.1%), and generally increased as household income decreased (71.5% for the 4th income quintile).
- While the profile of use for most types of treatment and services was similar among those meeting one or two problem gambling criteria and those meeting none, those meeting three or more criteria had a higher level of usage across all types.

11.1 Introduction

'Problem gambling' is gambling to a degree that compromises, disrupts or damages family, personal or recreational pursuits.[1] Pathological gambling is a term used to describe a greater degree of harmful impact on gamblers and on the people around them. This more severe form is classified in the Diagnostic and Statistics Manual of Mental Disorders IV (DSM-IV) as an Impulse Control Disorder.[2]

Problem gambling is relatively rare in Britain. The 2007 British Gambling Prevalence Survey (BGPS) estimated that 0.6% of the British population experience problems because of their gambling behaviour. The rate has remained unchanged since the previous BGPS was conducted in 1999,[3] and equates to around 250,000 adults currently being problem gamblers in Britain. The prevalence of problem gambling in Britain is similar to that observed in Canada, New Zealand and Germany, and lower than that in South Africa, USA, Australia and Singapore.[4]

Problem gambling is increasingly a subject of public health concern and policy interest. Over the past decade, the gambling landscape has changed dramatically, with a rise in remote gambling opportunities and the introduction of new gaming legislation. The Gambling Act 2005 noted the need to provide adequate protection for vulnerable people from the potential harm associated with gambling.[5] The British Medical Association recently highlighted the insufficient treatment facilities available and argued for providing services for problem gambling on the NHS similar to those for drug and alcohol problems.[6]

A review of psychiatric comorbidity research concluded that pathological gamblers frequently have co-existing substance dependency and mood disorders.[7,8] This, and the expected relationship between gambling behaviour and other psychiatric disorders, behaviours and socio-economic factors, warranted inclusion of gambling behaviour questions in the Adult Psychiatric Morbidity Survey (APMS) 2007 for the first time. Chapter 12 focuses on co-morbidity, and problem gambling has been included in the analyses presented in that chapter.

This chapter provides an overview of gambling behaviour and some socio-demographic associations, and places these findings in the context of some of the existing research in this area.

11.2 Definition and assessment

11.2.1 Gambling behaviour and problem gambling

The DSM-IV lists ten diagnostic criteria relating to gambling; a diagnosis of pathological gambling is made if a person meets at least five of these.

DSM-IV criteria relating to gambling

- Preoccupied with gambling;
- Needs to gamble with increasing amounts of money;
- Repeated unsuccessful efforts to cut back or stop gambling;
- Restless or irritable when attempting to cut down or stop gambling;
- Gambles as a way of escaping from problems or relieving a dysphoric mood;
- After losing money gambling, often returns another day in order to get even;
- Lies to conceal the extent of involvement with gambling;
- Commits illegal acts to finance gambling;
- Jeopardises a significant relationship, job, or opportunity because of gambling; and
- Relies on others to provide money to relieve a desperate financial situation caused by gambling.

11.2.2 Measuring problem gambling behaviour

The problem gambling screen used on APMS 2007 is based on the DSM-IV criteria, and was administered using Computer Assisted Self-Interviewing (CASI).[9]

The gambling questions were divided into two sections. The initial section established whether a respondent had spent any money on gambling in the past year. Examples of gambling activities were provided to indicate the range of types included:

By 'gambling' we mean things like:

- Buying lottery tickets or scratch cards for yourself;
- Playing games or making bets for money on the internet (online gambling);
- Playing football pools, bingo or fruit machines;
- Playing games or making bets with friends for money;
- Betting on races and/or with a bookmaker; and
- Table games in a casino.

Have you spent any money on any of these things in the last 12 months?

Those who answered 'yes' were routed to the problem gambling screen. Those who answered 'no' were asked a check question about whether they had gambled just occasionally in the past year, perhaps to buy a lottery ticket or scratch card. An additional 6% of respondents were identified as past year gamblers using this method, and were also routed to the problem gambling screen.

The ten-item problem gambling screen was used to identify past year gamblers who had experienced problems with their gambling behaviour. There is no gold standard problem gambling screen: many exist and different instruments have been used in different contexts.[10] The DSM-IV criteria were chosen for inclusion in APMS in part because the DSM-IV-Multiple Response screen had been used in BGPS 1999 and 2007. The APMS problem gambling screen was based on the one used in BGPS. However, it is worth noting that there were differences in how the screen was administered in the two surveys:

- BGPS 2007 used a paper self-completion booklet, while APMS used CASI.
- To aid use of the CASI program, the response categories in APMS were yes/no/don't know, rather than the multiple response categories used within BGPS.[11]
- To reduce respondent fatigue and irritation the criterion relating to 'feeling restless or irritable when trying to cut down on gambling' was asked only of those who reported 'making unsuccessful efforts to cut back or stop gambling'. The impact of this routing could underestimate problem gambling prevalence to the order of 0.04% compared to the BGPS 2007 approach.[12]
- While the problem gambling questions on APMS were asked only of those who had gambled in the past 12 months, the questions themselves were not explicitly time-bound. Although phrased in the present tense it was technically possible on some to answer about an event that had happened more than a year ago. It therefore is not strictly possible to delineate past year from lifetime problem gambling using these data.

The number of DSM-IV criteria endorsed were summed to generate a score. Respondents were included in the analysis if they had given a yes or no response to least half of the items. 4% of respondents were excluded, as they had not answered enough items for a score to be calculated. Those who had not gambled in the past year were given a score of zero.

DSM-IV recommends that people screen positive for pathological gambling if they meet five or more of the diagnostic criteria. Some studies have also used a score of three or more to identify an inclusive 'problem gambling' category,[13] and a score of one or more to include those 'at risk' of problem gambling.[14] Pathological gambling has a low prevalence, and it

would require a larger sample to obtain adequate numbers for full analysis of the factors associated with it. In the tables in this chapter, the cumulative proportion of respondents with a score of one or more, three or more, and five or more are presented: significance testing has been performed for the first two groups. It should be noted that, as for the other disorders where reported prevalence is based on self-reported data, a full diagnosis of pathological gambling would require a clinical assessment.

11.3 Results

11.3.1 Gambling behaviour by age and sex

Gambling in the past year

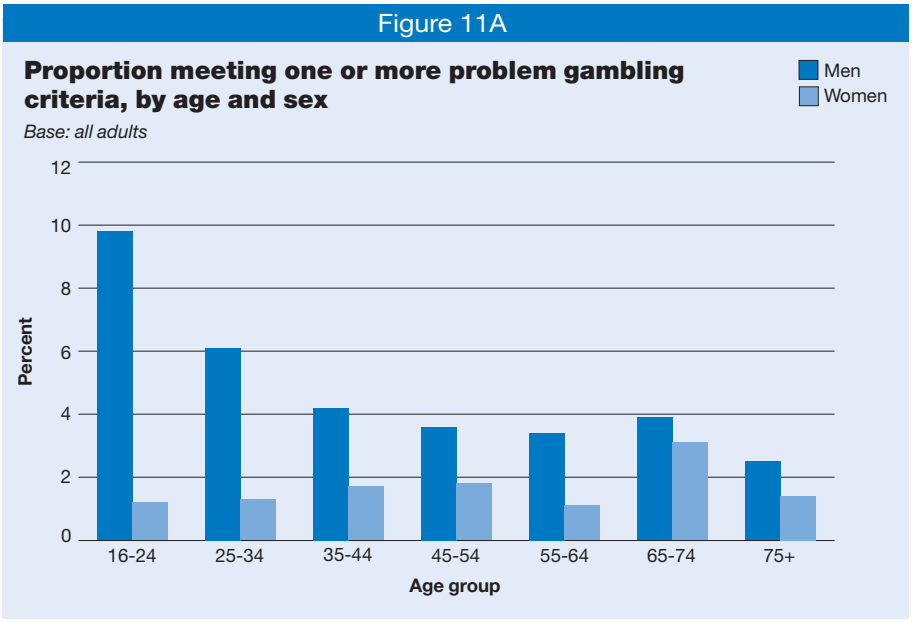
Overall, two thirds (65.9%) of adults reported spending money on a gambling activity in the past year. Participation in gambling was higher in men (70.8%) than women (61.3%); a difference observed across all age groups.

For both men and women, gambling was least prevalent in the youngest (16-24) and oldest (75 and over) adults. The highest rate for men was observed among those aged 25-34 (75.4%), while for women it was those aged 55-64 (69.5%). The finding that past year gambling is less common in women and in those aged 16-24 (which includes 16 and 17 year olds, who have the fewest legal opportunities to gamble) is a pattern found in other surveys of gambling, both in the UK and abroad.[15]

Meeting one or more criteria for problem gambling

Overall, 3.2% of people endorsed one or more DSM-IV criteria for problem gambling, the threshold used to indicate people at least at risk of problem gambling. Men were more likely than women to meet one or more criteria (4.9% of men, 1.6% of women). Meeting criteria for problem gambling was also associated with age. One man in 10 (9.8%) aged 16-24 met one or more criteria, compared with one in 50 (2.5%) aged 75 and over. The relationship between age and meeting criteria for problem gambling was less clear and less pronounced in women. **Figure 11A**

Figure 11A

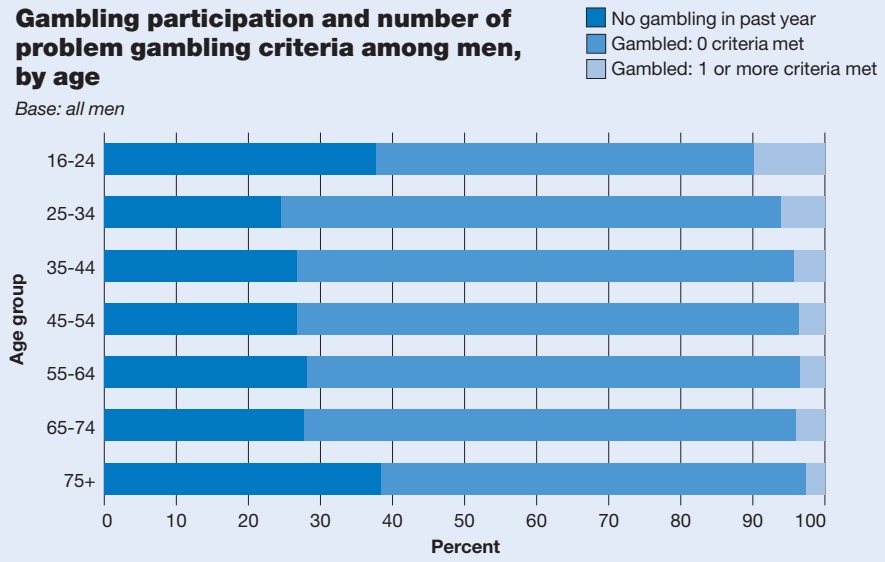


While participation in gambling in the past year was relatively low in men aged 16-24, in those that did gamble the proportion at risk of problem gambling was higher than for any other age group. **Figure 11B**

Figure 11B

Gambling participation and number of problem gambling criteria among men, by age

Base: all men



Meeting the thresholds for problem and pathological gambling

Overall, 0.7% of people endorsed three or more diagnostic criteria, the threshold used to indicate problem gambling. This is consistent with BGPS 2007, which found between 0.5% and 0.8% of British adults were problem gamblers.[16] 0.3% of adults met the threshold of five or more criteria, indicating pathological gambling.

A higher proportion of men than women met the threshold for problem gambling (1.2% of men, 0.2% of women), and for pathological gambling (0.6% of men, 0.1% of women). Problem (and pathological) gambling was not significantly associated with age, although this could be an artefact of sample size. **Table 11.1**

11.3.2 Gambling by other characteristics

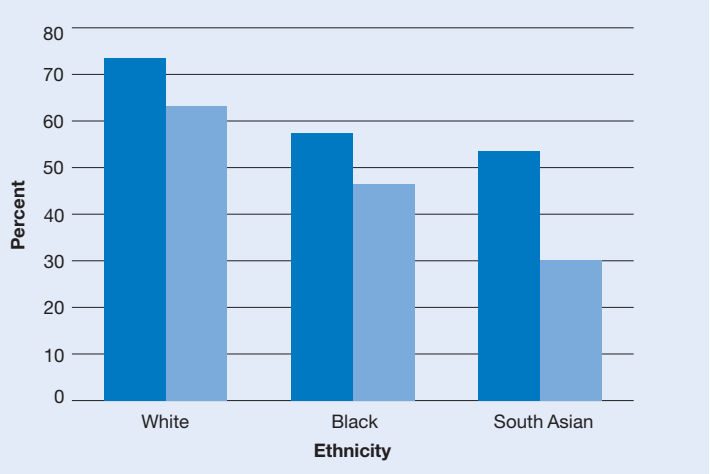
Ethnicity

Data were standardised to take account of the different age profiles of each ethnic group. Engagement with gambling in the past year was found to be strongly associated with ethnicity.[17] Past year participation was highest in white adults (73.5% men, 63.1% women) and lowest in South Asian adults (53.5% for men, 30.1% for women). Ethnicity was not significantly associated with meeting criteria for problem gambling, although again this may be due to sample size. **Table 11.2, Figure 11C**

Figure 11C

Past year gambling (age-standardised), by ethnicity and sex

Base: adults of white, black and South Asian origin



Marital status

Past year gambling varied by marital status. Among men, those who were single or widowed had the lowest levels of participation (65.1% and 65.4% respectively) and those who were cohabiting the highest (78.4%). These results are unsurprising, given that age is strongly associated with marital status and that men aged 16 to 24 or 75 and over were the least likely to report gambling in the past year.[18] A similar pattern was observed in women, although past year participation was lowest among the separated.

Marital status was also significantly associated with meeting one or more criteria for problem gambling, although the pattern was not entirely clear. The proportion was highest in divorced men (8.7%) and lowest in married men (3.3%). In women, the rates were highest in those who were separated (3.9%) or widowed (2.5%). Meeting three or more or five or more criteria was not significantly associated with marital status. **Table 11.3**

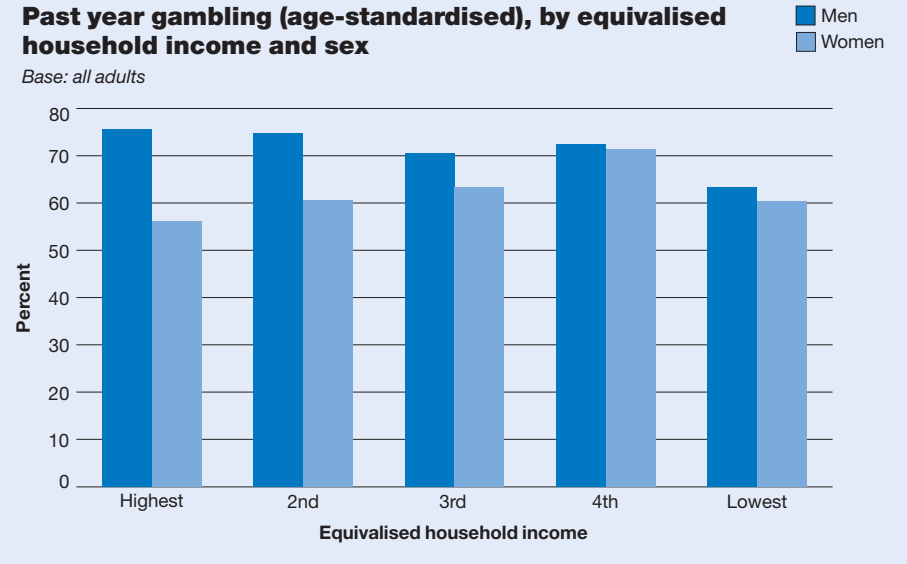
Equivalised household income

The household income measure has been equivalised to take account of the number of adults and children living in a household (see the Glossary for a definition of equivalised household income). Data have been standardised to take account of the differing age profiles of people belonging to each household income quintile. Previous research has found that participation in gambling is associated with household income level, with those living in the highest income households being the most likely to gamble in the past year.[19]

Among men, past year gambling was indeed highest in those in the highest income quintile (75.7%) and lowest in those in the lowest income quintile (63.4%), in line with findings from previous studies. However, among women, the pattern was different. Past year participation was lowest in women in the highest income quintile (56.1%) and broadly increased as household income decreased (71.5% for the 4th income quintile). This trend did not hold for women in the lowest income quintile however, in whom participation in past year gambling was 60.5%. As Figure 11D shows, the difference in past year gambling prevalence between men and women tended to reduce as household income declined.

Figure 11D

Figure 11D



Among men, those in the lower income quintiles were more likely than those in the higher income quintiles to meet at least one criterion for problem gambling. Among women, there was no clear pattern. **Table 11.4**

11.3.3 Treatment and service use

Respondents were asked about a range of types of treatment and services. These included current use of psychoactive medication, and counselling and therapy for any mental or

emotional reason, together with use of a range of health, community and day care services over the last year. These are all defined in more detail, including variation in the time frame referred to, in the Glossary.

While for most treatments and services the profile of use was similar in those meeting at least one problem gambling criteria and in those meeting none, people meeting three or more criteria had higher levels of usage across all types of treatment and services. Around a quarter of adults (26%) meeting three or more criteria (the threshold for problem gambling) were receiving current medication, counselling or therapy for a mental health or emotional problem. This compared with 7% of adults meeting no problem gambling criteria.

Adults screening positive for problem gambling (meeting 3 or more criteria) were around ten times more likely than those meeting no criteria to be in receipt of counselling or therapy (11%, compared with 1%).

20% of adults meeting three or more criteria reported using a health care service for a mental or emotional reason in the past year, compared with 11% of those who met no problem gambling criteria. The higher reported use of day care services in those screening positive was also significant with 14% of those meeting three or more criteria reporting using a day care service compared with 4% of those who met no problem gambling criteria.

Table 11.6

11.4 Discussion

Gambling has arrived on the public health and political agenda, with a wealth of legislative change and heated debate about casinos and regulation regimes. Much of the discussion has anticipated a rise in problem gambling due both to the increased availability of gambling opportunities and to the increasing popularity of certain types of gambling activities, such as online casinos or fixed odd betting terminals.[20] However data collected in the first two British Gambling Prevalence Surveys (BGPS) and in APMS 2007 suggest the prevalence of problem gambling has so far remained stable (at least since 1999) and relatively uncommon. About 0.7% of the adult non-institutional English population screen positive for problem gambling. At 0.3%, screening positive for pathological gambling has too low a prevalence to be properly profiled using the sample sizes in surveys like these, and further research is needed to describe this more severe group.

A majority of adults in England participated in gambling to some extent in the past year, with rates being highest in white adults and in men. Interestingly, problem gambling was not always highest in the socio-economic groups most likely to gamble. For example young men and men living in low income households both had relatively low rates of gambling participation, but when they did gamble they were particularly likely to meet at least one problem gambling criterion.

The APMS data show that, while some factors are strongly associated with gambling and with problem gambling, the picture is complex, and different for men and women. For example, living in households with the highest income was associated with the highest rates of gambling participation in men, but the lowest rates in women. However affordability seems to affect participation in the lowest income households, with rates being relatively low in this group for both men and women. BGPS data show that the gambling activities of women are different from those of men, and a recent study of women's National Lottery play highlighted how their practice and expenditure regulation was modified by the demands of family budgeting.[21] The prevalence of problem gambling in women is about a third that of men, compounding the problems of sample size. While the APMS data cannot clearly profile women problem gamblers, it is adequate to suggest that the patterns of association are different from those in men.

Currently few specific treatment services aimed at treating problem gambling are available on the NHS. Despite this, a quarter of people screening positive for problem gambling (i.e. meeting three or more of the DSM-IV problem gambling criteria) were also receiving some

current medication, counselling or treatment for a mental health or emotional problem. Use of health and day care services were also somewhat higher in problem gamblers than the rest of the population. That said, three quarters of problem gamblers did not report currently receiving any treatment for a mental or emotional problem. This highlights the potential unmet need both for support services and treatment in people who experience severe problems with their gambling behaviour, and for early intervention support services in those at risk of developing gambling problems.

References and notes

1 Lesieur HR and Rosenthal MD (1991). Pathological gambling: A review of the literature (prepared for the American Psychiatric Association Task Force on DSM-IV Committee on disorders of impulse control not elsewhere classified). *Journal of Gambling Studies* 7, 1, 5-40.

2 American Psychiatric Association (1994) The fourth edition of the Diagnostic and Statistical Manual of mental Disorders (DSM-IV).

3 This refers to problem gambling as measured by the DSM-IV. In both BGPS 1999 and BGPS 2007 additional screening instruments were also used that showed comparable results.

4 Cox B, Yu N, Afifi T and Ladouceur R (2005). A National Survey of Gambling Problems in Canada. *Canadian Journal of Psychiatry*: 4.

Abbot M and Volberg R (2000) *Taking the pulse on gambling and problem gambling in New Zealand: A report on phase one of the 1999 national prevalence survey*. Dept of Internal Affairs, New Zealand.

Collins P and Barr G (2007). *Gambling and problem gambling in South Africa: The national 2006 prevalence study*. National Centre for the Study of Gambling at the University of Cape Town.

Welte J, Barnes G, Wieczorek W, Tidwell M and Parker J (2001). Alcohol and Gambling Pathology among U.S Adults: Prevalence, Demographic Patterns and Comorbidity. *Journal of Studies on Alcohol*: 706-712.

Ministry of Community Development (2005) *Youth and Sports Survey* Ministry of Community Development.

Buth S and Stöver H (2008) Gambling participation and gambling problems in Germany: Results of a nationwide representative survey, *Addiction Treatment*: 9, 3-9.

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

6 British Medical Association (2007) 'Gambling addiction and its treatment within the NHS: A guide for healthcare professionals' http://www.bma.org.uk/ap.nsf/Content/gamblingaddiction

7 Crockford DN and el-Guebaly N (1998) Psychiatric comorbidity in pathological gambling: a critical review. *Canadian Journal of Psychiatry*: 43(1):43-50.

8 This has been supported by various studies examining gambling behaviour and its comorbidities. For example, a study of pathological gamblers seeking treatment showed that a comorbid psychiatric disorder was present among 62% of those seeking treatment. The most common disorders were personality disorders and alcohol disorders. Likewise, a recent study of 200 problem gamblers in Australia has shown strong correlations between problem gambling and depression, psychological distress and hazardous levels of alcohol consumption. Jackson A (2008) *Risk and Protective Factors in Problem Gambling, European Association for the Study of Gambling*, 8th Annual Conference.

9 CASI was used as this tends to elicit more honest reporting than face to face questioning. Tourangeau R, Rips L, Rasinski, K (2000) *The Psychology of Survey Responses* Cambridge.

10 For a more information about the range of screens available and an evaluation of them, see Abbott M and Volberg R. The Measurement of Adult Problem and Pathological Gambling. *International Gambling Studies*: 6 (2).

11 Abbott M and Volberg R (2006) The Measurement of Adult Problem and Pathological Gambling. *International Gambling Studies*: 6 (2).

12 In the BGPS 2007 all past year gamblers were asked all 10 DSM-IV criteria, whereas in APMS 2007 the criterion relating to feeling restless or irritable when trying to cut down on gambling (4) was asked only of those who reported that they had made unsuccessful efforts to stop gambling (3). This routing means that although both studies use a definition of "problem gambling" as meeting 3 or more criteria, some caution should be exercised when comparing figures produced from the two surveys. In particular, the effect of the routing is that APMS 2007 is likely to yield slightly lower estimates of problem gambling prevalence that would have been observed if all respondents were asked all ten items. People not classified as problem gamblers under APMS 2007 who would have been classified as problem gamblers had they been routed to criterion 4 are those who: (i) met exactly two criteria; and (ii) were routed away from answering criterion 4; and (iii) would have responded positively if they had been asked it. About 0.4% of respondents met exactly two criteria and were not asked to answer criterion 4. Using BGPS 2007 data, it is estimated that approximately 10% of these respondents would have given a positive answer, increasing their number of criteria met to 3, and therefore would have been classified as problem gamblers had they answered this question. This suggests that the estimates of problem gambling prevalence using the APMS routing are likely to be slightly underestimated to the order of 0.04% (overall) when compared with estimates generated using the approach on BGPS.

13 Fisher S (1996) *Gambling and Problem Gambling among Casino Patrons* University of Plymouth; Volberg R. (1997) *Gambling and Problem Gambling in Oregon*, Report to the Oregon Gambling Addiction Treatment Foundation.

14 Shaffer HJ, Hall MN, Vanderbilt J (1997) *Estimating the prevalence of disordered gambling behaviour in the United States and Canada: A Meta-analysis*. Boston, MA Harvard Medical School on Addictions.

15 For further information see: http://www.gamblingcommission.gov.uk/UploadDocs/publications/Document/Comparisons%20with%20other%20countries.pdf

16 The problem gambling prevalence estimate from the BGPS 2007 was 0.6% within a confidence interval range of 0.5% - 0.8%. The APMS 2007 adjusted and unadjusted estimates fall within this confidence interval; 0.74 adjusted and 0.70 unadjusted.

17 Age-standardisation adjusts the age and sex profile of respondents within each sub-group to match the age and sex distribution of the English population. However, when dealing with low prevalence estimates, there can sometimes be only a few respondents in each sub-group. Adjusting the weighting to age-standardise these few respondents to the English population profile can therefore disproportionately effect these estimates and should be viewed with caution.

18 See the Glossary for a discussion of why marital status was not age-standardised.

19 Wardle H, Sproston K, Orford J, Erens B, Griffiths M, Constantine R, Pigott S (2007) *British Gambling Prevalence Survey 2007*, NatCen, p. 58.

20 Griffiths MD and Barnes A (2008) Internet gambling: An online empirical study among student gamblers *International Journal of Mental Health and Addiction*: 6, 194-204.

21 Casey E (2008) *Women, Pleasure and the Gambling Experience* Ashgate.

Tables

Table 11.1

Gambling behaviour and number of problem gambling criteria met, by age and sex

All adults *2007*

Gambling behaviour and problem gambling criteria	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	%	%	%	%	%	%	%	%
Men								
Gambled in the past year	62.3	75.4	73.2	73.2	71.9	72.2	61.6	70.8
Number of diagnostic criteria met[a]								
0	90.2	93.9	95.8	96.4	96.6	96.1	97.5	95.1
1+	9.8	6.1	4.2	3.6	3.4	3.9	2.5	4.9
3+	2.3	1.9	0.9	1.4	0.6	0.5	0.2	1.2
5+	0.9	1.4	-	0.9	0.1	0.4	0.2	0.6
Women								
Gambled in the past year	52.7	59.2	63.4	68.7	69.5	62.0	48.1	61.3
Number of diagnostic criteria met[a]								
0	98.8	98.7	98.3	98.2	98.9	96.9	98.6	98.4
1+	1.2	1.3	1.7	1.8	1.1	3.1	1.4	1.6
3+		0.2	0.5	0.2	0.1	0.1	0.3	0.2
5+	-	-	0.1	0.2	-	-	0.3	0.1
All adults								
Gambled in the past year	57.6	67.2	68.2	70.9	70.7	66.9	53.5	65.9
Number of diagnostic criteria met[a]								
0	94.5	96.3	97.1	97.3	97.8	96.5	98.2	96.8
1+	5.5	3.7	2.9	2.7	2.2	3.5	1.8	3.2
3+	1.2	1.0	0.7	0.8	0.4	0.3	0.2	0.7
5+	0.5	0.7	0.1	0.5	0.0	0.2	0.2	0.3
Bases (unweighted)[b]								
Men	*267*	*408*	*607*	*490*	*571*	*458*	*360*	*3161*
Women	*295*	*618*	*794*	*632*	*701*	*561*	*566*	*4167*
All	*562*	*1026*	*1401*	*1122*	*1272*	*1019*	*926*	*7328*
Bases (weighted)								
Men	*524*	*597*	*700*	*584*	*537*	*359*	*252*	*3553*
Women	*513*	*611*	*717*	*600*	*553*	*394*	*380*	*3767*
All	*1036*	*1208*	*1417*	*1184*	*1090*	*753*	*631*	*7320*

[a] If respondents had not gambled in the past year, they were deemed to meet zero criteria for problem gambling in the past year. The '1+' group includes those meeting 3 or more criteria, and the '3+' group includes those with 5 or more.

[b] Bases shown are for participation in any gambling activity in the past year. Bases sizes for the number of DSM-IV criteria met are slightly lower than bases for past year participation as it was not possible to calculate a DSM-IV score for all participants.

Table 11.2

Gambling behaviour and number of problem gambling criteria met (observed and age-standardised), by ethnicity and sex

All adults *2007*

Gambling behaviour and problem gambling criteria	Ethnicity			
	White	Black	South Asian	Other[a]
	%	%	%	%
Men				
Observed				
Gambled in the past year	73.4	53.0	41.9	59.3
Number of diagnostic criteria met[b]				
0	95.2	97.4	93.0	92.2
1+	4.8	2.6	7.0	7.8
3+	1.2	1.9	1.5	1.1
5+	0.5	-	1.5	1.1
Age-standardised				
Gambled in the past year	73.5	57.4	53.5[d]	55.8
Number of diagnostic criteria met[b]				
0	95.1	97.5	91.7	89.9
1+	4.9	2.5	8.3	10.1
3+	1.2	1.5	0.9	2.7
5+	0.5	-	0.9	2.7
Women				
Observed				
Gambled in the past year	63.2	45.4	30.9	50.9
Number of diagnostic criteria met[b]				
0	98.4	97.8	99.1	98.4
1+	1.6	2.2	0.9	1.6
3+	0.2	0.5	0.9	-
5+	0.1	-	0.9	-
Age-standardised				
Gambled in the past year	63.1	46.5	30.1	59.5
Number of diagnostic criteria met[b]				
0	98.4	96.9	98.9	98.7
1+	1.6	3.1	1.1	1.3
3+	0.2	1.0	1.1	-
5+	0.1	-	1.1	-
Bases (unweighted)[c]				
Men	*2896*	*74*	*106*	*70*
Women	*3866*	*111*	*87*	*87*
Bases (weighted)				
Men	*3163*	*99*	*166*	*110*
Women	*3426*	*121*	*108*	*102*

[a] Includes Chinese and mixed ethnic groups.

[b] If respondents had not gambled in the past year, they were deemed to meet zero criteria for problem gambling in the past year. The '1+' group includes those meeting 3 or more criteria, and the '3+' group includes those with 5 or more.

[c] Bases shown are for participation in any gambling activity in the past year. Bases for number of criteria met are slightly lower than these presented as it was not possible to calculate a score for all participants.

[d] Age-standardised rates should be treated with caution especially when they differ greatly from the observed rate and/or are based on a small sample.

Table 11.3

Gambling behaviour and number of problem gambling criteria met (observed), by marital status and sex

All adults *2007*

Gambling behaviour and problem gambling criteria	Marital status					
	Married	Cohabiting	Single	Widowed	Divorced	Separated
	%	%	%	%	%	%
Men						
Gambled in the past year	72.5	78.4	65.1	65.4	69.6	68.5
Number of diagnostic criteria met[a]						
0	96.7	93.9	92.6	94.9	91.3	96.1
1+	3.3	6.1	7.4	5.1	8.7	3.9
3+	0.8	1.6	1.6	0.4	3.3	1.6
5+	0.5	-	0.7	0.4	2.6	-
Women						
Gambled in the past year	63.1	67.4	56.1	56.2	64.5	53.5
Number of diagnostic criteria met[a]						
0	98.6	98.4	98.4	97.5	99.1	96.1
1+	1.4	1.6	1.6	2.5	0.9	3.9
3+	0.2	-	0.2	0.4	-	-
5+	0.1	-	-	0.3	-	-
Bases (unweighted)[b]						
Men	*1655*	*278*	*690*	*231*	*229*	*78*
Women	*1834*	*335*	*722*	*698*	*435*	*143*
Bases (weighted)						
Men	*1932*	*396*	*905*	*115*	*149*	*55*
Women	*1906*	*376*	*756*	*389*	*256*	*85*

[a] If respondents had not gambled in the past year, they were deemed to meet zero criteria for problem gambling in the past year. The '1+' group includes those meeting 3 or more criteria, and the '3+' group includes those with 5 or more.

[b] Bases shown are for participation in any gambling activity in the past year. Bases for number of criteria met are slightly lower than these presented as it was not possible to calculate a score for all participants.

Table 11.4

Gambling behaviour and number of problem gambling criteria met (age-standardised), by equivalised household income and sex

All adults *2007*

Gambling behaviour and problem gambling criteria	Equivalised household income[a] Highest	2nd	3rd	4th	Lowest
	%	%	%	%	%
Men					
Gambled in the past year	75.7	74.7	70.6	72.5	63.4
Number of diagnostic criteria met[b]					
0	96.3	96.6	96.9	93.1	94.0
1+	3.7	3.4	3.1	6.9	6.0
3+	1.7	0.4	1.0	3.2	1.9
5+	1.5	0.4	0.4	1.4	0.1
Women					
Gambled in the past year	56.1	60.7	63.4	71.5	60.5
Number of diagnostic criteria met[b]					
0	99.0	99.4	98.0	98.8	97.4
1+	1.0	0.6	2.0	1.2	2.6
3+	-	0.2	0.5	0.1	0.1
5+	-	0.1	0.1	0.1	-
Bases (unweighted)[c]					
Men	*627*	*545*	*504*	*444*	*417*
Women	*562*	*599*	*731*	*670*	*737*
Bases (weighted)					
Men	*713*	*607*	*519*	*455*	*455*
Women	*531*	*542*	*623*	*535*	*621*

[a] For an explanation of equivalised household income see the Glossary.

[b] If respondents had not gambled in the past year, they were deemed to have met zero criteria for problem gambling in the past year. The '1+' group includes those meeting 3 or more criteria, and the '3+' group includes those with 5 or more.

[c] Bases shown are for participation in any gambling activity in the past year. Bases for number of criteria met are slightly lower than these presented as it was not possible to calculate a score for all participants.

Table 11.5

Gambling behaviour and number of problem gambling criteria met (observed and age-standardised), by region[a] and sex

All adults *2007*

Gambling behaviour and problem gambling criteria	Government Office Region									Strategic Health Authority	
	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	London	South West	South East	South East Coast	South Central
	%	%	%	%	%	%	%	%	%	%	%
Men											
Observed											
Gambled in the past year	75.5	72.9	75.7	73.7	73.7	71.3	63.4	65.1	71.2	71.9	70.4
Number of diagnostic criteria met[b]											
0	96.0	93.8	94.7	95.3	94.3	94.8	94.2	98.6	95.1	93.7	96.4
1+	4.0	6.2	5.3	4.7	5.7	5.2	5.8	1.4	4.9	6.3	3.6
3+	1.3	1.6	1.4	0.7	1.3	1.8	1.7	0.4	0.8	0.7	0.9
5+	0.7	0.4	1.2	0.4	0.6	1.1	0.5	-	0.4	-	0.9
Age-standardised											
Gambled in the past year	75.7	73.0	76.5	73.4	73.7	71.3	63.5	65.3	71.5	72.4	70.5
Number of diagnostic criteria met[b]											
0	96.0	94.0	95.1	95.3	94.3	94.8	94.2	98.7	95.0	93.5	96.6
1+	4.0	6.0	4.9	4.7	5.7	5.2	5.8	1.3	5.0	6.5	3.4
3+	1.5	1.5	1.5	0.6	1.2	1.8	1.5	0.3	0.8	0.7	0.9
5+	0.9	0.4	1.4	0.4	0.6	1.0	0.4	-	0.5	-	0.9
Women											
Observed											
Gambled in the past year	64.8	65.7	64.2	65.0	59.9	63.7	54.0	64.3	57.3	55.9	59.0
Number of diagnostic criteria met[b]											
0	99.2	97.8	97.5	97.9	99.3	97.8	98.0	99.4	99.0	98.9	99.1
1+	0.8	2.2	2.5	2.1	0.7	2.2	2.0	0.6	1.0	1.1	0.9
3+	0.2	0.3	0.2	-	-	-	0.5	-	0.3	0.5	-
5+	0.2	-	0.2	-	-	-	-	-	0.3	0.5	-
Age-standardised											
Gambled in the past year	64.7	66.5	63.8	64.7	61.0	63.7	54.2	63.8	57.2	55.6	59.7
Number of diagnostic criteria met[b]											
0	99.3	97.8	97.5	98.0	99.4	98.0	98.1	99.4	99.0	99.0	98.8
1+	0.7	2.2	2.5	2.0	0.6	2.0	1.9	0.6	1.0	1.0	1.2
3+	0.2	0.3	0.2	-	-	-	0.5	-	0.3	0.5	-
5+	0.2	-	0.2	-	-	-	-	-	0.3	0.5	-
Bases (unweighted)[c]											
Men	*178*	*477*	*331*	*329*	*340*	*377*	*319*	*323*	*487*	*252*	*235*
Women	*258*	*620*	*461*	*346*	*440*	*476*	*467*	*408*	*691*	*370*	*321*
Bases (weighted)											
Men	*168*	*490*	*358*	*338*	*368*	*402*	*510*	*366*	*552*	*275*	*277*
Women	*206*	*506*	*386*	*291*	*396*	*416*	*575*	*364*	*628*	*336*	*292*

[a] This table provides data for regional analysis both by Government Office Region (GOR) and Strategic Health Authorities (SHAs). The first eight columns represent GORs and SHAs of the same name, while the South East GOR (column nine) is divided into South East Coast SHA and South Central SHA, shown in the final two columns.

[b] If respondents had not gambled in the past year, they were deemed to meet zero criteria for problem gambling in the past year. The '1+' group includes those meeting 3 or more criteria, and the '3+' group includes those with 5 or more.

[c] Bases shown are for participation in any gambling activity in the past year. Bases for number of criteria met are slightly lower than these presented as it was not possible to calculate a score for all participants.

Table 11.6

Treatment and service use (observed), by number of problem gambling criteria met

All adults *2007*

Treatment and service use	Number of diagnostic criteria met[a]		
	0	1+	3+
	%	%	%
All adults			
Current treatment for a mental or emotional problem			
No treatment	93	90	74
Medication only	5	5	8
Counselling or therapy only	1	3	11
Medication and counselling	1	2	6
Service use			
Any current counselling or therapy	3	5	17
Any health care service use for mental or emotional reason[b]	11	14	20
Any community care service in past year	7	7	12
Any day care service in past year	4	5	14
Bases (unweighted)	*6712*	*210*	*40*
Bases (weighted)	*6710*	*224*	*48*

[a] Due to small base sizes, the profile of those meeting five or more criteria has not been presented. The '1+' group includes those meeting 3 or more criteria, and the '3+' group includes those with 5 or more.

[b] Inpatient stay or outpatient visit in last quarter, or spoken with GP in last year, for a mental or emotional reason.

Psychiatric comorbidity 12

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Summary

- Psychiatric comorbidity - or meeting the diagnostic criteria for two or more psychiatric disorders - is known to be associated with increased severity of symptoms, longer duration, greater functional disability and increased use of health services.
- This chapter is intended to describe the prevalence of and characteristics associated with psychiatric comorbidity in the English general population, and the correlations between different pairs of psychiatric conditions. It also uses latent class analysis (LCA) to identify underlying clusters of people based on the combinations of conditions they manifest, and to describe the characteristics associated with each cluster. All the disorders and behaviours covered in each of the chapters in this report were included in the analyses of comorbidity.
- Just under a quarter of adults (23.0%) met the criteria or screened positive for at least one of the psychiatric conditions under study. Of those with at least one condition: 68.7% met the criteria for only one condition, 19.1% met the criteria for two conditions and 12.2% met the criteria for three or more conditions (data not shown). Numbers of identified conditions were not significantly different for men and women.
- The proportions of people with any condition (one or more) and comorbid conditions (two or more) fell with age among both men and women. Comorbidity also varied by income and marital status.
- There were no negative correlations between any of the conditions (except where they were mutually exclusive), suggesting that the presence of almost any of the conditions in the model increased the likelihood of another condition being present.
- Psychotic disorder and antisocial personality disorder (ASPD) were both very highly comorbid conditions, each being strongly associated with ten of the 14 other conditions in the model. This level of comorbidity was similar for all the disorders measured to diagnostic criteria, except for generalised anxiety disorder (GAD) and mixed anxiety and depression (the latter for methodological reasons).
- Suicide attempts in the past year were positively associated with every condition in the analysis other than mixed anxiety and depression, and strongly associated with seven. The highest correlation coefficient was with psychosis, followed by depressive episode, panic disorder or phobia, obsessive and compulsive disorder (OCD) and attention deficit hyperactivity disorder (ADHD).
- We examined how people group together in terms of the conditions that they were identified with, and a six cluster solution emerged as optimal. These six clusters were labelled: unaffected; moderate internalising; cothymia; comorbid internalising; externalising; and highly comorbid.
- The 'unaffected' cluster accounted for the overwhelming majority of respondents (89.0%). This group included everyone with no conditions. 13.1% of the cluster had one condition; mainly mixed anxiety and depressive disorder or alcohol dependency.
- 5.8% of people were assigned by the model to the 'moderate internalising' cluster. Most members of this cluster were identified with GAD. About two thirds (68.2%) had just one condition, and one third (30.8%) had two conditions.

- ‘Cothymia’ is a term which refers to the combination of symptoms of anxiety and depression. Every member of this cluster had mixed anxiety and depressive disorder. Three quarters (76.9%) had one further condition and one quarter (23.1%) had two or more further conditions. These were usually alcohol dependency or posttraumatic stress (PTSD). 2.1% of people were members of this group.
- A similar proportion (2.5%) belonged to the ‘comorbid internalising’ cluster. Almost two thirds of members (62.1%) met the criteria for depressive episode; GAD and panic disorder or phobia were also experienced by a majority of members. 83% of people in this cluster had three or more conditions.
- 0.5% of people (39 respondents) were assigned to the ‘externalising’ cluster. Almost all (94.9%) were drug dependent and most were alcohol dependent (79.5%).
- The ‘highly comorbid’ cluster contained just 7 respondents: the mean number of conditions present was extremely high at 8. The cluster with the next highest mean number of conditions was comorbid internalising, with 3.5.

12.1 Introduction

Psychiatric comorbidity - or meeting the criteria for two or more psychiatric disorders - is associated with increased severity of symptoms, longer duration, greater functional disability and increased use of health services.[1,2,3] Comorbidity has practical implications for both the diagnosis and the treatment of each disorder: not only might the symptoms of one condition mask another, but they might also interfere with its treatment.

It is well established that a substantial minority of people living in the general population have a psychiatric disorder. When disorders are classified as either present or absent, many people are identified with two or more conditions.[4,5] The likelihood of two or more conditions co-existing is greater than can be attributed to chance.[6,7] This has raised questions about the nature and determinants of psychopathology.[8] The implication is that meeting the criteria for more than one psychiatric diagnosis does not necessarily mean the presence of multiple and distinct mental illnesses, but instead might reflect an inability of existing systems of classification to provide a single diagnosis that accounts for all the symptoms present.[9,10,11,12]

Making sense of psychiatric comorbidity is made difficult by the sheer number of possible combinations of different disorders.[13,14,15] Given this, much of the existing research in this field has focused on the overlap between two specific mental disorders. Some comorbid relationships are thus well established, such as that between depression and anxiety. The dual diagnosis of substance misuse and various mental disorders is also well documented.[16,17] However, a more comprehensive picture of the prevalence and structure of comorbidity in the English general population is less well developed.

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 and borderline personality disorders; eating disorder; posttraumatic stress disorder (PTSD); attention deficit hyperactivity disorder (ADHD); alcohol and drug dependency; and problem behaviours such as problem gambling and suicide attempts. These are defined according to different classification criteria and refer to a variety of different reference periods (see Section 12.2.1). Mixed anxiety and depressive disorder was defined following the exclusion of other common mental disorders (CMDs), thus constraining comorbidity analysis. In addition, some conditions share common criteria: for example problem gambling, drinking and misuse of drugs made a diagnosis of antisocial personality disorder (ASPD) more likely, while suicidal thoughts and attempts contributed to the diagnosis of depression.

These problems are indicative of some of the issues inherent in 'counting' disorders, and it would be misleading to over-interpret the findings presented in this chapter. It also needs to be stated that some of the 'failure' here to find a single diagnostic category that takes account of the range of symptoms present in an individual results from a reliance on self-report measures and symptom assessment in the survey. Some of the respondents identified as 'comorbid' by this study might well have received a single primary diagnosis in a full clinical assessment. The main reporting of the survey data does not take a hierarchical approach to diagnosing disorders. The main purpose of the adult psychiatric morbidity surveys is to estimate the current prevalence and distribution of symptoms likely to cause distress or warrant clinical attention, rather than to validly distinguish different forms of disorder within each individual.

Recent research into comorbidity, including this study, has attempted to interpret the complicated relationships between disorders through the application of more advanced statistical methods – particularly latent class analysis.[5] Latent class analysis is described in this chapter and 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 meet.

This chapter is intended to:

- Describe the prevalence of psychiatric comorbidity;
- Describe the characteristics associated with psychiatric comorbidity;
- Describe the correlations between different pairs of psychiatric conditions;
- Identify underlying clusters of people based on the combinations of conditions they manifest; and
- Describe the characteristics associated with each cluster.

Elements of this analysis that might inform service delivery and further research into the causes of different forms of mental disorder are highlighted. Comorbidity between mental and physical health is not addressed in this report.

12.2 Definitions and assessment

12.2.1 Mental health conditions and psychiatric comorbidity

The mental health conditions assessed on APMS 2007 were all included in the analyses of comorbidity.[18] Many of these took the form of psychiatric disorders as defined by the tenth 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 diagnosis (such as psychosis).[19,20] Some conditions were defined according to DSM-IV diagnostic criteria (for example, personality disorder). In particular, it should be noted that other conditions (specifically; ADHD, eating disorder and PTSD) 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.

Where such a screening tool was used and two thresholds were presented in the relevant chapter (i.e. as with ADHD and eating disorder), the higher threshold was used for the comorbidity analysis to ensure that people identified as 'screening positive' were those most likely to have been diagnosed in a clinical assessment. The recommended threshold for screening positive for ADHD on the ASRS is endorsing four items out of the six, and both this and the threshold of all six items are presented in the ADHD chapter of this report (Chapter 7). In our comorbidity modelling we have included as positive only those endorsing all six items. Likewise, the recommended threshold for a positive screen for eating disorder on the SCOFF is endorsement of two items: for inclusion as positive in the modeling we required that this threshold be met and that the respondent reported that food impacted on their life. This reduced the estimated population prevalence of eating disorder from 6.4% of the adult population to 1.6%: both rates are presented in the eating disorder chapter (Chapter 8).

Other categories of mental health problem used in the comorbidity analysis represent behaviours (gambling and attempted suicide) that are considered problematic and indicative of significant mental distress.

In this chapter psychiatric disorders and behaviours are collectively referred to as 'conditions' irrespective of whether these are:

- Individual ICD-10 diagnostic categories (such as OCD);
- Groups of ICD-10 diagnoses (such as psychosis);
- DSM-IV diagnostic categories (such as ASPD);
- Screen positives (such as drug dependency); or
- Behaviours (such as attempted suicide).

The reference period varied between conditions: for example CMDs, such as generalised anxiety disorder, referred to presence of symptoms in the past week, while psychotic disorder referred to an episode in the past year.

Another key methodological issue was the fact that mixed anxiety and depressive disorder was defined in part as the absence of other CMDs. This is an artefact of the Clinical Interview Schedule – Revised (CIS-R)[21] which was used to identify CMDs. A diagnosis of mixed anxiety and depression was only made where a respondent's overall CIS-R symptom score met a particular threshold (12) but the criteria for none of the other disorders were fully met.

A related issue was the fact that diagnoses of panic disorder and of a phobic disorder derived from the CIS-R according to the ICD-10 classification are mutually exclusive. To avoid this definitional issue impacting on the associations between variables underpinning the latent class analysis, these categories were combined into a single 'panic or phobia' category.

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.

Conditions included in the analysis of psychiatric comorbidity

Condition	Diagnostic status	Classification system	Assessment tool	Survey phase	Reference period
Generalised anxiety disorder (GAD)	Present to diagnostic criteria	ICD-10	CIS-R	One	Past week
Mixed anxiety and depressive disorder	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 or any phobia (combined)	Present to diagnostic criteria	ICD-10	CIS-R	One	Past week
Alcohol dependence	Screen positive	-	AUDIT[22] and SADQ-C[23]	One	Past six months
Drug dependence	Screen positive	-	Based on the Diagnostic Interview Schedule[24]	One	Past year
Psychotic disorder	Present to diagnostic criteria	ICD-10	SCAN[25]	Two	Past year
Borderline personality disorder (BPD)	Present to diagnostic criteria	DSM-IV	SCID-II[26]	Two	Past year
Antisocial personality disorder (ASPD)	Present to diagnostic criteria	DSM-IV	SCID-II	Two	Past year
Posttraumatic stress disorder (PTSD)	Screen positive: endorsed six out of ten items.	DSM-IV	Trauma Screening Questionnaire (TSQ)[27]	One	Past week
Attention deficit hyperactivity disorder (ADHD)	Screen positive: endorsed all six items	DSM-IV	Adult Self-Report Scale-v1.1 (ASRS)[28]	One	Past six months
Eating disorder	Screen positive: endorsed two items and reported food impacted on life	-	SCOFF eating disorders questionnaire[29]	One	Past year
Problem gambling	Present to diagnostic criteria (3 endorsed)	DSM-IV	-	One	Past year
Attempted suicide	Occurrence of behaviour	-	Self-completion	One	Past year

12.2.2 Measuring the prevalence of comorbidity

First, fifteen binary variables were generated and coded according to whether or not an individual was identified with the symptoms of each of the conditions (either by meeting the threshold criteria or by screening positive). A count was then made of the conditions identified in each respondent, and the proportion with any condition (one or more), comorbidity (two or more conditions), and 'multimorbidity'[30] (three or more conditions) was presented. Descriptive analyses were undertaken to examine how the number of conditions was associated with characteristics such as age, sex, ethnicity, marital status and income.

12.2.3 Measuring the correlations between pairs of conditions

While the simple 'co-occurrence' of two conditions may be more likely by chance the more prevalent the conditions are in the population, this can be controlled for by looking at correlation, or 'co-variation': where two disorders co-occur above what would be expected by chance.

Tetrachoric correlation analysis was undertaken to examine the basic patterns of comorbidity for each combination of two conditions. Tetrachoric correlation is appropriate for use with binary data and is used to estimate the Pearson correlation coefficient between two continuous variables from dichotomized versions of those variables. Tetrachoric correlation coefficients can therefore be interpreted in much the same way as Pearson correlations.

In interpreting the strength of a correlation, a value of 0.5 or more is widely used in social sciences to indicate a strong correlation between two variables; 0.3-0.5 is usually considered to indicate a weaker correlation that is nevertheless still of interest; correlations below 0.3 are often considered to be of little or no interest.

Some correlations of -1 are observed. These result when two conditions are exclusive, that is they do not co-occur for any respondents in the sample. They are mainly observed for correlations between mixed anxiety and depressive disorder and other CMDs. As an artefact of the CIS-R tool used to assess CMD, mixed anxiety and depressive disorder could not by definition co-occur with GAD, OCD, depressive episode, or panic disorder or phobias.

12.2.4 Identifying and describing underlying clusters of comorbidity

Latent class analysis (LCA) overview

Data on the fifteen binary variables were entered in a Latent Class Analysis (LCA).

LCA is a statistical technique for finding subtypes of related cases (latent classes) from multivariate categorical data. The analysis fits a model to the data that (a) identifies a given number of latent classes, and (b) generates probabilities, for each respondent, of their being in each class (one probability per class). An individual is then assigned to the class for which they have the highest probability. In this way, as with cluster analysis, they are assigned to the group where they are most similar to the other members (in terms of the pattern of psychiatric conditions they met criteria for).

The main advantage of LCA over cluster analysis is that it is designed for categorical data, whereas cluster analysis is designed for continuous data. Furthermore, unlike cluster analysis, LCA generates a parameterised model of class membership. These parameters allow the relationship between the original set of variables (in this case the variables indicating presence or absence of particular psychiatric conditions) and the final latent classes to be formally traced. In particular it is possible to trace why a respondent is in one class rather than another, and what the members of a class have in common.

After dealing with missing data (see Appendix B for a full description of this process) a total of 7,325 respondents were included in the LCA analysis.

Regression analysis to identify factors associated with each cluster

Multivariate logistic regression was conducted to determine the characteristics associated with membership of each cluster (except for cluster six, due to the small sample size of this group). Regression analysis allows us to study the independent effect of each of these characteristics, whilst controlling for the influence of the other factors included in the model. In each regression model the dependent variable was membership of the cluster and the independent variables were: sex, age group, ethnicity, marital status, equivalised household income quintile, and region (Government Office Region). The factors indicate associations, not causes.

These variations in 'risk' are expressed as odds ratios, the degree to which the odds of the key outcome increases or decreases relative to the reference category. Odds ratios greater than one indicate higher odds of being in the highest risk category, and odds ratios less than one indicate lower odds. 95% confidence intervals are shown in Table 12.9, and where the interval does not include one, this category is significantly different from the reference category.

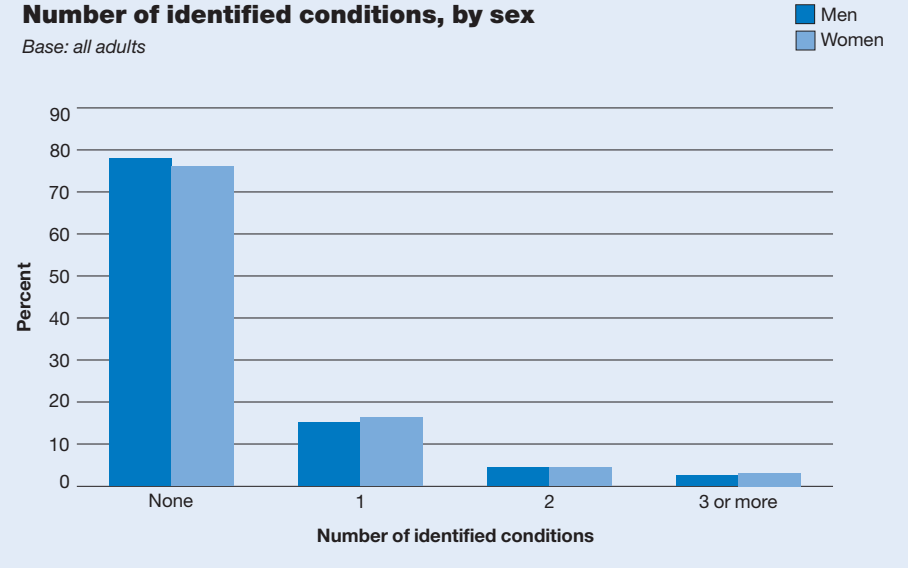
All of the factors are presented for every cluster, except for region. Region was found not to be a significant 'risk factor' for any of the clusters; however it is still adjusted for in the models.

12.3 Counts of conditions

12.3.1 Counts of conditions by age and sex

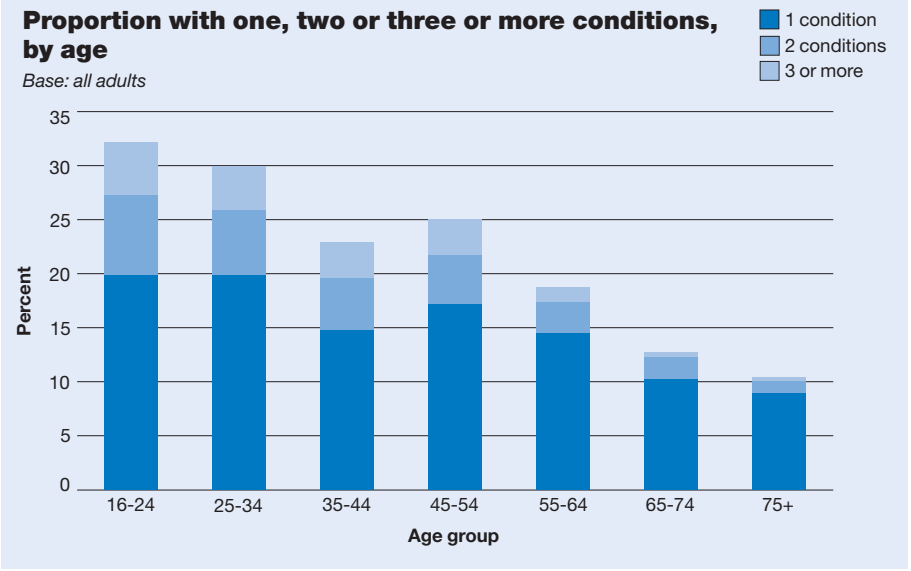
Just under a quarter of adults (23.0%) met the criteria for at least one of the conditions under study. Of those with at least one condition: 68.7% met the criteria for only one condition, 19.1% met the criteria for two conditions and 12.2% met the criteria for three or more conditions (data not shown). Numbers of identified conditions were not significantly different for men and women. **Figure 12A**

Figure 12A



The proportions of adults who met the criteria or screened positive for any condition (one or more) and comorbid conditions (two or more) fell with age among both men and women. 12.4% of 16-24 year olds had two or more conditions, compared with just 1.5% of those aged 75 and over. This age trend was similar for men and women. It is worth noting here that the adult psychiatric morbidity surveys do not cover organic psychoses such as Alzheimer's. **Table 12.1, Figure 12B**

Figure 12B



12.3.2 Counts of conditions by other characteristics

The tables showing comorbidity by ethnicity, equivalised household income and region were age-standardised to take account of variation by subgroup in age profile. However these tables made no adjustment for other factors.

Ethnicity

Comorbidity appeared to vary with ethnic group after age-standardisation. However the age-standardised rates for the South Asian sample differed greatly from the observed rates, among women in particular. Driving this was the fact that a) there were only two South Asian women aged 75 or over in the comorbidity analysis sample, and that b) both of them had two conditions. The age-standardised rates should therefore be treated with caution: this is the reason why both observed and age-standardised rates are presented for tables by ethnicity. **Table 12.2**

Marital status

The likelihood of having two or more conditions was related to marital status. Rates of comorbidity were lowest among people who were married (3.8% of men, 4.6% of women) or widowed (3.9% of men, 4.7% of women), and highest among divorced men (15.4%) and separated women (15.9%). It should be noted however that the age profiles of these groups were not standardised (see the Glossary for an explanation), and these patterns of comorbidity will reflect, for example, that single people are likely to be younger than the population as a whole, and widows and widowers are likely to be older than average.

Table 12.3

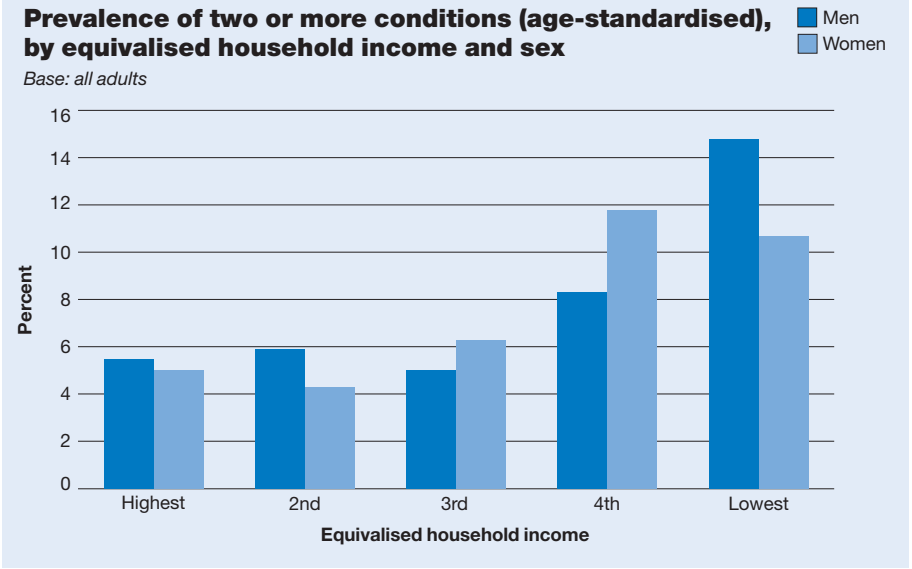
Equivalised household income

The analysis by equivalised household income (see the Glossary for a definition) was standardised to control for the different age profiles of the quintiles. Comorbidity was found to vary with equivalised household income. People living in households in the bottom two income quintiles had higher rates of comorbidity than those in higher income households. After age-standardisation, 14.8% of men and 10.7% of women in the lowest household income quintile had two or more of the conditions, compared with 5.5% of men and 5.0% of women in the highest. **Table 12.4, Figure 12C**

12.3.3 Treatment and service use by count of conditions

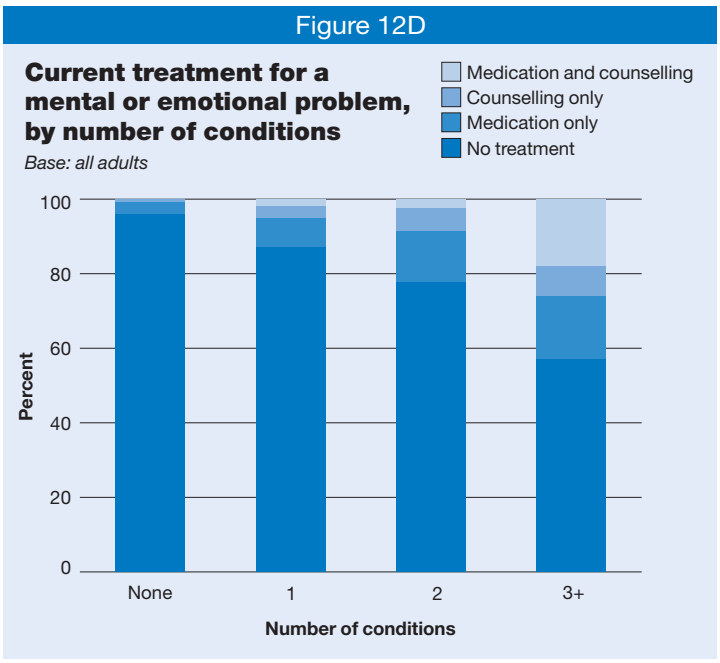
Receipt of treatment, such as psychoactive medication or counselling for a mental or emotional problem, increased with the number of conditions identified. 13% of people with one condition were receiving treatment, compared with 22% of people with two conditions and 43% of people with three or more conditions. While treatment rates did increase

Figure 12C



sharply with number of conditions, it was still the case that more than half (57%) of those with three or more conditions were receiving no treatment for a mental or emotional problem at the time of interview. **Figure 12D**

Figure 12D



A similar pattern emerged for use of services. There was a strong association between the likelihood of receiving health care for a mental or emotional reason and the number of mental health conditions present. 21% of people with one condition used a health care service for this reason, compared with 65% of those with three or more conditions.

Table 12.6

12.4 Correlations between conditions

The tetrachoric correlations were conducted to understand the basic patterns of comorbidity between pairs of conditions. To interpret the correlations the following cut offs were used:

- A score of 0.50 or more indicates a strong association;
- A score of 0.30 to 0.49 indicates a weak association; and
- A score of less than 0.30 indicates little or no association.

A negative correlation would indicate that the presence of one condition was associated with the absence of another. The exception to this is where a '-1' was observed: this indicated mutual exclusivity and tended to occur either where classificatory definitions prevented overlap (e.g. between mixed anxiety and depressive disorder and other CMDs), or where the sample size for a condition was extremely small (e.g. ASPD had just nine positive cases). The results for the tetrachoric correlations are shown in Table 12.7.

Overall

There were no negative correlations identified between any conditions (except where they were mutually exclusive) suggesting that the presence of almost any condition in the model increased the likelihood of another condition being present.

Mixed anxiety and depressive disorder

For the reasons given above, no one meeting the criteria for any of the other common mental disorders measured by the CIS-R could be diagnosed with mixed anxiety and depressive disorder. Mixed anxiety and depressive disorder had little or no association with any of the other conditions in the analysis, except for PTSD with which it was weakly associated (0.32).

Generalised anxiety disorder (GAD)

GAD was strongly associated with six of the other fourteen conditions in the model. It was most strongly associated with the other CMDs measured by the CIS-R (other than mixed anxiety and depressive disorder, as described above). These were depressive episode (0.68), panic disorder or phobias (0.64), and OCD (0.63). GAD was also strongly associated with less common disorders and behaviours such as psychosis (0.54), borderline personality disorder (BPD, 0.57) and attempting suicide in the past year (0.50). Of the conditions included in the analysis, GAD was least associated with externalising disorders such as alcohol dependency (0.20), problem gambling (0.26), drug dependency (0.30) and ASPD (0.32).

Obsessive and compulsive disorder (OCD)

OCD was strongly associated with eight of the conditions in the analysis, and was at least weakly associated with every other condition. As with GAD, OCD was strongly associated with the other CMDs assessed by the CIS-R: depressive episode (0.73), panic/phobia (0.64), and GAD (0.63). However it was also strongly associated with BPD (0.74), as well as with ASPD (0.54) and PTSD (0.57).

Depressive episode

Depressive episodes were strongly associated with nine of the other conditions. The only condition with which it had little or no association was problem gambling (0.23). Depressive episode had strong associations with the other CMDs (0.68 to 0.71), but equally strong associations with the less common conditions assessed, including ASPD (0.71), BPD (0.69), and psychosis (0.65). Depressive episode as the CMD with the highest correlation coefficient with suicide attempts (0.65) and eating disorder (0.42).

Panic disorder or phobias

Panic disorder or phobias, condensed here into a single category, was strongly associated with nine of the other conditions, and at least weakly associated with all the others. Of all the conditions in the analysis, ADHD had its highest correlation coefficient with panic disorders or phobias (0.55).

Alcohol dependence

Alcohol dependence was strongly associated with only one other condition: ASPD (0.63). This is not surprising given that harmful use of alcohol contributes to a diagnosis of ASPD. BPD (0.41) and drug dependence (0.43) were the next most strongly correlated conditions. Alcohol dependence was found to have little or no association with four conditions (mixed anxiety and depression (0.18), GAD (0.20), psychosis (0.25), and eating disorder (0.28)).

Drug dependence

Drug dependence was strongly associated with both the personality disorders (ASPD (0.81) and BPD (0.60)), with which it shares common criteria. The correlation coefficient between drug dependence and ASPD was the highest observed in the model. Drug dependence was weakly associated with all other conditions except for two (mixed anxiety and depression (0.14) and eating disorder (0.25)) with which it had little or no association.

Psychotic disorder

Psychosis was strongly associated with ten other conditions in the analysis; only ASPD had as many strong correlations at this. Of all the conditions in the analysis, psychosis was most strongly associated with suicide attempts (0.71), BPD (0.69), depressive episode (0.65), and PTSD (0.64).

Borderline personality disorder (BPD)

Borderline personality disorder was strongly associated with nine other conditions. It was most strongly associated with the other personality disorder assessed: antisocial personality disorder (0.77). This was followed by: OCD (0.74), depressive episode (0.69), psychosis (0.69), panic disorder and phobia (0.63), and drug dependency (0.60). There were no respondents in the sample with both borderline personality disorder and ADHD. It is difficult to interpret this, given there were altogether only 16 people with borderline personality disorder.

Antisocial personality disorder (ASPD)

Overall, the highest correlation coefficient identified in the analysis was between ASPD and drug dependence, which was very strong at 0.81. ASPD was also strongly associated with other externalising conditions such as alcohol dependency (0.63) and problem gambling (0.62). Again, this was not surprising, given that these contribute to the likelihood of a diagnosis of ASPD being made. ADHD was also found to be strongly associated with ASPD, although at 0.50 it was less strongly associated than the other externalising disorders. Internalising conditions such as depressive episode (0.71) and panic disorder or phobias (0.60) also had high correlation coefficients with ASPD.

There were no respondents in the sample identified with both ASPD and eating disorder. This is difficult to interpret given there were only nine respondents in the sample identified with ASPD.

Posttraumatic stress disorder (PTSD)

PTSD was strongly associated with six conditions, and the highest correlation coefficients were with psychosis (0.64), panic disorder or phobia (0.63), depressive episode (0.62), and ASPD (0.61). It was the only condition found to be associated with mixed anxiety and depression (0.32). The only condition with which PTSD was found to have little or no association was problem gambling (0.28).

Attention deficient hyperactivity disorder (ADHD)

ADHD was strongly association with six other conditions, although none with a correlation efficient of more than 0.55. It was found to be most strongly associated with attempted suicide (0.55), panic disorder or phobia (0.55), PTSD (0.54), psychosis (0.54), depressive episode (0.51), and antisocial disorder (0.50). The association with suicide attempts is particularly noteworthy; only OCD, depressive episode and psychosis had a correlation coefficient with suicide attempts that was higher than this.

The lower than expected correlation of ADHD with externalising disorders such as alcohol and drug dependency and problem gambling may reflect the fact that the profile of ADHD in the APMS 2007 sample did not significantly vary by sex.

Eating disorder

Eating disorder was found to be strongly associated with just two other conditions: BPD (0.55) and psychosis (0.50). The conditions with which it had little or no association were those that are externalising (and associated with higher rates in men): including alcohol

dependence (0.28), drug dependence (0.25), and problem gambling (0.20). As mentioned above there were no respondents with both eating disorder and ASPD.

Problem gambling

Interestingly, problem gambling was found to be strongly associated with just one other condition in the analysis: ASPD (0.62). No other coefficient correlation was greater than 0.40. There was little or no association found with six conditions, and this was more than for any other condition in the analysis.

Suicide attempts in the past year

Other than mixed anxiety and depression (0.14), attempting suicide in the past year was associated with every condition in the analysis, strongly with seven. The highest correlation coefficient was with psychosis (0.71), followed by depressive episode (0.65), panic disorder or phobia (0.61), OCD (0.60) and ADHD (0.55). **Table 12.7**

12.5 Clusters of people according to their pattern of conditions

12.5.1 Identification and interpretation the six clusters

Technical details about the latent class analysis (LCA) undertaken are summarised in Section 12.2.4 and detailed further in Appendix B.

Number of clusters

The results of the LCA suggested that there were five, six or seven distinct clusters of individuals in the data. The six cluster solution was chosen for the following reasons:

- All six clusters were interpretable (so adopting a five-cluster solution was sub-optimal);
- The six cluster solution produced a new cluster (not present in the five cluster solution), which, though very small, clearly represented individuals with very high levels of comorbidity who would otherwise be subsumed under cluster four; and
- The seven cluster solution produced a new cluster which was much less robust in terms of probabilities of membership as compared with the other six clusters, as well as less interpretable.

Naming of clusters

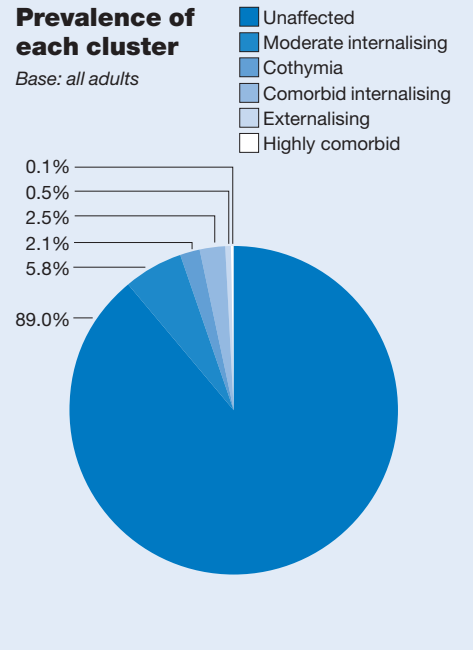
The figures in the main part of Table 12.8 indicate the proportion of people in each cluster who meet the criteria or screened positive for each of the conditions. Consideration of the cluster distributions allowed us to give each cluster an appropriate label, based on the number and nature of conditions manifested by the respondents assigned to the cluster. The following were identified:

- Unaffected;
- Moderate internalising;
- Cothymia;[31]
- Comorbid internalising;
- Externalising; and
- Highly comorbid.

Prevalence of clusters

The 'unaffected' cluster accounted for the overwhelming majority of respondents (89.0%). 5.8% of people were assigned by the model to the 'moderate internalising' cluster; 2.1% to the 'cothymia' cluster; and 2.5% to the 'comorbid internalising' cluster. Less than 1% of the sample was in the remaining two clusters: 0.5% in 'externalising' and just 0.1% in 'highly comorbid'. **Figure 12E**

Figure 12E



Description of clusters

Cluster one: Unaffected

Most people (86.8%) assigned to the 'unaffected' cluster were not identified with any of the conditions in the model. Of the people in this cluster who were identified with a condition (13.1%), all had just one. This was most likely to be mixed anxiety and depressive disorder (8.0%), alcohol dependency (3.0%) or drug dependency (1.3%). The proportion of people in the unaffected cluster with any other condition was less than 1%. Everyone in the sample who was not identified with a condition was a member of this cluster. The mean number of conditions per cluster member was 0.1.

Multivariate logistic regression analysis showed that membership of the unaffected cluster was independently associated with sex, age, marital status and equivalised household income. People who were married, male, or aged 65 or more had increased odds of being assigned to this group (compared with those of another marital status, women, and aged 16-24 respectively). The odds of being a group member were also higher among those resident in households with higher levels of equivalised income (the odds ratios for the lowest two household income quintiles were significantly less then those of the highest income quintile, the reference category).

Cluster two: Moderate internalising

The moderate internalising cluster was composed mostly of people with a single internalising disorder. Members of this group all met the criteria or screened positive for at least one condition: two-thirds (68.2%) for only one, and one-third (30.8%) for two conditions. Most of them met the criteria for generalised anxiety disorder (59.2%). The only other conditions to affect more than 6% of the sample were panic disorder or phobia (20.9%), depressive episode (17.5%) and PTSD (15.4%). The mean number of conditions per cluster member was 1.3.

Membership of this group was found to be associated with sex, ethnicity, marital status, and income. Risk factors for being assigned to this group included being a woman; widowed or divorced; and in the lowest equivalised household income quintile. Black people also had increased odds for belonging to this group (1.99, compared with the white reference category).

Cluster three: Cothymia

Everyone assigned to the cothymia cluster met the criteria or screened positive for two or more conditions, and about one-quarter (23.1%) were identified with three or more

conditions. People in the cothymia cluster all met the criteria for mixed anxiety and depressive disorder, and all had at least one of a range of other conditions. High rates of externalising problems were observed among cluster members: 39.7% with alcohol dependency and 19.9% with drug dependency. PTSD (36.5%) and eating disorder (14.1%) were also highly represented in this cluster. The mean number of conditions per cluster member was 2.3.

This cluster was diverse and cut across predictors. Age was significantly associated with membership: people aged 55 or over were less likely to be in the group than those aged 16-24 (the reference category). South Asian people also had lower odds of being members of the cothymia cluster than the white reference group.

Cluster four: Comorbid internalising

Everyone assigned to the comorbid internalising group met the criteria or screened positive for at least two conditions: four-fifths (83.0%) had three or more conditions. These conditions covered a range of primarily internalising disorders, including: depressive episode (62.1%), generalised anxiety disorder (53.3%), panic disorder or phobia (52.7%), PTSD (47.8%), and obsessive and compulsive disorder (34.6%). Only the 'highly comorbid' cluster had a higher proportion of cluster members reporting attempted suicide in the last year (17.6% of comorbid internalising, 28.6% of highly comorbid). Most of the respondents in the sample with psychosis and BPD were in this cluster. While there was a moderate level of externalising conditions such as alcohol dependency (24.2%) and drug dependency (15.9%), these rates were lower than for the other three comorbid clusters. The mean number of conditions per cluster member was 3.5.

Membership of this cluster was significantly predicted by marital status, age and income. Married people had lower odds of being a member than people of other marital statuses, and those aged 65 or over had odds of just 0.07 compared with the reference category (16-24 year olds) The odds of being assigned to the comorbid internalising group were higher for people living in a household with an equivalised income in the bottom two quintiles.

Cluster five: Externalising

Less than 1% of the sample (n=39) were included in this cluster. They tended to meet the criteria or screen positive for fewer conditions than members of the comorbid internalising group. Three-quarters (76.9%) of members of the externalising cluster met criteria for two conditions: these were almost invariably drug (94.9%) and alcohol (79.5%) dependency. Other conditions for which cluster members met the criteria were problem gambling (12.8%) and depressive episode (also 12.8%). This was the only cluster other than the highly comorbid group in which antisocial personality disorder (7.7%) occurred (other than cothymia, where it was present in 0.6% of members). The mean number of conditions per cluster member was 2.3.

People who were male and of a marital status group other than married or cohabiting had higher odds of being assigned to the externalising group. Adults aged 45 or more had very low odds of being in this cluster: 0.03 compared with 16-24 year olds as the reference group.

Cluster six: Highly comorbid

This was an extremely small but highly comorbid cluster, accounting for just 0.1% of the sample (or seven respondents). All seven cluster members met the criteria or screened positive for three or more conditions: in fact the mean number of conditions was extremely high at 8.0. All seven respondents had depressive disorder and panic disorder or phobia; six had drug dependency; five had borderline personality disorder, alcohol dependency, or generalised anxiety disorder. Four of the seven respondents in the cluster had psychosis and four had antisocial personality disorder.

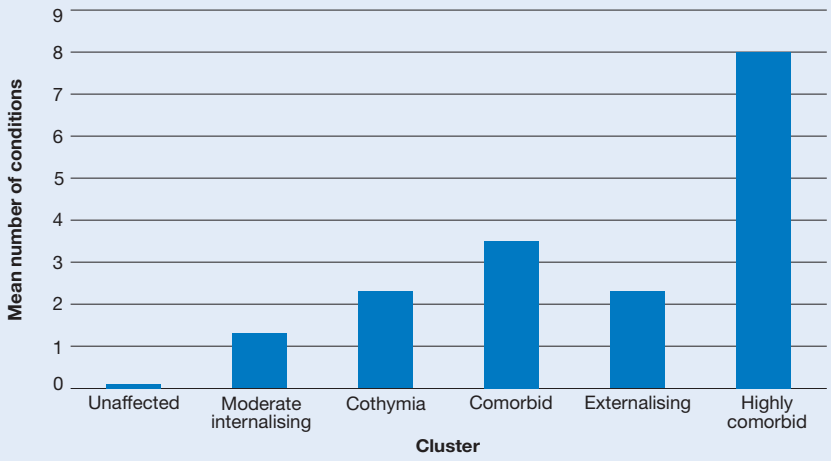
Due to the small base size for this group, odds ratios were not calculated.

Tables 12.8, 12.9, Figure 12F

Figure 12F

Mean number of conditions, by cluster

Base: all adults



12.5.2 Treatment and service use by LCA cluster

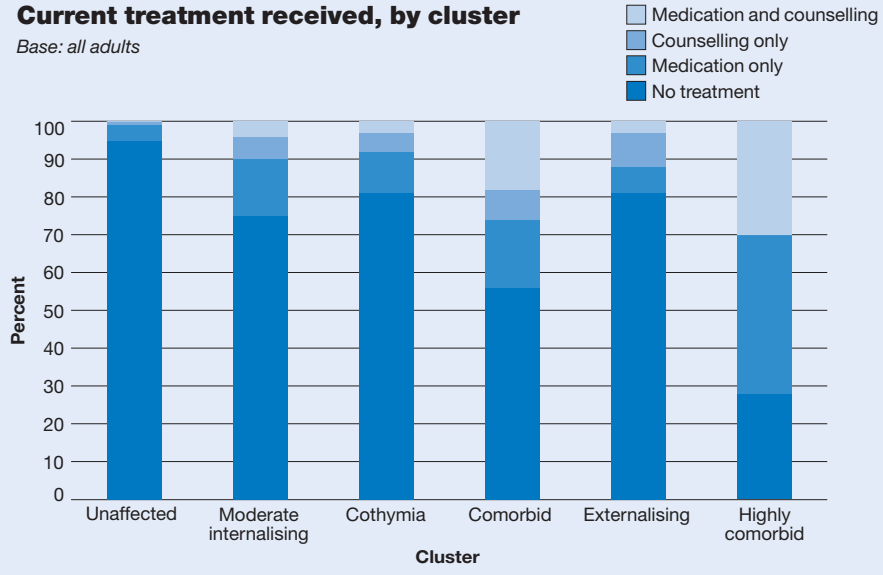
Treatment and service use rates varied substantially across clusters. Health care service use for a mental or emotional reason ranged from 69% of members of the comorbid internalising cluster, to 22% of the externalising cluster (excluding those in the unaffected cluster). Rates of treatment and service use were especially low in the externalising group cluster: none received any community care service in the past year, and only 12% and 10% reported current receipt of counselling or medication, respectively, at the time of interview. The only groups with significantly greater rates of treatment were the comorbid internalising cluster (26% current counselling and 36% current medication) and potentially the highly comorbid cluster (precise data not shown in tables due to small sample size).

Table 12.15, Figure 12G

Figure 12G

Current treatment received, by cluster

Base: all adults



12.6 Discussion

Overall, about a quarter of people meet the criteria for, or were screen positive for, at least one psychiatric condition. Of these, a third – or 7.2% overall - had more than one condition. The treatment and service use data collected in this survey confirmed that number of

conditions present may be a useful marker of severity. The more conditions that an individual had, the more likely he or she was to be receiving treatment for a mental or emotional problem and to be accessing health, community and day care services.

Much of the co-occurrence that a 'count' of conditions captures will be accounted for by the most common mental disorders (CMDs). Due to their high prevalence in the population, they are likely to co-occur with other common conditions by chance. What the correlation analysis indicated was the extent to which these and the other conditions in the model co-vary above and beyond chance.

The strength of correlation across almost all the psychiatric conditions under study was strikingly high. Psychotic disorder and antisocial personality disorder were both very highly comorbid conditions, each strongly associated with ten of the 14 other conditions in the model. While the small bases for some of these low prevalence disorders warrants caution in interpretation, it is noteworthy that even among the nine cases of ASPD in the sample, all of the other conditions in the model (except eating disorder) were present. This level of comorbidity was similar for all the disorders meeting diagnostic criteria, except for GAD and mixed anxiety and depression (the latter for methodological reasons).

An interesting observation from the correlation analysis was how relatively weakly problem gambling and drug and alcohol dependency were associated with the other conditions, and even with each other. Factors explaining this might include that substance dependencies were assessed by a screening tool (and so may be less accurate), and that people with the most severe dependency problems were particularly likely not to have been in the sample. However, the associations between these and the other conditions in the model remained in a positive direction, and still broadly supports the emphasis on dual diagnosis in substance dependency and psychiatric illness.

The application of latent class analysis (LCA) to the patterns of diagnoses in the adult population was an exciting extension of a relatively recent statistical approach..This has been used previously for similar purposes on community psychiatric surveys in Australia and the United States. This chapter presents the first application of this approach that we are aware of to psychiatric data from an English general population sample. The classification system to emerge from the modelling was one of clusters characterised both by the type of conditions identified in members of the group, and by the number of conditions they had. Before discussing these findings, it is important to acknowledge here the reliance that a survey of this kind has on structured lay interviews. Clinical reappraisal might in some cases have delineated more complex clinical syndromes.[32]

As expected the largest group comprised those 'unaffected' by psychiatric comorbidity. However not all members were entirely unaffected by psychiatric disorder: for example everyone for whom mixed anxiety and depression, drug dependency or alcohol dependency was their only diagnosis were assigned to this group. No member of this cluster had more than one condition, and the vast majority had none.

The next largest group, which we called 'moderate internalising', was the only other cluster to contain anyone with a single diagnosis. Most of the conditions represented in this group involved the internalisation of psychiatric distress.

The other predominantly internalising cluster, 'comorbid internalising', was highly comorbid with many other problem behaviours, including many traditionally considered to be 'externalising' – namely PTSD, alcohol and drug dependency, and suicidal behaviour. GAD was highly prevalent in both internalising clusters, although interestingly depressive episode featured only in the cluster with the higher level of comorbidity. These differences might reflect variation in severity[33] or duration of particular problems. One possibility is that this cluster describes a predisposition towards self-medication in the form of drugs and alcohol among some individuals who experience this form of distress.

Cothymia is a term referring to the comorbidity of anxiety and depression.[9] All members of the cothymia group met the criteria for mixed anxiety and depression plus at least one other condition. The exclusivity of comorbid mixed anxiety and depression to one cluster was

partly an artifact of the survey methodology. However, what was less expected was the high prevalence of externalising behaviours in this cluster, particularly drug and alcohol misuse. A quarter of cluster members were highly comorbid, with three or more conditions identified.

While the highly comorbid group was extremely small – just 7 respondents – the model which included them as a discrete cluster was used because they clearly represent a distinct group, albeit one of very low prevalence. The mean number of conditions present was eight: the patient population they represent are likely to have a hugely disproportionate impact on service utilisation.

Our findings confirmed the dearth of treatment received by those with externalising conditions, and with drug and alcohol misuse in particular.[15] 81% of people in the externalising cluster were receiving no treatment for a mental or emotional problem, despite a relatively high mean number of conditions.

In keeping with previous research, there was a high degree of comorbidity between almost all of the conditions studied, amounting to a highly complex matrix of correlations. We employed latent class analysis in order to identify a clear and unambiguous structure within the data. However, in trying to draw inferences about patterns of psychiatric morbidity in the English population, it is clear that the conditions included here do not fall into neat and simple clusters. This complexity in interpreting the results of latent class analyses suggests that the underlying (or latent) structure of psychiatric morbidity obtained from a general population survey sample may not be altogether well characterised within existing systems of classification.

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33 Our definition of depression requires impairment in functioning - the other CIS-R disorders do not.

Tables

Table 12.1

Number of conditions, by age and sex

All adults *2007*

Number of conditions[a]	Age group							
	16-24	25-34	35-44	45-54	55-64	65-74	75+	All
	%	%	%	%	%	%	%	%
Men								
None	68.3	67.2	77.7	79.3	83.2	89.4	93.7	78.0
1	19.5	21.8	14.4	15.3	13.2	8.7	5.3	15.1
2	8.1	6.2	4.7	3.6	2.5	1.7	1.0	4.4
3+	4.1	4.8	3.2	1.9	1.1	0.2	-	2.5
Comorbidity (2+ conditions)	**12.2**	**11.0**	**7.9**	**5.5**	**3.6**	**1.9**	**1.0**	**6.9**
Women								
None	67.1	72.7	76.5	70.7	79.4	85.4	86.7	76.1
1	20.3	18.1	15.1	19.1	16.0	11.9	11.5	16.4
2	6.7	5.9	4.8	5.4	3.1	2.3	1.2	4.5
3+	5.8	3.2	3.5	4.7	1.6	0.5	0.5	3.1
Comorbidity (2+ conditions)	**12.6**	**9.1**	**8.4**	**10.1**	**4.6**	**2.7**	**1.7**	**7.5**
All Adults								
None	67.7	70.0	77.1	75.0	81.3	87.3	89.5	77.0
1	19.9	19.9	14.8	17.2	14.6	10.3	9.0	15.8
2	7.4	6.0	4.8	4.5	2.8	2.0	1.1	4.4
3+	4.9	4.0	3.3	3.3	1.3	0.4	0.3	2.8
Comorbidity (2+ conditions)	**12.4**	**10.1**	**8.1**	**7.8**	**4.1**	**2.4**	**1.5**	**7.2**
Bases (unweighted)								
Men	*267*	*407*	*607*	*494*	*571*	*457*	*360*	*3163*
Women	*293*	*616*	*794*	*630*	*704*	*562*	*563*	*4162*
All	*560*	*1023*	*1401*	*1124*	*1275*	*1019*	*923*	*7325*
Bases (weighted)								
Men	*524*	*597*	*702*	*588*	*537*	*359*	*252*	*3558*
Women	*510*	*611*	*716*	*599*	*556*	*394*	*378*	*3764*
All	*1034*	*1207*	*1418*	*1187*	*1093*	*753*	*630*	*7321*

[a] See Section 12.2.1 for a definition of 'conditions' and a list which are covered.

Table 12.2

Number of conditions (observed and age-standardised), by ethnicity and sex

All adults *2007*

Number of conditions[a]	Ethnicity			
	White	Black	South Asian	Other[b]
	%	%	%	%
Men				
Observed				
None	78.0	75.2	84.2	73.3
1	15.1	15.0	11.4	21.1
2	4.4	4.2	3.7	2.7
3+	2.5	5.6	0.7	2.9
Comorbidity (2+)	**6.9**	**9.8**	**4.4**	**5.6**
Age-standardised				
None	77.6	76.1	87.0	72.4
1	15.3	15.7	7.9	23.6
2	4.6	4.2	3.6	1.8
3+	2.6	4.1	1.5	2.1
Comorbidity (2+)	**7.1**	**8.3**	**5.1**	**3.9**
Women				
Observed				
None	76.6	70.3	75.4	67.3
1	16.1	17.5	14.4	26.5
2	4.1	10.8	8.3	3.0
3+	3.2	1.4	1.9	3.2
Comorbidity (2+)	**7.3**	**12.1**	**10.2**	**6.3**
Age-standardised				
None	76.4	72.1	64.7	71.9
1	16.2	18.4	16.1	22.3
2	4.2	8.1	17.7	3.0
3+	3.2	1.4	1.5	2.8
Comorbidity (2+)	**7.4**	**9.5**	**19.2[c]**	**5.8**
Bases (unweighted)				
Men	*2900*	*77*	*107*	*69*
Women	*3866*	*111*	*86*	*87*
Bases (weighted)				
Men	*3169*	*103*	*168*	*109*
Women	*3425*	*121*	*107*	*102*

[a] See Section 12.2.1 for a definition of 'conditions' and a list which are covered.

[b] Includes Chinese and mixed ethnic groups.

[c] Age-standardisaton had a strong influence on the estimated rate of comorbidity among South Asian women. Driving this result was the fact that a) there were only two South Asian women aged 75 or over in the comorbidity analysis sample, and b) that both of them had two conditions. These women with a comorbidity rate of 100% are weighted up to represent 10% of the South Asian female population after standardisation. The age-standardised rates for ethnicity should be treated with caution: this is the reason why both observed and age-standardised rates are presented for tables by ethnicity.

Table 12.3

Number of conditions (observed), by marital status and sex

All adults *2007*

Number of conditions[a]	Marital status					
	Married	Cohabiting	Single	Widowed	Divorced	Separated
	%	%	%	%	%	%
Men						
None	84.6	70.9	68.2	86.9	63.5	78.0
1	11.6	18.8	20.9	9.2	21.1	11.2
2	2.7	7.9	5.8	2.8	7.9	8.3
3+	1.0	2.5	5.1	1.1	7.4	2.5
Comorbidity (2+)	**3.8**	**10.3**	**10.9**	**3.9**	**15.4**	**10.7**
Women						
None	80.9	73.6	67.0	80.5	68.3	63.2
1	14.5	17.6	19.5	14.8	20.0	20.9
2	2.9	5.1	7.4	3.1	6.4	10.1
3+	1.6	3.7	6.1	1.6	5.3	5.8
Comorbidity (2+)	**4.6**	**8.8**	**13.5**	**4.7**	**11.7**	**15.9**
Bases (unweighted)						
Men	*1657*	*276*	*691*	*229*	*231*	*79*
Women	*1836*	*334*	*720*	*695*	*436*	*141*
Bases (weighted)						
Men	*1935*	*393*	*908*	*115*	*150*	*56*
Women	*1908*	*375*	*753*	*387*	*257*	*84*

[a] See Section 12.2.1 for a definition of 'conditions' and a list which are covered.

Table 12.4

Number of conditions (observed and age-standardised), by equivalised household income and sex

All adults *2007*

Number of conditions[b]	Equivalised household income[a]				
	Highest	2nd	3rd	4th	Lowest
	%	%	%	%	%
Men					
Observed					
None	78.6	81.9	81.2	80.8	67.8
1	16.9	12.6	14.2	12.5	18.2
2	3.1	4.7	3.2	4.6	7.2
3+	1.4	0.8	1.4	2.1	6.8
Comorbidity (2+)	**4.5**	**5.4**	**4.6**	**6.7**	**14.0**
Age-standardised					
None	79.3	82.0	80.5	77.9	66.9
1	15.2	12.1	14.6	13.8	18.3
2	3.4	5.1	3.5	5.6	7.5
3+	2.2	0.8	1.5	2.7	7.3
Comorbidity (2+)	**5.5**	**5.9**	**5.0**	**8.3**	**14.8**
Women					
Observed					
None	79.5	81.3	76.3	74.2	69.8
1	15.9	13.8	17.2	16.4	19.8
2	3.9	2.7	4.1	3.6	6.6
3+	0.8	2.2	2.4	5.9	3.8
Comorbidity (2+)	**4.7**	**4.9**	**6.5**	**9.4**	**10.4**
Age-standardised					
None	77.4	82.9	75.8	70.6	69.4
1	17.6	12.8	17.9	17.6	19.9
2	4.2	2.2	3.8	4.2	6.9
3+	0.8	2.1	2.5	7.6	3.8
Comorbidity (2+)	**5.0**	**4.3**	**6.3**	**11.8**	**10.7**
Bases (unweighted)					
Men	*629*	*546*	*507*	*442*	*418*
Women	*562*	*599*	*732*	*670*	*738*
Bases (weighted)					
Men	*716*	*608*	*522*	*453*	*456*
Women	*531*	*543*	*623*	*534*	*623*

[a] See the Glossary for a definition of equivalised household income.

[b] See Section 12.2.1 for a definition of 'conditions' and a list which are covered.

Table 12.5

Number of conditions (observed and age-standardised), by region[a] and sex

All adults *2007*

Number of conditions[b]	Government Office Region									Strategic Health Authority	
	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	London	South West	South East	South East Coast	South Central
	%	%	%	%	%	%	%	%	%	%	%
Men											
Observed											
None	82.3	73.9	76.6	79.2	78.8	75.0	77.3	81.5	80.2	78.9	81.5
1	10.9	16.6	15.6	15.6	13.3	18.5	18.0	12.0	12.8	13.2	12.4
2	4.2	5.0	5.6	2.1	4.7	4.0	2.8	5.7	5.2	5.9	4.4
3+	2.6	4.5	2.2	3.1	3.2	2.6	1.9	0.7	1.9	2.0	1.8
Comorbidity (2+)	**6.8**	**9.5**	**7.8**	**5.3**	**7.9**	**6.5**	**4.8**	**6.4**	**7.0**	**7.9**	**6.2**
Age-standardised											
None	82.4	73.8	76.0	79.2	78.6	73.7	78.6	81.2	79.5	77.2	81.7
1	10.7	16.5	15.7	15.5	13.2	19.4	16.9	12.1	13.1	14.3	11.9
2	3.9	5.0	5.9	2.2	5.0	4.0	2.8	5.8	5.5	6.4	4.6
3+	2.9	4.7	2.5	3.2	3.2	2.9	1.7	0.9	2.0	2.1	1.8
Comorbidity (2+)	**6.8**	**9.7**	**8.3**	**5.3**	**8.2**	**6.9**	**4.5**	**6.7**	**7.5**	**8.5**	**6.4**
Women											
Observed											
None	70.6	72.9	76.4	75.0	73.7	80.7	75.8	77.2	78.9	80.4	77.1
1	18.3	19.1	17.4	17.7	16.3	15.2	15.0	16.4	14.3	13.5	15.3
2	4.8	5.3	3.8	4.2	6.8	1.9	5.6	3.2	4.1	3.6	4.7
3+	6.2	2.8	2.4	3.1	3.2	2.2	3.5	3.2	2.7	2.5	2.9
Comorbidity (2+)	**11.1**	**8.0**	**6.2**	**7.3**	**10.0**	**4.1**	**9.1**	**6.4**	**6.8**	**6.1**	**7.6**
Age-standardised											
None	70.8	72.9	76.3	75.4	74.5	80.3	76.1	76.2	78.8	79.8	77.9
1	17.9	19.3	17.4	17.3	16.1	15.4	15.2	16.9	14.4	13.5	15.0
2	5.4	5.1	3.8	4.5	6.5	2.0	5.4	3.3	4.1	4.0	4.3
3+	5.8	2.8	2.4	2.7	2.9	2.3	3.3	3.6	2.7	2.7	2.8
Comorbidity (2+)	**11.2**	**7.8**	**6.2**	**7.2**	**9.4**	**4.3**	**8.7**	**6.9**	**6.8**	**6.7**	**7.1**
Bases (unweighted)											
Men	*177*	*474*	*328*	*330*	*343*	*377*	*320*	*325*	*489*	*254*	*235*
Women	*258*	*620*	*462*	*346*	*435*	*473*	*467*	*412*	*689*	*368*	*321*
Bases (weighted)											
Men	*168*	*486*	*354*	*340*	*373*	*402*	*511*	*368*	*555*	*278*	*278*
Women	*206*	*505*	*386*	*290*	*393*	*413*	*575*	*369*	*627*	*335*	*292*

[a] This table provides data for regional analysis both by Government Office Region (GOR) and Strategic Health Authorities (SHAs). The first eight columns represent GORs and SHAs of the same name, while the South East GOR (column nine) is divided into South East Coast SHA and South Central SHA, shown in the final two columns.

[b] See Section 12.2.1 for a definition of 'conditions' and a list which are covered.

Table 12.6

Treatment and service use (observed), by number of conditions

All adults *2007*

Treatment and service use	Number of conditions[a]			
	None	1	2	3+
	%	%	%	%
All adults				
Current treatment for a mental or emotional problem				
No treatment	96	87	78	57
Medication only	3	8	14	17
Counselling or therapy	1	3	6	8
Medication and counselling	0	2	3	18
Service use				
Any current counselling or therapy	1	4	9	26
Any health care service use for a mental or emotional problem[b]	6	21	39	65
Any community care service in past year	5	9	15	27
Any day care service in past year	3	5	7	18
Bases (unweighted)[c]	*5647*	*1142*	*311*	*205*
Bases (weighted)	*5628*	*1153*	*321*	*204*

[a] See Section 12.2.1 for a definition of 'conditions' and a list which are covered.

[b] Inpatient stay or outpatient visit in past quarter, or spoken with GP in past year, for a mental or emotional reason.

[c] Bases shown are for those asked about receiving any treatment. Bases for services used in the past year vary but are of a similar magnitude.

Table 12.7

Tetrachoric correlations between conditions (showing Pearson coefficients where 0.5 or more indicates a strong correlation)

All adults *2007*

	GAD	Mixed A and D	OCD	Depressive episode	Panic disorder / phobia	Alcohol dependence	Drug dependence	Psychotic disorder	Borderline PD	Antisocial PD	PTSD	ADHD	Eating disorder	Problem gambling	Suicide attempt
GAD	1.00														
Mixed A and D	-1.00	1.00													
OCD	0.63	-1.00	1.00												
Depressive episode	0.68	-1.00	0.73	1.00											
Panic disorder / phobia	0.64	-1.00	0.64	0.68	1.00										
Alcohol dependence	0.20	0.18	0.38	0.36	0.37	1.00									
Drug dependence	0.30	0.14	0.35	0.31	0.39	0.43	1.00								
Psychotic disorder	0.54	0.07	0.55	0.65	0.57	0.25	0.40	1.00							
Borderline PD	0.57	0.17	0.74	0.69	0.63	0.41	0.60	0.69	1.00						
Antisocial PD	0.32	0.05	0.54	0.71	0.60	0.63	0.81	0.55	0.77	1.00					
PTSD	0.48	0.32	0.57	0.62	0.63	0.32	0.35	0.64	0.40	0.61	1.00				
ADHD	0.44	0.07	0.38	0.51	0.55	0.33	0.37	0.54	-1.00	0.50	0.54	1.00			
Eating disorder	0.40	0.20	0.33	0.42	0.38	0.28	0.25	0.50	0.55	-1.00	0.34	0.28	1.00		
Problem gambling	0.26	0.17	0.30	0.23	0.33	0.32	0.34	0.31	0.39	0.62	0.28	0.23	0.20	1.00	
Suicide attempt	0.50	0.14	0.60	0.65	0.61	0.30	0.38	0.71	0.52	0.47	0.45	0.55	0.39	0.31	1.00
No. of conditions strongly correlated with:	**6**	**0**	**8**	**9**	**9**	**1**	**2**	**10**	**9**	**10**	**6**	**6**	**2**	**1**	**7**

Table 12.8

Conditions and count of conditions within clusters

All adults *2007*

Conditions	Clusters					
	Unaffected	Moderate internalising	Cothymia	Comorbid internalising	Externalising[a]	Highly comorbid[a]
	%	%	%	%	%	%
All adults						
Generalised anxiety disorder (GAD)	0.0	59.2	0.0	53.3	[2.6]	[71.4]
Mixed anxiety/depressive Disorder	8.0	0.0	100.0	0.0	[0.0]	[0.0]
Obsessive compulsive disorder (OCD)	0.0	4.0	0.0	34.6	[0.0]	[42.9]
Depressive episode	0.0	17.5	0.0	62.1	[12.8]	[100.0]
Panic disorder or any phobia	0.0	20.9	0.0	52.7	[5.1]	[100.0]
Alcohol dependency	3.0	5.5	39.7	24.2	[79.5]	[71.4]
Drug dependency	1.3	2.6	19.9	15.9	[94.9]	[85.7]
Psychosis	0.0	0.0	1.9	8.8	[0.0]	[57.1]
Borderline personality disorder (BPD)	0.0	0.0	1.9	4.4	[0.0]	[71.4]
Antisocial personality disorder (ASPD)	0.0	0.0	0.6	0.0	[7.7]	[57.1]
Posttraumatic stress disorder (PTSD)	0.0	15.4	36.5	47.8	[0.0]	[57.1]
Attention deficit hyperactivity disorder (ADHD)	0.0	2.6	3.2	10.4	[5.1]	[28.6]
Eating disorder	0.6	3.3	14.1	15.4	[5.1]	[14.3]
Problem gambling	0.2	1.7	5.1	2.2	[12.8]	[14.3]
Suicide attempt in past year	0.1	0.0	5.1	17.6	[0.0]	[28.6]
Cluster prevalence	**89.0**	**5.8**	**2.1**	**2.5**	**[0.5]**	**[0.1]**
Number of conditions						
None	86.8	0.0	0.0	0.0	[0.0]	[0.0]
1	13.1	68.2	0.0	0.0	[0.0]	[0.0]
2	0.0	30.8	76.9	17.0	[76.9]	[0.0]
3+	0.0	0.9	23.1	83.0	[23.1]	[100.0]
Mean number of conditions	**0.1**	**1.3**	**2.3**	**3.5**	**[2.3]**	**[8.0]**
Bases (unweighted)						
Men	*2867*	*136*	*62*	*64*	*31*	*3*
Women	*3652*	*286*	*94*	*118*	*8*	*4*
All	*6519*	*422*	*156*	*182*	*39*	*7*
Bases (weighted)						
Men	*3225*	*144*	*77*	*67*	*40*	*4*
Women	*3315*	*239*	*92*	*105*	*10*	*2*
All	*6540*	*383*	*169*	*173*	*51*	*6*

[a] Note that the externalising and highly comorbid clusters have very small bases.

Table 12.9

Estimated odds ratios of clusters, by associated risk factors

		Unaffected		Moderate internalising		Cothymia		Comorbid internalising		Externalising	
	N	OR[a]	95% CI[b]	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Sex		**(p=0.036)**		**(p<0.001)**		**(p=0.703)**		**(p=0.105)**		**(p=0.001)**	
Male	3163	1		1		1		1		1	
Female	4162	0.80	0.65-0.99	1.53	1.19-1.97	1.08	0.74-1.58	1.37	0.94-2.25	0.25	0.11-0.57
Age group		**(p<0.001)**		**(p=0.012)**		**(p<0.001)**		**(p<0.001)**		**(p<0.001)**	
16 - 24	560	1		1		1		1		1	
25 - 34	1023	0.79	0.56-1.12	1.47	0.92-2.35	0.88	0.49-1.58	1.22	0.66-2.25	1.31	0.57-3.00
35 - 44	1401	0.87	0.61-1.23	1.60	0.97-2.63	0.60	0.31-1.17	1.45	0.76-2.74	0.64	0.22-1.88
45 - 54	1124	0.91	0.62-1.33	1.47	0.86-2.51	0.67	0.35-1.29	1.78	0.96-3.32	0.03[c]	0.01-0.19
55 - 64	1275	1.40	0.95-2.07	1.46	0.83-2.56	0.24	0.11-0.50	0.72	0.36-1.42		
65 - 74	1019	2.86	1.85-4.40	0.93	0.52-1.66	0.14	0.05-0.40	0.07[d]	0.03-0.19		
75+	923	4.42	2.73-7.15	0.69	0.37-1.29	0.09	0.02-0.34				
Ethnicity		**(p=0.659)**		**(p=0.059)**		**(p=0.024)**		**(p=0.662)**		**(p=0.281)**	
White	6766	1		1		1		1		1	
Black	188	0.87	0.54-1.39	1.99	1.12-3.52	0.50	0.13-1.86	0.95	0.30-3.04	0.32[e]	0.04-2.53
South Asian	193	1.15	0.69-1.89	1.75	0.92-3.42	0.12	0.03-0.49	0.64	0.24-1.70		
Other	156	1.33	0.76-2.32	0.93	0.44-1.96	0.58	0.16-2.08	1.37	0.62-3.03		
Marital status		**(p<0.001)**		**(p=0.002)**		**(p=0.207)**		**(p<0.001)**		**(p=0.002)**	
Married	3493	1		1		1		1		1	
Cohabiting	610	0.67	0.49-0.91	1.35	0.88-2.07	1.33	0.76-2.33	1.90	1.09-3.32	3.06	0.77-12.12
Single	1411	0.60	0.47-0.76	1.20	0.83-1.74	1.35	0.81-2.23	2.60	1.65-4.11	5.02	1.63-15.47
Widowed	924	0.42	0.30-0.59	1.81	1.25-2.62	1.63	0.66-4.02	4.32	2.01-9.25	13.50[f]	2.91-62.74
Divorced	667	0.40	0.30-0.51	1.90	1.34-2.69	2.23	1.22-4.09	2.53	1.53-4.16		
Separated	220	0.49	0.32-0.76	1.43	0.82-2.52	1.40	0.59-3.35	2.80	1.40-5.59	13.66	2.84-65.66
Equivalised household income		**(p<0.001)**		**(p<0.001)**		**(p=0.168)**		**(p<0.001)**		**(p=0.840)**	
Highest quintile	1191	1		1		1		1		1	
2nd	1145	0.95	0.69-1.31	1.03	0.67-1.58	0.92	0.46-1.85	1.58	0.69-3.62	0.70	0.22-2.19
3rd	1239	0.84	0.59-1.19	0.94	0.60-1.45	1.50	0.78-2.90	2.02	0.88-4.64	0.43	0.09-2.12
4th	1112	0.53	0.37-0.74	1.31	0.86-2.01	1.93	0.93-4.02	4.52	2.13-9.57	0.85	0.21-3.54
Lowest quintile	1156	0.41	0.30-0.56	1.98	1.31-3.00	1.71	0.91-3.20	4.72	2.27-9.82	0.99	0.30-3.35

[a] Odds ratio.

[b] Confidence interval.

[c] Odds ratio and confidence interval for those aged 45 years and older.

[d] Odds ratio and confidence interval for those aged 65 years and older.

[e] Odds ratio and confidence interval for the combined group of black, South Asian, and other.

[f] Odds ratio and confidence interval for the combined group of widowed and divorced.

Table 12.10

Age of respondent, by cluster and sex

All adults *2007*

Age group	Clusters[a]				
	Unaffected	Moderate internalising	Cothymia	Comorbid internalising	Externalising
	%	%	%	%	%
Men					
16-24	14.0	14.0	33.3	18.8	[35.9]
25-34	16.0	18.5	26.4	24.5	[41.9]
35-44	19.4	23.7	16.1	29.0	[17.7]
45-54	16.7	18.8	12.9	18.7	[1.4]
55-64	15.7	13.0	8.0	7.9	[3.1]
65-74	10.7	8.8	1.6	1.2	[-]
75+	7.6	3.2	1.7	-	[-]
Women					
16-24	13.0	10.8	23.5	23.9	[a]
25-34	16.0	17.5	21.0	14.9	[a]
35-44	18.7	21.9	21.2	20.7	[a]
45-54	15.3	17.1	22.8	27.1	[a]
55-64	15.0	17.3	5.0	10.6	[a]
65-74	11.2	7.8	4.3	1.8	[a]
75+	10.8	7.7	2.1	1.0	[a]
All adults					
16-24	13.5	12.0	28.0	21.9	[38.6]
25-34	16.0	17.9	23.4	18.6	[39.0]
35-44	19.1	22.5	18.9	23.9	[18.8]
45-54	16.0	17.7	18.3	23.8	[1.1]
55-64	15.4	15.7	6.4	9.5	[2.5]
65-74	10.9	8.1	3.1	1.6	[-]
75+	9.2	6.0	1.9	0.6	[-]
Bases (unweighted)					
Men	*2867*	*136*	*62*	*64*	*31*
Women	*3652*	*286*	*94*	*118*	*8*
All	*6519*	*422*	*156*	*182*	*39*
Bases (weighted)					
Men	*3225*	*144*	*77*	*67*	*40*
Women	*3315*	*239*	*92*	*105*	*10*
All	*6540*	*383*	*169*	*173*	*51*

[a] The 'highly comorbid' cluster and women in the externalising clusters are not shown due to very small base sizes.

Table 12.11

Ethnicity of respondent (observed), by cluster and sex

All adults *2007*

Ethnicity	Clusters[a]				
	Unaffected	Moderate internalising	Cothymia	Comorbid internalising	Externalising
	%	%	%	%	%
Men					
White	89.5	83.6	92.9	84.9	[94.3]
Black	2.7	4.6	2.3	8.3	[-]
South Asian	4.6	10.1	1.0	1.9	[5.7]
Other[b]	3.1	1.7	3.9	4.9	[-]
Women					
White	91.3	88.1	95.1	91.8	[a]
Black	3.1	6.1	2.8	1.6	[a]
South Asian	2.9	2.9	0.5	3.5	[a]
Other[b]	2.7	2.9	1.6	3.1	[a]
Bases (unweighted)					
Men	*2860*	*136*	*61*	*62*	*31*
Women	*3642*	*284*	*94*	*118*	*8*
Bases (weighted)					
Men	*3219*	*144*	*76*	*65*	*40*
Women	*3307*	*237*	*92*	*105*	*10*

[a] The 'highly comorbid' cluster and women in the externalising clusters are not shown due to very small base sizes.

[b] Includes Chinese and mixed ethnic groups.

Table 12.12

Marital status (observed), by cluster and sex

All adults *2007*

Marital status	Clusters[a]				
	Unaffected	Moderate internalising	Cothymia	Comorbid internalising	Externalising
	%	%	%	%	%
Men					
Married	56.3	49.3	31.4	26.2	[9.1]
Cohabiting	10.8	9.1	21.8	14.4	[16.1]
Single	24.4	25.4	35.3	46.5	[60.1]
Widowed	3.2	5.0	1.8	1.8	[-]
Divorced	3.7	10.7	7.8	9.4	[7.9]
Separated	1.6	0.5	1.8	1.7	[6.9]
Women					
Married	52.5	41.8	35.8	30.4	[a]
Cohabiting	9.7	13.7	7.9	11.9	[a]
Single	18.9	20.3	40.3	33.4	[a]
Widowed	10.6	10.2	4.0	7.4	[a]
Divorced	6.3	9.7	9.5	11.1	[a]
Separated	2.0	4.3	2.5	5.7	[a]
Bases (unweighted)					
Men	*2867*	*136*	*62*	*64*	*31*
Women	*3652*	*286*	*94*	*118*	*8*
Bases (weighted)					
Men	*3225*	*144*	*77*	*67*	*40*
Women	*3315*	*239*	*92*	*105*	*10*

[a] The 'highly comorbid' cluster and women in the externalising clusters are not shown due to very small base sizes.

Table 12.13

Equivalised household income (observed), by cluster and sex

All adults *2007*

Equivalised household income	Clusters[a]				
	Unaffected	Moderate internalising	Cothymia	Comorbid internalising	Externalising
	%	%	%	%	%
Men					
Highest	26.8	16.3	17.3	14.3	[38.8]
2nd	22.4	22.1	20.1	7.5	[22.0]
3rd	19.5	12.5	15.8	12.8	[8.0]
4th	16.5	17.4	19.2	15.6	[6.8]
Lowest	14.8	31.7	27.6	49.7	[24.4]
Women					
Highest	19.0	18.6	20.1	5.9	[a]
2nd	19.8	14.1	9.9	16.5	[a]
3rd	22.2	17.9	25.2	16.7	[a]
4th	18.4	17.7	20.7	29.2	[a]
Lowest	20.6	31.7	24.1	31.7	[a]
Bases (unweighted)					
Men	*2306*	*108*	*49*	*53*	*24*
Women	*2893*	*226*	*76*	*98*	*4*
Bases (weighted)					
Men	*2501*	*118*	*55*	*51*	*27*
Women	*2516*	*182*	*67*	*81*	*5*

[a] The 'highly comorbid' cluster and women in the externalising clusters are not shown due to very small base sizes.

Table 12.14

Region (observed), by cluster and sex

All adults *2007*

GOR / SHA[a]	Clusters[b]				
	Unaffected	Moderate internalising	Cothymia	Comorbid internalising	Externalising
	%	%	%	%	%
Men					
North East	4.8	2.1	3.7	6.7	[7.2]
North West	13.1	16.5	20.2	21.6	[20.8]
Yorkshire & the Humber	9.9	12.1	8.3	6.2	[18.3]
East Midlands	9.7	7.2	4.6	10.5	[11.4]
West Midlands	10.4	11.0	13.9	11.1	[5.0]
East of England	11.3	12.4	12.1	14.8	[-]
London	14.7	9.6	13.3	10.6	[10.0]
South West	10.4	15.1	7.8	3.7	[3.7]
South East	15.6	14.0	16.1	14.8	[23.6]
South East Coast	7.7	8.4	10.7	8.3	[12.1]
South Central	8.0	5.6	5.4	6.5	[11.5]
Women					
North East	5.3	5.6	8.9	7.7	[b]
North West	13.3	12.8	20.5	10.8	[b]
Yorkshire & the Humber	10.2	12.4	9.0	6.8	[b]
East Midlands	7.5	11.3	4.9	7.1	[b]
West Midlands	10.1	11.6	9.6	20.3	[b]
East of England	11.4	8.5	4.9	7.8	[b]
London	15.2	15.4	20.1	13.7	[b]
South West	10.0	8.3	3.8	11.6	[b]
South East	16.9	14.1	18.3	14.2	[b]
South East Coast	9.1	6.5	9.8	7.4	[b]
South Central	7.8	7.6	8.5	6.7	[b]
Bases (unweighted)					
Men	*2867*	*136*	*62*	*64*	*31*
Women	*3652*	*286*	*94*	*118*	*8*
Bases (weighted)					
Men	*3225*	*144*	*77*	*67*	*40*
Women	*3315*	*239*	*92*	*105*	*10*

[a] This table provides data for regional analysis both by Government Office Region (GOR) and Strategic Health Authorities (SHAs). The first eight columns represent GORs and SHAs of the same name, while the South East GOR (column nine) is divided into South East Coast SHA and South Central SHA, shown in the final two columns.

[b] The 'highly comorbid' cluster and women in the externalising clusters are not shown due to very small base sizes.

Table 12.15

Treatment and service use (observed), by cluster

All adults *2007*

Treatment and service use	Clusters[a]				
	Unaffected	Moderate internalising	Cothymia	Comorbid internalising	Externalising
	%	%	%	%	%
All adults					
Current treatment for a mental or emotional problem					
No treatment	95	75	81	56	[81]
Medication only	4	15	11	18	[7]
Counselling or therapy only	1	6	5	8	[9]
Medication and counselling	0	4	3	18	[3]
Service use					
Any current counselling or therapy	1	9	8	26	[12]
Health care service use for a mental or emotional problem[b]	7	37	38	69	[22]
Community care service in past year	5	16	13	28	[-]
Day care service in past year	3	8	4	19	[5]
Bases (unweighted)[c]	*6504*	*420*	*155*	*180*	*39*
Bases (weighted)	*6529*	*382*	*168*	*171*	*51*

[a] The 'highly comorbid' cluster is not shown due to very small base size.

[b] Inpatient stay or outpatient visit in past quarter, or spoken with GP in past year, for a mental or emotional problem.

[c] Bases shown are for those responding to the questions about receiving any treatment. Bases for services used in the past year vary but are of a similar magnitude.

Methods 13

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13.1 Introduction

The Adult Psychiatric Morbidity Survey 2007 (APMS 2007) is the third in a series of general population surveys of adult mental health. The previous surveys were conducted by ONS in 1993 and 2000, and covered England, Scotland and Wales. The 2007 survey was carried out by NatCen, covered England only, and removed the upper age limit to participation (which was 64 in 1993 and 74 in 2000). Like the preceding surveys, APMS 2007 consisted of two phases, with the second phase interview being conducted with a sub-sample of phase one respondents by clinically trained interviewers coordinated by the University of Leicester.

Core topics have been covered in every survey wave, such as anxiety and depression, psychosis and substance use disorders. New topics in 2007 included screening for eating disorder, posttraumatic stress disorder, problem gambling and attention deficit hyperactivity disorder.

The Adult Psychiatric Morbidity survey series is part of a programme of surveys currently commissioned by the NHS Information Centre for health and social care, and previously commissioned by the Department of Health.

This chapter provides a description of the survey methodology used on APMS 2007, including accounts of the:

- Sample design for the phase one and phase two interviews;
- Topic coverage;
- Questionnaire development and piloting;
- Fieldwork procedures;
- Survey response;
- Weighting strategies; and
- Data analysis and age-standardisation approach used in this report.

13.2 Sample design

13.2.1 Overview of the sample design

The sample for APMS 2007 was designed to be representative of the population living in private households (that is, people not living in communal establishments) in England. People living in institutions, who are likely to be older and, on average, in poorer mental health than those in private households, were not covered. This should be borne in mind when considering the survey's account of the population's mental health. At the time of the 2001 Census, 2% of the English population aged 16 years or over were resident in a communal establishment; for people aged 65 years or over, the figure was 4%.

The survey adopted a multi-stage stratified probability sampling design. The sampling frame was the small user Postcode Address File (PAF) because of its 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 thus be sampled. Once the interviewer has verified that an address does not contain a private household, such addresses are recorded as ineligible. The very small proportion of households living at addresses not on the PAF (less than 1%[1]) were not covered by the sample frame.[2]

A stratified multi-stage random probability sample was used for the phase one interview, involving two stages of sample selection: the sampling of the primary sampling units (PSUs) followed by the sampling of addresses within the selected PSUs.

13.2.2 Selection of primary sampling units (PSUs)

The PSUs were individual or groups of postcode sectors. A postal sector contains on average 2,550 households. Small postal sectors are grouped with contiguous sectors so that each group contains at least 500 delivery points.

A way of increasing the precision of a random sample is to stratify it. Before any selection takes place, the population is divided into a number of strata; then a random sample is selected independently within each strata. This ensures the different strata in the population are represented in known proportions. This also leads to a reduction of standard error.

APMS 2007 used an approach to sampling that was consistent with the 2000 survey. In the 2000 survey the stratifiers used were:

- NHS Regional Office and old Regional Health Authority Area.
- Proportion of household heads in socio-economic groups 1-5 and 13 (based on 1991 Census data).
- Proportion of households without a car (1991 Census data).

In the first stage of sampling for the APMS 2007, the postcode sectors were stratified on the basis of a measure of socio-economic status within a regional breakdown. First, postcode sectors were divided into regions based on Strategic Health Authority (SHAs).[3] The regional strata used in this survey are shown in Table 13.1. All the PSUs within each SHA were then further stratified on the basis of the proportion of people in non-manual classes and sorted by the proportion of households without a car based on 2001 Census data.[4] Then postal sectors were sampled from each stratum with a probability proportional to size (where size is measured by the number of delivery points). In this way a total of 519 postal sectors were selected in England. **Table 13.1**

13.2.3 Sampling addresses and households

In the second stage of sampling 28 delivery points were randomly selected within each of the selected postal sectors. This yielded a total sample of 14,532 delivery points.

Interviewers visited the 14,532 addresses to identify private households with at least one person aged 16 or over. When visited by an interviewer, 1,318 of the selected addresses were found not to contain private households. These addresses were thus ineligible, and were excluded from the survey sample.

Within each eligible household, one person was randomly selected to take part, as described in Section 13.2.4. Standard multi-household procedures were used at addresses found to contain more than one household, so that all households were given an equal chance of selection. At addresses with more than one household, interviewers used multi-household selection grids to select a single household.

13.2.4 Sampling one adult per household

One adult aged 16 years or over was selected for interview in each household.[5] 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 will tend to be similar to each other and, where households differ markedly from each other, the resultant clustering can lead to a substantial increase in standard errors around survey estimates: by selecting only one person in each household this clustering effect was overcome; and
- It reduced the burden placed on each household.

In households where there was more than one person aged 16 years or over, one was selected at random for interview, ensuring that all members who were eligible for the survey had the same chance of being selected.

13.2.5 Eligible addresses

Out of the 14,532 addresses in the original sample, 12,694 (87%) were found to include at least one private household, 1,318 (9%) were non-residential addresses, and 520 (4%) were addresses of unknown eligibility. 13,214 were therefore potentially eligible. However, given the profile of eligibility at the addresses where this could be determined, we can estimate that 91% of the addresses of unknown eligibility would in practice have been eligible. This means there was an estimated combined base of 13,171 eligible and probably eligible addresses for the phase one interview.

13.2.6 Sampling procedures for the phase two interviews

Overview

For each phase one respondent, the probability of selection for a phase two assessment was calculated as the maximum of four disorder-specific probabilities: psychosis probability; Asperger syndrome probability; borderline personality disorder probability; and antisocial personality disorder probability. The probabilities were based on respondents' responses to screening questions in the phase one questionnaire. The antisocial personality disorder score was based on a combination of scores for conduct disorder and adult antisocial personality.

These disorder-specific probabilities are summarised below, and described in more detail in the relevant disorder-specific chapter and in Appendix A.

As an example of their use: a person with a psychosis score of zero, an Asperger syndrome score of three, a borderline personality disorder score of four, an adult antisocial personality score of two, and a conduct disorder score of three would have had the following four disorder-specific 'probabilities' for selection:

- Psychotic disorder: 0;
- Asperger syndrome: 0;
- Borderline personality disorder: 0.25; and
- Antisocial personality disorder: 0.18.

Given that the maximum of these four probabilities is 0.25, the probability that the respondent was selected for a phase two interview was 0.25. **Figure 13A**

Figure 13A

Calculation of disorder-specific probabilities of selection for a phase two interview

Psychotic disorder

Number of phase one psychosis criteria met	*Probability of selection for phase two*
0	0
1+	1

Asperger syndrome

Score at phase one Asperger sydrome self-completion questionnaire	*Probability of selection for phase two*
0-4	0
5	0.021
6	0.022
7	0.022
8	0.025
9	0.029
10	0.25
11	0.61
12+	1

Borderline personality disorder

Score at phase one self-completion SCID-II screen	*Probability of selection for phase two*
0-3	0
4	0.25
5	0.40
6	0.52
7	0.63
8	1
9	1

Antisocial personality disorder

Stratum assigned according to phase one self-completion SCID-II screen	*Probability of selection for phase two*
1 (or aged 16/17)	0
2	0.13
3	0.18
4	0.29
5	0.38
6	0.54
7	0.76
8	1
9	1

The antisocial personality disorder probability depended on the stratum that a respondent fell into: the strata were defined in terms of respondents' adult antisocial personality score and conduct score, as described in more detail in Chapter 6.

13.3 Topic coverage

13.3.1 APMS 2007 phase one interview

Figure 13B 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. The full phase one questionnaire is reproduced in Appendix D.

Figure 13B

Figure 13B

APMS 2007 phase one interview content

	Age of respondent		
	16-59	60-69	70+
CAPI interview: face to face interview [1]			
Marital status and household relationships	•	•	•
Identification of household reference person	•	•	•
General health (SF12) and health conditions	•	•	•
Activities of daily living (ADL)	•	•	•
Caring responsibilities	•	•	•
Service use and medication	•	•	•
Self-perceived height and weight (for calculation of BMI)	•	•	•
Common mental disorders (CIS-R)	•	•	•
Suicidal behaviour and self-harm	•	•	•
Psychosis screening questionnaire (PSQ)	•	•	•
Attention deficit hyperactivity disorder (ASRS)	•	•	•
Work related stress	•	•	-
Smoking	•	•	•
Drinking 1	•	•	•
CASI interview: self completion			
Drinking 2 (AUDIT, SADQ-C)	•	•	•
Drug use	•	•	•
Personality disorder (SCID-II) and social functioning (SFQ)	•	•	•
Problem gambling	•	•	•
Asperger syndrome (ASCQ)	•	•	•
Posttraumatic stress disorder (TSQ) & military experience	•	•	•
Domestic violence and abuse	•	•	•
Suicidal behaviour and self-harm (3 questions from face to face)	•	•	•
Eating disorder (SCOFF)	•	•	•
Discrimination and sexual identity	•	•	•
CAPI interview: face to face interview [2]			
Intellectual functioning:			
TICS-M	-	•	•
National Adult Reading Test (NART)	•	•	•
Animal naming test	-	•	•
Stressful life events (LTE)	•	•	•
Social support networks (IMSR)	•	•	•
Parenting	•	•	•
Religion and spirituality	•	•	•
Social capital and participation	•	•	•
Socio-demographics	•	•	•
Consents (NHS Central Register flag & phase two consent)	•	•	•

13.3.2 APMS 2007 phase two interview

The phase two interview assessed the following disorders:

- Psychotic disorder;
- Antisocial and borderline personality disorders; and
- Asperger syndrome.

The approach taken to the phase two assessment of psychosis is described in Chapter 5 and the phase two assessment of personality disorder is described in Chapter 6, with further technical detail in Appendix A. Asperger syndrome, including details of the assessment process used, will be reported on separately.

13.3.3 Coverage of the 1993, 2000 and 2007 APMS interviews

Figure 13C summarises the topic coverage of the 1993, 2000 and 2007 APMS questionnaires.

Figure 13C

Figure 13C

APMS coverage in 1993, 2000 and 2007

	1993	2000	2007
Face to face interview (PAPI 1993, CAPI 2000, 2007)			
General health	-	•	•
Activities of daily living	•	•	•
Caring responsibilities	-	-	•
Service use & medication	•[a]	•	•
Self perceived height & weight	-	-	•
Common mental disorders	•	•	•
Suicidal behaviour and self-harm	•[b]	•	•
Psychosis screening questionnaire	•	•	•
Attention deficit hyperactivity disorder	-	-	•
Work related stress	-	-	•
Smoking	•	•	•
Drinking 1	•	•	•
Self completion (PAPI 1993, CASI 2000, 2007)			
Drinking 2	•[c]	•	•
Drug use	•	•	•
Personality disorder and social functioning	-	•	•
Problem gambling	-	-	•
Asperger syndrome	-	-	•
Posttraumatic stress disorder and military experience	-	-	•
Domestic violence and abuse	-	-	•
3 suicidal behaviour and self-harm questions	-	-	•
Eating disorder	-	-	•
Discrimination	-	-	•
Face to face interview (PAPI 1993, CAPI 2000, 2007)			
Intellectual functioning:			
TICS-M	-	•	•
National Adult Reading Test (NART)	-	•	•
Animal naming test	-	•	•
Key life events	•	•	•
Social support networks	•	•	•
Religion and spirituality	-	-	•
Social capital and participation	-	-	•
Socio-demographics	•	•	•

[a] In APMS 1993 only respondents who screened positive for a common mental disorder were asked about use of services and receipt of treatment.

[b] In APMS 1993 only respondents with depressive episode in the past week were asked about suicidal behaviour.

[c] APMS 1993 data on alcohol is not comparable with that collected in 2000 and 2007.

13.3.4 Key differences between the 2000 and 2007 surveys

A primary purpose of the 2007 survey was to assess change in the population prevalence of disorders over time. For this reason maintaining comparability with the 2000 survey was a priority, so both the questionnaire and the approach taken to its administration were largely the same. However, there were some changes in coverage and method, and these are summarised below.

Area

The 2000 survey covered England, Scotland and Wales, while the 2007 survey covered England only.

Age range

APMS 2007 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).

Topics added

The following topics were included for the first time in the 2007 survey:

- Caring responsibilities;
- Attention deficit hyperactivity disorder;
- Work related stress;
- Problem gambling;
- Asperger syndrome;
- Posttraumatic stress disorder;
- Military experience;
- Social functioning;
- Domestic violence and abuse;
- Eating disorders;
- Discrimination and sexual identity;
- Religion and spirituality; and
- Social capital and participation.

Amendments to existing modules

To create space for the new topics listed above, some cuts and changes were made to the APMS 2000 questionnaire. These included:

- Physical health – in 2000, respondents were asked what health conditions they currently had, and responses were keyed in by interviewers and coded. In 2007 respondents were presented with a show card listing 22 conditions, and asked which they had ever had and which they had now.
- Medications – in 2000, respondents were asked about all the medications they were currently taking. In 2007, only mental health related medications were asked about, using a series of show cards. Compliance with medication was not asked about in the 2007 survey.
- Service use – the service use module was longer in 2000 than in 2007. The questions dropped covered satisfaction with and refusal of services and use of services in particular time frames.
- Depression - additional questions on the age of onset of symptoms and the number of episodes experienced were added to the 2007 survey.
- Personality disorder – in 2000, 10 types of personality disorder were assessed, while the 2007 survey only covered two types (antisocial and borderline).
- Suicidal behaviour and self-harm – to maintain comparability with the 2000 survey, the suicidal behaviour questions were kept in the face to face section of the 2007 questionnaire. However in 2007, three of these questions were also asked in the self-completion section to assess possible mode effects on reporting.
- Key life events – changes were made to the questions about key life events to make it clearer when the events had taken place.
- Alcohol dependence – The Severity of Alcohol Dependence Questionnaire (SADQ) used in 2000 was replaced with the SADQ-Community, a later modification of the SADQ which

is more appropriate to community settings and slightly shorter. It is designed to be comparable with the SADQ.

- Smoking – questions that were asked in the 2000 survey of ex-smokers and questions about type of cigarette smoked (for example, whether filtered) were dropped in 2007. Four new questions were added to enable the Fagerstrom test of nicotine dependence to be conducted.

Phase two sample selection

The way in which a subsample of phase one respondents was selected for a phase two interview was different in 2000 and 2007. The earlier survey applied sampling fractions according to whether respondents screened negative or positive for the conditions assessed at phase two. For the 2007 survey, 2000 data were available on which to model sampling fractions, based on more precise and discriminating probabilities, and excluding entirely those with a very low score. The 2007 approach is outlined in Section 13.2.6.

Appendix F lists APMS 1993 and 2000 publications, including the APMS 2000 technical report.

13.4 Piloting and questionnaire development

13.4.1 Expert panel

In March 2006 an expert panel was held with people experienced in survey research or in some of the new topics proposed for inclusion or amendment in the APMS 2007 questionnaire. Their advice and guidance was incorporated into the early stage drafting of new or revised questions, and helped inform the subsequent cognitive testing.

13.4.2 Cognitive question testing

Two rounds of cognitive testing were conducted with a total of 21 participants. The first round was carried out in April 2006 and the second round in May 2006. This stage of development work sought to test the questions new to the 2007 survey or questions from 2000 that were identified by the expert panel and others as in need of revision. There were two main cognitive interviewing techniques used: 'thinking aloud' and probing. In the former, respondents are asked to think aloud as they answer survey questions. In the latter, they are asked specific questions about how they went about answering survey questions. Probes may be asked concurrently, as respondents answer the survey questions, or retrospectively, after a set of questions have been administered.[6]

Respondents' interpretations of the questions were explored, as well as their views on the language and terminology used. Two reports on the findings of the cognitive testing were submitted to the NHS Information Centre, and where appropriate, recommendations were discussed between the NHS Information Centre, the research team and key experts in the area.

13.4.3 Dress rehearsal

Following the cognitive testing, the questionnaire was refined for the dress rehearsal conducted in June/July 2006. Interviews were conducted with 107 respondents, including 24 aged 70 or over. Given the removal of the upper age limit, testing how well the questionnaire (including computer assisted self-completion) worked with older respondents was a key objective. The dress rehearsal also enabled the 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 39 phase two interviews conducted by clinically trained interviewers coordinated by the University of Leicester. Again, a report on the dress rehearsal was submitted to the NHS Information Centre.

13.5 Fieldwork procedures

13.5.1 Training and supervision of interviewers

Phase one interviewers

The NatCen interviewers selected to work on the first phase of the survey were generally experienced, and many had worked previously on 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 respondent distress.

Full sets of written instructions were provided for interviewers. As the fieldwork took place over the course of a year, homework and refresher sessions were held for those interviewers who took a break from the survey of 4 months or more. All 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 coordinated by the University of Leicester. They were all experienced in psychological research interviewing, and several had worked on APMS 2000. Phase two interviewers received an extensive 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 on the use of laptops.

13.5.2 Quality control

A number of quality control measures were built into the survey process, both during data collection and as a check on the quality of phase one and phase two interviewer performance.

The computer programme used by interviewers included 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 respondents 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 and a psychiatrist. In addition, 72 phase two interviews were repeated for a quality assessment interview by the senior research psychologist.

13.5.3 Advanced 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.

13.5.4 Making contact

At initial contact, the interviewer established the number of households at the address, and made any selection necessary (see Section 13.2). The interviewer randomly selected one adult per household, and then attempted to interview that person. As in 1993 and 2000, the survey title used in the field with respondents was the 'National Study of Health and Wellbeing', as this was felt to be more readily understandable than 'psychiatric morbidity'. Interviewers had copies of a leaflet outlining the purpose of the study, which they could use on the doorstep and leave with respondents. This is reproduced in Appendix E.

13.5.5 Collecting the data

Both the phase one and the phase two interviews took about an hour and a half to complete on average, although some 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. 17% of respondents were coded by interviewers as needing at least some help with using the laptop during the self-completion part of the interview. Older respondents were more likely than younger respondents to need assistance.

At the end of the phase one interview, written permission was sought for the respondent's name to be flagged on the National Health Service's centrally held register. The documentation for this is included in Appendix E. Verbal permission was also sought for a University of Leicester interviewer to contact the respondent further in order to explain the phase two interview, should they be selected: 76% agreed.

If the selected respondent was not capable of undertaking the interview alone, for reasons of mental or physical incapacity, the option was available for a 'proxy' interview conducted with another member of the family, a carer or another person who knew the selected respondent well. The 58 proxy interviews conducted were short (mostly less than half an hour), and only included questions that were current and factual rather than subjective.

13.5.6 Token of appreciation, help-lines and thank you letters

A £5-10 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 £5 high street voucher.

All participants were 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.

Thank you letters were sent to all respondents on completion of the phase one interview.

Examples of all these fieldwork documents are provided in Appendix E.

13.6 Survey response

13.6.1 Response at phase one

9% of sampled addresses were ineligible because they contained no private households, while 4% were addresses of unknown eligibility (see Section 13.2.5). This left a known eligible sample of 12,694 addresses. Applying the eligibility rate amongst those where it was established, to those where it was not, we estimate that 91% of those of unknown eligibility would indeed have been eligible to take part. This increased the set sample of households to 13,171. The proportion of selected adults who agreed to take part in an initial interview is shown in Figure 13D. At the phase one interview, 57% of those eligible agreed to take part in an interview. This included 50 partial interviews where the respondent completed the service use and CIS-R modules, but did not reach the end of the interview.

Figure 13D

13.6.2 Response at phase two

7461 respondents provided a productive phase one interview. Of these 58 were proxy respondents and therefore not eligible for the phase two interview. A probability of selection was calculated for each respondent based on their answers to the phase one screening questions on psychosis, Asperger syndrome, and personality disorder: as outlined in Section 13.2.6. 5,329 respondents had a probability of selection of greater than zero: 4050 of these also agreed to be recontacted for a phase two interview (76%). After the

Figure 13D

Response rates of adults at initial interview (phase one)

	Number	%
Set sample of households	**13,171**	**100**
Refusals	4,075	31
Non-contacts (known eligible)	499	4
Non-contacts (estimated eligible)	471	4
Other unable/unproductive	664	5
Co-operating adults	**7,461**	**57**
Co-operating adults	**7,461**	**100**
Full interviews	7,353	99
Partial interviews	50	1
Proxy interviews	58	1

application of the highest of the four disorder specific sampling fractions, 849 respondents were selected for a phase two interview. Phase two interviews were conducted with 630 of these (74%). **Figure 13E**

Figure 13E

Response rates of adults at clinical interview (phase two)

	Number	%
Productive respondents	7,461	
– excluding proxies	7,403	
Eligible for phase two based on phase one responses	**5,329**	**100**
- eligible and agreed to recontact	4,050	76
Selected for phase two after sampling fractions applied	**849**	**100**
- phase two interview conducted	630	74
- refusals	62	7
- non contacts	54	3
- not issued to field due to time constraints	103	12
Phase two interviews	**630**	**100**
- SCAN interview completed[a]	628	100
- SCID interview completed	606	96
- ADOS interview completed	618	98

[a] Scan data are not present for all 630 cases, as were lost for two respondents.

13.7 Weighting the data

13.7.1 Weighting the phase one data

The survey data were weighted to take account of non-response, so that the results were representative of the household population aged 16 years and over. Weighting occurred in three steps.

First, sample weights were applied to take account of the different probabilities of selecting respondents in different sized households.

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 2001 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 to entry to the property (e.g. a locked common entrance or the presence of security staff), Government Office Region, Index of Multiple Deprivation 2004 (IMD 2004) quintiles,[7] population density (number of persons per hectare), percentage of persons of non-white ethnic background, 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 strongly related to the propensity of households to respond were dropped from the analysis. The variables found to be related to response were Government Office Region, whether there were entry barriers to the selected address, and the percentage of households owner-occupied. The model shows that the propensity for a household to respond was lower in the West Midlands, East of England, London, South East and the South West (relative to the North East), higher for households with no physical barriers to entry to the property, and higher in areas where a relatively high percentage of households were owner-occupied.

The non-response weight for each household was calculated as the inverse of the probability of response estimated from the model, multiplied by the household's selection weight. The full model is given in Table 13.2. **Table 13.2**

Finally, weights were applied using the techniques of calibration weighting[8] based on age, sex and region to weight the data to represent the structure of the national population, and to take account of differential non-response between regions and age-by-sex groups. The population control totals used were the Office for National Statistics (ONS) 2006 mid-year household population estimates. Tables 13.3 and 13.4 show the control totals used. As a result of the calibration, the APMS 2007 weighted data matches exactly the estimated population across these three dimensions. This is shown in Table 13.5. **Tables 13.3 to 13.5**

13.7.2 Weighting the phase two data

The phase two interview data has a set of survey weights different from those generated at phase one. These phase two weights were designed to generate condition-specific phase two datasets that were representative of the population 'eligible' for phase two on that particular condition. So, for psychosis, the phase two weighted dataset represents those screened in as 'possibly psychotic' at phase one; and the phase two weighted dataset for borderline personality disorder represents those with a score of 3 or more on the borderline personality disorder phase one screening questions.

The calculation of the phase two weights was relatively straightforward. They account for two factors:

- Not all those eligible for phase two were selected with equal probability (those with higher screening scores at phase two were more likely to be selected, and those with potential co-morbidities were selected with, on average, higher probabilities than those with single disorders); and
- Some of those selected for phase two declined to take part. This introduces the possibility of phase two non-response bias. Attempts have been made to minimise the risk of this by including a non-response adjustment to the weights that ensures that those responding match those selected in terms of sex, age-group and screening score for the disorder in question.

The weights relating to the second phase dataset were calculated as two components. The first comprised the selection weights, which were calculated for each person as the inverse of their probability of selection for phase two, multiplied by their phase one weight. The second component was the non-response adjustment, calculated as the inverse of the modelled probability of responding at phase two (having been selected). The modelling was based on a weighted logistic regression, with the weights in the model being the selection weights.

13.8 Data analysis and reporting

13.8.1 Introduction

APMS 2007 was a cross-sectional survey of the general population. While it allows for associations between mental health disorders 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.

13.8.2 Weighted and unweighted bases

As outlined in Section 13.7, all the data presented in the substantive chapters of this report are weighted to account for likelihood of selection and non-response. Both weighted and non-weighted bases are given in each table. The unweighted bases are presented to show the number of respondents included. The weighted base shows the relative size of the various sample elements after weighting, reflecting their proportions in the English population, so that data from different columns can be combined in their correct proportions. The absolute size of the weighted base has no particular significance, since it has been scaled to the achieved sample size.

13.8.3 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. APMS 2007 fieldwork was spread across the 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 depressive episode in terms of the month in which the interview took place. Adjusting for month of interview did not significantly affect comparisons of rates of disorder across survey years.

13.8.4 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. 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.[9]

Age-standardisation was carried out using the direct standardisation method. The reference population was the Office for National Statistics' Census based mid year 2006 population estimates for England.

Age-standardisation was not conducted for some analyses. These include analysis by marital status. Our age-standardisation approach requires cases to be present in each 'cell'. Because some marital status groups (e.g. 'widowed') 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 both observed and age-standardised rates of disorder are presented for analysis by ethnicity.

13.8.5 Standard analysis breaks

Most of the disorders covered in this report are analysed by a core set of breaks: age, sex, ethnicity, marital status, equivalised household income, and region. These are all defined in more detail in the Glossary at the back of this report, including how they were derived. The analysis breaks used in the report are described briefly below:

Ethnicity

Respondents identified their ethnicity according to one of fifteen groups presented on a show card, including 'other – please state'. For analysis purposes, these groups were subsumed under four headings: white, black, South Asian and other. Due to the heterogeneous nature of the 'other' group, which includes people of mixed ethnic origin and Chinese, it is generally not referred to in the text or charts in the chapters. It is however included in tables for completeness. Because of the small base sizes for ethnic minority groups, age-standardised rates should be treated with caution and regarded in relation to the observed rates.

Marital status

Respondents were categorised according to their self-reported legal marital status. This included a category for whether the respondent was in a legally recognised Civil Partnership with someone of the same sex. See Section 13.8.4 for an explanation of why analysis by this variable was not age-standardised.

Equivalised household income

Household income was established by means of a show-card (see Appendix E) on which banded incomes were presented. While income alone can be used as an analysis variable, there is interest in using measures of equivalised income that is adjusted to take account of the number of people living in the household. To derive this, each household member is given a score depending, for adults, on the number of adults cohabiting or not cohabitating, and for dependent children, their age. The total household income is divided by the sum of the scores to provide the measure of equivalised household income. Respondents were then allocated to the equivalised household income quintile to which their household had been allocated. Analyses by equivalised household income have been age-standardised.

Region

Government Office Region (GOR) is the key classification system used for regional statistics. There are nine Government Office Regions in England: North East, North West, Yorkshire and the Humber, East Midlands, West Midlands, East of England, London, South East and South West. The nine category system has been in use since 1998; however, GOR boundaries may change from year to year, as they reflect administrative boundaries.

From July 2006, a new configuration of Strategic Health Authorities (SHAs) was introduced in England, reducing the number of SHAs from 28 to 10. The boundaries are the same as those of the Government Office Regions with the exception of the South East, which has been divided into South East Coast SHA and South Central SHA.

Tables provide data for regional analysis both by Government Office Region (GOR) and Strategic Health Authorities (SHAs). The first eight columns represent GORs and SHAs of the same name, while the South East GOR (column nine) is divided into South East Coast SHA and South Central SHA, shown in the final two columns. This approach to analysis by region is the same as that used on the Health Surveys for England, and is usually shown both observed and age-standardised.

Treatment and service use

When looking at treatment and service use, respondents with each disorder were compared with those without the disorder. Because of the low prevalence of most of the disorders assessed in APMS 2007, this generally meant that the base size for the group with the

disorder was usually very small. Age-standardising a small group can be problematic, for the reasons outlined in 13.8.4. Therefore, the treatment and service use tables were only age-standardised where the base for the disordered group was always large (for example, at least 100 cases). This was the case for the following chapters only: posttraumatic stress disorder (Chapter 3); eating disorders (Chapter 8) and alcohol misuse and dependence (Chapter 9).

13.8.6 Asperger syndrome

The data collected as part of APMS 2007 relating to Asperger syndrome are not presented in this report. This is because subsequent fieldwork has been undertaken on validating and extending this work. These data will be analysed together, and published separately at a later date.

13.8.7 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 were 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.

The sampling errors, design effects and confidence intervals for key prevalence variables can be found in Tables 13.6 to 13.16. The calculations were carried out using the statistical package STATA. **Tables 13.6 to 13.16**

References and notes

1 Dodd T (1987) 'A further investigation into the coverage of the Postcode Address File' *Survey Methodology Bulletin* no 21 OPCS.

2 Addresses selected for all NatCen surveys in the last three years were excluded from the sampling frame. However, because they have been selected at random in the first place, this does 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.

3 The sample design (implemented April 2006) used the structure for health administration in England which came into effect on 1 July 2003. There were 28 SHAs which were constituted from groups of local authorities.

4 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 *persons* 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).

5 In 2000 one adult aged 16 to 74 years was interviewed per household.

6 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.

7 IMD 2004 is a measure of multiple deprivation at the small area level. http://www.communities.gov.uk/archived/general-content/communities/indicesofdeprivation/216309/

8 The calibration weighting was carried out iteratively in the CALMAR SAS macro.

9 An alternative approach would have been to undertake the age-standardisation by expressing the all adults combined data to the all adults combined mid year population estimates. We would expect the absolute values of the standardised rates to show a negligible difference. The comparison of groups will be broadly the same in each case.

Tables

Table 13.1

Regional stratifiers used and number of PSUs selected

Regional stratifier	Strategic Health Authority[a]	Delivery Point Count	Number of PSUs[b] selected
1	Norfolk, Suffolk and Cambridgeshire	993,067	24
2	Bedfordshire and Hertfordshire	692,132	16
3	Essex	716,697	18
4	North West London	723,877	17
5	North Central London	495,489	12
6	North East London	638,329	15
7	South East London	666,114	16
8	South West London	554,970	13
9	Northumberland, Tyne & Wear	633,663	15
10	County Durham and Tees Valley	512,894	12
11	North and East Yorkshire and Northern Lincolnshire	730,673	18
12	West Yorkshire	919,293	22
13	Cumbria and Lancashire	856,005	20
14	Greater Manchester	1,109,392	27
15	Cheshire & Merseyside	1,050,407	25
16	Thames Valley	888,735	21
17	Hampshire and Isle of Wight	773,709	18
18	Kent and Medway	698,001	17
19	Surrey and Sussex	1,136,614	27
20	Avon, Gloucestershire and Wiltshire	954,049	23
21	South West Peninsula	717,566	17
22	Dorset and Somerset	552,905	13
23	South Yorkshire	567,408	14
24	Trent	1,200,485	28
25	Leicestershire, Northamptonshire and Rutland	678,179	17
26	Shropshire and Staffordshire	643,446	15
27	Birmingham and the Black Country	979,455	23
28	West Midlands South	666,013	16
	England	**21,749,567**	**519**

[a] Created in 2002, there were originally 28 strategic health authorities (SHAs). On July 1 2006, this number was reduced to 10. We used the original SHA boundaries to stratify the sample by region.

[b] Primary sampling unit.

Table 13.2

Final response model

Variable	Base	Odds ratio	Standard error	P-value	95% confidence interval
Government Office Region (<0.001)					
North East	679	(baseline)			
North West	1,779	0.88	0.095	0.168	0.73-1.06
Yorkshire & the Humber	1,328	0.83	0.098	0.059	0.69-1.01
East Midlands	1,107	0.86	0.102	0.134	0.70-1.05
West Midlands	1,349	0.78	0.098	0.012	0.65-0.95
East of England	1,456	0.76	0.097	0.005	0.63-0.92
London	1,647	0.58	0.096	<0.001	0.48-0.70
South East	2,040	0.75	0.093	0.002	0.63-0.90
South West	1,309	0.73	0.099	0.001	0.60-0.88
Barriers to entry at selected address					
One or more barriers to entry	1,349	(baseline)			
No barriers	11,345	1.38	0.061	<0.001	1.22-1.55
Percentage of households in area owner-occupied[a]	12,694	1.00	0.001	0.003	1.00-1.01

[a] The odds of a household responding increased by 1.004 (to 3 decimal places) per one unit increase in the percentage of households owner-occupied, adjusting for the other variables in the model.

Table 13.3

2006 mid-year household population estimates for adults in England,[a] by age and sex

Age group	Men N	Women N
16-24	2,898,211	2,798,318
25-34	3,292,746	3,329,246
35-44	3,840,530	3,902,973
45-54	3,208,291	3,272,812
55-64	2,908,582	3,014,655
65-74	1,960,670	2,167,516
75 and over	1,437,592	2,145,871
Total	**19,546,622**	**20,631,391**

[a] Office for National Statistics (ONS) 2006 mid-year household population estimates. (http://www.statistics.gov.uk/about/data/methodology/specific/population/PEMethodology/)

These figures are estimates: they are provided to enable others to replicate our process.

Table 13.4

2006 mid-year household population estimates for adults in England,[a] by Government Office Region

Government Office Region	N
North East	2,040,387
North West	5,410,995
Yorkshire & the Humber	4,074,538
East Midlands	3,463,025
West Midlands	4,226,702
East of England	4,433,773
London	5,970,247
South East	6,472,410
South West	4,085,936
Total	**40,178,013**

[a] Office for National Statistics (ONS) 2006 mid-year household population estimates. (http://www.statistics.gov.uk/about/data/methodology/specific/population/PEMethodology/)

These figures are estimates: they are provided to enable others to replicate our process.

Table 13.5

Weighted and unweighted sample distribution, by Government Office Region, age and sex

	Population	Unweighted respondents	Respondents weighted by selection weight only	Respondents weighted by un-calibrated non-response weight	Respondents weighted by final weight
	%	%	%	%	%
Government Office Region					
North East	5.1	5.9	5.8	5.3	5.1
North West	13.5	14.8	14.4	13.6	13.5
Yorkshire & the Humber	10.1	10.8	10.6	10.2	10.1
East Midlands	8.6	9.2	9.5	9.0	8.6
West Midlands	10.5	10.7	10.9	10.8	10.5
East of England	11.0	11.5	11.8	11.8	11.0
London	14.9	10.8	10.7	12.8	14.9
South East	16.1	16.1	16.3	16.3	16.1
South West	10.2	10.2	10.1	10.2	10.2
Age and sex					
Male 16-24	7.2	3.7	5.1	5.2	7.2
Male 25-34	8.2	5.6	6.0	6.1	8.2
Male 35-44	9.6	8.3	8.5	8.6	9.6
Male 45-54	8.0	6.7	7.1	7.2	8.0
Male 55-64	7.2	7.7	8.0	7.9	7.2
Male 65-74	4.9	6.2	6.1	6.0	4.9
Male 75+	3.6	5.1	4.5	4.4	3.6
Female 16-24	7.0	4.0	5.0	5.0	7.0
Female 25-34	8.3	8.3	8.1	8.3	8.3
Female 35-44	9.7	10.8	10.9	10.9	9.7
Female 45-54	8.1	8.6	9.4	9.3	8.1
Female 55-64	7.5	9.5	9.6	9.5	7.5
Female 65-74	5.4	7.6	6.2	6.2	5.4
Female 75+	5.3	8.0	5.6	5.6	5.3
Total	**40,178,013**	**7,462**	**7,462**	**7,462**	**7,462**

Table 13.6

True standard errors and 95% confidence intervals for CIS-R score (12+) and prevalence of common mental disorders (CMDs)[a]

All adults *2007*

Base	Characteristic	%	Sample size	Weighted sample size	True standard error	95% confidence interval	Deft
Men	**CIS-R score**						
	12 or more	11.6	3197	3592	0.6	10.3-12.8	1.14
	CMDs						
	Mixed anxiety and depressive disorder	6.9	3197	3592	0.5	6.0-7.9	1.08
	Generalised anxiety disorder	3.4	3197	3592	0.4	2.7-4.1	1.10
	Depressive episode	1.9	3197	3592	0.3	1.4-2.4	1.10
	All phobias	0.8	3197	3592	0.2	0.5-1.2	1.14
	Obsessive compulsive disorder	0.9	3197	3592	0.2	0.5-1.3	1.15
	Panic disorder	1.0	3197	3592	0.2	0.6-1.3	1.07
	Any CMD	**12.5**	**3197**	**3592**	**0.7**	**11.1-13.9**	**1.20**
Women	**CIS-R score**						
	12 or more	18.4	4206	3801	0.7	17.0-19.8	1.18
	CMDs						
	Mixed anxiety and depressive disorder	11.0	4206	3801	0.6	9.8-12.2	1.26
	Generalised anxiety disorder	5.3	4206	3801	0.4	4.6-6.0	1.08
	Depressive episode	2.8	4206	3801	0.2	2.3-3.2	0.94
	All phobias	2.0	4206	3801	0.2	1.5-2.5	1.16
	Obsessive compulsive disorder	1.3	4206	3801	0.2	0.8-1.7	1.32
	Panic disorder	1.2	4206	3801	0.2	0.8-1.6	1.15
	Any CMD	**19.7**	**4206**	**3801**	**0.7**	**18.3-21.1**	**1.16**
All adults	**CIS-R score**						
	12 or more	15.1	7403	7393	0.5	14.1-16.0	1.17
	CMDs						
	Mixed anxiety and depressive disorder	9.0	7403	7393	0.4	8.2-9.8	1.22
	Generalised anxiety disorder	4.4	7403	7393	0.3	3.9-4.9	1.06
	Depressive episode	2.3	7403	7393	0.2	2.0-2.7	1.01
	All phobias	1.4	7403	7393	0.2	1.1-1.7	1.11
	Obsessive compulsive disorder	1.1	7403	7393	0.1	0.8-1.4	1.22
	Panic disorder	1.1	7403	7393	0.1	0.8-1.3	1.11
	Any CMD	**16.2**	**7403**	**7393**	**0.5**	**15.2-17.2**	**1.19**

[a] See Chapter 2 – Common mental disorders.

Table 13.7

True standard errors and 95% confidence intervals for trauma and screen positive for posttraumatic stress disorder (PTSD)[a]

All adults *2007*

Base	Characteristic	%	Sample size	Weighted sample size	True standard error	95% confidence interval	Deft
Men	Trauma ever	44.1	3110	3495	1.0	42.1-46.1	1.13
	Trauma since 16	35.2	3110	3495	1.0	33.3-37.2	1.13
	Screen positive for PTSD	2.6	3110	3495	0.4	1.9-3.3	1.22
Women	Trauma ever	40.4	4097	3711	0.9	38.6-42.2	1.20
	Trauma since 16	31.5	4097	3711	0.9	29.8-33.2	1.18
	Screen positive for PTSD	3.3	4097	3711	0.3	2.7-3.9	1.14
All adults	Trauma ever	42.2	7207	7205	0.6	40.9-43.5	1.11
	Trauma since 16	33.3	7207	7205	0.6	32.1-34.6	1.14
	Screen positive for PTSD	3.0	7207	7205	0.2	2.5-3.4	1.09

[a] See Chapter 3 – Posttraumatic stress disorder.

Table 13.8

True standard errors and 95% confidence intervals for prevalence and recency of suicidal thoughts, suicide attempts and self-harm[a] (face to face and self-completion)

All adults *2007*

Base	Characteristic	Cumulative %	Sample size	Weighted sample size	True standard error	95% confidence interval	Deft
Men	**Suicidal thoughts**						
	Past week	0.6	3192	3588	0.2	0.3-0.9	1.15
	Past year	3.4	3192	3588	0.4	2.6-4.1	1.19
	Lifetime	12.0	3192	3588	0.7	10.7-13.3	1.19
	Lifetime (self-completion)	*14.0*	*3159*	*3551*	*0.7*	*12.6-15.4*	*1.15*
	Suicide attempts						
	Past year	0.5	3193	3588	0.1	0.2-0.7	1.21
	Lifetime	3.7	3193	3588	0.4	3.0-4.4	1.11
	Lifetime (self-completion)	*4.3*	*3165*	*3558*	*0.4*	*3.5-5.1*	*1.08*
	Self-harm without suicide intent (lifetime)	3.4	3191	3586	0.4	2.7-4.1	1.13
	Self-harm without suicide intent (lifetime, self-completion)	*4.4*	*3165*	*3558*	*0.4*	*3.6-5.2*	*1.15*
Women	**Suicidal thoughts**						
	Past week	1.0	4197	3793	0.2	0.7-1.3	1.00
	Past year	5.2	4197	3793	0.4	4.4-6.0	1.16
	Lifetime	15.4	4197	3793	0.6	14.1-16.6	1.13
	Lifetime (self-completion)	*19.2*	*4164*	*3765*	*0.7*	*17.9-20.6*	*1.12*
	Suicide attempts						
	Past year	0.9	4202	3796	0.2	0.5-1.2	1.17
	Lifetime	5.8	4202	3796	0.4	5.0-6.6	1.11
	Lifetime (self-completion)	*6.9*	*4163*	*3764*	*0.5*	*6.0-7.8*	*1.17*
	Self-harm without suicide intent (lifetime)	3.5	4200	3795	0.4	2.7-4.2	1.27
	Self-harm without suicide intent (lifetime, self-completion)	*5.4*	*4166*	*3768*	*0.4*	*4.5-6.3*	*1.27*
All adults	**Suicidal thoughts**						
	Past week	0.8	7389	7381	0.1	0.6-1.0	1.06
	Past year	4.3	7389	7381	0.3	3.8-4.9	1.18
	Lifetime	13.7	7389	7381	0.5	12.8-14.6	1.16
	Lifetime (self-completion)	*16.7*	*7323*	*7316*	*0.5*	*15.7-17.7*	*1.12*
	Suicide attempts						
	Past year	0.7	7395	7385	0.1	0.4-0.9	1.17
	Lifetime	4.8	7395	7385	0.3	4.2-5.4	1.16
	Lifetime (self-completion)	*5.6*	*7328*	*7322*	*0.3*	*5.0-6.3*	*1.18*
	Self-harm without suicide intent (lifetime)	3.4	7391	7381	0.2	2.9-3.9	1.15
	Self-harm without suicide intent (lifetime, self-completion)	*4.9*	*7331*	*7326*	*0.3*	*4.3-5.4*	*1.13*

[a] See Chapter 4 – Suicidal thoughts, suicide attempts and self-harm.

Table 13.9

True standard errors and 95% confidence intervals for prevalence of psychotic disorder[a] in past year

All adults *2007*

Base	Characteristic	%	Sample size	Weighted sample size	True standard error	95% confidence interval	Deft
Men	Psychotic disorder	0.3	3159	3593	0.1	0.0-0.5	1.27
Women	Psychotic disorder	0.5	4119	3801	0.1	0.3-0.8	1.12
All adults	Psychotic disorder	0.4	7278	7393	0.1	0.2-0.6	1.17

[a] See Chapter 5 – Psychosis.

Table 13.10

True standard errors and 95% confidence intervals for borderline personality disorder and antisocial personality disorder[a] in past year

16+ for BPD, 18+ for ASPD *2007*

Base	Characteristic	%	Sample size	Weighted sample size	True standard error	95% confidence interval	Deft
Men	Borderline	0.3	3074	3614	0.1	0.0-0.6	1.57
	Antisocial	0.6	2655	3381	0.3	0.0-1.1	1.95
Women	Borderline	0.6	3921	3821	0.2	0.0.2-1	1.69
	Antisocial	0.1	3753	3484	0.1	0.0-0.3	1.47
All adults	Borderline	0.4	6995	7436	0.1	0.2-0.7	1.62
	Antisocial	0.3	6408	6865	0.1	0.1-0.6	1.88

[a] See Chapter 6 – Antisocial and borderline personality disorders.

Table 13.11

True standard errors and 95% confidence intervals for number of attention deficit hyperactivity disorder[a] characteristics present in the past six months (ASRS)

All adults *2007*

Base	Characteristic	%	Sample size	Weighted sample size	True standard error	95% confidence interval	Deft
Men	0	36.6	3193	3589	1.0	34.6-38.6	1.20
	1	26.3	3193	3589	0.9	24.6-28.0	1.10
	2	18.0	3193	3589	0.8	16.4-19.5	1.16
	3	10.3	3193	3589	0.7	9.1-11.6	1.21
	4	5.6	3193	3589	0.5	4.7-6.5	1.13
	5	2.4	3193	3589	0.3	1.8-3.0	1.11
	6	0.7	3193	3589	0.2	0.4-1.0	1.09
	4 or more	**8.8**	**3193**	**3589**	**0.5**	**7.7-9.8**	**1.04**
Women	0	40.2	4204	3800	0.9	38.4-41.9	1.16
	1	25.4	4204	3800	0.8	23.9-26.9	1.14
	2	17.0	4204	3800	0.6	15.8-18.2	1.05
	3	9.8	4204	3800	0.5	8.8-10.8	1.10
	4	5.1	4204	3800	0.4	4.4-5.8	1.10
	5	2.2	4204	3800	0.2	1.7-2.6	1.11
	6	0.5	4204	3800	0.1	0.2-0.7	1.11
	4 or more	**7.7**	**4204**	**3800**	**0.5**	**6.8-8.7**	**1.15**
All adults	0	38.4	7397	7389	0.7	37.0-39.8	1.26
	1	25.8	7397	7389	0.6	24.7-26.9	1.09
	2	17.5	7397	7389	0.5	16.5-18.4	1.08
	3	10.1	7397	7389	0.4	9.2-10.9	1.20
	4	5.4	7397	7389	0.3	4.8-5.9	1.09
	5	2.3	7397	7389	0.2	1.9-2.7	1.15
	6	0.6	7397	7389	0.1	0.4-0.8	1.10
	4 or more	**8.2**	**7397**	**7389**	**0.3**	**7.6-8.9**	**1.06**

[a] See Chapter 7 – Attention deficit hyperactivity disorder.

Table 13.12

True standard errors and 95% confidence intervals for screen positive for eating disorder[a] in the past year

All adults *2007*

Base	Characteristic	%	Sample size	Weighted sample size	True standard error	95% confidence interval	Deft
Men	SCOFF score 2 or more	3.5	3176	3571	0.4	2.8-4.2	1.11
	SCOFF score 2 or more with significant impact	0.6	3176	3571	0.2	0.3-0.9	1.19
Women	SCOFF score 2 or more	9.2	4177	3777	0.6	8.1-10.3	1.25
	SCOFF score 2 or more with significant impact	2.5	4173	3773	0.3	1.9-3.1	1.18
All adults	SCOFF score 2 or more	6.4	7353	7348	0.3	5.8-7.1	1.18
	SCOFF score 2 or more with significant impact	1.6	7349	7344	0.2	1.2-1.9	1.17

[a] See Chapter 8 – Eating disorders.

Table 13.13

True standard errors and 95% confidence intervals for prevalence of hazardous and harmful drinking[a] in the past year

All adults *2007*

Base	Characteristic	%	Sample size	Weighted sample size	True standard error	95% confidence interval	Deft
Men	0-7: not hazardous	66.8	3193	3588	1.0	64.9-68.7	1.16
	8-15: hazardous, not harmful	27.4	3193	3588	0.9	25.6-29.2	1.16
	16-40: harmful	5.8	3193	3588	0.5	4.8-6.8	1.23
	8 or more: hazardous or harmful drinking	**33.2**	**3193**	**3588**	**1.0**	**31.3-35.1**	**1.16**
Women	0-7: not hazardous	84.3	4199	3796	0.6	83.1-85.6	1.14
	8-15: hazardous, not harmful	13.8	4199	3796	0.6	12.6-15	1.15
	16-40: harmful	1.9	4199	3796	0.3	1.4-2.4	1.22
	8 or more: hazardous or harmful drinking	**15.7**	**4199**	**3796**	**0.6**	**14.4-16.9**	**1.14**
All adults	0-7: not hazardous	75.8	7392	7384	0.6	74.6-77.0	1.23
	8-15: hazardous, not harmful	20.4	7392	7384	0.6	19.2-21.5	1.24
	16-40: harmful	3.8	7392	7384	0.3	3.2-4.3	1.28
	8 or more: hazardous or harmful drinking	**24.2**	**7392**	**7384**	**0.6**	**23.0-25.4**	**1.23**

[a] See Chapter 9 – Alcohol misuse and dependence.

Table 13.14

True standard errors and 95% confidence intervals for prevalence of drug dependence[a]

All adults *2007*

Base	Characteristic	%	Sample size	Weighted sample size	True standard error	95% confidence interval	Deft
Men	**Signs of dependence on…**						
	Cannabis only	3.3	3174	3570	0.4	2.4-4.1	1.30
	Another drug(s) with or without cannabis dependence	1.3	3174	3570	0.2	0.8-1.7	1.17
	Any drug dependence	**4.5**	**3174**	**3570**	**0.5**	**3.6-5.4**	**1.24**
Women	**Signs of dependence on…**						
	Cannabis only	1.7	4182	3780	0.3	1.2-2.2	1.26
	Another drug(s) with or without cannabis dependence	0.6	4182	3780	0.1	0.3-0.9	1.24
	Any drug dependence	**2.3**	**4182**	**3780**	**0.3**	**1.8-2.8**	**1.17**
All adults	**Signs of dependence on…**						
	Cannabis only	2.5	7356	7350	0.2	2.0-2.9	1.35
	Another drug(s) with or without cannabis dependence	0.9	7356	7350	0.1	0.6-1.2	1.24
	Any drug dependence	**3.4**	**7356**	**7350**	**0.3**	**2.9-3.9**	**1.27**

[a] See Chapter 10 – Drug misuse and dependence.

Table 13.15

True standard errors and 95% confidence intervals for gambling behaviour[a]

All adults *2007*

Base	Characteristic	%	Sample size	Weighted sample size	True standard error	95% confidence interval	Deft
Men	**Gambled in the past year**	**70.8**	**3161**	**3553**	**0.9**	**69.0-72.7**	**1.15**
	DSM-IV score						
	0	95.1	3086	3468	0.4	94.3-96	1.14
	1-2	3.7	3086	3468	0.4	2.9-4.4	1.13
	3-4	0.6	3086	3468	0.2	0.2-0.9	1.21
	5+	0.6	3086	3468	0.2	0.3-1.0	1.23
	3 or more	**1.2**	**3086**	**3468**	**0.2**	**0.7-1.6**	**1.20**
Women	**Gambled in the past year**	**61.3**	**4167**	**3767**	**0.8**	**59.6-62.9**	**1.11**
	DSM-IV score						
	0	98.4	3988	3620	0.2	98.0-98.8	1.06
	1-2	1.4	3988	3620	0.2	1.0-1.7	1.02
	3-4	0.1	3988	3620	0.1	0.0-0.3	1.29
	5+	0.1	3988	3620	0.0	0.0-0.2	0.94
	3 or more	**0.2**	**3988**	**3620**	**0.1**	**0.0-0.4**	**1.17**
All adults	**Gambled in the past year**	**65.9**	**7328**	**7320**	**0.7**	**64.6-67.3**	**1.22**
	DSM-IV score						
	0	96.8	7074	7088	0.2	96.3-97.3	1.19
	1-2	2.5	7074	7088	0.2	2.1-2.9	1.15
	3-4	0.4	7074	7088	0.1	0.2-0.6	1.31
	5+	0.3	7074	7088	0.1	0.2-0.5	1.24
	3 or more	**0.7**	**7074**	**7088**	**0.1**	**0.4-0.9**	**1.27**

[a] See Chapter 11 – Gambling behaviour.

Table 13.16

True standard errors and 95% confidence intervals for number of conditions[a]

All adults *2007*

Base	Characteristic	%	Sample size	Weighted sample size	True standard error	95% confidence interval	Deft
Men	**Number of conditions**						
	None	78.0	3163	3558	0.9	76.2-79.8	1.24
	1	15.1	3163	3558	0.7	13.7-16.6	1.14
	2	4.4	3163	3558	0.5	3.4-5.3	1.30
	3+	2.5	3163	3558	0.3	1.9-3.1	1.07
Women	**Number of conditions**						
	None	76.1	4162	3764	0.8	74.6-77.6	1.17
	1	16.4	4162	3764	0.7	15.1-17.7	1.15
	2	4.5	4162	3764	0.4	3.7-5.2	1.19
	3+	3.1	4162	3764	0.3	2.5-3.7	1.17
All adults	**Number of conditions**						
	None	77.0	7325	7321	0.6	75.9-78.2	1.19
	1	15.8	7325	7321	0.5	14.8-16.7	1.17
	2	4.4	7325	7321	0.3	3.9-5.0	1.18
	3+	2.8	7325	7321	0.2	2.4-3.2	1.09

[a] See Chapter 12 – Psychiatric comorbidity.

NHS
The Information Centre
for health and social care

This report presents findings of a survey of psychiatric morbidity among people aged 16 and over living in private households in England. The survey was commissioned by The NHS Information Centre for health and social care, and is one of a series of surveys of mental health in different population groups.

Each of the main disorders and behaviours covered by the 2007 survey is discussed in a separate chapter. The chapters present disorder prevalence by age, sex, ethnicity, marital status, region, and the level and nature of treatment and service use. Where the disorder was also covered in the general household population surveys carried out in 1993 and 2000, change in rate is also considered.

National Centre for Social Research
www.natcen.ac.uk

The National Centre for Social Research (NatCen) 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 and postal methods; many use advanced applications of computer assisted interviewing.

Department of Health Sciences, University of Leicester
www2.le.ac.uk/departments/health-sciences

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