Gwent Health Authority
Caerphilly County Borough Council

## Caerphilly Health \& Social Needs Study

Stage 3


The Caerphilly Research Collaboration

## Caerphilly Health \& Social Needs Study: Stage 3

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## Executive Summary

> This report presents results for stage 3 of the Caerphilly Health and Social Needs Study, a population questionnaire survey of health and lifestyle and the social and built environment. It builds upon the data published in stages 1 and 2 of the study.
> Questions were asked on occupational status, housing tenure and conditions, height and weight, smoking, alcohol consumption, diet, physical activity, limiting long-term illness, chronic diseases, accidents and injuries, the SF-36 version 2 health status questionnaire, social capital and household income.
> 22,290 residents of Caerphilly county borough aged 18 and over were randomly sampled to receive a postal questionnaire. The denominator was adjusted by excluding sampled residents reported by the canvassers to have moved away. This was greatest in younger age groups and males, but as a proportion by ward, was not related significantly to deprivation. The overall response rate was $63 \%$.
> Data at county borough level show that nearly $12 \%$ of female and $14 \%$ of male respondents were unable to work due to illness or disability, over $38 \%$ reported no educational qualifications and $50 \%$ reported a household income less than half of the UK average. One-fifth of the respondents were found to be obese, $28 \%$ smoked cigarettes, $17 \%$ reported excess alcohol intake and $75 \%$ exercised below levels beneficial to health. $54 \%$ reported a limiting long-term illness, $22 \%$ back pain, $18 \%$ cardiovascular disease, and $22 \%$ respiratory disease. $22 \%$ of respondents felt unhappy about their health status.
> Data from the SF-36 health status questions found a low overall mean mental health summary score of 46.8 (significantly below the Welsh average of 49.5) and an overall mean physical health summary score of 47.4 (non significantly below the Welsh average of 48.2).
> The electoral division data in this report show considerable variation within the county borough. 49.5\% of 18-64 years olds in Twyn Carno reported no educational qualification compared with $16.2 \%$ in St Martins. $67.7 \%$ of Twyn Carno respondents have an average annual household income of less than half the national average compared with $31.7 \%$ in St Martins. Aberbargoed has the highest percentage of obese males in the county borough with $30.7 \%$ compared with $11.9 \%$ in Machen. $38.3 \%$ of persons in Twyn Carno reported that they were current smokers compared with $19 \%$ in Ystrad Mynach.
> The data shown at electoral division level show close associations between the level of deprivation and health and social needs outcomes.
> The data presented in this report should be used in the development of the Health, Social Care and Well Being strategy by Caerphilly county borough council, Caerphilly Local Health Board and their local partnerships. Policy makers and planners should take note of the importance of area based deprivation and social capital in understanding variation in health status between individuals and areas.

## Chapter 1 - Introduction

### 1.1 Background: the Caerphilly Health \& Social Needs Study

The Caerphilly Study Research Collaboration and the four-stage Caerphilly Health \& Social Needs Study was established in 1998. The Study was designed to support new partnership working which aimed to take forward the revived public health agenda of reducing health inequalities and improving health. It was recognised that joint planning for local action on health inequalities and cost-effective targeting of resources required epidemiological analysis of data on social, economic and environmental determinants of health and health outcomes at small area level. However, apart from routine ONS Vital Statistics (births and mortality), there were no systematic data available on morbidity, health status and lifestyle determinants of health at ward level in Caerphilly borough, nor indeed Wales, and it was clear that these important gaps in the data should be filled. In addition, many potentially useful datasets held by Caerphilly county borough council (CCBC) had not been assessed and exploited for health needs assessment and planning purposes.

The study consists of four stages:
Stage 1, a review and analysis of routinely available data, was completed and the report published in March 1999:

Gwent Health Authority, Caerphilly county borough council. Caerphilly Health \& Social Needs Study. Stage 1: A study of socio-economic deprivation and health inequalities in Caerphilly county borough. Caerphilly: Gwent Health Authority, Caerphilly county borough council 1999.

Stage 2, was formally completed in 2001. The report identified a broad range of multi-agency datasets shared between the organizations using the Gwent Information Exchange Protocol (see Cymruweb online http://gwentweb). In Stage 2 the following datasets at ward level were shared by CCBC and GHA: ONS Vital Statistics (Full Bayesian spatially modelled age $<75$, all-cause and cause-specific mortality, and births), population, 1991 Census data on a wide range of variables and calculated deprivation indices (Townsend, Carstairs, Breadline Britain), unemployment and job seekers allowance (by family composition), income (Paycheck), income support (by family composition), family credit (by family composition), incapacity benefit and severe disablement allowance, attendance allowance and disability living allowance bands (by category), educational attainment (Key Stage 2 and 3), housing conditions (voids and hard to let), council tax bands, Crime and Disorder Act data and hospital utilisation rates.

Further details are available:

1. Gwent Health Authority, Caerphilly county borough council. Caerphilly Health \& Social Needs Study: Stage 2. Report to Wales Office of Research \& Development Caerphilly: Gwent Health Authority, Caerphilly county borough council, 2000.
2. WORD spotlight 68
http://dspace.dial.pipex.com/word/
3. Fone DL, Jones A, Watkins J, et al. Using local authority data for action on health inequalities: the Caerphilly Health and Social Needs Study. British Journal of General Practice 2002; 52: 799-804.

A pilot survey for Stage 3 was undertaken in December 1999, funded by the Chief Medical Officer in Wales. This was a $100 \%$ sample questionnaire survey of 4137 residents living in 2400 households situated within 13 enumeration districts in the Upper Rhymney Valley. It was carried out as an additional component to the Neighbourhood Renewal Assessment by the Directorate of Environmental Services, CCBC, for the purposes of declaring a Housing Renewal Area. CCBC gave the Caerphilly Study Research Collaboration the opportunity to include a health and lifestyle questionnaire.

Further details are available in the Report of the Pilot Survey:
Fone DL, Lester N, Jones A, Watkins J. Rhymney Neighbourhood Renewal area: health status study. Report to Chief Medical Officer, October 2001.

The results of Stage 3, a population based postal questionnaire survey, are summarised in this report. Further details are available from the authors. These include the technical report to the Wales Office of Research and Development (WORD):

Gwent Health Authority, Caerphilly County Borough Council. Caerphilly Health \& Social Needs Study: Stage 3. Report to Wales Office of Research \& Development Caerphilly: Gwent Health Authority, Caerphilly County Borough Council, 2003.

A series of short publications focussing on specific topic areas, such as smoking and obesity, are planned and further analyses will be published on the National Public Health Service website as they are completed.

Stage 4 is planned for 2004/2005. Stage 4 will be qualitative research to explore the "Why" questions relating to relationships between social, environmental and economic deprivation and health, building on the results of Stages 1 to 3.

### 1.2 Information relating to research setting

This is fully described in the Caerphilly Health and Social Needs profile (see online: http://www.gwent-ha.wales.nhs.uk/frameset.htm) and not repeated here. 1991 Census ward geography rather than the 1999 electoral division geography was used in Stage 3 to maximise the number of wards in the multilevel analyses presented in the technical report to WORD. Figure 1.1 shows a map of Caerphilly county borough with ward boundaries. Table 1.1 identifies the 36 wards and the reference codes and numbers used throughout this report.

Table 1.1: Ward name, code \& reference number

Figure 1.1 Caerphilly county borough wards


## Chapter 2 - Methods

### 2.1 Overview

A self-completing postal questionnaire survey of the Caerphilly county borough resident adult population, funded by WORD.

Ethical approval was granted by the Gwent Local Research Ethics Committee.

### 2.2 Sampling frame

The sampling frame used was the adult resident population aged 18 and over of Caerphilly County Borough as recorded on the Gwent Health Authority 'Exeter’ system. We took a download of all 132,613 residents from the Exeter system on 31 May 2001 containing name, age, sex, address and postcode. Patients registered with a Caerphilly borough GP but not resident in the borough were excluded.

We then matched the sample frame dataset with the CCBC council tax band register to assign the property council tax band to each resident. Using a Geographical Information System, Mapinfo version 6.5, the postcode of each resident was georeferenced to assign enumeration district and electoral ward ONS codes and the associated Townsend score ${ }^{1}$.

22,290 residents were randomly sampled to receive a questionnaire (see appendix 1 for further details).

### 2.3 Questionnaire Design

We designed the questionnaire in six sections including questions on self-reported illness and lifestyle that had been previously used and validated in the Welsh Health Survey $1998^{2}$. Section 1 asked questions on "you and your lifestyle", including age, gender, and lifestyle questions on height and weight, smoking, alcohol consumption, diet, physical activity. Section 2 asked questions about "your health" including limiting long-term illness, chronic diseases, accidents and injuries, the SF-36 version 2 health status questionnaire ${ }^{3}$ and the MHLC locus of control questionnaire ${ }^{4}$. Section 3 asked questions on "you and your neighbourhood" to derive measures of social capital. Section 4 asked questions about "you and your job" including occupational status (in order to derive Registrar General social class) and educational qualifications. Section 5 asked questions on "your home", including housing tenure and conditions. The final section asked for details of gross household income within three bands.

Each questionnaire was identified by a unique code for use in tracking non-response and as a key code for matching to the sampling frame database. The questionnaire is included in appendix 4.

### 2.4 Survey Process

### 2.4.1 Electoral Register Canvassers

In order to try and maximise response, CCBC allowed the study to make use of the electoral registration process in the borough during which Electoral Register Canvassers (canvassers) call on each property to collect the completed electoral registration forms. We timed the survey to link in with this process and used the canvassers as representatives of the research team to collect completed questionnaires in a sealed envelope at the same time as the canvass. If the canvasser found no one at home, they were-asked to visit up to a further two separate occasions to contact the recipient. On the first non-response a slip was posted through the door reminding the recipient about the questionnaire and advising that they would call again.

### 2.4.2 Questionnaire mail out and return

Beaufort Research, Cardiff was awarded the contract to desk top publish and print the questionnaires and covering letter, pack and post the envelopes, keep track of responses to organise the second and third mailings, and enter the response data into a computer database.

For an unknown reason, 54 of the original 22,290 persons sampled were not sent a questionnaire. Therefore, 22,236 questionnaires were posted on Wednesday $29^{\text {th }}$ and Thursday $30^{\text {th }}$ August 2001. Also included was a freepost return envelope and a covering letter of explanation, signed by the senior GP partner of the recipients practice. In one practice that was not possible, so the letter was signed by Dr John Watkins, Medical Director of Primary Care at Gwent Health Authority and Board member of Caerphilly LHG. A copy of the letter can be found at appendix 2

Canvassers visited each address listed for the recipient(s) and canvassed for completion and return of the questionnaire. Sheets recording canvasser activity, recipient status and completed questionnaires were collected from the canvassers. Prior to the second mail out on $11^{\text {th }}$ of October of 10,486 questionnaires the canvassers were provided with updated area lists prepared by exclusion of returns, moved away/not known at this address, deaths (derived from the Exeter database) and refusals to complete. Again canvassers visited each recipient at least three times if necessary in the next fortnight. Using the same process, a third mail out of 5,242 questionnaires were posted on the $8^{\text {th }}$ of February 2002. The canvassers were not used in the third wave. Beaufort Research received completed questionnaires from the third posting up to the cut off date of 5 April 2002.

### 2.5 Data entry and database preparation

Data entry commenced in April 2002. Each question item and sub-item was coded and data were double entered into an SPSS file. The dataset was received on 31 May 2002. Considerable work was required subsequently on the dataset to identify and eliminate duplicate entries.

### 2.5.1 Geographical information

The unique ID number allowed matching of the response dataset to the sample frame database from which the sample was generated. This was necessary to add unit postcode to the response dataset so that geographical data could be added. Using the postcode, we geocoded each case in the response dataset to provide an accurate grid reference for each record using Postpoint

Professional and Map Info GIS software. We then linked the records to an ED-Line boundary file in Map Info to derive enumeration district and ward codes for each record.

Following the achievement of a clean dataset, frequency tabulations and cross-tabulations were used to check and deal with extreme or unlikely values and internal inconsistencies and to ensure consistent treatment of missing data as system missing.

### 2.5.2 Recoding of dataset variables

A considerable amount of recoding of individual level variables was required. This included occupational social class, SF-36, locus of control, diet, exercise, housing conditions and measures of social capital. Details are given in the relevant section of the results for each item.

### 2.5.3 Calculation of weights to adjust for non-response

Age group-gender specific weights were calculated using the method described in the OPCS survey users handbook ${ }^{5}$, as the ratio of the sample frame to response data stratum specific proportions of the total population. This method will adjust for under or over-representation of age group-gender strata in the response dataset but only fully correct for non-response bias if the population means or proportions for the variable under analysis are equal in both sample and response populations. This is of course unlikely to be the case, but without actual data on nonresponders this method offers a conventional approach to correct for non-response.

### 2.6 Presentation of results

Data at county borough level are shown in table format by sex.
Electoral division data are shown in graph and map format. The graphs show those electoral divisions which are significantly higher or lower than the average for the county borough in dark and pale green respectively.

Data for these graphs and maps are found in Appendix 1

Scatterplots showing the relationship between the variables and ward deprivation are available in each section

[^0]
## Chapter 3 - Results

### 3.1 Questionnaire response

### 3.1.1 Overall response

A total of 12,408 completed questionnaires were returned. Of the 22,236 residents sent a questionnaire, 2267 were reported by canvassers to have moved away, 84 had died or were too ill to complete a questionnaire, and 98 living in nursing homes were excluded, giving an adjusted denominator of 19,787 . The adjusted overall response was therefore $62.7 \%$. The gender was known for all respondents and age was missing for two. 316 respondents had missing or incorrectly input unique ID code and therefore could not be matched to a postcode for georeferencing. No geographical data could therefore be assigned to these respondents.

### 3.1.2 Exclusions from the denominator

Overall $11 \%$ of sampled residents were excluded from the denominator as they had moved away, died, were too ill to complete the questionnaire or were nursing home residents. The age gradient is clear, with greater percent exclusion in younger age groups and the elderly. In the 18-24 age group, $20 \%$ of persons had moved away and in those aged over $75,5 \%$ were excluded because they had died, lived in a nursing home or were too ill to complete the questionnaire.

### 3.1.3 Comparison of response to the sampling frame

Figures 3.1.1 and 3.1.2 compare the population pyramids for the sampling frame (those in Caerphilly county borough aged 18 years and older) and the respondents, clearly identifying the under-representation of younger age groups and the oldest age groups, with the overrepresentation of the "middle-aged".

Figure 3.1.1 Sample Frame

-Female ■Male

Figure 3.1.2 Respondents

$\square$ Female ■Male

### 3.1.4 Response by age group and gender

Figure 3.1.3 shows the response by age group for males and females as a percentage of the adjusted denominator. The overall response was significantly higher for females than males ( $58.3 \%$ vs. $66.8 \%$ ) with an increasing gradient in response across the age groups. Responders were significantly older than non-responders (mean age of responders 50.5 vs .43 .8 for nonresponders). In line with all postal surveys, the response was considerably lower in young men.

Figure 3.1.3 Percent response by age group


Male 【Female

Figure 3.1.4 Percent response by ward


### 3.1.5 Ward response and social deprivation

Figure 3.1.5 shows how the variation in ward response rates is related to the ward Townsend score, showing a significant declining trend in response with increasing ward deprivation.

Figure 3.1.5 Relation between ward response and Townsend score: persons


Rank correlation coefficient $=-0.46, \mathrm{p}<0.005$

### 3.2 Socio-demographic status

### 3.2.1 Registrar General Social Class

Derivation of Registrar General Social Class group of responders ${ }^{1}$ was based on the Standard Occupational Classification (OPCS 1991), using survey questions $3,4 \& 5$.

Social class could be derived for 11216 ( $90.4 \%$ ) of respondents. Table 3.2.1 summarises responses and shows the weighted percent of respondents in each category. Figures 3.2.1, 3.2.2 and 3.2.3 show the weighted percent of respondents in social classes IV and V by ward and gender.

Table 3.2.1: Social class categories

|  | Male |  | Female |  | Persons |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Weighted percent | Number | Weighted percent | Number | Weighted percent |
| I Professional | 211 | 4.2 | 80 | 1.4 | 291 | 2.6 |
| II Managerial/Technical | 1056 | 20.9 | 1294 | 21.1 | 2350 | 21.0 |
| IIIN Skilled non-manual | 447 | 9.2 | 1836 | 30.3 | 2283 | 20.4 |
| IIIM Skilled manual | 1912 | 36.4 | 560 | 9.0 | 2472 | 22.0 |
| IV Partly skilled | 926 | 18.1 | 1326 | 21.6 | 2252 | 20.1 |
| V Unskilled | 346 | 7.0 | 417 | 6.5 | 763 | 6.8 |
| Armed forces | 5 | 0.1 | 3 | 0.1 | 8 | 0.1 |
| Other | 187 | 4.1 | 610 | 10.1 | 797 | 7.1 |

The category 'other' in table 3.2.1 above includes those in education, youth training schemes, house-partners (not working), disabled (not working), unemployed (never worked), and full-time carers.

Figure 3.2.1: Social class category by gender


[^1]Figure 3.2.2 Percent social class IV \& V by ward
Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.2.3 Percent social class IV \& V


### 3.2.2 Education

## Question 42

What is your highest educational qualification?
This question was answered by 10900 ( $87.8 \%$ ) of survey respondents. Table 3.2.2 shows the number of respondents and the weighted percentages for the level of highest educational attainment or equivalent by gender. Figure 3.2.4 shows data on respondents aged $18-64$ with no qualifications by ward by age and gender and figures 3.2.5 and 3.2.6 show these data by ward.

Table 3.2.2: Categories of highest educational attainment

|  | Male |  |  | Female |  | Persons |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ${ }^{*}$ Weighted |  |  | Weighted |  | Weighted <br> pumber <br> percent |  |
| Number | percent | Number | percent |  |  |  |  |
| Degree | 647 | 13.3 | 834 | 14.5 | 1481 | 13.9 |  |
| HNC/HND | 337 | 7.2 | 108 | 2.0 | 445 | 4.6 |  |
| A level | 430 | 10.9 | 549 | 10.5 | 979 | 10.7 |  |
| School cert / City \& Guilds |  |  |  |  |  |  |  |
| ordinary level | 608 | 12.0 | 446 | 7.4 | 1054 | 9.7 |  |
| O level or GCSE grades A* to C | 603 | 14.0 | 1242 | 21.9 | 1845 | 17.9 |  |
| O level grade D to E or GCSE |  |  |  |  |  |  |  |
| grade D to G | 222 | 5.4 | 294 | 5.2 | 516 | 5.3 |  |
| No educational qualifications | 2155 | 37.3 | 2425 | 38.4 | 4580 | 37.9 |  |
|  | $\mathbf{5 0 0 2}$ | $\mathbf{1 0 0}$ | $\mathbf{5 8 9 8}$ | $\mathbf{1 0 0}$ | $\mathbf{1 0 9 0 0}$ | $\mathbf{1 0 0}$ |  |
| ${ }^{*}$ Ton |  |  |  |  |  |  |  |

*Total \% may not add up to 100 due to rounding

Figure 3.2.4: Percent no educational qualifications by age and gender


Figure 3.2.5: Percent 18 to 64 year olds with no educational qualifications by ward

$\square$ Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.2.6: Percent 18 to 64 year olds with no educational qualifications by ward


Figure 3.2.7: Relation between ward prevalence of $\mathbf{1 8} \mathbf{- 6 4}$ year olds with no educational qualifications and ward deprivation


Rank correlation coefficient $=0.78, \mathrm{p}<0.001$
Figure 3.2.7 shows that no educational qualifications are significantly related to ward deprivation.

### 3.2.3 Employment Status

## Question 37

What best describes your situation?
This question was answered by 11583 ( $93.4 \%$ ) of survey respondents. Table 3.2 .3 shows the employment status of respondents under retirement age (females less than 60 years of age and males under 65). Figures 3.2.8 and 3.2.9 show ward prevalence of unemployment in respondents under retirement age.

Table 3.2.3: Employment status under retirement age by gender

|  | Females |  | Males |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Number | Weighted <br> percent | Number | Weighted <br> percent |
| Employed | 2852 | 62.7 | 2698 | 70.4 |
| Not employed: | 1714 | 37.3 | 1281 | 29.6 |
| Seeking work | 111 | 2.6 | 177 | 5.0 |
| Full time student | 106 | 2.8 | 75 | 2.7 |
| Home/carer | 712 | 16.1 | 75 | 1.9 |
| Retired | 199 | 3.9 | 307 | 5.9 |
| Disability | 581 | 11.8 | 636 | 13.8 |
| Government training scheme | 5 | 0.1 | 11 | 0.4 |

Figure 3.2.8: Percent persons not employed under retirement age by ward


Figure 3.2.9: Percent persons not employed under retirement age by ward


Figure 3.2.10: Relation between ward prevalence of persons not employed under retirement age and ward deprivation


Rank correlation coefficient $=0.86, \mathrm{p}<0.001$
Figure 3.2.10 shows that not being employed under retirement age is significantly related to ward deprivation.

### 3.2.4 Household income

## Question 50

What is your total current gross weekly or yearly household income from all sources?
This question was answered by 11431 ( $92.1 \%$ ) of survey respondents. Table 3.2 .4 shows the responses in each gross household income category.

Table 3.2.4: Gross household income by gender

|  | Male |  | Female |  | Persons |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Weighted <br> percent | Weighted <br> Number <br> percent | Weighted <br> Number |  |  |
| Less than $£ 95$ per <br> week / Less than <br> $£ 5000$ pa | 456 | 8.9 | 841 | 13.0 | 1297 | 11.0 |
| Between $£ 95$ and <br> $£ 215$ per week / |  |  |  |  |  |  |
| Between $£ 5000$ and <br> $£ 11250$ pa | 2042 | 36.1 | 2664 | 41.3 | 4706 | 38.7 |
| More than $£ 215$ per <br> week / More than <br> $£ 11250$ pa | 2604 | 55.1 | 2824 | 45.7 | 5428 | 50.3 |

We dichotomised these data to recode a new variable defining those with a gross household income of above and below $£ 11.25 \mathrm{~K}$, equivalent to less than half the UK national average ${ }^{1}$. Figures 3.2.11, 3.2.12 and 3.2.13 show the proportion of respondents with annual household income of less than $£ 11.25 \mathrm{~K}$ by age and ward.

Figure 3.2.11: Percent annual household income less than $£ 11.25 \mathrm{~K}$ by age


Figure 3.2.12: Percent annual household income less than $£ 11.25 \mathrm{~K}$ by ward


[^2]Figure 3.2.13: Annual household income less than $£ 11.25 \mathrm{~K}$ per annum


Figure 3.2.14: Relation between ward prevalence of low income households and ward deprivation


Rank correlation coefficient $=0.81, \mathrm{p}<0.001$
Figure 3.2.14 shows that low household income is significantly related to ward deprivation.

### 3.3 Lifestyles

### 3.3.1 Body Mass Index

## Questions 3 \& 4

Weight and height were reported by 11942 ( $96.3 \%$ ) of respondents. From these measurements we calculated Body Mass Index ( $\mathrm{kg} / \mathrm{m}^{2}$ ) (BMI). These data were recoded into categories of underweight (BMI <20), normal weight (BMI 20-24), overweight and obese (BMI >25) using the Welsh Health Survey 1998 (WHS98) classification. Overweight and obese were then split to show those overweight (BMI 25-29) and those obese (BMI =>30). Table 3.3.1 shows the frequency and weighted percent of respondents with BMI corresponding to underweight, normal weight, overweight and obese by gender.

Table 3.3.1: BMI classification categories by gender

|  |  | Males |  | Females |  | Persons |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Number | Weighted <br> percent | Number | Weighted <br> percent | Number | Weighted <br> percent |
| Underweight | BMI $<20$ | 220 | 3.7 | 409 | 6.7 | 603 | 5.3 |
| Normal | BMI 20-24 | 1935 | 33.0 | 2501 | 41.2 | 4370 | 37.1 |
| Overweight | BMI 25-29 | 2565 | 43.7 | 1933 | 31.9 | 4550 | 37.7 |
| Obese | BMI $=>30$ | 1151 | 19.6 | 1228 | 20.2 | 2419 | 19.9 |

Figure 3.3.1 shows the prevalence of overweight and obese respondents by age. Figures 3.3.2 and 3.3.3 show the prevalence of obesity by ward for all persons whilst figures 3.3.5 and 3.3.6 show obesity for both males and females by ward.

Figure 3.3.1: Body Mass Index category by age group


10-year age band

Figure 3.3.2: Percent persons obese by ward


Figure 3.3.3: Percent persons obese by ward


Figure 3.3.4: Relation between ward prevalence obesity and ward deprivation


Rank correlation coefficient $=0.55, \mathrm{p}<0.001$
Figure 3.3.4 shows that obesity is significantly related to ward deprivation.

Figure 3.3.5 Percent males obese by ward


Figure 3.3.6 Percent females obese by ward


### 3.3.2 Smoking

## Question 5

Do you smoke? - Daily/occasionally/used to smoke/never

This question was answered by 12353 ( $99.6 \%$ ) of survey respondents. Table 3.3 .2 shows smoking status by gender. Tables 3.3.3, 3.3.4 and figure 3.3.7 show smoking prevalence by age and gender.

Table 3.3.2: Smoking status by gender

|  | Males |  | Females |  | Persons |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Weighted <br> percent | Number | Weighted <br> percent | Number | Weighted <br> percent |
| Smoker | 1515 | 28.8 | 1866 | 27.7 | 3381 | 28.2 |
| Daily | 1241 | 23.5 | 1574 | 23.3 | 2815 | 23.4 |
| Occasionally | 274 | 5.3 | 292 | 4.4 | 566 | 4.8 |
| Non-smoker | 3976 | 71.2 | 4996 | 72.3 | 8972 | 71.8 |
| Ex-smoker | 1726 | 26.8 | 1400 | 19.4 | 3126 | 23.0 |
| Never smoker | 2250 | 44.5 | 3596 | 52.9 | 5846 | 48.8 |

Figures 3.3.8 and 3.3.9 show male and female smoking prevalence by ward. Figure 3.3.10 shows smoking prevalence by ward for all persons.

Table 3.3.3: Smoking by age group: male

| Age group | Number | Percent | $\mathbf{9 5 \%} \mathbf{y y y}$ | Weighted <br> percent | $\mathbf{9 5 \%}$ CI |
| :--- | :---: | :---: | :---: | :---: | :---: |
| $18-24$ | 126 | 33.5 | $28.9,38.4$ | 33.5 | $30.0,37.1$ |
| $25-34$ | 229 | 32.0 | $28.7,35.5$ | 32.2 | $29.6,35.0$ |
| $35-44$ | 270 | 28.9 | $26.1,31.9$ | 29.0 | $26.5,31.6$ |
| $45-54$ | 353 | 32.1 | $29.4,34.9$ | 32.1 | $29.4,34.9$ |
| $55-64$ | 269 | 27.1 | $24.4,29.9$ | 27.3 | $24.5,30.3$ |
| $65-74$ | 191 | 21.3 | $18.7,24.1$ | 21.1 | $18.1,24.5$ |
| 75 and older | 77 | 16.2 | $13.2,19.8$ | 15.9 | $12.6,19.9$ |

Table 3.3.4: Smoking by age group: female

| Age group | Number | Percent | 95\% CI | Weighted <br> percent | 95\% CI |
| :--- | :---: | :---: | :---: | :---: | :---: |
| $18-24$ | 195 | 37.4 | $33.4,41.6$ | 37.4 | $33.8,41.3$ |
| $25-34$ | 338 | 32.2 | $29.4,35.1$ | 32.2 | $29.5,35.0$ |
| $35-44$ | 376 | 30.2 | $27.7,32.8$ | 30.2 | $27.6,32.9$ |
| $45-54$ | 370 | 28.8 | $26.4,31.3$ | 28.8 | $26.2,31.5$ |
| $55-64$ | 318 | 28.3 | $25.7,31.0$ | 28.3 | $25.5,31.4$ |
| $65-74$ | 182 | 20.0 | $17.5,22.7$ | 19.9 | $17.2,23.0$ |
| 75 and older | 86 | 11.8 | $9.7,14.3$ | 11.6 | $9.4,14.3$ |

Figure 3.3.7: Smoking prevalence by age and gender

$\square$ Males $\square$ Females

Figure 3.3.8: Percent smoking by ward males


Figure 3.3.9: Percent smoking by ward: females


Figure 3.3.10: Percent smoking prevalence by ward (persons)


Figure 3.3.11: Relation between ward smoking prevalence and ward deprivation


Rank correlation coefficient $=0.79, \mathrm{p}<0.001$
Figure 3.3.11 shows that smoking prevalence is significantly related to ward deprivation.

### 3.3.3 Alcohol consumption

## Question 7

In a typical seven-day week, how many units of alcohol would you drink (including weekends)?

This question was answered by 11116 (89.6\%) of survey respondents. Data were dichotomised to a new variable 'excess alcohol consumption', defined as more than 14 units per week for females and more than 21 units for males. Table 3.3.5 shows excess alcohol consumption by gender. Table 3.3.6 and figure 3.3.12 show prevalence of excess alcohol consumption for males and females by age.

Table 3.3.5: Excess alcohol consumption by gender

|  |  |  | Weighted |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Number | Percent | 95\% CI | percent | 95\% CI |
| Male | 904 | 16.4 | $15.4,17.4$ | 17.0 | $16.1,18.0$ |
| Female | 433 | 6.3 | $5.7,6.9$ | 6.5 | $5.9,7.2$ |

Table 3.3.6: Excess alcohol consumption by age-group: females

|  | Females |  |  |  | Males |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age group | Number | \% | $\mathbf{9 5 \%} \mathbf{~ C I}$ | $\mathbf{W t e d}$ |  |  |  |  |  |  |
| \% | $\mathbf{9 5 \%} \mathbf{C I}$ | Number | \% | $\mathbf{9 5 \%} \mathbf{C I}$ | Wted | 95\% CI |  |  |  |  |
| $18-24$ | 55 | 10.5 | $8.2,13.4$ | 10.5 | $8.4,13.2$ | 53 | 14.0 | $10.9,17.9$ | 13.9 | $11.5,16.8$ |
| $25-34$ | 80 | 7.6 | $6.1,9.4$ | 7.6 | $6.2,9.3$ | 154 | 21.5 | $18.6,24.7$ | 21.5 | $19.2,24.0$ |
| $35-44$ | 113 | 9.1 | $7.6,10.8$ | 9.1 | $7.6,10.9$ | 167 | 17.8 | $15.5,20.4$ | 17.8 | $15.8,20.1$ |
| $45-54$ | 98 | 7.6 | $6.3,9.2$ | 7.6 | $6.2,9.3$ | 221 | 20.1 | $17.8,22.6$ | 20.1 | $17.9,22.5$ |
| $55-64$ | 48 | 4.3 | $3.3,5.7$ | 4.2 | $3.1,5.7$ | 155 | 15.5 | $13.4,17.9$ | 15.6 | $13.4,18.1$ |
| $65-74$ | 32 | 3.5 | $2.5,4.9$ | 3.5 | $2.4,5.1$ | 120 | 13.3 | $11.2,15.7$ | 13.1 | $10.7,15.9$ |
| 75 and over | 7 | 1.0 | $0.5,2.0$ | 1.0 | $0.5,2.1$ | 34 | 7.0 | $5.1,9.6$ | 7.1 | $4.9,10.0$ |

Figure 3.3.12: Percent excess alcohol consumption by age group and gender

$\square$ Males पFemales

Figures 3.3.13, 3.3.14, 3.3.15 and 3.3.16 show prevalence of excess alcohol consumption for males and females by ward.

Figure 3.3.13: Percent excess alcohol consumption by ward: females
Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.3.14: Percent excess alcohol consumption: females


Figure 3.3.15: Percent excess alcohol consumption by ward: males


Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.3.16: Percent excess alcohol consumption: males


Figure 3.3.17: Relation between ward prevalence of excess alcohol consumption and ward deprivation score


Rank correlation coefficient (males) $=0.15, \mathrm{p}>0.1$
Rank correlation coefficient (females) $=-0.28, \mathrm{p}>0.05$
Figure 3.3.17 shows that although the trend in males is increasing and in females decreasing, there is no significant relationship between excess alcohol consumption in males or females and ward deprivation.

### 3.3.4 Physical activity

## Question 8

During the past 7 days, how many times did you exercise lasting at least 30 minutes?
This question was answered by 12132 ( $97.8 \%$ ) of survey respondents.
We recoded the question responses into two new variables; the first 'some exercise' to categorise respondents that had undertaken at least one bout of light, moderate or vigorous physical activity lasting at least 30 minutes on one day in the preceding week. The second variable, 'beneficial exercise' categorised responses, which indicated that enough physical activity was accrued to benefit health in accordance with the current American College of Sports Medicine (ACSM) guidelines ${ }^{2}$.

Table 3.3.7 Percentage taking 'some exercise' by gender

|  | Male |  | Female |  | Persons |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Weighted <br> percent | Number | Weighted <br> percent | Number | Weighted <br> percent |
| Some exercise | 4647 | 87.2 | 5835 | 87.1 | 10482 | 87.1 |
| Beneficial exercise | 1352 | 27.9 | 1496 | 22.9 | 2848 | 25.3 |

[^3]Table 3.3.8 and figure 3.3 .18 show the weighted percent of the calculated 'beneficial exercise' by age. Figure 3.3.19 and 3.3.20 show those in each ward who had taken 'beneficial exercise'.

Table 3.3.8: Percent taking beneficial exercise by age-group

| Age group | Count | Percent | $\mathbf{3 5 \%}$ CI | Weighted <br> percent | 95\% CI |
| :--- | :---: | :---: | :---: | :---: | :---: |
| $18-24$ | 340 | 38.0 | $34.9,41.2$ | 39.3 | $36.7,42.0$ |
| $25-34$ | 561 | 31.9 | $29.8,34.1$ | 32.7 | $30.8,34.7$ |
| $35-44$ | 628 | 29.0 | $27.1,30.9$ | 29.5 | $27.7,31.4$ |
| $45-54$ | 544 | 23.1 | $21.4,24.8$ | 23.1 | $21.4,24.9$ |
| $55-64$ | 437 | 21.1 | $19.4,22.9$ | 21.1 | $19.2,23.0$ |
| $65-74$ | 262 | 14.9 | $13.3,16.6$ | 14.8 | $12.9,16.8$ |
| 75 and older | 76 | 6.7 | $5.4,8.3$ | 6.5 | $5.1,8.2$ |

Figure 3.3.18: Percent taking beneficial exercise by age group


Figure 3.3.19: Percent taking beneficial exercise by ward
Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.3.20: Percent taking ‘beneficial exercise’ by ward


Figure 3.3.21: Relation between ward prevalence of respondents taking beneficial exercise and ward deprivation score


Rank correlation coefficient $=-0.52, \mathrm{p}<0.005$
Figure 3.3.21 shows that beneficial exercise is significantly inversely related to ward deprivation.

### 3.3.5 Diet and nutrition

## Question 9

In an average week, how often (if at all) do you usually eat the following of these foods?
The question on potatoes was answered by 12232 ( $98.5 \%$ ) survey respondents, on vegetables by 12226 ( $98.5 \%$ ) and on fresh fruit by 12188 ( $98.2 \%$ ). Tables 3.3.9, 3.3.10 and 3.3.11 show reported weekly frequency of consumption of potatoes, vegetables or salad and fresh fruit respectively.

Table 3.3.9: Consumption of potatoes by gender

|  | Male |  | Female |  | Persons |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Weighted <br> percent |  | Weighted <br> percent |  | Weighted <br> percent |
| Number |  | Number |  | Number |  |  |
| M to 3 days a week | 2382 | 43.7 | 2594 | 38.3 | 4976 | 41.0 |
| About once a week | 556 | 11.0 | 690 | 10.4 | 1246 | 10.7 |
| Rarely or never | 124 | 2.5 | 137 | 2.0 | 261 | 2.3 |

Table 3.3.10: Consumption of green vegetables or salad by gender

|  | Male |  | Female |  | Persons |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Weighted <br> percent |  | Weighted <br> percent |  | Weighted <br> percent |
| Number |  | Number |  | Number |  |  |
| M tost days a week | 2209 | 38.4 | 3639 | 52.4 | 5848 | 45.6 |
| About once a week a week | 2337 | 43.4 | 2382 | 35.3 | 4719 | 39.3 |
| Rarely or never | 683 | 13.8 | 632 | 9.9 | 1315 | 11.8 |
|  | 194 | 4.3 | 150 | 2.3 | 344 | 3.3 |

Table 3.3.11: Consumption of fresh fruit by gender

|  | Male |  | Female |  | Persons |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Weighted <br> percent |  | Weighted <br> percent |  | Weighted <br> percent |
| Number | 2509 | 44.2 | 3828 | 55.4 | 6337 | 49.9 |
| Most days a week | 1222 | 23.0 | 1442 | 21.7 | 2664 | 22.4 |
| 2 to 3 days a week | 18.0 | 894 | 13.6 | 1834 | 15.8 |  |
| About once a week | 940 | 18.0 |  |  |  |  |
| Rarely or never | 742 | 14.7 | 611 | 9.3 | 1353 | 12.0 |

We recoded responses for consumption of 'green vegetables or salad', and 'fresh fruit' to a new variable that categorised respondents by whether they reported consuming one or both at a frequency of 'about once per week' or less. Figures 3.3.22 and 3.3.23 show the ward prevalence of these data.

Figure 3.3.22: Percent consuming green vegetables, salad or fresh fruit about once per week or less by ward


Figure 3.3.23 Percent consuming green vegetables, salad or fresh fruit about once per week or less by ward


Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.3.24 Relation between ward consumption of vegetables, salad and fresh fruit once a week or less and ward deprivation score


Rank correlation coefficient $=0.65, \mathrm{p}<0.001$
Figure 3.3.24 shows that the consumption of vegetables, salad and fresh fruit once a week or less is significantly related to ward deprivation.

## 3.4: General health

### 3.4.1 Feelings about health

## Question 10

How do you feel about your health now?
This question was answered by 12238 ( $98.6 \%$ ) of respondents. Table 3.4.1 summarises responses and shows the weighted percent of respondents in each category. Figures 3.4.1 and 3.4.2 show the weighted percent of respondents by ward.

Table 3.4.1: How respondents feel about their health

|  | Male |  | Female |  | Persons |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Weighted <br> percent | Number | Weighted <br> percent | Number | Weighted <br> percent |
| Happiest | 544 | 10.8 | 599 | 9.0 | 1143 | 9.9 |
| Happy | 1053 | 20.3 | 1348 | 20.2 | 2401 | 20.3 |
| A bit happy | 1536 | 28.8 | 2003 | 29.6 | 3539 | 29.2 |
| Neutral | 1034 | 18.4 | 1239 | 18.1 | 2273 | 18.3 |
| A bit unhappy | 609 | 10.5 | 793 | 11.4 | 1402 | 11.0 |
| Unhappy | 369 | 6.3 | 459 | 6.5 | 828 | 6.4 |
| Most unhappy | 298 | 5.0 | 354 | 5.1 | 652 | 5.0 |

We recoded responses combining respondents who reported being neutral or happy about their health in to one category and respondents who reported being in one of the three 'unhappy' categories in to the other.

Figure 3.4.1 Percent respondents who felt unhappy about their health by ward
Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.4.2 Percent respondents who felt unhappy about their health by ward


Figure 3.4.3 Relation between those who felt unhappy about their health and ward deprivation score


Rank correlation coefficient $=0.63, \mathrm{p}<0.001$
Figure 3.4.3 shows unhappiness with health is significantly related to ward deprivation.

### 3.4.2 Limiting Long term illness (LLTI)

Limiting long term illness is a self reported measure of long term illness, health problems or handicap which limit the person's daily activities or employment options.

## Question 11

Do you have any longstanding illness, health problem or disability, which limits your daily activities or the work you can do?

This question was answered by 12304 (99.2\%) of respondents. Overall 6677 (54.3\%) of respondents reported LLTI. Table 3.4.2 summarises responses and shows the weighted percent of respondents in each category. Figures 3.4 .4 and 3.4 .5 show the weighted percent of LLTI by ward. Table 3.4 .3 shows the weighted percent of respondents reporting limiting long-term mental health problems. Figures 3.4.7 and 3.4.8 show those respondents reporting limiting long term mental health problems by ward.

Table 3.4.2: Frequencies of reported reason for LLTI

|  | Male |  | Female |  | Persons |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Condition | Number | Weighted <br> percent | Number | Weighted <br> percent | Number | Weighted <br> percent |
| One or more conditions | 3030 | 49.5 | 3647 | 51.3 | 6677 | 50.4 |
| Arthritis | 1403 | 20.7 | 1908 | 25.6 | 3311 | 23.2 |
| Back pain | 1326 | 21.0 | 1681 | 23.0 | 3007 | 22.0 |
| Diabetes | 340 | 4.9 | 299 | 4.0 | 639 | 4.4 |
| Hearing problems | 977 | 13.8 | 662 | 9.2 | 1639 | 11.4 |
| Vision problems | 815 | 12.2 | 970 | 13.2 | 1785 | 12.7 |
| Depression | 550 | 9.4 | 825 | 11.7 | 1375 | 10.6 |
| Stress/anxiety | 750 | 12.7 | 1185 | 16.6 | 1935 | 14.7 |
| Other mental health issues | 151 | 2.7 | 123 | 1.7 | 274 | 2.2 |
| Other | 1148 | 18.4 | 1254 | 17.3 | 2402 | 17.8 |

Figure 3.4.4 Percent reporting limiting long-term illness by ward
Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.4.5: Percent reporting limiting long-term illness by ward

Figure 3.4.6 Relation between limiting long-term illness and ward deprivation score


Rank correlation coefficient $=0.49, \mathrm{p}<0.005$
Figure 3.4.6 shows that LLTI is significantly related to ward deprivation.
We recoded a positive response to one or more of the variables, depression, stress/anxiety, and other mental health issue into a new binary variable, limiting long-term mental health problems.

Table 3.4.3: Reported limiting long-term mental health problems

|  | Number | Percent | $\mathbf{3 5 \%}$ CI | Weighted <br> percent | $\mathbf{9 5 \%}$ CI |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Total | 2461 | 19.8 | $19.1,20.5$ | 18.7 | $18.0,19.4$ |
| Female | 1474 | 21.4 | $20.4,22.4$ | 20.7 | $19.7,21.7$ |
| Male | 987 | 17.9 | $16.9,18.9$ | 16.6 | $15.6,17.5$ |

Figure 3.4.7 Percent reporting limiting long-term mental health problems by ward
Significantly lower than Caerphilly average
Significantly higher than Caerphilly average
}

Figure 3.4.8: Percent reporting limiting long-term mental health problems by ward


Figure 3.4.9 Relation between limiting long-term mental health problems and ward deprivation score


Rank correlation coefficient $=0.69, \mathrm{p}<0.001$
Figure 3.4.9 shows that LLTI mental health problems are significantly related to ward deprivation.

### 3.4.3 Accidents and injuries

## Question 13

Have you had an accident, injury or poisoning, needing hospital treatment or a visit to Casualty in the past three months?

This question was answered by 12187 ( $98.2 \%$ ) of respondents. Table 3.4.4 summarises responses and shows the weighted percent of respondents in each category. Figure 3.4.10 and 3.4.11 show the weighted percent of respondents by ward.

Table 3.4.4: Injuries requiring a visit to accident and emergency by gender

|  | Male |  | Female |  | Persons |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Type of injury | Number | Weighted <br> percent | Number | Weighted <br> percent | Number | Weighted <br> percent |
| One or more injuries: | 416 | 8.2 | 465 | 6.9 | 881 | 7.6 |
| Break or fracture | 70 | 1.4 | 95 | 1.3 | 165 | 1.4 |
| Head injury | 48 | 0.9 | 33 | 0.5 | 81 | 0.7 |
| Burn or scald | 10 | 0.2 | 17 | 0.3 | 27 | 0.3 |
| Poisoning | 19 | 0.4 | 12 | 0.2 | 31 | 0.3 |
| Eye injury | 43 | 0.9 | 28 | 0.4 | 71 | 0.6 |
| Cut or puncture | 88 | 1.8 | 69 | 1.0 | 157 | 1.4 |
| Bruising | 68 | 1.3 | 95 | 1.4 | 163 | 1.3 |
| Sprain, strain or twist | 91 | 1.9 | 142 | 2.1 | 233 | 2.0 |

Figure 3.4.10 Percent reporting accidents and injuries requiring hospital treatment by ward
Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.4.11: Percent reporting injuries requiring a visit to accident and emergency department by ward


Figure 3.4.12 Relation between injuries requiring a visit to A\&E and ward deprivation score


Rank correlation coefficient $=0.25, \mathrm{p}>0.1$
Figure 3.4.12 shows that injuries requiring a visit to A\&E are not significantly related to ward deprivation.

### 3.4.4 Cardiovascular disease

## Question 15

Have you ever been treated for heart disease or stroke?
This question was answered by 11760 ( $94.8 \%$ ) of respondents. Table 3.4 .5 summarises responses and shows the weighted percent of respondents in each category. Figures 3.4.13 and 3.4.14 show the weighted percent of respondents by ward.

Table 3.4.5: Cardiovascular disease by gender

|  | Male |  | Female |  | Persons |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Condition | Number | Weighted <br> percent | Number | Weighted <br> percent | Number | Weighted <br> percent |
| One or more conditions: | 1243 | 19.9 | 1153 | 16.8 | 2396 | 18.3 |
| Angina | 420 | 5.7 | 336 | 4.5 | 756 | 5.1 |
| Heart failure | 239 | 4.6 | 267 | 4.0 | 506 | 4.3 |
| Other heart disease | 161 | 2.3 | 172 | 2.3 | 333 | 2.3 |
| Heart attack | 303 | 4.2 | 123 | 1.6 | 426 | 2.9 |
| Hypertension | 561 | 8.1 | 566 | 7.6 | 1127 | 7.8 |
| Stroke | 159 | 2.2 | 147 | 2.0 | 306 | 2.1 |

Figure 3.4.13 Percent reporting cardiovascular disease by ward


Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.4.14: Percent reporting cardiovascular disease by ward


Figure 3.4.15 Relation between cardiovascular disease and ward deprivation score


Rank correlation coefficient $=0.17, \mathrm{p}>0.1$
Figure 3.4.15 shows that self-reported cardiovascular disease is not significantly related to ward deprivation.

Although we would expect cardiovascular disease to be significantly related to ward deprivation the above graphs include a wide range of conditions of which only some are known to be related to deprivation (e.g. hypertension).

### 3.4.5 Cancer

## Question 16

Have you ever been treated for cancer?
This question was answered by 11730 ( $94.5 \%$ ) of respondents. Table 3.4.6 summarises responses and shows the weighted percent of respondents in each category. Figures 3.4.16 and 3.4.17 show the weighted percent of respondents by ward.

Table 3.4.6: Cancers by gender

|  | Male |  | Female |  | Persons |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Condition | Number | Weighted <br> percent | Number | Weighted <br> percent | Number | Weighted <br> percent |
| One or more cancers | 219 | 3.3 | 360 | 5.2 | 579 | 4.3 |

Figure 3.4.16 Percent reporting cancer by ward


Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.4.17: Percent reporting cancer by ward


Figure 3.4.18 Relation between all cancers and ward deprivation score


Rank correlation coefficient $=-0.25, \mathrm{p}>0.1$
Figure 3.4.18 shows that self-reported cancer is not significantly related to ward deprivation.

### 3.4.6 Respiratory disease

## Question 17

Do you have any chest or breathing difficulties?
This question was answered by 11655 (93.9\%) of respondents. Table 3.4.19 summarises responses and shows the weighted percent of respondents in each category. Table 3.4.20 and figure 3.4.6 show the weighted percent of respondents by ward.

Table 3.4.19: Respiratory disease by gender

|  | Male |  | Female |  | Persons |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Condition | Number | Weighted <br> percent | Number | Weighted <br> percent | Number | Weighted <br> percent |
| One or more conditions: | 1416 | 23.6 | 1366 | 20.6 | 2782 | 22.1 |
| Asthma | 381 | 6.9 | 639 | 9.2 | 1020 | 8.1 |
| Pneumoconiosis | 165 | 2.3 | 8 | 0.1 | 173 | 1.2 |
| Chronic bronchitis/emphysema | 435 | 6.1 | 278 | 3.7 | 713 | 4.9 |
| Other chest problem | 673 | 10.5 | 609 | 8.4 | 1282 | 9.4 |

Figure 3.4.19 Percent reporting respiratory disease by ward


Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.4.20: Percent reporting respiratory disease by ward


Figure 3.4.21 Relation between respiratory disease and ward deprivation score


Rank correlation coefficient $=0.57, \mathrm{p}<0.001$
Figure 3.4.21 shows that respiratory disease is significantly related to ward deprivation.

## 3.5: SF-36 health status

Responses to the SF-36 questions were coded into the eight domains and two component summary scores using the standard algorithm, standardised to American norms ${ }^{3}$.

Table 3.5.1: SF-36 domain scores: weighted descriptive statistics

|  | Physical <br> Function | Role <br> Physical | Bodily <br> Pain | General <br> Health | Vitality | Social <br> Functioning | Role <br> Emotional | Mental <br> Health |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number | 11908 | 11354 | 12315 | 11754 | 12149 | 12326 | 11582 | 12021 |
| Missing | 500 | 1054 | 93 | 654 | 259 | 82 | 826 | 387 |
| Mean | 45.9 | 46.6 | 48.2 | 45.1 | 46.1 | 45.9 | 45.9 | 47.0 |
| Std. Deviation | 13.6 | 13.5 | 12.7 | 12.0 | 11.5 | 13.1 | 14.6 | 12.1 |
| Median | 52.8 | 56.9 | 50.3 | 47.2 | 45.8 | 51.4 | 55.9 | 50.0 |
| Minimum | 14.9 | 17.7 | 19.9 | 16.2 | 20.9 | 13.2 | 9.2 | 7.8 |
| Maximum | 57.0 | 56.9 | 62.1 | 63.9 | 70.8 | 56.8 | 55.9 | 64.1 |
| Centiles 25 | 38.1 | 37.3 | 37.2 | 35.3 | 39.6 | 35.0 | 36.4 | 38.7 |
| 75 | 57.0 | 56.9 | 62.1 | 55.3 | 55.2 | 56.8 | 55.9 | 55.6 |

Table 3.5.2 shows the descriptive statistics for the distributions of the physical (PCS) and mental (MCS) component summary scores. The PCS is calculated from the physical function, role physical, bodily pain, general health and vitality scores and the MCS is calculated from the social functioning, role emotional and mental health scores. Higher scores indicate better health and lower scores worse health.

Table 3.5.2: Raw numbers and weighted descriptive statistics for PCS and MCS

|  | PCS | MCS |
| :--- | ---: | ---: |
| Responded | 10739 | 10739 |
| Missing | 1669 | 1669 |
| Mean | 47.4 | 46.8 |
| Median | 52 | 51 |
| Std. Deviation | 12.7 | 12.8 |
| Minimum | 3.4 | -5.7 |
| Maximum | 77.3 | 74.2 |

[^4]Figure 3.5.1 Mean physical component score (PCS) by ward
Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.5.2: Mean PCS by ward


Figure 3.5.3 Relation between PCS and ward deprivation score


Rank correlation coefficient $=-0.53, \mathrm{p}<0.005$
Figure 3.5 .3 shows that PCS is significantly inversely related to ward deprivation.

Figure 3.5.4: Mean mental component score (MCS) by ward


Figure 3.5.5 Mean MCS by ward


Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.5.6 Relation between MCS and ward deprivation score


Rank correlation coefficient $=-0.72, \mathrm{p}<0.001$
Figure 3.5.6 shows that MCS is significantly inversely related to ward deprivation.

### 3.6 Home

### 3.6.1 Tenure

## Question 44

Which of the following statements best describes your home?
This question was answered by 12141 ( $97.8 \%$ ) of respondents. Table 3.6 .1 summarises responses and shows the weighted percent of respondents in each category. Figure 3.6.1 and 3.6.2 show the weighted percent of respondents by ward.

Table 3.6.1: Breakdown of housing tenure

|  | Persons |  |
| :--- | :---: | :---: |
| Status | Number | Percent |
| Own or live with owner | 9695 | 79.8 |
| Rented from local council, Housing Association or | 2021 | 16.3 |
| Housing Trust |  |  |
| Rented from private landlord | 326 | 2.9 |
| Other | 99 | 1.0 |

Figure 3.6.1 Percent respondents reporting that they do own their home


Significantly lower than Caerphilly average

- Significantly higher than Caerphilly average

Figure 3.6.2: Percent respondents who do not own their own home by ward


Figure 3.6.3. Relation between non-owner occupation and ward deprivation score


Rank correlation coefficient $=0.89, \mathrm{p}<0.001$
Figure 3.6 .3 shows that non-owner occupation is significantly related to ward deprivation.

### 3.6.2 Housing conditions

## Question 45

How often do you suffer from problems (heavy condensation; damp; draughts, mould) in your home?

This question was answered by: condensation 11240 (90.1\%) of respondents; damp 11157 (89.9\%); draughts 11259 (90.7); and mould 11047 ( $89.0 \%$ ). Table 3.6.2 summarises responses and shows the weighted percent of respondents in each category. Figures 3.6.4 and 3.6.5 show the weighted percent of respondents reporting any problem more frequently than 'hardly ever', by ward.

Table 3.6.2: Breakdown of housing conditions

|  | Condensation |  | Damp |  | Draughts |  | Mould |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Condition | Number | Weighted <br> percent | Number | Weighted <br> percent | Number | Weighted | Number |  |
| percent |  |  |  |  |  |  |  |  | | Weighted |
| :---: |
| percent |

Figure 3.6.4 Percent reporting any problem more frequently than 'hardly ever' by ward


Significantly lower than Caerphilly average
Significantly higher than Caerphilly average

Figure 3.6.5 Percent reporting any problem more frequently than 'hardly ever' by ward


Figure 3.6.6 Relation between problems with housing and ward deprivation score


Rank correlation coefficient $=0.60, \mathrm{p}<0.001$
Figure 3.6 .6 shows that housing problems are significantly related to ward deprivation.

### 3.7 Social capital

Social capital is a developing theoretical concept which seeks to explain, among other things, why some communities have higher levels of health and well-being than others. One of the first writers on social capital, Putnam offered a definition of social capital as "the features of social organisations such as networks, norms, and social trust that facilitate co-ordination and cooperation for mutual benefit". He argues that social capital is important because these networks, norms and trust in society lead to coordination and communication, acting as a template for future collaboration ${ }^{1,2}$.

Four measures of social capital that relate to community well-being will be presented in this report. The first two relate to how people feel about living in their neighbourhood, based on question 36. A new variable 'neighbourhood' was derived with two categories: 'Happy', based on a positive response to either of the three smiling faces, or 'Unhappy', based on responses to the neutral or the three sad faces. A second variable 'neighbourhood stability' was based on question 35 , derived as the percentage of people living in the same neighbourhood for five or more years.

The final two measures of social capital relate to perceived neighbourhood quality. Using the statistical technique of factor analysis on responses to question 33, two variables, 'quality of the neighbourhood environment' and 'crime \& disorder' were derived.
'Quality of the neighbourhood environment' related to reported problems of noise, nuisance from dogs, speeding traffic, uneven or dangerous pavements, lack of safe places for children to play, litter and rubbish, disturbance by children or youngsters. 'Crime and disorder' related to reported problems of assaults and muggings, burglaries, discarded needles and syringes, vandalism, walking around after dark.

## Happy living in neighbourhood

Table 3.7.1 shows the proportion of respondents happy and unhappy with living in their neighbourhood.

Table 3.7.1 Happy living in neighbourhood

|  |  | Males |  | Females |  | Persons |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Code on <br> questionnaire | Number | Weighted <br> percent | Number | Weighted <br> percent | Number | Weighted <br> percent |
| Happiest face | 1 | 1128 | 19.6 | 1745 | 25.2 | 2873 | 22.4 |
|  | 2 | 1716 | 32.1 | 2019 | 29.9 | 3735 | 31.0 |
|  | 3 | 1455 | 26.8 | 1769 | 26.1 | 3224 | 26.4 |
| Neutral face | 4 | 676 | 12.9 | 686 | 10.3 | 1362 | 11.6 |
|  | 5 | 210 | 3.9 | 238 | 3.6 | 448 | 3.7 |
|  | 6 | 147 | 2.8 | 161 | 2.5 | 308 | 2.6 |
| Saddest face | 7 | 96 | 1.9 | 157 | 2.4 | 253 | 2.2 |

Overall, $79.8 \%$ of respondents were happy and the percentage of respondents happy with living in their neighbourhood varied at ward level from $63 \%$ to $91 \%$. This is shown in figure 3.7.1.

Figure 3.7.1 Percent who feel happy in their neighbourhood


## Neighbourhood stability

Overall, $85.5 \%$ of respondents had lived in the same neighbourhood for five or more years. The proportion of respondents by ward varied from $76 \%$ to $93 \%$, shown in figure 3.7.2.

Figure 3.7.2 Neighbourhood: stability


## Quality of the neighbourhood environment and Crime \& disorder

In order to compare these social capital variables at ward level, average scores were calculated for each variable and the results are shown in figures 3.7.3 to 3.7.4.

Figure 3.7.3 Ward scores: environment


Figure 3.7.4 Ward scores: crime


## Comment

There is clearly concern from Caerphilly residents who responded to the survey over the quality of the local environment and problems with crime \& disorder. Comparison with the patterns of deprivation and health status shown already in this report suggest that respondents with poorer health tend to live in areas of poorer environmental quality. These areas also have a greater turnover of residents who feel less happy with living in their neighbourhoods.

[^5]
## Chapter 4 Discussion

### 4.1 Main results

Some of the more striking results deserve highlighting. Nearly $12 \%$ of female and $14 \%$ of male respondents were unable to work due to illness or disability, over $38 \%$ reported no educational qualifications and $50 \%$ reported a household income less than half of the UK average. 19\% lived in rented accommodation, $14 \%$ reported damp housing and $7 \%$ moulds.
$20 \%$ of respondents were obese, $28 \%$ smoked cigarettes, $17 \%$ of males reported excess alcohol intake, $12 \%$ respondents never ate fresh fruit and $75 \%$ exercised below levels beneficial to health. $54 \%$ reported a limiting long-term illness, $22 \%$ back pain and $11 \%$ depression, stress, anxiety or other mental illness. $22 \%$ of respondents felt unhappy about their health status. Data from the SF36 health status questions found a low overall mean mental health summary score of 46.8 (significantly below the Welsh average of 49.5) and an overall mean physical health summary score of 47.4 (non significantly above the Welsh average of 48.2 ). $8 \%$ of respondents reported a recent injury requiring treatment, $18 \%$ cardiovascular disease and $22 \%$ respiratory disease.

Variation in all of the variables at electoral division has been shown confirming the general relationship between poor health and deprivation in Caerphilly county borough.

### 4.2 Methodological issues

Our study was faced with the usual limitations that beset all postal questionnaire health surveys, resulting ultimately in ward population estimates that may be biased from non-response. Steps were taken to try and limit the amount of non-response bias operating. This included an evidence based approach to question wording, order and format (consistent question layout and fonts, paper colour, A5 booklet size, contact details on front page), suitably worded covering letter signed, where possible, by the recipients GP, and multiple contacts using canvassers.

Although there are ethical issues arising from the use of financial incentives, especially in vulnerable groups, the Steering Group and Gwent Research Ethics Committee considered the financial incentive of a prize draw acceptable.

We consider that it was worthwhile having three separate questionnaire mail-outs. The first posting and canvasser returns obtained a $46.5 \%$ female and $39 \%$ male response. The second wave obtained a further $13 \%$ response from both male and females and the third exclusively postal wave obtained a further $4.5 \%$ from both, taking the response to over $60 \%$. Although there were no age-gender stratum specific differences in response between waves, the additional response gained raised the male younger age group response to over $40 \%$, which although low, was considerably better than if two waves and no canvassers had been employed.

We found the lowest response to the survey was from young males. Response was highest in middle age and declined in the over 85 age groups. Assessment of non-response by ward found an inverse relation between deprivation and response. However we found a similar distribution of respondents to the sample frame by council tax band property value, with a small excess of respondents in band A , the lowest value property band. A similar age gender gradient across all eight council tax bands suggested that we at least achieved a representative sample by housing value.

We adjusted the denominator by excluding sampled residents reported by the canvassers to have moved away. This was greatest in younger age groups and males, but as a proportion by ward, was not related significantly to deprivation.

Overall, as with all postal surveys, our response dataset was not truly representative of the sampling frame population, particularly for males aged under 45 years. However the $63 \%$ overall response was good considering the socio-economic characteristics of the borough, and in comparison to the $57.7 \%$ response achieved by the Welsh Health Survey $1998{ }^{1}$.

In order to adjust for the age-gender under-representation, we weighted the response dataset using a standard ONS population-based weighting method ${ }^{2}$. Although it is unlikely that the sample means or proportions of variables are equal for responders and non-responders in the same agegender specific strata, this weighting method goes some way towards reducing non-response bias.

### 4.3 Conclusions

We believe this study has successfully achieved its objectives and established a firm foundation for subsequent work, both from further analyses of the response dataset and possibilities for further research.

This study has given us the resource of a comprehensive dataset on 12,408 individuals within Caerphilly county borough. There are substantial opportunities for further hypothesis testing in both single level and multilevel analyses and for a wide range of secondary studies to explore in greater depth some health needs issues that have strong policy implications.

Work is underway to link this study with the Housing \& Neighbourhoods \& Health (HANAH), a collaborative study between the Department of Epidemiology, Statistics and Public Health at the University of Wales College of Medicine and the Centre for Research in the Built Environment, Welsh School of Architecture, Cardiff University.

Finally, we recommend that data presented in this report are used in the development of the Health and Well Being strategy by Caerphilly county borough council, Caerphilly Local Health Board and their local partnerships and that policy makers and planners take note of the importance of area based deprivation and social capital in understanding variation in mental health status between individuals and areas.

[^6]
## Appendix 1

We estimated the sample size on the basis of the precision of the estimates of the relevant ward prevalence rates. The criterion chosen was a prevalence estimate to within $\pm 5 \%$ with $95 \%$ confidence. The required number is dependent on the actual prevalence and is at a maximum when the prevalence is $50 \%$. The sample size calculation takes the unequal populations of wards into account, so that the sampling fraction and sample sizes varied between wards.

Sample sizes varied between 285 and 366 between wards, making allowance for the finite population correction factor, which depends on the ward population size. The mean sample size was 350 per ward, making a total of 12,600 . This assumed a $100 \%$ response. We aimed to achieve a $60 \%$ response and so we inflated sample sizes to give a total sample size of 22,290 with ward sample sizes varying between 508 and 658.

We took a random sample using the random number generator in SPSS version 11.0, and generated the appropriate sample for each ward. When this process had been completed, the sample contained the name, age, sex, address and postcode of the 22,290 sampled residents.

| Ward code | Ward name | Population 18+ | Number in sample |
| :--- | :--- | :---: | :---: |
| STFA | Aber Valley | 5097 | 650 |
| STFB | Aberbargoed | 2820 | 615 |
| STFC | Abercarn | 3757 | 634 |
| STFD | Abertysswg | 1141 | 523 |
| STFE | Argoed | 1978 | 585 |
| STFF | Bargoed | 4912 | 648 |
| STFG | Bedwas and Trethomas | 5286 | 651 |
| STFH | Blackwood | 6231 | 658 |
| STFJ | Cefn Fforest | 2847 | 615 |
| STFK | Crosskeys | 2626 | 609 |
| STFL | Crumlin | 4504 | 644 |
| STFM | Darran Valley | 1982 | 585 |
| STFN | Gilfach | 1599 | 563 |
| THFA | Hengoed | 3794 | 634 |
| THFB | Llanbradach | 3585 | 631 |
| THFC | Machen | 3250 | 625 |
| THFD | Maesycwmmer | 1727 | 571 |
| THFE | Morgan Jones | 5331 | 652 |
| THFF | Moriah | 2439 | 603 |
| THFG | Nelson | 2971 | 618 |
| THFH | New Tredegar | 2883 | 616 |
| THFJ | Newbridge | 4889 | 648 |
| THFK | Pengam | 3064 | 621 |
| THFL | Penmaen | 3521 | 630 |
| THFM | Penyrheol | 8265 | 667 |
| THFN | Pontllanfraith | 6281 | 658 |
| THFP | Pontlottyn | 1528 | 558 |
| THFQ | Risca East | 5023 | 649 |
| THFR | Risca West | 4245 | 641 |
| THFS | St. Cattwg | 5631 | 654 |
| THFT | St. James | 4790 | 647 |
| THFU | St. Martins | 5497 | 653 |
| THFW | Tir-Phil | 1023 | 508 |
| THFX | Twyn Carno | 1973 | 585 |
| THFY | Ynysddu | 2873 | 616 |
| THFZ | Ystrad Mynach | 3250 | 625 |
| Totals |  | 132,613 | 22,290 |
|  |  |  |  |
|  |  |  | 63 |

## Appendix 2

## AA/August 2001

## A STUDY OF HEALTH AND WELL-BEING OF PEOPLE LIVING IN CAERPHILLY COUNTY BOROUGH

Dear Sir or Madam

Caerphilly Local Health Group is conducting a survey of the health and well-being of local residents. The Local Health Group is made up of representatives from local family doctors (GPs), nurses, dentists, opticians and pharmacists, and from the local authority and voluntary groups. They are working very closely with all local family doctors and local community organisations to find out what affects people's health in Caerphilly County Borough and to help local planning to improve the health of communities.

You have been chosen at random to receive a questionnaire booklet and we would be very grateful if you could spare the time to answer the questions enclosed. It should take about 20 minutes to complete. Some questions are about your health and lifestyle, and others are about the area in which you live. We think you will find the questions interesting. The questions are different from the questions asked in the Census held in April, as we need different information to help us plan to improve local health and well-being. Your views are important to us - if you have any difficulty in filling in the form you may ask a relative or friend to help you. The Local Health Group would also be pleased to help you. Should you require help please ring our FREEPHONE Survey Helpline on 0800328088.

Please remember your replies will be strictly confidential. We have included a number at the end of the booklet. This is to help us keep track of the booklets. You will not personally be identified in any way in our report and the results will be shared widely within the borough. In addition, one of the study researchers will use some of the survey information as part of his research for a higher degree.

## Os hoffech gael copi o'r holiadur hwn yn y Gymraeg, cysylltwch â 01443864353

Once you have completed the questionnaire, please seal it in the envelope provided. The envelopes will be collected by our study representatives and delivered to the Local Health Group office. You do not need to post the questionnaire back, but you may do so if you wish in the FREEPOST envelope provided.

At the end of the survey three questionnaires will be randomly selected. The first selected will receive $£ 250$, the second $£ 150$ and the third $£ 100$ in postal orders.

Thank you for helping us.

Yours sincerely

Appendix 3

|  | \% social class IV/V |  |  | 18-64 no educational qualification |  |  | Persons not employed under 65 |  |  | Annual hh income <11.25K |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Wghtd \% | 95\% CI | Number | Wghtd \% | 95\% CI | Number | Wghtd \% | 95\% CI | Number | Wghtd \% | 95\% CI |
| Abercarn | 105 | 31.1 | 26.3, 36.1 | 74 | 26.7 | 21.7, 32.3 | 75 | 28.6 | 23.5, 34.2 | 173 | 46.6 | 41.4, 51.9 |
| Argoed | 73 | 31.2 | 25.2, 36.8 | 59 | 30.4 | 24.3, 37.2 | 62 | 34.7 | 28.3, 41.7 | 152 | 58.3 | 52.2, 64.3 |
| Blackwood | 94 | 26.9 | 22.3, 31.5 | 85 | 27.1 | 22.4, 32.3 | 95 | 30.6 | 25.7, 36.0 | 150 | 39.2 | 34.3, 44.3 |
| Cefn Fforest | 101 | 31.2 | 26.5, 36.6 | 93 | 34.5 | 29.0, 40.3 | 85 | 33.5 | 28.0, 39.4 | 184 | 52.2 | 46.7, 57.5 |
| Crosskeys | 107 | 31.4 | 26.2, 36.0 | 90 | 32.3 | 26.9, 38.1 | 66 | 24.4 | 19.6, 30.0 | 167 | 43.3 | 38.2, 48.6 |
| Crumlin | 77 | 25.4 | 21.2, 31.0 | 77 | 29.8 | 24.4, 35.6 | 78 | 30.6 | 25.2, 36.6 | 143 | 43.9 | 38.5, 49.5 |
| Newbridge | 94 | 27.7 | 24.1, 33.7 | 91 | 32.1 | 26.7, 37.8 | 98 | 37.8 | 32.3, 43.7 | 188 | 53.0 | 47.8, 58.2 |
| Pengam | 81 | 28.1 | 22.6, 32.9 | 78 | 32.8 | 27.0, 39.0 | 79 | 34.3 | 28.5, 40.7 | 161 | 51.2 | 45.5, 56.9 |
| Penmaen | 79 | 23.0 | 18.2, 27.0 | 70 | 25.0 | 20.2, 30.4 | 65 | 24.1 | 19.4, 29.5 | 149 | 39.8 | 34.8, 45.1 |
| Pontllanfraith | 74 | 23.4 | 19.0, 28.2 | 73 | 28.3 | 23.0, 34.1 | 73 | 28.0 | 22.9, 33.7 | 161 | 46.4 | 41.2, 51.8 |
| Risca East | 87 | 24.8 | 20.9, 29.9 | 85 | 27.6 | 22.8, 32.8 | 87 | 30.6 | 25.6, 36.1 | 166 | 44.7 | 39.6, 50.0 |
| Risca West | 100 | 28.2 | 22.9, 32.1 | 83 | 32.0 | 26.7, 37.7 | 76 | 28.9 | 23.9, 34.5 | 206 | 52.3 | 47.2, 57.3 |
| Ynysddu | 92 | 29.0 | 23.6, 33.4 | 86 | 31.8 | 26.4, 37.6 | 81 | 31.3 | 26.0, 37.1 | 167 | 48.3 | 42.8, 53.7 |
| Aberbargoed | 72 | 30.1 | 24.0, 35.4 | 83 | 42.2 | 35.4, 49.2 | 85 | 42.4 | 35.7, 49.4 | 171 | 63.7 | 57.6, 69.3 |
| Abertysswg | 80 | 35.1 | 29.3, 41.7 | 69 | 36.0 | 29.4, 43.0 | 70 | 38.0 | 31.5, 45.1 | 152 | 61.5 | 55.2, 67.5 |
| Aber Valley | 89 | 28.8 | 24.6, 34.6 | 102 | 38.9 | 33.1, 44.8 | 97 | 37.8 | 32.2, 43.8 | 196 | 58.6 | 53.2, 63.8 |
| Bargoed | 80 | 26.8 | 21.8, 31.7 | 79 | 33.8 | 28.0, 39.9 | 93 | 40.1 | 34.1, 46.4 | 192 | 59.4 | 53.9, 64.7 |
| Bedwas \& Trethomas | 78 | 24.8 | 19.7, 29.1 | 64 | 24.0 | 19.0, 29.6 | 79 | 33.3 | 27.7, 39.4 | 168 | 48.3 | 42.8, 53.7 |
| Darran Valley | 100 | 35.8 | 29.8, 40.7 | 97 | 42.2 | 35.9, 48.6 | 87 | 38.0 | 32.1, 44.4 | 173 | 60.7 | 54.9, 66.2 |
| Gilfach | 58 | 23.8 | 18.4, 28.9 | 51 | 26.2 | 20.4, 32.9 | 69 | 38.1 | 31.5, 45.2 | 139 | 54.4 | 48.0, 60.5 |
| Hengoed | 88 | 31.0 | 26.0, 36.7 | 94 | 38.8 | 32.9, 45.1 | 89 | 37.8 | 31.9, 44.1 | 151 | 49.7 | 43.9, 55.4 |
| Llanbradach | 63 | 20.1 | 15.9, 24.5 | 67 | 24.4 | 19.6, 29.7 | 74 | 27.2 | 22.4, 32.6 | 145 | 42.9 | 37.6, 48.3 |
| Machen | 53 | 17.2 | 12.7, 21.0 | 43 | 17.4 | 13.0, 22.7 | 69 | 28.8 | 23.5, 34.8 | 127 | 39.5 | 34.0, 45.1 |
| Maes y Cwmmer | 46 | 17.0 | 12.6, 21.5 | 48 | 20.7 | 15.7, 26.5 | 59 | 27.2 | 21.7, 33.6 | 110 | 41.2 | 35.4, 47.3 |
| Morgan Jones | 71 | 20.9 | 16.3, 24.8 | 75 | 24.3 | 19.7, 29.5 | 91 | 31.4 | 26.3, 36.9 | 169 | 44.1 | 39.1, 49.2 |
| Moriah | 87 | 33.0 | 26.7, 37.7 | 71 | 34.2 | 28.3, 40.6 | 88 | 42.4 | 36.1, 49.0 | 180 | 58.5 | 52.8, 64.0 |
| Nelson | 81 | 24.2 | 18.2, 27.1 | 76 | 26.4 | 21.5, 31.8 | 79 | 30.5 | 25.3, 36.2 | 187 | 51.0 | 45.8, 56.2 |
| New Tredegar | 104 | 39.4 | 33.3, 44.9 | 95 | 43.4 | 36.9, 50.1 | 89 | 44.0 | 37.6, 50.7 | 188 | 65.5 | 59.7, 70.8 |
| Penyrheol | 82 | 21.9 | 18.2, 26.5 | 84 | 25.8 | 21.2, 30.8 | 92 | 29.3 | 24.6, 34.5 | 172 | 43.0 | 38.1, 48.0 |
| Pontlottyn | 121 | 39.5 | 33.9, 44.8 | 116 | 45.6 | 39.5, 51.8 | 94 | 37.9 | 32.2, 44.0 | 189 | 59.1 | 53.5, 64.4 |
| St. Cattwg | 77 | 25.5 | 20.8, 30.5 | 85 | 31.6 | 26.3, 37.3 | 77 | 29.8 | 24.6, 35.6 | 153 | 47.6 | 42.1, 53.1 |
| St. James | 71 | 21.3 | 16.8, 25.4 | 77 | 26.5 | 21.7, 31.8 | 107 | 38.6 | 33.2, 44.3 | 159 | 45.3 | 40.1, 50.6 |
| St. Martins | 55 | 15.0 | 11.2, 18.5 | 50 | 16.2 | 12.4, 20.8 | 59 | 19.6 | 15.4, 24.5 | 125 | 31.7 | 27.2, 36.6 |
| Tir-Phil | 74 | 33.5 | 28.7, 41.2 | 63 | 35.1 | 28.3, 42.4 | 65 | 38.2 | 31.3, 45.7 | 143 | 62.5 | 55.9, 68.7 |
| Twyn Carno | 81 | 34.2 | 28.2, 40.1 | 93 | 49.5 | 42.5, 56.4 | 105 | 54.7 | 47.8, 61.5 | 161 | 67.7 | 61.4, 73.3 |
| Ystrad Mynach | 71 | 22.7 | 17.6, 26.8 | 57 | 21.7 | 17.0, 27.3 | 66 | 28.2 | 22.9, 34.2 | 129 | 38.0 | 32.8, 43.6 |


|  | Obesity (persons) |  |  | Obesity (males) |  |  | Obesity (females) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Wghtd \% | 95\% CI | Number | Wghtd \% | 95\% CI | Number | Wghtd \% | 95\% CI |
| Abercarn | 67 | 17.6 | 14.0, 21.9 | 21 | 13.5 | 9.1, 19.4 | 46 | 21.6 | 16.3, 28.1 |
| Argoed | 62 | 24.9 | 20.0, 30.5 | 28 | 26.6 | 19.7, 34.8 | 34 | 23.3 | 16.9, 31.2 |
| Blackwood | 64 | 16.1 | 12.8, 20.2 | 28 | 15.8 | 11.3, 21.8 | 36 | 16.4 | 11.9, 22.2 |
| Cefn Fforest | 64 | 18.7 | 14.9, 23.2 | 27 | 17.1 | 12.3, 23.3 | 37 | 21.2 | 15.5, 28.2 |
| Crosskeys | 73 | 20.8 | 16.9, 25.3 | 37 | 23.6 | 18.0, 30.3 | 36 | 17.9 | 13.1, 24.1 |
| Crumlin | 64 | 20.4 | 16.3, 25.2 | 26 | 20.7 | 14.9, 2.08 | 38 | 20.1 | 14.8, 26.8 |
| Newbridge | 74 | 20.2 | 16.4, 24.7 | 33 | 20.7 | 15.3, 27.4 | 41 | 19.7 | 14.6, 25.9 |
| Pengam | 64 | 20.8 | 16.7, 25.7 | 31 | 22.1 | 16.3, 29.3 | 33 | 19.0 | 13.5, 25.9 |
| Penmaen | 60 | 16.2 | 12.8, 20.5 | 26 | 14.4 | 9.9, 20.3 | 34 | 17.6 | 12.7, 23.9 |
| Pontllanfraith | 63 | 18.8 | 15.0, 23.2 | 30 | 21.0 | 15.5, 27.7 | 33 | 17.2 | 12.4, 23.4 |
| Risca East | 78 | 21.0 | 17.1, 25.5 | 26 | 15.8 | 11.2, 21.9 | 52 | 25.9 | 20.2, 32.7 |
| Risca West | 74 | 17.9 | 14.4, 22.0 | 27 | 14.2 | 10.0, 19.8 | 47 | 21.6 | 16.4, 28.0 |
| Ynysddu | 71 | 20.5 | 16.5, 25.1 | 29 | 18.1 | 13.1, 24.4 | 42 | 23.3 | 17.5, 30.4 |
| Aberbargoed | 70 | 25.4 | 20.5, 30.9 | 38 | 30.7 | 23.4, 39.2 | 32 | 20.6 | 14.7, 28.0 |
| Abertysswg | 58 | 22.0 | 17.3, 27.4 | 20 | 18.2 | 12.1, 26.4 | 38 | 24.8 | 18.5, 32.4 |
| Aber Valley | 70 | 21.3 | 17.2, 26.0 | 30 | 20.5 | 15.0, 27.3 | 40 | 22.0 | 16.4, 28.9 |
| Bargoed | 67 | 19.7 | 15.7, 24.4 | 32 | 20.9 | 15.3, 27.9 | 35 | 18.5 | 13.3, 25.2 |
| Bedwas \& Trethomas | 65 | 18.6 | 14.7, 23.2 | 28 | 17.9 | 12.7, 24.7 | 37 | 19.2 | 13.9, 25.8 |
| Darran Valley | 79 | 25.4 | 20.9, 30.5 | 32 | 22.9 | 16.9, 30.1 | 47 | 27.4 | 21.0, 34.8 |
| Gilfach | 38 | 14.3 | 10.5, 19.1 | 16 | 14.7 | 9.4, 22.2 | 22 | 14.7 | 9.7, 21.6 |
| Hengoed | 63 | 20.5 | 16.3, 25.5 | 23 | 17.6 | 12.2, 24.7 | 40 | 23.5 | 17.5, 30.8 |
| Llanbradach | 65 | 20.1 | 16.1, 24.7 | 31 | 20.7 | 15.3, 27.3 | 34 | 19.5 | 14.1, 26.3 |
| Machen | 41 | 12.3 | 9.1, 16.5 | 19 | 11.9 | 7.8, 17.9 | 22 | 13.3 | 8.8, 19.7 |
| Maes y Cwmmer | 50 | 18.4 | 14.2, 23.4 | 24 | 19.6 | 13.8, 27.0 | 26 | 17.2 | 11.7, 24.4 |
| Morgan Jones | 70 | 19.9 | 16.1, 24.4 | 34 | 25.5 | 19.3, 32.8 | 36 | 15.3 | 11.0, 20.9 |
| Moriah | 80 | 26.4 | 21.8, 31.6 | 35 | 27.2 | 20.7, 34.7 | 45 | 26.1 | 19.9, 33.5 |
| Nelson | 67 | 18.4 | 14.7, 22.7 | 35 | 20.4 | 15.2, 26.9 | 32 | 16.3 | 11.6, 22.4 |
| New Tredegar | 75 | 25.0 | 20.4, 30.3 | 33 | 25.8 | 19.1, 33.8 | 42 | 24.4 | 18.3, 31.7 |
| Penyrheol | 94 | 23.9 | 19.9, 28.3 | 41 | 24.2 | 18.7, 30.8 | 53 | 24.0 | 18.7, 30.3 |
| Pontlottyn | 62 | 18.5 | 14.7, 23.0 | 25 | 17.9 | 12.8, 24.5 | 37 | 19.2 | 13.9, 25.8 |
| St. Cattwg | 74 | 21.7 | 17.5, 26.5 | 31 | 20.0 | 14.5, 26.9 | 43 | 23.9 | 18.0, 31.0 |
| St. James | 66 | 18.9 | 15.1, 23.4 | 26 | 15.7 | 11.1, 21.8 | 40 | 22.2 | 16.5, 29.0 |
| St. Martins | 53 | 13.8 | 10.7, 17.7 | 22 | 12.6 | 8.6, 18.1 | 31 | 15.4 | 11.0, 21.3 |
| Tir-Phil | 47 | 19.3 | 14.8, 24.8 | 26 | 22.4 | 15.8, 30.8 | 21 | 15.7 | 10.3, 23.2 |
| Twyn Carno | 54 | 22.3 | 17.5, 27.9 | 22 | 23.0 | 16.2, 31.6 | 32 | 21.5 | 15.4, 29.1 |
| Ystrad Mynach | 71 | 21.0 | 16.9, 25.7 | 36 | 24.4 | 18.3, 31.7 | 35 | 17.9 | 12.8, 24.3 |


|  | Smoking (persons) |  |  | Smoking (males) |  |  | Smoking (females) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Wghtd \% | 95\% CI | Number | Wghtd \% | 95\% CI | Number | Wghtd \% | 95\% CI |
| Abercarn | 94 | 25.6 | 21.4, 30.3 | 48 | 29.1 | 22.9, 36.1 | 46 | 22.4 | 17.1, 28.8 |
| Argoed | 82 | 31.6 | 26.3, 37.4 | 42 | 36.4 | 28.6, 45.0 | 40 | 27.2 | 20.4, 35.2 |
| Blackwood | 82 | 22.2 | 18.3, 26.6 | 40 | 24.2 | 18.6, 30.8 | 42 | 19.9 | 14.9, 26.0 |
| Cefn Fforest | 103 | 29.3 | 24.8, 34.3 | 45 | 26.2 | 20.4, 32.9 | 58 | 32.9 | 26.1, 40.5 |
| Crosskeys | 96 | 26.5 | 22.3, 31.2 | 39 | 25.3 | 19.5, 32.1 | 57 | 27.6 | 21.8, 34.3 |
| Crumlin | 83 | 26.6 | 22.0, 31.7 | 35 | 28.8 | 22.0, 36.6 | 48 | 24.7 | 18.9, 31.6 |
| Newbridge | 88 | 24.7 | 20.6, 29.3 | 40 | 26.7 | 20.7, 33.6 | 48 | 22.8 | 17.4, 29.2 |
| Pengam | 86 | 28.8 | 24.1, 34.1 | 33 | 26.0 | 19.7, 33.4 | 53 | 31.6 | 24.9, 39.3 |
| Penmaen | 69 | 20.4 | 16.6, 24.8 | 30 | 20.2 | 15.0, 26.7 | 39 | 20.5 | 15.3, 26.9 |
| Pontllanfraith | 97 | 29.5 | 24.9, 34.4 | 46 | 33.1 | 26.5, 40.5 | 51 | 26.1 | 20.3, 32.9 |
| Risca East | 101 | 28.0 | 23.6, 32.7 | 37 | 22.2 | 16.8, 28.8 | 64 | 33.2 | 26.9, 40.1 |
| Risca West | 109 | 28.0 | 23.9, 32.5 | 55 | 32.2 | 26.2, 38.8 | 54 | 24.2 | 18.8, 30.4 |
| Ynysddu | 84 | 24.9 | 20.7, 29.7 | 37 | 23.8 | 18.2, 30.4 | 47 | 26.2 | 20.1, 33.3 |
| Aberbargoed | 87 | 31.1 | 25.9, 36.9 | 34 | 27.3 | 20.4, 35.6 | 53 | 34.3 | 27.0, 42.4 |
| Abertysswg | 80 | 30.8 | 25.6, 36.6 | 33 | 33.6 | 25.7, 42.6 | 47 | 28.7 | 22.0, 36.4 |
| Aber Valley | 126 | 38.0 | 33.1, 43.3 | 55 | 37.8 | 30.9, 45.2 | 71 | 38.6 | 31.8, 46.0 |
| Bargoed | 98 | 29.7 | 25.1, 34.8 | 42 | 27.9 | 21.6, 35.2 | 56 | 31.4 | 24.8, 38.7 |
| Bedwas \& Trethomas | 100 | 29.5 | 24.9, 34.6 | 47 | 32.9 | 26.2, 40.4 | 53 | 26.6 | 20.6, 33.5 |
| Darran Valley | 103 | 32.6 | 27.7, 37.9 | 37 | 28.4 | 21.9, 35.9 | 66 | 37.0 | 30.0, 44.6 |
| Gilfach | 59 | 22.7 | 18.1, 28.0 | 27 | 25.2 | 18.4, 33.5 | 32 | 20.7 | 14.9, 28.0 |
| Hengoed | 100 | 33.1 | 28.1, 38.6 | 46 | 34.2 | 27.0, 42.3 | 54 | 31.6 | 24.9, 39.3 |
| Llanbradach | 96 | 29.3 | 24.7, 34.3 | 43 | 27.8 | 21.8, 34.7 | 53 | 30.9 | 24.4, 38.3 |
| Machen | 91 | 29.3 | 24.6, 34.5 | 46 | 30.7 | 24.1, 38.1 | 45 | 27.4 | 21.0, 34.8 |
| Maes y Cwmmer | 69 | 24.9 | 20.2, 30.3 | 32 | 25.2 | 18.7, 33.0 | 37 | 24.6 | 18.3, 32.3 |
| Morgan Jones | 82 | 22.3 | 18.4, 26.7 | 32 | 21.9 | 16.3, 28.7 | 50 | 23.0 | 17.8, 29.1 |
| Moriah | 76 | 24.8 | 20.3, 29.8 | 36 | 26.5 | 20.1, 33.9 | 40 | 23.0 | 17.2, 30.1 |
| Nelson | 88 | 24.7 | 20.6, 29.4 | 46 | 27.8 | 21.9, 34.6 | 42 | 21.4 | 16.1, 27.9 |
| New Tredegar | 101 | 34.2 | 29.1, 39.7 | 36 | 31.4 | 24.2, 39.6 | 65 | 36.5 | 29.6, 44.1 |
| Penyrheol | 122 | 31.2 | 26.9, 35.9 | 58 | 34.0 | 27.8, 40.9 | 64 | 29.0 | 23.3, 35.4 |
| Pontlottyn | 130 | 38.1 | 33.1, 43.4 | 58 | 38.6 | 31.5, 46.1 | 72 | 37.9 | 31.1, 45.3 |
| St. Cattwg | 86 | 26.9 | 22.4, 31.9 | 38 | 27.5 | 21.2, 34.9 | 48 | 26.2 | 20.2, 33.2 |
| St. James | 108 | 31.7 | 27.1, 36.7 | 54 | 33.3 | 26.9, 40.5 | 54 | 30.3 | 24.0, 37.5 |
| St. Martins | 76 | 20.5 | 16.8, 24.8 | 38 | 23.3 | 17.9, 29.8 | 38 | 17.3 | 12.7, 23.3 |
| Tir-Phil | 76 | 33.2 | 27.6, 39.3 | 37 | 37.0 | 28.8, 45.9 | 39 | 29.3 | 22.0, 37.8 |
| Twyn Carno | 94 | 38.3 | 32.5, 44.4 | 35 | 37.7 | 29.4, 46.9 | 59 | 38.3 | 30.7, 46.5 |
| Ystrad Mynach | 63 | 19.0 | 15.1, 23.5 | 30 | 20.6 | 15.0, 27.7 | 33 | 17.0 | 12.2, 23.3 |


|  | Excess alcohol consumption(males) |  |  | Excess alcohol consumption (females) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Wghtd \% | 95\% CI | Number | Wghtd \% | 95\% CI |
| Abercarn | 30 | 18.4 | 13.4, 24.8 | 13 | 6.7 | 4.0, 11.2 |
| Argoed | 22 | 20.2 | 14.1, 27.9 | 9 | 5.9 | 3.0, 11.2 |
| Blackwood | 22 | 14.5 | 10.2, 20.3 | 11 | 5.6 | 3.1, 9.7 |
| Cefn Fforest | 25 | 14.4 | 10.1, 20.2 | 9 | 5.0 | 2.5, 9.5 |
| Crosskeys | 25 | 14.8 | 10.4, 20.7 | 16 | 7.7 | 4.7, 12.4 |
| Crumlin | 24 | 19.0 | 13.5, 26.2 | 14 | 7.4 | 4.4, 12.3 |
| Newbridge | 19 | 10.9 | 7.2, 16.3 | 10 | 4.7 | 2.5, 8.6 |
| Pengam | 25 | 18.1 | 12.8, 24.9 | 6 | 4.4 | 2.1, 8.8 |
| Penmaen | 25 | 16.3 | 11.6, 22.4 | 12 | 5.9 | 3.3, 10.3 |
| Pontllanfraith | 26 | 17.5 | 12.6, 23.9 | 9 | 4.9 | 2.6, 9.0 |
| Risca East | 24 | 15.4 | 10.9, 21.3 | 19 | 9.3 | 6.0, 14.3 |
| Risca West | 37 | 18.8 | 14.1, 24.7 | 18 | 8.2 | 5.2, 12.8 |
| Ynysddu | 31 | 17.9 | 13.1, 24.1 | 14 | 8.9 | 5.5, 14.1 |
| Aberbargoed | 18 | 14.7 | 9.6, 21.9 | 7 | 4.9 | 2.4, 9.7 |
| Abertysswg | 15 | 14.7 | 9.4, 22.2 | 8 | 4.6 | 2.2, 9.2 |
| Aber Valley | 28 | 17.4 | 12.5, 23.8 | 17 | 9.1 | 5.7, 14.3 |
| Bargoed | 21 | 15.2 | 10.5, 21.4 | 7 | 4.1 | 2.0, 8.3 |
| Bedwas \& Trethomas | 26 | 18.1 | 13.0, 24.6 | 11 | 5.6 | 3.0, 9.9 |
| Darran Valley | 25 | 21.8 | 16.0, 28.9 | 12 | 7.8 | 4.6, 12.9 |
| Gilfach | 19 | 18.7 | 12.8, 26.5 | 9 | 5.5 | 2.8, 10.4 |
| Hengoed | 30 | 24.0 | 17.8, 31.5 | 10 | 5.7 | 3.0, 10.5 |
| Llanbradach | 31 | 19.4 | 14.3, 25.8 | 10 | 6.1 | 3.3, 10.8 |
| Machen | 21 | 12.8 | 8.5, 18.8 | 6 | 3.8 | 1.8, 8.0 |
| Maes y Cwmmer | 19 | 17.0 | 11.7, 24.1 | 15 | 10.6 | 6.6, 16.8 |
| Morgan Jones | 28 | 18.3 | 13.2, 24.9 | 20 | 9.0 | 5.8, 13.6 |
| Moriah | 19 | 14.9 | 10.2, 21.4 | 3 | 1.9 | 0.6, 5.3 |
| Nelson | 29 | 16.6 | 11.9, 22.6 | 14 | 7.1 | 4.2, 11.8 |
| New Tredegar | 19 | 16.8 | 11.5, 23.9 | 11 | 6.5 | 3.7, 11.2 |
| Penyrheol | 29 | 15.7 | 11.3, 21.5 | 16 | 7.5 | 4.7, 11.8 |
| Pontlottyn | 34 | 24.6 | 18.6, 31.6 | 13 | 6.9 | 4.0, 11.6 |
| St. Cattwg | 14 | 11.8 | 7.7, 17.7 | 12 | 7.0 | 4.0, 11.8 |
| St. James | 22 | 13.7 | 9.4, 19.4 | 16 | 8.6 | 5.3, 13.7 |
| St. Martins | 36 | 20.2 | 15.1, 26.4 | 15 | 6.6 | 3.9, 11 |
| Tir-Phil | 23 | 21.5 | 15.1, 29.6 | 11 | 8.8 | 5.0, 15.1 |
| Twyn Carno | 17 | 16.5 | 10.8, 24.4 | 7 | 4.9 | 2.4, 9.8 |
| Ystrad Mynach | 13 | 8.3 | 4.9, 13.7 | 11 | 5.6 | 3.1, 10.1 |


|  | Green vegetables, salad or fruit once per week or less |  |  | Unhappy about health (persons) |  |  | Beneficial exercise |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Wghtd \% | 95\% CI | Number | Wghtd \% | 95\% CI | Number | Wghtd \% | 95\% CI |
| Abercarn | 107 | 31.2 | 26.7, 36.2 | 99 | 25.5 | 21.3, 30.2 | 86 | 26.5 | 22.0, 31.6 |
| Argoed | 75 | 30.4 | 25.1, 36.2 | 69 | 25.2 | 20.3, 30.8 | 55 | 23.7 | 18.7, 29.6 |
| Blackwood | 110 | 31.2 | 26.7, 36.0 | 78 | 18.9 | 15.3, 23.2 | 92 | 26.9 | 22.5, 31.8 |
| Cefn Fforest | 105 | 32.3 | 27.5, 37.4 | 76 | 20.7 | 16.8, 25.3 | 80 | 25.1 | 20.6, 30.1 |
| Crosskeys | 125 | 34.1 | 29.5, 39.1 | 92 | 23.7 | 19.7, 28.3 | 89 | 26.0 | 21.6, 30.8 |
| Crumlin | 96 | 31.8 | 26.9, 37.2 | 74 | 21.1 | 17.0, 26.0 | 66 | 22.2 | 17.9, 27.3 |
| Newbridge | 113 | 33.3 | 28.7, 38.3 | 79 | 19.9 | 16.2, 24.2 | 93 | 27.0 | 22.6, 31.9 |
| Pengam | 104 | 36.3 | 31.1, 41.8 | 69 | 21.4 | 17.2, 26.3 | 68 | 23.2 | 18.7, 28.3 |
| Penmaen | 89 | 26.0 | 21.7, 30.7 | 70 | 18.8 | 15.1, 23.2 | 97 | 29.2 | 24.6, 34.4 |
| Pontllanfraith | 109 | 34.1 | 29.3, 39.2 | 76 | 21.4 | 17.5, 26.0 | 90 | 26.9 | 22.4, 31.8 |
| Risca East | 120 | 35.2 | 30.4, 40.2 | 75 | 19.6 | 15.8, 23.9 | 95 | 27.6 | 23.1, 32.5 |
| Risca West | 122 | 31.3 | 27.0, 35.9 | 86 | 19.5 | 15.9, 23.6 | 92 | 23.5 | 19.5, 27.9 |
| Ynysddu | 92 | 28.6 | 24.0, 33.6 | 86 | 24.1 | 19.8, 28.8 | 84 | 25.7 | 21.3, 30.7 |
| Aberbargoed | 91 | 35.7 | 30.2, 41.7 | 82 | 28.4 | 23.3, 34.0 | 55 | 23.4 | 18.4, 29.2 |
| Abertysswg | 71 | 27.4 | 22.4, 33.1 | 69 | 23.4 | 18.7, 28.9 | 52 | 22.8 | 17.8, 28.7 |
| Aber Valley | 135 | 42.3 | 37.2, 47.6 | 86 | 23.3 | 19.2, 28.1 | 79 | 26.4 | 21.7, 31.7 |
| Bargoed | 118 | 39.1 | 34.0, 44.5 | 99 | 28.0 | 23.5, 33.1 | 65 | 23.1 | 18.6, 28.4 |
| Bedwas \& Trethomas | 103 | 30.9 | 26.2, 36.0 | 81 | 21.8 | 17.8, 26.5 | 93 | 29.7 | 24.9, 35.0 |
| Darran Valley | 109 | 37.5 | 32.3, 43.0 | 89 | 27.6 | 23.0, 32.8 | 66 | 24.3 | 19.6, 29.7 |
| Gilfach | 89 | 35.6 | 30.1, 41.6 | 62 | 21.9 | 17.3, 27.2 | 54 | 22.6 | 17.8, 28.4 |
| Hengoed | 100 | 36.5 | 31.2, 42.1 | 75 | 22.8 | 18.4, 27.8 | 64 | 22.9 | 18.4, 28.2 |
| Llanbradach | 101 | 33.1 | 28.3, 38.3 | 84 | 24.9 | 20.6, 29.8 | 88 | 29.2 | 24.3, 34.5 |
| Machen | 86 | 26.3 | 21.8, 31.5 | 64 | 19.8 | 15.8, 24.5 | 86 | 28.5 | 23.7, 33.9 |
| Maes y Cwmmer | 73 | 29.5 | 24.4, 35.1 | 54 | 18.6 | 14.5, 23.6 | 68 | 25.8 | 20.9, 31.4 |
| Morgan Jones | 113 | 32.4 | 27.8, 37.3 | 72 | 19.1 | 15.5, 23.4 | 100 | 29.0 | 24.4, 33.9 |
| Moriah | 114 | 39.7 | 34.4, 45.2 | 76 | 23.1 | 18.7, 28.1 | 64 | 24.1 | 19.3, 29.6 |
| Nelson | 95 | 29.3 | 24.8, 34.2 | 79 | 20.4 | 16.6, 24.9 | 92 | 27.1 | 22.7, 32.1 |
| New Tredegar | 112 | 39.7 | 34.2, 45.3 | 84 | 26.1 | 21.5, 31.3 | 63 | 22.8 | 18.3, 28.2 |
| Penyrheol | 142 | 37.2 | 32.6, 42.0 | 84 | 20.1 | 16.5, 24.3 | 105 | 27.6 | 23.4, 32.3 |
| Pontlottyn | 132 | 41.4 | 36.2, 46.8 | 94 | 26.7 | 22.3, 31.7 | 66 | 20.4 | 16.4, 25.2 |
| St. Cattwg | 109 | 36.6 | 31.6, 42.0 | 84 | 24.5 | 20.1, 29.4 | 69 | 23.4 | 18.9, 28.5 |
| St. James | 114 | 35.4 | 30.6, 40.5 | 66 | 17.7 | 14.1, 22.1 | 77 | 22.4 | 18.3, 27.1 |
| St. Martins | 114 | 32.1 | 27.6, 36.9 | 70 | 17.1 | 13.6, 21.1 | 91 | 24.5 | 20.4, 29.1 |
| Tir-Phil | 91 | 39.9 | 34.0, 46.2 | 75 | 29.2 | 23.8, 35.2 | 52 | 24.2 | 18.9, 30.3 |
| Twyn Carno | 96 | 41.8 | 35.9, 48.0 | 74 | 28.5 | 23.3, 34.3 | 56 | 23.9 | 18.9, 29.7 |
| Ystrad Mynach | 86 | 27.7 | 23.1, 32.8 | 75 | 21.0 | 17.0, 25.8 | 84 | 25.9 | 21.4, 30.9 |


|  | LLTI |  |  | LLTI mental health |  |  | PCS |  |  | MCS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Wghtd \% | 95\% CI | Number | Wghtd \% | 95\% CI | Number | Mean | SD | Number | Mean | SD |
| Abercarn | 215 | 54.3 | 49.2, 59.3 | 91 | 22.6 | 18.7, 27.2 | 338 | 46.1 | 13.6 | 338 | 46.4 | 12.4 |
| Argoed | 148 | 50.8 | 44.8, 56.7 | 57 | 19.9 | 15.6, 25.1 | 234 | 46.1 | 13.8 | 234 | 44.1 | 14.3 |
| Blackwood | 178 | 42.8 | 38.0, 47.8 | 68 | 15.8 | 12.5, 19.8 | 353 | 48.8 | 12.1 | 353 | 48.8 | 12.2 |
| Cefn Fforest | 184 | 48.7 | 43.5, 53.9 | 73 | 19.5 | 15.7, 24.0 | 310 | 47.1 | 12.3 | 310 | 46.8 | 12.0 |
| Crosskeys | 198 | 48.8 | 43.8, 53.9 | 58 | 14.6 | 11.4, 18.6 | 319 | 48.0 | 12.6 | 319 | 47.1 | 11.5 |
| Crumlin | 159 | 44.8 | 39.4, 50.3 | 56 | 15.2 | 11.7, 19.5 | 288 | 48.5 | 12.2 | 288 | 47.9 | 12.7 |
| Newbridge | 202 | 50.3 | 45.2, 55.3 | 69 | 17.3 | 13.8, 21.4 | 329 | 47.8 | 12.6 | 329 | 47.5 | 13.1 |
| Pengam | 184 | 54.0 | 48.5, 59.4 | 79 | 23.6 | 19.3, 28.7 | 279 | 45.9 | 13.1 | 279 | 45.9 | 13.2 |
| Penmaen | 183 | 47.2 | 42.2, 52.4 | 59 | 15.3 | 12.0, 19.4 | 335 | 48.2 | 12.2 | 335 | 47.5 | 12.3 |
| Pontllanfraith | 178 | 45.9 | 40.8, 51.1 | 64 | 16.9 | 13.3, 21.1 | 318 | 48.4 | 12.3 | 318 | 46.7 | 12.5 |
| Risca East | 193 | 48.1 | 43.1, 53.2 | 67 | 16.8 | 13.4, 21.0 | 333 | 49.6 | 11.7 | 333 | 46.9 | 12.3 |
| Risca West | 233 | 53.8 | 49.0, 58.6 | 83 | 18.6 | 15.1, 22.6 | 365 | 47.8 | 12.9 | 365 | 47.8 | 12.1 |
| Ynysddu | 184 | 48.4 | 43.2, 53.7 | 65 | 18.1 | 14.5, 22.5 | 305 | 48.1 | 12.5 | 305 | 46.4 | 13.6 |
| Aberbargoed | 175 | 59.9 | 53.9, 65.5 | 75 | 25.3 | 20.5, 30.7 | 221 | 45.0 | 14.1 | 221 | 43.2 | 14.8 |
| Abertysswg | 149 | 50.0 | 44.1, 55.9 | 56 | 19.4 | 15.1, 24.6 | 233 | 45.2 | 13.9 | 233 | 46.7 | 12.6 |
| Aber Valley | 196 | 52.9 | 47.6, 58.1 | 78 | 21.3 | 17.3, 25.9 | 294 | 46.1 | 13.3 | 294 | 45.6 | 13.4 |
| Bargoed | 189 | 53.8 | 48.4, 59.1 | 74 | 20.7 | 16.7, 25.3 | 289 | 45.3 | 14.2 | 289 | 45.5 | 13.1 |
| Bedwas \& Trethomas | 202 | 53.0 | 47.8, 58.2 | 65 | 17.6 | 14.0, 22.0 | 293 | 47.9 | 13.3 | 293 | 47.6 | 13.0 |
| Darran Valley | 178 | 53.5 | 48.0, 58.9 | 76 | 23.0 | 18.7, 27.9 | 264 | 45.9 | 13.2 | 264 | 44.8 | 13.2 |
| Gilfach | 153 | 53.0 | 47.0, 58.9 | 55 | 19.7 | 15.4, 24.9 | 235 | 46.5 | 13.0 | 235 | 47.5 | 12.5 |
| Hengoed | 174 | 52.8 | 47.2, 58.4 | 71 | 21.0 | 16.8, 25.9 | 266 | 47.0 | 13.0 | 266 | 45.1 | 14.0 |
| Llanbradach | 174 | 49.3 | 44.0, 54.6 | 57 | 16.5 | 12.9, 20.7 | 312 | 47.6 | 13.5 | 312 | 48.4 | 12.6 |
| Machen | 164 | 47.7 | 42.3, 53.1 | 48 | 14.3 | 10.9, 18.5 | 290 | 48.9 | 11.7 | 290 | 48.4 | 11.7 |
| Maes y Cwmmer | 149 | 49.6 | 43.8, 55.5 | 46 | 14.9 | 11.2, 19.5 | 260 | 47.6 | 12.0 | 260 | 49.0 | 11.0 |
| Morgan Jones | 180 | 45.2 | 40.3, 50.3 | 65 | 16.6 | 13.2, 20.6 | 340 | 48.6 | 12.6 | 340 | 46.8 | 12.0 |
| Moriah | 189 | 56.2 | 50.7, 61.6 | 70 | 20.2 | 16.1, 25.0 | 266 | 45.9 | 13.3 | 266 | 46.4 | 12.6 |
| Nelson | 202 | 51.8 | 46.7, 56.9 | 59 | 15.2 | 11.9, 19.2 | 325 | 46.9 | 12.4 | 325 | 49.3 | 11.4 |
| New Tredegar | 192 | 59.2 | 53.6, 64.5 | 74 | 22.8 | 18.5, 27.8 | 255 | 45.9 | 12.5 | 255 | 46.0 | 13.5 |
| Penyrheol | 200 | 45.9 | 41.1, 50.7 | 65 | 14.8 | 11.7, 18.6 | 375 | 49.0 | 11.6 | 375 | 47.9 | 12.0 |
| Pontlottyn | 196 | 53.4 | 48.1, 58.6 | 84 | 23.0 | 18.9, 27.8 | 293 | 45.9 | 12.9 | 293 | 44.1 | 14.3 |
| St. Cattwg | 172 | 48.8 | 43.5, 54.2 | 68 | 19.2 | 15.3, 23.8 | 297 | 48.3 | 11.8 | 297 | 44.7 | 13.9 |
| St. James | 164 | 42.6 | 37.6, 47.8 | 64 | 16.8 | 13.2, 21.0 | 323 | 49.5 | 11.3 | 323 | 48.6 | 11.6 |
| St. Martins | 184 | 44.0 | 39.2, 49.0 | 65 | 15.6 | 12.4, 19.6 | 360 | 51.0 | 10.2 | 360 | 49.8 | 10.8 |
| Tir-Phil | 155 | 58.8 | 52.6, 64.9 | 63 | 24.0 | 19.1, 29.7 | 215 | 43.3 | 14.4 | 215 | 43.2 | 14.0 |
| Twyn Carno | 150 | 57.3 | 51.2, 63.3 | 68 | 26.8 | 21.8, 32.6 | 206 | 46.8 | 12.8 | 206 | 41.8 | 14.2 |
| Ystrad Mynach | 197 | 55.0 | 49.6, 60.3 | 65 | 18.0 | 14.3, 22.5 | 306 | 46.9 | 13.3 | 306 | 47.9 | 12.5 |


|  | A\&E visit for injury |  |  | Cardiovascular Disease |  |  | All cancers |  |  | Respiratory Disease |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Wghtd \% | 95\% CI | Number | Wghtd \% | 95\% CI | Number | Wghtd \% | 95\% CI | Number | Wghtd \% | 95\% CI |
| Abercarn | 26 | 7.8 | 5.0, 10.3 | 81 | 20.3 | 16.5, 24.8 | 16 | 4.2 | 2.5, 6.8 | 101 | 26.7 | 22.4, 31.5 |
| Argoed | 32 | 12.3 | 8.8, 16.8 | 65 | 23.2 | 18.5, 28.8 | 9 | 3.2 | 1.7, 6.3 | 79 | 29.6 | 24.2, 35.5 |
| Blackwood | 19 | 5.0 | 3.2, 7.7 | 63 | 14.6 | 11.4, 18.6 | 16 | 3.5 | 2.1, 6.0 | 71 | 18.0 | 14.4, 22.2 |
| Cefn Fforest | 23 | 6.5 | 4.4, 9.6 | 59 | 15.5 | 12.0, 19.7 | 15 | 3.9 | 2.3, 6.6 | 68 | 18.5 | 14.7, 23.0 |
| Crosskeys | 26 | 7.0 | 4.8, 10.1 | 83 | 20.3 | 16.4, 24.7 | 20 | 4.9 | 3.1, 7.7 | 86 | 22.2 | 18.2, 26.8 |
| Crumlin | 21 | 6.6 | 4.4, 9.9 | 53 | 15.2 | 11.5, 19.7 | 15 | 4.4 | 2.6, 7.3 | 69 | 20.7 | 16.5, 25.7 |
| Newbridge | 27 | 7.3 | 5.1, 10.4 | 64 | 16.0 | 12.5, 20.2 | 16 | 4.5 | 2.8, 7.2 | 67 | 17.2 | 13.6, 21.6 |
| Pengam | 23 | 7.4 | 5.0, 10.9 | 73 | 22.1 | 17.8, 27.1 | 8 | 2.0 | 0.9, 4.4 | 78 | 25.2 | 20.6, 30.4 |
| Penmaen | 20 | 5.5 | 3.6, 8.3 | 61 | 15.4 | 12.0, 19.6 | 18 | 4.6 | 2.9, 7.4 | 68 | 19.0 | 15.2, 23.5 |
| Pontllanfraith | 20 | 5.7 | 3.7, 8.6 | 61 | 15.6 | 12.2, 19.9 | 20 | 5.6 | 3.6, 8.5 | 56 | 14.8 | 11.4, 19.0 |
| Risca East | 22 | 5.9 | 3.9, 8.8 | 71 | 18.8 | 15.1, 23.2 | 16 | 4.0 | 2.4, 6.6 | 67 | 17.3 | 13.7, 21.7 |
| Risca West | 25 | 6.2 | 4.2, 9.0 | 80 | 17.9 | 14.4, 22.0 | 25 | 5.3 | 3.5, 8.0 | 83 | 19.6 | 16.0, 23.9 |
| Ynysddu | 19 | 5.6 | 3.6, 8.6 | 63 | 16.5 | 12.9, 20.8 | 19 | 4.7 | 2.9, 7.6 | 74 | 20.9 | 16.9, 25.6 |
| Aberbargoed | 20 | 7.4 | 4.8, 11.2 | 67 | 23.2 | 18.5, 28.7 | 16 | 5.0 | 2.9, 8.3 | 84 | 29.5 | 24.2, 35.3 |
| Abertysswg | 24 | 9.1 | 6.2, 13.2 | 62 | 21.6 | 17.0, 27.0 | 14 | 4.4 | 2.5, 7.6 | 70 | 25.2 | 20.3, 30.9 |
| Aber Valley | 37 | 11.0 | 8.1, 14.8 | 79 | 22.6 | 18.4, 27.5 | 14 | 4.1 | 2.4, 6.9 | 87 | 25.4 | 20.9, 30.4 |
| Bargoed | 26 | 8.0 | 5.5, 11.5 | 66 | 18.4 | 14.5, 23.1 | 16 | 4.5 | 2.7, 7.4 | 89 | 25.8 | 21.3, 30.9 |
| Bedwas \& Trethomas | 30 | 8.7 | 6.2, 12.1 | 73 | 19.9 | 15.9, 24.5 | 21 | 5.4 | 3.5, 8.4 | 83 | 23.1 | 18.8, 28.0 |
| Darran Valley | 16 | 5.2 | 3.2, 8.3 | 56 | 16.7 | 12.9, 21.3 | 7 | 1.9 | 0.9, 4.2 | 84 | 25.6 | 21.0, 30.8 |
| Gilfach | 11 | 4.1 | 2.3, 7.2 | 48 | 16.9 | 12.9, 22.0 | 18 | 6.3 | 3.9, 9.9 | 52 | 18.4 | 14.2, 23.6 |
| Hengoed | 20 | 6.6 | 4.3, 10 | 63 | 19.4 | 15.2, 24.3 | 12 | 3.4 | 1.9, 6.2 | 76 | 24.9 | 20.3, 30.2 |
| Llanbradach | 21 | 6.4 | 4.2, 9.6 | 58 | 17.0 | 13.3, 21.6 | 15 | 4.1 | 2.4, 6.9 | 55 | 16.3 | 12.6, 20.7 |
| Machen | 12 | 3.7 | 2.1, 6.4 | 44 | 12.1 | 9.0, 16.2 | 15 | 3.8 | 2.2, 6.6 | 63 | 18.6 | 14.7, 23.4 |
| Maes y Cwmmer | 27 | 9.7 | 6.8, 13.7 | 48 | 16.1 | 12.2, 21.0 | 12 | 3.7 | 2.0, 6.7 | 62 | 21.0 | 16.5, 26.3 |
| Morgan Jones | 21 | 5.6 | 3.7, 8.4 | 62 | 16.1 | 12.6, 20.3 | 16 | 3.7 | 2.2, 6.2 | 82 | 22.3 | 18.3, 26.9 |
| Moriah | 23 | 7.5 | 5.0, 11.0 | 76 | 22.7 | 18.3, 27.7 | 12 | 3.3 | 1.8, 5.9 | 87 | 26.8 | 22.1, 32.1 |
| Nelson | 32 | 8.8 | 6.3, 12.2 | 73 | 19.4 | 15.6, 23.9 | 26 | 6.7 | 4.5, 9.8 | 75 | 19.8 | 15.9, 24.3 |
| New Tredegar | 20 | 6.7 | 4.4, 10.1 | 60 | 18.9 | 14.8, 23.9 | 13 | 4.2 | 2.4, 7.2 | 109 | 36.0 | 30.7, 41.7 |
| Penyrheol | 30 | 7.5 | 5.3, 10.5 | 74 | 17.7 | 14.2, 21.8 | 11 | 2.4 | 1.3, 4.5 | 107 | 27.2 | 23.0, 31.9 |
| Pontlottyn | 26 | 7.6 | 5.2, 10.9 | 61 | 16.4 | 12.8, 20.7 | 16 | 4.2 | 2.5, 6.9 | 86 | 23.9 | 19.6, 28.7 |
| St. Cattwg | 23 | 7.2 | 4.8, 10.6 | 68 | 19.8 | 15.8, 24.4 | 13 | 3.5 | 2.0, 6.1 | 69 | 19.6 | 15.6, 24.3 |
| St. James | 32 | 9.2 | 6.6, 12.7 | 55 | 14.7 | 11.3, 18.8 | 22 | 5.8 | 3.8, 8.9 | 60 | 17.5 | 13.8, 21.9 |
| St. Martins | 27 | 7.0 | 4.9, 10.0 | 78 | 19.5 | 15.8, 23.9 | 25 | 6.1 | 4.0, 9.0 | 65 | 16.1 | 12.7, 20.2 |
| Tir-Phil | 27 | 11.2 | 7.8, 15.8 | 68 | 25.9 | 20.8, 31.8 | 15 | 5.8 | 3.5, 9.5 | 71 | 27.2 | 21.9, 33.2 |
| Twyn Carno | 17 | 6.7 | 4.2, 10.5 | 47 | 17.6 | 13.3, 22.8 | 12 | 4.5 | 2.5, 7.9 | 64 | 24.9 | 19.9, 30.7 |
| Ystrad Mynach | 24 | 7.1 | 4.8, 10.3 | 74 | 21.7 | 17.4, 26.7 | 16 | 4.7 | 2.8, 7.8 | 72 | 22.7 | 18.3, 27.8 |


|  | Do not own home |  |  | Problems with housing |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Wghtd $\%$ | $95 \%$ CI | Number | Wghtd $\%$ | $95 \%$ CI |
| Abercarn | 59 | 15.9 | $12.5,19.9$ | 204 | 63.8 | $58.5,68.8$ |
| Argoed | 71 | 27.3 | $22.3,33.0$ | 139 | 62.3 | $55.9,68.3$ |
| Blackwood | 54 | 14.3 | $11.1,18.1$ | 151 | 42.9 | $37.8,48.1$ |
| Cefn Fforest | 104 | 28.7 | $24.2,33.6$ | 161 | 56.2 | $50.5,61.7$ |
| Crosskeys | 80 | 19.7 | $16.0,24.1$ | 193 | 59.6 | $54.2,64.7$ |
| Crumlin | 50 | 15.5 | $12.0,19.9$ | 147 | 53.5 | $47.7,59.2$ |
| Newbridge | 66 | 17.8 | $14.3,22$ | 173 | 53.4 | $47.9,58.7$ |
| Pengam | 68 | 23.0 | $18.7,28$ | 155 | 55.7 | $49.8,61.4$ |
| Penmaen | 31 | 7.7 | $5.4,10.9$ | 147 | 45.0 | $39.7,50.4$ |
| Pontllanfraith | 74 | 20.2 | $16.4,24.7$ | 145 | 47.8 | $42.4,53.3$ |
| Risca East | 66 | 17.9 | $14.3,22.1$ | 177 | 52.5 | $47.2,57.7$ |
| Risca West | 87 | 21.2 | $17.5,25.4$ | 176 | 48.9 | $43.8,54.0$ |
| Ynysddu | 46 | 12.7 | $9.7,16.6$ | 161 | 52.2 | $46.7,57.7$ |
| Aberbargoed | 85 | 31.3 | $26.0,37.0$ | 132 | 60.9 | $54.4,67.0$ |
| Abertysswg | 64 | 23.5 | $18.8,28.9$ | 135 | 56.0 | $49.6,62.2$ |
| Aber Valley | 70 | 20.2 | $16.3,24.7$ | 158 | 57.5 | $51.7,63.1$ |
| Bargoed | 81 | 25.5 | $21.1,30.5$ | 178 | 64.1 | $58.5,69.4$ |
| Bedwas \& Trethomas | 68 | 17.6 | $14.0,22.0$ | 131 | 42.4 | $37.1,47.9$ |
| Darran Valley | 71 | 24.1 | $19.8,29.1$ | 137 | 54.1 | $48.1,60.0$ |
| Gilfach | 43 | 16.7 | $12.7,21.7$ | 140 | 60.3 | $54.0,66.4$ |
| Hengoed | 59 | 19.3 | $15.3,24.1$ | 145 | 54.5 | $48.6,60.3$ |
| Llanbradach | 39 | 11.3 | $8.4,15.1$ | 145 | 49.8 | $44.3,55.3$ |
| Machen | 70 | 22.7 | $18.4,27.6$ | 135 | 49.1 | $43.4,54.9$ |
| Maes y Cwmmer | 32 | 11.0 | $7.9,15.2$ | 115 | 45.8 | $39.8,51.8$ |
| Morgan Jones | 57 | 14.7 | $11.5,18.7$ | 160 | 49.6 | $44.3,54.9$ |
| Moriah | 118 | 36.8 | $31.7,42.2$ | 163 | 64.3 | $58.5,69.8$ |
| Nelson | 55 | 14.9 | $11.6,18.9$ | 156 | 48.3 | $43.0,53.7$ |
| New Tredegar | 85 | 27.9 | $23.2,33.2$ | 161 | 64.5 | $58.5,70.1$ |
| Penyrheol | 73 | 17.7 | $14.3,21.7$ | 158 | 43.0 | $38.1,48.1$ |
| Pontlottyn | 91 | 27.4 | $23.0,32.4$ | 155 | 56.3 | $50.4,62.0$ |
| St. Cattwg | 51 | 15.0 | $11.6,19.2$ | 137 | 50.3 | $44.6,56.1$ |
| St. James | 97 | 27.9 | $23.5,32.8$ | 142 | 48.3 | $42.8,53.7$ |
| St. Martins | 25 | 6.4 | $4.4,9.3$ | 162 | 45.2 | $40.1,50.3$ |
| Tir-Phil | 42 | 17.5 | $13.2,22.7$ | 128 | 61.5 | $54.8,67.8$ |
| Twyn Carno | 109 | 43.6 | $37.7,49.7$ | 125 | 59.5 | $52.9,65.9$ |
| Ystrad Mynach | 33 | 9.6 | $6.9,13.3$ | 147 | 49.3 | $43.7,55.0$ |
|  |  |  |  |  |  |  |

## Appendix 4 - questionnaire

## CAERPHI LLY COUNTY BOROUGH HEALTH \& WELLBEI NG QUESTI ONNAI RE

[^7]Questions 1 to 9 are about you and your lifestyle.

1. Please can you tell us your age? (Please write the number of years)

2. Are you?
(Please tick one box)
Male $\square \quad$ Female
3. What is your weight, lightly dressed?
(please write the number) $\square$
\& pounds (please write the number) $\qquad$
4. What is your height? $\square$
Feet \& inches
(please write the number) lease write the number)
5. Do you smoke? (Please tick one box)

## Daily

Occasionally but not
Used to smoke daily but
Never smoked every day do not smoke at all now
6. If you smoke: (Please write the number in each box. If you do not smoke please go to question 7)


## PLEASE USE THE FOLLOWING TABLE TO ANSWER THE NEXT QUESTION

| 1 pint of beer, | $1 / 2$ pint beer, lager, <br> cider $=$ | 1 glass wine, <br> sherry, vermouth $=$ | Single spirit <br> measure (whiskey, <br> vodka, gin etc. $)=$ | Double spirit <br> measure $=$ <br> 1 unit |
| :--- | :--- | :--- | :--- | :--- |
| 2 units | 1 units | 1 unit | 2 units |  |

7. In a typical seven day week, how many units of alcohol would you drink (including weekends)? (Please write the number of units)
8. During the past 7 days, how many times did you exercise lasting at least 30 minutes?
(Please tick one box on each line)

| Never in | Once or | Three or | Five |
| :---: | :---: | :---: | :---: |
| past 7 | Twice | Four | Times |
| days |  | Times | or More |

Vigorous exercise, for example: running, jogging, squash, swimming lengths, aerobics, fast cycling, football.

Moderate exercise, for example fast walking, dancing, gentle swimming, golf, heavy housework, heavy gardening, (e.g. digging).

Light exercise, for example walking at an average pace, table tennis, light housework, light gardening (e.g. weeding).
9. In an average week, how often (if at all) do you usually eat the following of these foods?
(Please tick one box on each line)

|  | Most days a <br> week | 2/3 days a <br> week | About once a <br> week | Rarely or <br> never |
| ---: | :---: | :---: | :---: | :---: |
| Potatoes (e.g. boiled or jacket but <br> not fried or chips), pasta or rice | $\square$ | $\square$ | $\square$ | $\square$ |
| Green vegetables or salad | $\square$ | $\square$ | $\square$ | $\square$ |

Questions 10 to 19 are about your health. The answers you provide will be analysed to give an overall health score, so we would be grateful if you could answer all of the questions.
10. How do you feel about your health now? Please circle the number under the face which best shows how you feel. (Please circle one number only.)

11. Do you have any longstanding illness, health problem or disability which limits your daily activities or the work you can do? (Please tick one box)

| Yes | $\square$ | (If Yes, please go to question <br> 12) |
| :--- | :--- | :--- |
| No | $\square$ | (If No, please go to question <br> $13)$ |

12. Please indicate the nature of your problem. Use the space provided at the end of the question to describe any circumstances not covered by the available boxes. (Please tick a box on each line)

13. Have you had an accident, injury, or poisoning, needing hospital treatment or a visit to Casualty in the past three months?
Yes $\square$ No (If you answered No, please go to question 15)

If Yes, what was the injury?
(If you have had more than one injury, please think of the most recent one.)
(Please tick all the boxes which apply to you)

14. Where did the accident, injury or poisoning take place?
(Please tick one box only)
In the home
In traffic
At work/school/college
Playing sport
Somewhere else
15. Have you ever been treated for HEART DISEASE or STROKE?
Yes $\square \quad$ No $\square$ (If you answered No, please go to question 16)

If Yes please specify your illness:
(Please tick all the boxes which apply to you)
AnginaHeart attack (or coronary)

Heart failure $\square$ High blood pressure (hypertension)

Another heart Stroke disease
16. Have you ever been treated for CANCER?
Yes
No
(If you answered No, please go to question 17)

If Yes please specify your illness:
(Please tick all the boxes which apply to you)

| Lung cancer | $\square$ | Breast cancer | $\square$ | Other cancer |  |
| ---: | ---: | ---: | ---: | ---: | ---: |
| Bowel cancer | $\square$ | Prostate cancer | $\square$ |  |  |
| Skin cancer | $\square$ | Bladder cancer | $\square$ |  |  |

17. Do you have any CHEST trouble or BREATHING difficulties?
Yes
No(If you answered No, please go to question 18)

If Yes please specify your illness:
(Please tick all the boxes which apply to you)
Asthma requiring regular treatment
Pneumoconiosis (coal dust)
Spells of bronchitis for over 3 years/ chronic bronchitis / emphysema
Another chest or breathing problem
18. In the last six months, have you had any trouble with your teeth or gums?

19. Do you have any bad teeth at the moment?
(Please tick one box)
Yes
No $\square$
Not sure Wear dentures

Questions 20 to 30 are about your recent health in general. The answers you provide will be analysed to give an overall health score, so we would be grateful if you could answer all of the questions.
20. In general, would you say your health is: (Please tick one box)

| Excellent | $\square$ |
| ---: | ---: |
| Very Good | $\square$ |
| Good | $\square$ |
| Fair | $\square$ |
| Poor | $\square$ |

21. Compared to three months ago, how would you rate your health in general now? (Please tick one box)

Much better than three months ago
Somewhat better than three months ago
About the same
Somewhat worse now than three months ago
Much worse now than three months ago
22. The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much? (Please tick one box on each line)

|  | Yes, limited |
| ---: | :---: | :---: | :---: |
| a lot | Yes, limited |
| a little |  |$\quad$| No, not limited |
| :---: |
| at all |

23. During the past 2 weeks how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?
(Please tick one box on each line)
a) Cut down on the amount of time you spent on work or other activities
b) Accomplished less than you would like
c) Were limited in the kind of work or other activities
d) Had difficulty performing the work or other activities (e.g. it took extra effort)
24. During the past 2 weeks how much of the time have you had any of the following problems with your work or other regular daily activities as a result of emotional problems (e.g. feeling depressed or anxious)? (Please tick one box on each line)

25. During the past 2 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups? (Please tick one line)

| Not at all | $\square$ |
| ---: | ---: |
| Slightly | $\square$ |
| Moderately | $\square$ |
| Quite a bit | $\square$ |
| Extremely | $\square$ |

26. How much bodily pain have you had during the past 2 weeks? (Please tick one box)

27. During the past 2 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)? (Please tick one box)

| Not at all | $\square$ |
| :---: | :---: |
| A little bit | $\square$ |
| Moderately | $\square$ |
| Quite a bit | $\square$ |
| Extremely | $\square$ |

28. These questions are about how you feel and how things have been with you during the past 2 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. (Please tick one box on each line)

|  | How much of the time during the last 2 weeks: | All of the time | Most of the time | Some of the time | A little of the time | None of the time |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| a) | Did you feel full of life? | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| b) | Have been very nervous? | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| c) | Have you felt so down in the dumps that nothing could cheer you up? | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| d) | Have you felt calm and peaceful? | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| e) | Did you have a lot of energy? | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| f) | Have you felt depressed? | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| g) | Did you feel worn out? | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| h) | Have you been happy? | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| i) | Did you feel tired? | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |

29. During the past 2 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives etc.)?
(Please tick one box)
All of the time
Most of the time
Some of the time
A little of the time
None of the time
30. How TRUE or FALSE is each of the following statements for you? (Please tick one box on each line)

|  | Definitely <br> true | Mostly true | Not sure | Mostly false | Definitely <br> false |
| :---: | :---: | :---: | :---: | :---: | :---: |
| a $\quad$I seem to get ill a lititle more <br> easily than other people | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| b I am as healthy as anyone I know | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| c $\quad$I expect my health to get worse | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| d $\quad$My health is excellent | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |

Each item below is a belief statement about your health with which you may agree or disagree. Beside each statement is a scale which ranges from strongly disagree (1) to strongly agree (6). For each item we would like you to circle the number that represents the extent to which you agree or disagree with that statement. The more you agree with a statement, the higher will be the number you circle. The more you disagree with a statement, the lower the number you will circle. Please make sure that you answer EVERY ITEM and that you CIRCLE ONLY ONE number per item. This is a measure of your personal beliefs; there are no right or wrong answers.
31. How much do you agree or disagree with the following statements?


If I get sick, it is my own behaviour which determines how soon I get well again..


Whenever I don't feel well, I should consult a doctor...................................... 1.
I am in control of my health.................................................................. 1 2 3 4 5 6





The main thing which affects my health is what I myself do............................... 1

Whenever I recover from an illness, it's usually because other people (for $\quad 1 \begin{array}{lllllll}6 & 2 & 3 & 5 & 6\end{array}$
example, doctors, nurses, family, friends) have been taking good care of me.......
No matter what I do, I'm likely to get sick........................................................ $12_{2}$
2


Regarding my health, I can only do what my doctor tells me to do...................... 1

We wish to identify whether people's health \& well-being are affected by the neighbourhood in which they live. Questions 32 to 36 will help us to understand about where you live. Please ring one number on each line.

| 32. How well placed do you think your home is for..... | Very well placed | Fairly well placed | Average | e Not very well placed | Not at all <br> d well placed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Getting to work................................ | 1 | 2 | 3 | 4 | 5 |
| Job opportunities (finding employment)...... | 1 | 2 | 3 | 4 | 5 |
| Food stores with fresh fruit and vegetables.. | 1 | 2 | 3 | 4 | 5 |
| Your doctors surgery......................... | 1 | 2 | 3 | 4 | 5 |
| The nearest hospital with a casualty department. | 1 | 2 | 3 | 4 | 5 |
| Schools........................................... | 1 | 2 | 3 | 4 | 5 |
| Libraries......................................... | 1 | 2 | 3 | 4 | 5 |
| Public transport (buses, trains)................ | 1 | 2 | 3 | 4 | 5 |
| General shopping................................. | 1 | 2 | 3 | 4 | 5 |
| Leisure facilities.................................. | 1 | 2 | 3 | 4 | 5 |
| 33. In this area, how much of a problem are the following..... |  | Serious problem |  | Some problem | Not a problem |
| Vandalism............................................. |  | 1 |  | 2 | 3 |
| Litter and rubbish.. |  | 1 |  | 2 | 3 |
| Smells and fumes... |  | 1 |  | 2 | 3 |
| Assaults and muggings............................... |  | 1 |  | 2 | 3 |
| Burglaries.. |  | 1 |  | 2 | 3 |
| Disturbance by children or youngsters.... | .... | 1 |  | 2 | 3 |
| Speeding traffic... |  | 1 |  | 2 | 3 |
| Discarded needles and syringes.... |  | 1 |  | 2 | 3 |
| Uneven or dangerous pavements... |  | 1 |  | 2 | 3 |
| Nuisance from dogs... |  | 1 |  | 2 | 3 |
| Reputation of neighbourhood............................ |  | 1 |  | 2 | 3 |
| Lack of safe places for children to play.............. |  | 1 |  | 2 | 3 |
| Walking around after dark............................ |  | 1 |  | 2 | 3 |
| Noise............ |  | 1 |  | 2 | 3 |


| 34. How much do you agree with the following statements about your neighbourhood..... | Strongly agree | agree | Neither agree or disagree | disagree | Strongly disagree |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Overall, I am attracted to living in this neighbourhood <br> I feel like I belong to this neighbourhood | 1 1 | 2 2 | 3 3 | 4 4 | 5 5 |
| I visit my friends in their homes | 1 | 2 | 3 | 4 | 5 |
| The friendships and associations I have with other people in my neighbourhood mean a lot to me | 1 | 2 | 3 | 4 | 5 |
| Given the opportunity, I would like to move out of this neighbourhood | 1 | 2 | 3 | 4 | 5 |
| If I need advice about something I could go to someone in my neighbourhood | 1 | 2 | 3 | 4 | 5 |
| I believe my neighbours would help in an emergency | 1 | 2 | 3 | 4 | 5 |
| I borrow things and exchange favours with my neighbours | 1 | 2 | 3 | 4 | 5 |
| I would be willing to work together with others on something to improve my neighbourhood | 1 | 2 | 3 | 4 | 5 |
| I plan to remain a resident of this neighbourhood for a number of years | 1 | 2 | 3 | 4 | 5 |
| I like to think of myself as similar to the people who live in this neighbourhood | 1 | 2 | 3 | 4 | 5 |
| I rarely have neighbour over to my house to visit | 1 | 2 | 3 | 4 | 5 |
| I regularly stop and talk with people in my neighbourhood | 1 | 2 | 3 | 4 | 5 |
| Living in this neighbourhood gives me a sense of community | 1 | 2 | 3 | 4 | 5 |
| Overall I think this is a good place to bring up children | 1 | 2 | 3 | 4 | 5 |

35. How long have you lived in this neighbourhood? (Please write the number of years)

36. Looking at the face scale, which face best shows how you feel about living in your neighbourhood? Please circle one number under the face which best shows how you feel.


Questions 37 to 42 are about you and your job.
37. Which best describes your situation? (Please tick one box)

Employed (full time or part time)
Unemployed and seeking work
Looking after home or children full time
Full time student/school
Retired from paid work Long term carer
Permanently unable to work due to illness or disability
On a Government training scheme
38. In your present or most recent job, are (WERE) you:
(Please answer this question even if you are not working now. Please tick one box)

## A manager

A foreman or supervisor
An employee (other than a manager or foreman)
Self-employed (with employees)
Self employed (without employees)
I have never been in paid employment
40. What is your job title (if you are not in work state what your previous title was)? (Please answer this question even if you are not working now)

40b. Industry sector / field of employment
41. Main things done in job (Please answer this question even if you are not working now)
42. What is your highest educational qualification? (Please tick one box)

Degree, professional qualification, NVQ levels $4 / 5$ or above HNC / HND

A level, Advanced GNVQ, NVQ level 3 or equivalent School certificate or Matric/City \& Guilds ordinary level O level or GCSE grades A* to C, Intermediate GNVQ, NVQ level 2 or equivalent O level grade D to E, GCSE grade D to G, Foundation GNVQ, NVQ level 1 or equivalent No educational qualifications

## Questions 43 to 47 are about your home.

43. Looking at the faces scale, which face best shows how you feel about your home?
(Please circle one number only)

44. Which of the following statements best describes your home? (Please tick one box) I own it or live with the person who owns it (includes homes being bought with a mortgage) It is rented from the Local Council or a Housing Association or Housing Trust

It is rented from a private landlord

Other (e.g. live rent free, or home comes with job)
45. How often do you suffer from these problems in your home? (Please tick one box on each line)

|  | Almost always | Quite often | Not very often | Hardly ever / never |
| ---: | :---: | :---: | :---: | :---: |
| Heavy Condensation | $\square$ | $\square$ | $\square$ | $\square$ |
| Damp | $\square$ | $\square$ | $\square$ | $\square$ |
| Draughts | $\square$ | $\square$ | $\square$ | $\square$ |
| Mould | $\square$ | $\square$ | $\square$ | $\square$ |

46. Do you find it too expensive to keep your home as warm as you would like in the winter? (Please tick one box)
47. What type of heating do you use during the winter in your main:
(Please tick one box for each room)

|  | Living room | Bedroom |
| ---: | :---: | :---: |
| Central Heating | $\square$ | $\square$ |
| Fires or stoves | $\square$ | $\square$ |
| Electric fire | $\square$ | $\square$ |
| Other | $\square$ | $\square$ |

Other studies have found that income has an effect on peoples' health and well-being. We wish to understand how levels of income in a neighbourhood affect people's overall health and well-being in Caerphilly County Borough. Any information given is completely confidential.
48. Looking at the faces scale, which face shows best how you feel about how adequate your household income is taken altogether? Please circle one number only.

1
2
3
4
5
6
7
49. Would you mind telling us your total current gross weekly or yearly household income from all sources? We do not need to know your exact income, just which of the three income groups best describes your circumstances. Please combine all income for your household - husband/wife/partner/others living in your household. Do not deduct tax, national insurance, superannuation or health insurance payments. Count all income including: earnings, pensions, benefits, interest from savings or investments, rent from property, other (e.g. maintenance payments or grants).
(Please tick one box)

Less than $£ 95$ per week $\square$ Or
Less than $£ 5,000$ per year

Between $£ 95$ and $£ 215$ per week Or

Between $£ 5,000$ and $£ 11,250$ per year

More than $£ 215$ per week Or More than $£ 11,250$ per year

Thank you for taking the time to complete the questionnaire. Your answers will enable us to build up a picture of health and well-being in Caerphilly County Borough. Please place the completed questionnaire in the envelope provided and hand to our local study representative when they call. If you would prefer you can post your questionnaire to us using the same envelope. NO STAMP IS NEEDED.


[^0]:    ${ }^{1}$ Townsend P, Phillimore P, Beattie A. Health and deprivation: inequality and the North. London: Routledge, 1988.
    ${ }^{2}$ The National Assembly for Wales. Welsh Health Survey 1998. Results of the Second Welsh Health Survey. Cardiff: The National Assembly for Wales, 1999.
    ${ }^{3}$ Ware JE, Snow KK, Kosinski M. SF-36 Health Survey: Manual and Interpretation Guide. Lincoln, RI: QualityMetric Incorporated, 1993, 2000.
    ${ }^{4}$ http://www.vanderbilt.edu/nursing/kwallston/mhlcbibliography.htm
    ${ }^{5}$ Elliot D. Weighting for non-response. A survey researcher’s guide. Office of Population Censuses and Surveys. London: OPCS, 1991.

[^1]:    ${ }^{1}$ Office for Population Censuses and Surveys. Standard Occupational Classification, Volume 3. London: HMSO, 1991.

[^2]:    ${ }^{1}$ Sources of gross household income: by household type, 1997-98: Social Trends 30 (www.statistics.gov.uk/STATBASE/xsdataset)

[^3]:    ${ }^{2}$ Pate R, Pratt M, Blair SN, et al. Physical activity and public health. Journal of the American Medical Association 1995;273(5):402-7.

[^4]:    ${ }^{3}$ Ware JE, Kosinski M, Dewey JE. How to score version two of the SF-36 Health Survey. Lincoln, RI: QualityMetric Incorporated, 2000.

[^5]:    ${ }^{1}$ Putnam R, Leonardi R, Nanetti R. Making democracy work: civic traditions in Modern Italy. Princeton University Press, Princeton, 1993.
    ${ }^{2}$ Putnam R. Bowling alone: Americas declining social capital. J Democracy 6(1): 65-78, 1995.

[^6]:    ${ }^{1}$ The National Assembly for Wales. Welsh Health Survey 1998. Results of the Second Welsh Health Survey. Cardiff: The National Assembly for Wales, 1999.
    ${ }^{2}$ Elliot D. Weighting for non-response. A survey researcher's guide. Office of Population Censuses and Surveys. London: OPCS, 1991.

[^7]:    Thank you for agreeing to complete this questionnaire. Please complete all questions as this will help us to build up a better picture of health and well-being in your neighbourhood.

