Adult Psychiatric Morbidity Survey

2014

User Guide

A survey carried out on behalf of NHS Digital

National Centre for Social Research
University of Leicester

CONTENTS

1. BACKGROUND 3

2. SAMPLE DESIGN 4

RESPONSE 4
Response at phase one *4*
Response at phase two *4*
DATA COLLECTION 4

3. DOCUMENTATION 5

4. USING THE DATA 5

VARIABLES ON THE FILES 5
MULTICODED QUESTIONS 5
MISSING VALUES CONVENTIONS 6
DISORDERS ASSESSED AT THE PHASE TWO INTERVIEW 7
NEW DISCLOSURE CONTROL MEASURES 7
ERRATA 7

5. WEIGHTING AND SURVEY DESIGN VARIABLES 8

OVERVIEW OF WEIGHTING AND COMPLEX SURVEY DESIGN VARIABLES TO USE 8
WEIGHTING THE PHASE ONE DATA 8
WEIGHTING THE PHASE TWO DATA 9

6. APMS 2014 MAIN SURVEY REPORT 10

APPENDIX A: APMS 2014 TOPIC COVERAGE 11

1. Background

The data files contain data from the Adult Psychiatric Morbidity Survey 2014 (APMS 2014), also known as the Mental Health and Wellbeing Survey. This is the fourth survey of psychiatric morbidity in adults living in private households. It was carried out by the National Centre for Social Research (NatCen Social Research) in collaboration with the University of Leicester, and was commissioned by NHS Digital.

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

- To estimate the prevalence of psychiatric morbidity according to diagnostic category in the adult household population of England. The survey includes assessment of common mental disorders, psychosis, autism, substance misuse and dependency, and suicidal thoughts, attempts and self-harm.
- To screen for attention-deficit/hyperactivity disorder (ADHD), posttraumatic stress disorder (PTSD), bipolar disorder and personality disorders.
- To examine trends in the psychiatric disorders included in previous survey years (1993, 2000, and 2007).
- To identify the nature and extent of social disadvantage associated with mental illness.
- To gauge the level and nature of treatment and service use in relation to mental health problems, with an emphasis on primary care.
- To collect data on key current and lifetime factors that might be associated with mental health problems, such as the experience of stressful life events, abusive relationships, and work stress.
- To collect data on factors that might protect against poor mental health, such as social support networks and neighbourhood cohesion.

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

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

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

2. Sample design

Response

Response at phase one

APMS 2014 used a sampling methodology that was consistent with previous surveys in the series, and very similar to that used in 2007. The sample for APMS 2014 was designed to be representative of people living in private households. The sampling frame was the Small User Postcode Address File. Small businesses and institutions were excluded once the interviewer had verified the address was not a private household.

The Primary Sampling Units (PSUs) were postcode sectors, which contain on average 2,550 households. Small sectors were grouped so each PSU contained at least 500 addresses. The population was stratified before sampling by region (Strategic Health Authorities) and manual and non-manual socio-economic grouping. Where households contained more than one adult aged 16 or over, one adult was randomly selected for interview. 57% (7546) of those approached agreed to take part. This was made up of 7528 full interviews and 18 partial interviews.

Response at phase two

A probability of selection was calculated for each participant based on their answers to the phase one screening questions on psychosis and ASD. Overall 78% of phase one participants agreed to be contacted about the phase two interview. 875 participants were issued for a phase two interview. Phase two interviews were conducted with 630 of these (72%). See Chapter 14 of the report for details, http://content.digital.nhs.uk/catalogue/PUB21748/apms-2014-full-rpt.pdf .

Wakefield local boost sample

In addition to the national 'core' sample, a sample for an additional local area 'boost' was also drawn. The fieldwork involved the full phase one interview, but did not include a phase two assessment. The boost took place in Wakefield and was funded by a collaboration of the Wakefield Local Authority, NHS Wakefield CCG and South West Yorkshire Partnership NHS Foundation Trust. The Wakefield dataset will not be deposited with the UK Data Service.

Data collection

The phase one and the phase two interviews each 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. Despite the self-completion section being very long, 75% of participants completed this entirely alone. In 16% of cases the interviewer read out the self-completion and entered the participant's responses, and for 3% of cases the interviewer read out the questions and the participant entered their own responses. 6% of participants did not complete the self-completion section of the interview at all, this was mainly older participants.

At the end of the phase one interview, permission was sought for the participant's survey responses to be linked with other health datasets, including the NHS Central Register and Hospital Episode Statistics. 77% gave permission for data linkage.

3. Documentation

The documentation has been organised into the following sections

- Interview (contains the CAPI documentation for the phase one questionnaire; and phase two questionnaire coverage)
- Data (contains the list of variables and list of derived variables)
- Other instructions (contains phase one interviewer instructions, and coding & editing instructions).

4. Using the data

The 2014 data consists of one file, which contains all productive participants.

APMS14 archive.sav	7,546 records	contains data for all selected individuals who completed a full or partially productive interview. It contains information from the phase one questionnaire, outcomes from the phase two interview (where one occurred), and derived variables (some of which draw on both the phase one and phase two interviews).

Variables on the files

The data file contains the questionnaire variables (excluding variables used for administrative purposes) from the phase one interview, a summary of outcome variables from the phase two interview, and all the derived variables used in the main survey report. These variables are detailed in the "**List of Variables**" document in the data section of the documentation. This document is the best place to look in order to plan your analysis. It includes:

- Variable names
- Variable labels
- Source of each variable (i.e. whether phase one interview, phase two interview, derived variable etc.)

Once you have decided which variables to include in your analysis, you can look up details of the question wording using the interview documentation (all variables on the data file are given by name in the copy of the interview schedules provided), or use the "**Derived Variables Specification**" document in the data section of the documentation for derived variables.

Multicoded questions

Multicoded questions, where the interviewer is instructed to "CODE ALL THAT APPLY" or where an open ended question has elicited more than one answer, are stored as indicator variables where each value in the set is stored as its own variable.

As an example, the question 'NREv' was asked of all respondents:

ASK ALL

NREv

SHOWCARD L9

Have you ever used any of these products?

'Some people who have never regularly smoked sometimes use nicotine replacement products'

1 Nicotine chewing gum
2 Nicotine lozenge/mini lozenge
3 Nicotine patch
4 Nicotine inhaler/inhalator
5 Nicotine mouthspray
6 Nicotine nasal spray
7 Another nicotine product
8 Electronic cigarette
9 None

In the APMS 2014 dataset, the variables NREv1-9 store the answer to this question by category as follows:

NREv1 - coded 1 for those reporting ever having used nicotine chewing gum and 0 for everyone else
NREv2 - coded 1 for those reporting ever having used nicotine lozenges/mini lozenges and 0 for everyone else
NREv3 - coded 1 for those reporting ever having used nicotine patches and 0 for everyone else
NREv4 - coded 1 for those reporting ever having used a nicotine inhaler/inhalator and 0 for everyone else
NREv5 - coded 1 for those reporting ever having used nicotine mouthspray and 0 for everyone else
NREv6 - coded 1 for those reporting ever having used nicotine nasal spray and 0 for everyone else
NREv7 - coded 1 for those reporting ever having used another nicotine product and 0 for everyone else
NREv8 - coded 1 for those reporting ever having used an electronic cigarette and 0 for everyone else
NREv9 - coded 1 for those reporting never using any nicotine replacement products and 0 for everyone else

Because a participant could have replied with more than one answer, that participant could have a value 1 for a number of these variables. The missing values are the same across all nine variables. Documentation for the CAPI questionnaire shows only the name of the question (NREv).

Missing values conventions

-1 Not applicable: Used to signify that a particular variable did not apply to a given participant usually because of internal routing. For example, people aged 70+ in questions asked only of younger participants. It may also apply where a respondent was not asked the question because they refused a whole section or did not make it to the end of the questionnaire (e.g. they gave a partial interview).
-7 Missing data (due to filter error).
-8 Don't know/ Can't say.
-9 No answer/ Refused.

These conventions have also been applied to most of the derived variables. The derived variable specifications should be consulted for details.

Disorders assessed at the phase two interview

Psychotic disorder and autism spectrum disorder (ASD) were screened for at the phase one interview and then assessed by a clinically trained interviewer at the phase two interview for a subset of participants.

The psychosis variable (PSYCHDIS) and the ASD variable (Stage2_AD_Diag) give a positive diagnosis based only on the phase two interview. The disorder specific weight (specified in the next section) must then be used to generate a prevalence for the population as a whole. The unweighted base size will be smaller than the total phase one sample (made up of those screened out as negative based on their phase one responses plus those with a valid phase two outcome). It is important that before any of these variables are used the disorder specific chapter in the main report is read, as this details how a diagnosis was derived.

Additional psychosis variables have been derived (PsychDisProb, ProbPsyc) which can be used with the standard phase one data weights (weight_core). Again, see the psychotic disorder chapter of the main report for a description of how this variable was derived.

New disclosure control measures

NHS Digital has undergone a major review of its survey data release requirements to ensure any risk of participant identity disclosure is minimised. This has led to a number of changes to the way in which APMS 2014 data will be archived:

- APMS 2014 will be available under Special License, this requires researchers to complete an application form stating their reason for requesting access to the dataset and evidencing their data security procedures. NHS Digital will review all applications, and approval will be required before the dataset can be downloaded from the archive.
- Some variables with a small number of cases in a particular category have the potential to be disclosive. In the archived dataset these variables have either been dropped, or similar categories have been combined or banded to reduce granularity.
- The detailed medications data are not available on this APMS 2014 special licence dataset. A decision on this data will be made in due course.

Errata

Medication coding

Please note that for some of the variables in the medication section, the data have been slightly revised since publication of the main survey report. A revised version of the report has been produced with corrected text and tables.

Self-reported health professional diagnosis of ‘other’ disorders

The APMS 2014 questionnaire included new questions about whether participants thought that they have had any of the mental disorders listed on a show card, and if so whether each had been diagnosed by a health professional and treated. A small questionnaire filter error has been identified here. Follow-up questions about diagnosis and treatment were asked for all the disorders named on the show card (categories 1 to 15), but were not asked for ‘other’ disorders not listed on the show card.

5. Weighting and survey design variables

Overview of weighting and complex survey design variables to use

Weight_core	Survey weight for all analyses except those specified below.
PSYCDIS_WT	Weighting variable to use with PSYCHDIS (psychotic episode in the past year based on phase one and two data combined)
ASDWT	Weighting variable to use with Stage2_AD_Diag (presence of autism spectrum disorder based on phase one and two data combined)
iPSU	Primary sampling unit
iStrata	Stratification variable
ipsu_0714	Primary sampling unit variable to use if APMS 2007 and 2014 datasets are combined
istrata_0714	Stratification variable to use if APMS 2007 and 2014 datasets are combined
weight_0714	Weighting variable to use if APMS 2007 and 2014 datasets are combined

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 participants 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 2011 data) available for responding and non-responding households. The dependent variable was whether the household responded or not. The independent variables considered for inclusion in the model were the presence of any physical barriers for entry to the property (e.g. a locked common entrance or the presence of security staff), Government Office Region (GOR), Index of Multiple Deprivation 2010 (IMD 2010) quintiles, population density (number of persons per hectare), percentage of households owner-occupied, and the percentage of adults in a non-manual occupation. Not all the variables were retained for the final model: variables not significantly related to the propensity of households to respond were dropped from the analysis. The variables significantly associated with response were: GOR, whether there were entry barriers to the selected address, the percentage of households owner-occupied and population density. The model shows that the propensity for a household to respond was lower in Yorkshire and Humberside, East of England, and in inner and outer London (relative to the North East), higher for households with no physical barriers for entry to the property, higher in areas where a relatively high percentage of households were owner-occupied and lower in areas with a relatively high population density.

Third, selection weights were applied to take account of the different probabilities of selecting participants in different sized households. The weight was equal to the number of adults (16+) in the household, the inverse of the probability of selection. The full model is given in the main survey report.

The composite weight for selection and participation was calculated as the product of the weights from the previous stages. The final stage of the weighting was to adjust the composite weight using calibration weighting. The population control totals used were the ONS 2014 mid-year population estimates for age-by-sex and region. After calibration, the APMS 2014 weighted data matches the estimated population in terms of age-by sex and region.

An additional weight was calculated which can be used for analysis of the combined APMS 2007 and 2014 (weight_0714) datasets by re-calibrating the combined data to the ONS 2014 mid-year population, as well as comparable survey design variables: ipsu_0714 and istrata_0714

Weighting the phase two data

The phase two interview data have two survey weights different from the weights to use with phase one data. These phase two weights were designed to generate condition-specific datasets that are representative of the population. So, for psychosis, the weighted dataset contains all those screened out at phase one as negative plus those with a phase two outcome (both positive and negative), and is weighted to represent the population as a whole. See the condition specific chapters of the main report for further detail of this.

The calculation of the phase two weights was relatively straightforward. They account for two factors:

1. Not all those eligible for phase two were selected with equal probability (those with higher screening scores at phase one were more likely to be selected, and those with potential co-morbidities were selected with, on average, higher probabilities than those with single disorders);
2. 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 for psychotic disorder and ASD 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.

6. APMS 2014 main survey report

Further information about the Adult Psychiatric Morbidity Survey 2014 can be found in the main report:

McManus S, Bebbington P, Jenkins R, Brugha T. (eds.) (2016) *Mental health and wellbeing in England: Adult Psychiatric Morbidity Survey 2014*. Leeds: NHS Digital.

This report can be downloaded for free from the NHS Digital website:
http://content.digital.nhs.uk/catalogue/PUB21748

A summary of questionnaire content and changes since the last survey (carried out in 2007) can be found here:
http://content.digital.nhs.uk/media/20638/About-Adult-Psychiatric-Morbidity-Survey/pdf/About_APMS_2014__v2.pdf

Further information about the survey series is available on these websites:
https://mentalhealthsurveys.org/
http://www.natcen.ac.uk/our-research/research/adult-psychiatric-morbidity-survey/

APPENDIX A: APMS 2014 topic coverage

APMS 2014 phase one interview

Figure A 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 separate documentation.

Figure A Phase one interview content			
	Age of participant		
CAPI interview: face to face interview [1]	**16-59**	**60-69**	**70+**
Details of household members and relationships	•	•	•
General health and activities of daily living	•	•	•
Caring responsibilities	•	•	•
Mental wellbeing (WEMWBS)	•	•	•
Physical health conditions	•	•	•
Sensory impairment	•	•	•
Learning impairment	•	•	•
Mental illness diagnoses	•	•	•
Treatment and service use	•	•	•
Common mental disorders	•	•	•
Suicidal behaviour and self-harm	•	•	•
Psychosis screening questionnaire	•	•	•
Attention-deficit/hyperactivity disorder (ADHD)	•	•	•
Work related stress	•	•	-
Tobacco	•	•	•
Alcohol (1)	•	•	•
CASI interview: self-completion			
Alcohol (AUDIT, SADQ)	•	•	•
Drug use and dependence	•	•	•
Personality disorder	•	•	•
Social functioning (SRQ)	•	•	•
Bipolar disorder	•	•	•
ASD	•	•	•
Posttraumatic stress disorder	•	•	•
Military experience	•	•	•
Domestic violence and abuse	•	•	•
Child neglect	•	•	•
Suicidal behaviour and self-harm	•	•	•
Discrimination	•	•	•
Sexual identity and behaviour	•	•	-
Menopause	•	-	-
CAPI interview: face to face interview [2]			
TICS-M	-	•	•
National Adult Reading Test (NART)	•	•	•
Animal naming test	-	•	•
Stressful life events (LTE)	•	•	•
Parenting	•	•	•
Social support networks (IMSR)	•	•	•
Religion	•	•	•

Social capital and participation	•	•	•
Socio-demographics	•	•	•
Consents (for data linkage and phase two contact)	•	•	•

APMS 2014 phase two interview

The phase two interview assessed the following disorders:

- Psychotic disorder (SCAN-II);
- ADHD; and
- ASD (ADOS module 4).

The approaches taken to the phase two assessment of psychosis and ASD are described fully in the main survey report.

Key to standard measures used

CIS-R: revised Clinical Interview Schedule

SCAN: Schedules for Clinical Assessment in Neuropsychiatry

SCID-II: Structured Clinical Interview for DSM-IV

AUDIT: Alcohol Use Disorders Identification Test

SAD-Q: Severity of Alcohol Dependence Questionnaire

IMSR: Interview Measure of Social Relationships

LTE: List of Threatening Experiences

NART: National Adult Reading Test

TICS-m: modified Telephone Interview for Cognitive Screening.

PSQ: Psychosis Screening Questionnaire.

ADOS: Autism Diagnostic Observation Schedule

AQ20: ASD Self Completion Questionnaire

ASRS: Adult ADHD Self-Report Scale