

The Coventry Wellbeing Report

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THE UNIVERSITY OF
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Understanding
Mental wellbeing in
Coventry:
Inequalities, levels,
and factors
associated

What is Well-being?

“A positive physical, social and mental state; ...It requires that basic needs are met, that individuals have a sense of purpose, that they feel able to achieve important personal goals and participate in society. It is enhanced by conditions that include supportive personal relationships, strong and inclusive communities, good health, financial and personal security, rewarding employment, and a healthy attractive environment.”

-Whitehall well-being working group (2006)

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Abbreviations

ACORN: A demographic measure used to describe population characteristics

CVD: Cardiovascular Disease

IMD: Index of Multiple Deprivation, 2007

MSOA: Middle Super Output Areas

PAF: Postal Address File

SES: Socioeconomic status, referred to here as socio-demographic variables

WEMWBS: Warwick-Edinburgh Mental Well-being Scale

Aim

To understand how different aspects of living in Coventry are related to mental wellbeing and to make recommendations to Coventry Partnership and NHS Coventry on improving the health and wellbeing of the population of Coventry; responding to needs; informing services and targeting areas for improvement.

Research Questions

1. How are the levels of wellbeing distributed in this sample of people living in Coventry?
2. What factors are associated with mental wellbeing?

3. Are there potential inequalities between levels of wellbeing and subgroups of the population based on age, gender, ethnicity, socio-demographic variables, disability or marital status?

Introduction

Examining mental wellbeing in Coventry as part of the household survey was undertaken by Warwick University for NHS Coventry and the Coventry Partnership in November 2009-January 2010 with the central aim of studying, promoting and improving well-being for the people of Coventry. The Coventry Household Survey has been undertaken every year since 2003, with the exception of 2008 when the Place Survey was undertaken.

The 2009/2010 Coventry Household Survey collected similar information as in previous years. It included seven key aspects of living in Coventry: equalities and communities, housing and environment, community safety, health and general wellbeing, work and training, transport and accessibility, and general profile questions such as age and gender were covered. This year the Survey had a central aim of measuring the levels of mental wellbeing of the people of Coventry using the Warwick-Edinburgh Mental Well-being scale (WEMWBS) which is a 14-question validated scale used to measure levels of mental wellbeing.

Background

Coventry, in the south of the West Midlands has a total population of 309,800,¹ with 68% of the resident working age population in employment in 2008/9.² It has a higher than average share of employment in manufacturing, although this has fallen recently, with the banking, finance and public sectors growing. The population is dynamic and diverse, with more young people than England's average, and almost a third of the total population (32%) living in neighborhoods considered 'most deprived'.³ In 2007, it was estimated that Coventry's population consisted of 74% white British people, this figure excludes the other white communities such as Irish and Polish who form 6% of Coventry's population. People with Indian origins comprise 8% of the population, Pakistani 2% and Bangladeshi 1%.

What is mental wellbeing?

Wellbeing has been discussed since the time of Aristotle in the concept of 'the good life'.⁴

Mental wellbeing is one aspect of wellbeing generally which also includes physical and social wellbeing. Mental wellbeing consists of positive psychological functioning, satisfaction with life, happiness, fulfilment, enjoyment and resilience in the face of hardship.⁵ There is evidence which suggests that mental wellbeing is a very good indicator of how people and populations are able to function and thrive.

Mental wellbeing and mental health are different terms. 'Mental wellbeing' describes positive states of being, whilst 'mental health' is a term often used to incorporate a spectrum of states from excellent mental health to severe mental health problems.

Much research and practice surrounding mental health and wellbeing focus on mental health problems and on prevention of developing a mental disorder (such as drug and alcohol problems or depression) rather than on positive mental health.⁶ Consequently not much data has been gathered at larger population levels on current levels of wellbeing or trends over time. Using WEMWBS to measure mental wellbeing gives us a unique opportunity to think about positive mental health - to shine a spotlight on the more positive end of the spectrum. In this report we investigate for Coventry how positive mental health is associated with other characteristics of people and their life circumstances.

From previous research, we know that higher levels of mental wellbeing have been associated with better physical functioning at older ages, better self-rated health, reductions in cardiovascular reactivity and decreased death rates in populations with renal failure and human immunodeficiency virus (HIV).^{7 8 9 10}

Higher levels of wellbeing are also consistently strongly associated with strong emotional and social support experienced by individuals and communities.^{11 12} Social capital is a similar type of 'protective factor' although it is harder to measure, and its definitions can vary.¹³ People who live in economically deprived environments are often facing economic hardship themselves. These deprived environments are associated with many factors which can have an impact on health and wellbeing including^{14 15} physical hazards, sleep disturbance, violence, greater crowding and exposure to noise.^{16 17 18}

The levels and factors associated with wellbeing in the population of Coventry have not been measured before. In this report we describe levels of mental wellbeing in Coventry and how these are associated with other environmental, physical, social, and health issues. We hope the results of this survey can be taken forward to underpin public health priorities and to help with decisions and policies for the benefit of all the people of Coventry.

Methods

The Coventry Partnership, the appointed research consultant M·E·L,¹⁹ and the University of Warwick collaboratively undertook the Coventry Household Survey. Surveys were completed in the winter of 2009 and early 2010 by face to face household and on-street interview after ethical and Caldicott Guardian approval had been obtained (see appendices). The survey contained 45 questions, and was completed (on average) in 15 minutes in a face to face interview. There are seven topical sections to the survey: equalities and communities, housing and environment, community safety, health and wellbeing (including the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)) work and training, transport and accessibility, and general profile questions.

Study sample

The response rate for the survey was 44%, with 3750 surveys completed from 8500 households contacted (doors knocked on). Approximately 2800 were refusals. The sample was representative of the population of Coventry on the basis of gender, ethnicity and Deprivation quintile/IMD (index of multiple deprivation, 2007) classification score.¹

Out of 3750 surveys conducted, 3370 people completed the WEMWBS. 380 people did not complete at least one question (approximately 1 in 10) and as a result those WEMWBS scores were not calculated.

¹ The sample over-represents retired persons or persons who are not economically active. This should be taken into consideration when examining general characteristics such as mean and median WEMWBS scores according to groups. However, this over-representation is accounted for in the linear regression models because age and economic status are adjusted for in the analyses.

What was measured?

The measurement of mental wellbeing was undertaken using the WEMWBS,²⁰ which is a 14-item positively worded scale with five responses from 'none of the time' to 'all of the time'. The minimum score is 14 and the maximum score is 70. The period of assessment covers the previous two weeks up to the completion of the scale. The WEMWBS was self-completed during face to face interviews. The WEMWBS has recently been used in similar population surveys such as the 2008 Scottish Health Survey with 6465 participants, the 'Scottish Health Education Population Survey' ('HEPS') with 1896 participants and the 'Well? What do you think?' survey ('WELL') with 1216 participants.

Other standardised measures

We measured self-rated health by asking the widely used question 'How would you say your health is, in general?' with five options ranging from 'very good' to 'very bad'.²¹ Social-grade was classified according to the 2001 office for National Statistics classification.²² Limiting long standing illness/disability was assessed using similar wording to the 2011 census question, and identical to the Scottish Health Survey 2008 for the purpose of comparable information on wellbeing.²³ Marital status and educational qualifications (slightly modified) and ethnicity were assessed using the 2011 census questions.²⁴ The full questionnaire can be viewed in Appendix B.

Data collection and sampling

Data collection was undertaken by the Birmingham research firm M·E·L using a trained, multi-language interviewing team. The initial postcodes were sampled using the Royal Mail Postcode Address File (PAF) to obtain a full list of addresses in Coventry. This was linked to the Middle Super Output Areas (MOSAs).²⁵ Postcodes were sampled within each of the 42 MOSA's to ensure representativeness based on deprivation and clusters of 3 adjoining postcodes were then selected. Interviewers were asked to complete 30 interviews within each cluster, resulting in a geographically stratified random sample.

Households already included in previous years were omitted to avoid consultation fatigue. Approximately 200 surveys were also conducted around Coventry city centre to ensure the participation of 'mobile populations'. During data collection there was an abnormally high number of refusals, which may have been a result of adverse weather conditions. Fifty-one

percent (51%) of the sample were interviewed just before the winter holidays/ Christmas time and 49% interviewed just after the winter holidays/Christmas time.

Data processing

Data entry, checking, cleaning, quality assurance and primary coding were undertaken by M·E·L. The cleaned dataset was submitted to the Coventry Partnership and University of Warwick Medical School for analysis. At all times all answers were kept confidential and anonymous, meeting the requirements of the Data Protection Act legislation.

Statistical methods

We noted frequencies of responses for all the questions. We then adjusted for age and gender and evaluated the associations between the WEMWBS scores and the other variables (factors)²⁶. We used simple linear regression to test for associations between factors and WEMWBS score (which can range from 14 to 70).² Factors that were found to be significantly associated with mental wellbeing in this process (or that have been consistently reported as important for wellbeing in previous research) were included in a multiple regression analyses.³ Multiple regression is used to identify those factors which collectively explain the variation of WEMWBS scores best. Individual factor levels are reported in terms of regression coefficients (B). The larger B is (either positive or negative), the stronger the association for that particular factor with mental wellbeing⁴

² All WEMWBS score differences which are statistically significant between different levels of other variables (at the 5% significance level) are reported as such. This is expressed based on the 'p-value'. If a difference is significant at the 5% level, the p-value will be less than 0.05. The smaller the p-value, the stronger the evidence that the observed difference is not due to chance.

³ The analysis yields a set of factors which predicts an individual's mental wellbeing best according to a statistical scoring criterion (adjusted R2).

⁴ The regression coefficient (B) illustrates the strength of the association between a given factor and mental wellbeing, measured in WEMWBS score units. The larger B is (either positive or negative), the stronger the association for that particular factor with mental wellbeing.

Results

This section describes the distribution of WEMWBS scores in the sample and factors associated with wellbeing, answering the research questions set out:

1. How are the levels of wellbeing distributed in this sample of people living in Coventry?
2. What factors are associated with mental wellbeing?
3. Are there potential inequalities between levels of wellbeing and subgroups of the population based on age, gender, ethnicity, socio-demographic variables, disability or marital status?

Participant characteristics

Figures 1, 2 and 3 show the characteristics of those participating in the survey and their responses to questions about their health, sleep, neighbourhoods and environment.

- Age: Age bands were fairly evenly distributed with about one sixth of the sample in each ten year age band and one sixth in the over 80s. There were more 16-24s (19%) and fewer 25-34s (5%).
- Sex or gender: 48% of the sample were male and 52% female.
- Deprivation: Using the government's quintile categories: one third of the sample were in the most deprived category and 22% were in the two least deprived categories. 46% of the sample were in the two middle categories of deprivation.

The age, sex and deprivation patterns of the sample closely reflect the characteristics of the underlying population of Coventry.

- Marital status: 52% of the sample were married or cohabiting and 48% of the sample were single or divorced, widowed or separated.
- Education: About a third of the sample had no formal qualifications, one third had level one or two qualifications (equivalent to GCSEs) and one third had higher level qualifications.
- Employment: 44% of the sample were in work and 24% of the sample were retired. Of the remainder, 11% were students or in training and 21% were unemployed or in unpaid work.

Figure 1: Participants' characteristics

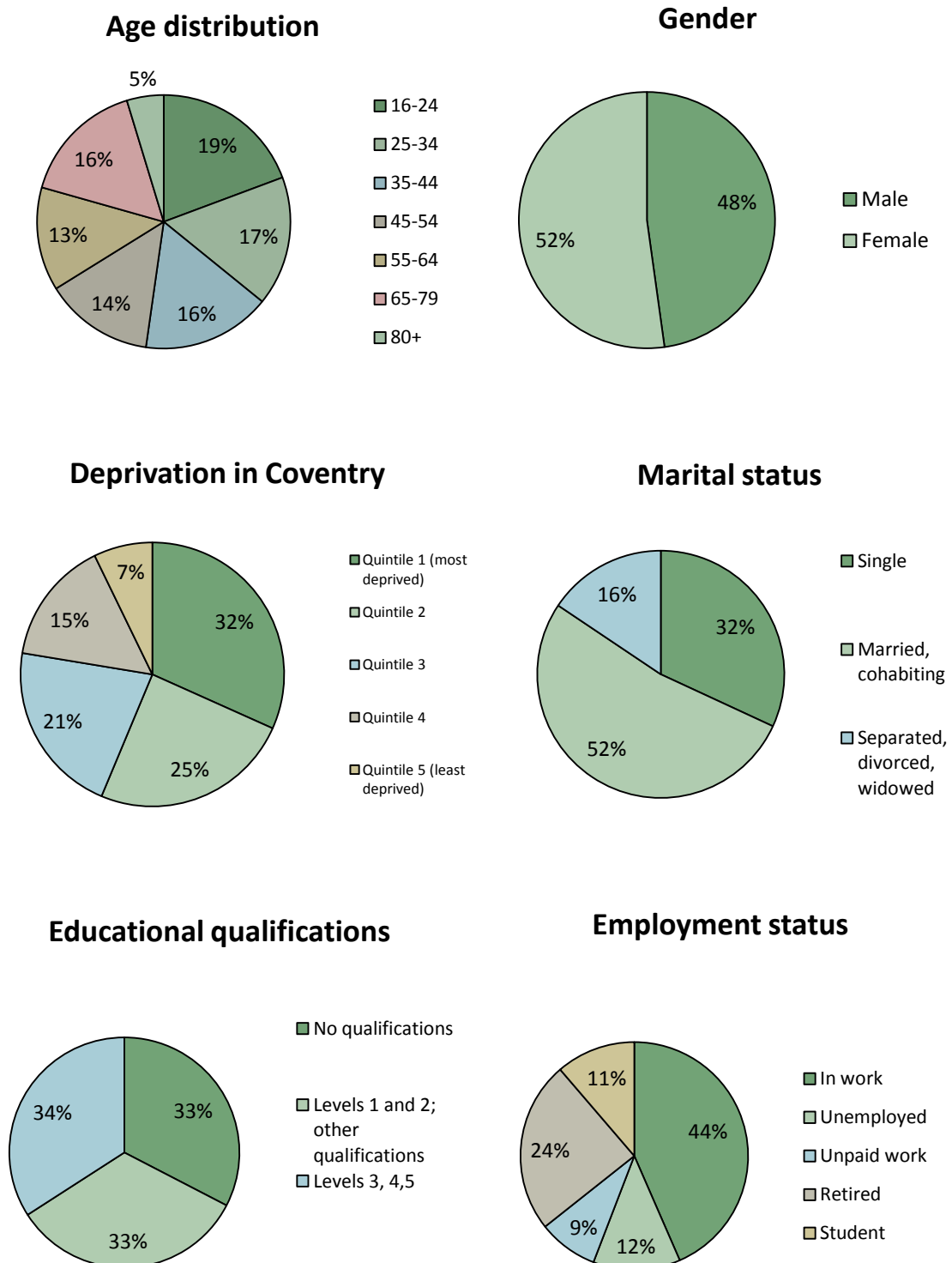
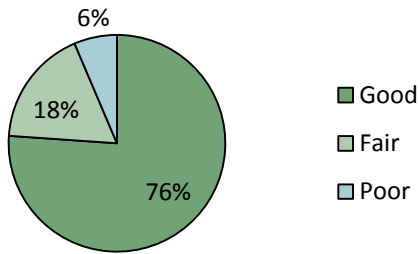


Figure 2 shows responses of those participating in the survey to questions about their health, habits and sleep.

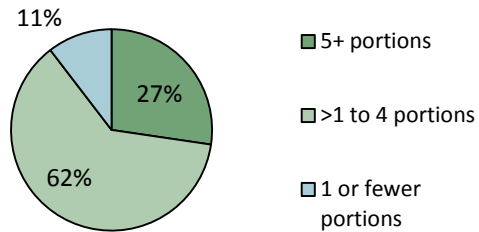
- Self-rated health status: just over three quarters of the sample rated their health as good; 38% rating their health as fair and only 6% as poor. Four fifths of the sample said that they had no limiting or longstanding illness, 10% said that they had an illness which limited them a little and 8% had an illness which limited them a lot. (Pie chart not shown for this).
- Fruit and vegetables: A quarter of the sample said that they ate the daily recommended 5-a-day portions of fruit and vegetables a day, the majority ate between 1 and 4 portions (63%) and 11% ate 1 or fewer portions.
- Sleep: Two thirds of the sample said that they had good quality sleep whilst 12% said that they had poor quality of sleep. As far as quantity of sleep was concerned, half had about 7 hours a night, and a third had fewer than 6 hours a night. Just under one in ten said that they had 9 hours or more of sleep a night.
- Physical activity and sports: A high proportion of the sample - 42% - said that they took moderate physical activity 5 or more times a week, with an equally high proportion taking moderate activity between 1 and 4 times a week. One in six of the sample said that they never took moderate physical activity. Only one third of the sample said that they played sport weekly, with two thirds saying that they never played sports.
- Smoking: The large majority of the sample were non smokers (62%) with 26% reporting themselves as current smokers.
- Alcohol: This is an area of concern with well over half the sample (57%) reporting themselves as drinking above the daily recommended amount at least once a week. Forty-three (43%) of the sample said that they never drank over the daily recommended amount.

Figure 2: Participants' health

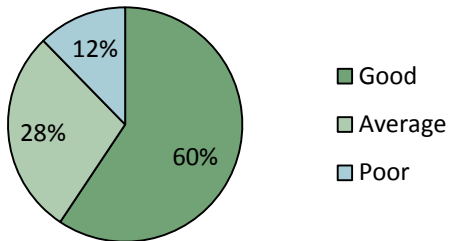
Self-rated health status



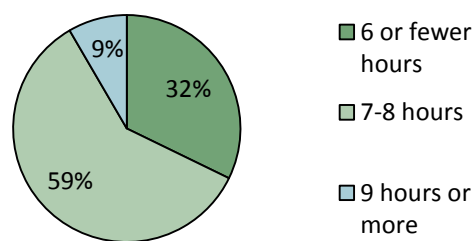
Healthy eating: Daily fruit & veg consumption



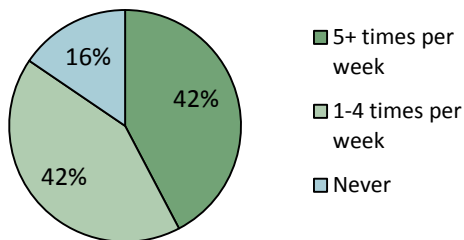
Quality of sleep



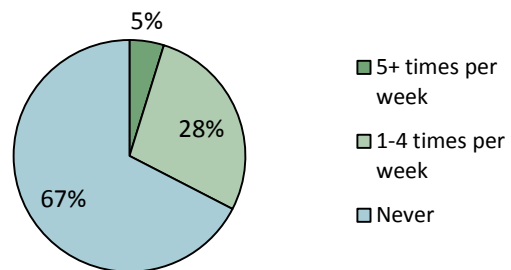
Quantity of sleep



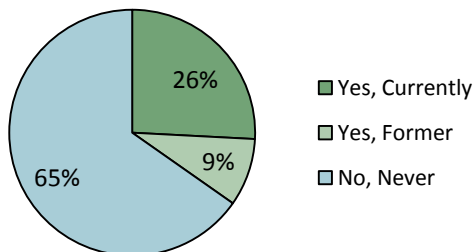
Physical activity: Moderate weekly activity



Physical activity: Vigorous weekly activity



Smoking



Alcohol consumption: Days drink over the daily recommended amount

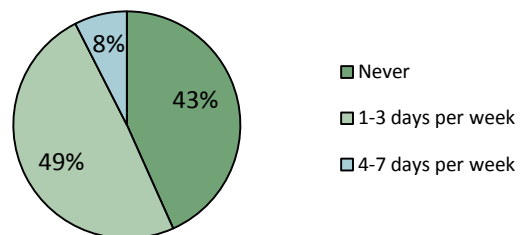


Figure 3 shows participants' responses to questions about their neighbourhood and environments.

- Satisfaction with neighbourhood and with the home: 90% of the sample were satisfied with the quality of their home and a similarly high proportion were satisfied with their neighbourhood. A small proportion (6-7%), were dissatisfied with their home and with their neighbourhood.
- Safety and crime: three quarters of the sample reported that they feel safe at night; with a quarter reporting that they feel unsafe. A quarter of the sample thought that crime had increased in the past year.
- Hopeful about the future: Three quarters of the sample felt hopeful about the future for themselves and their household.

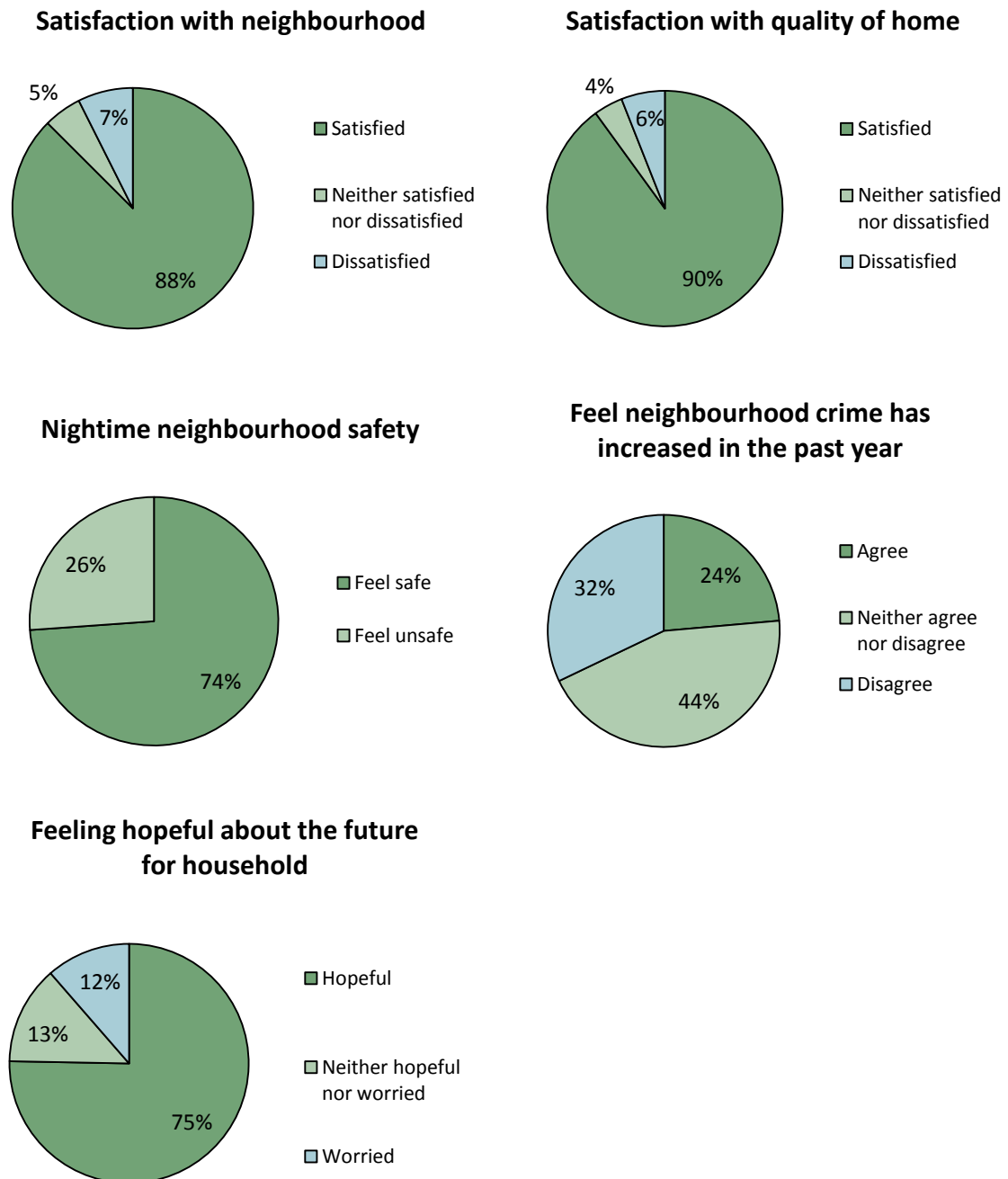
Summary of sample characteristics

Overall the findings suggest that the sample are representative of Coventry as far as age, sex and deprivation categories are concerned. Mostly there is good news, with people in the main rating their health as good; taking moderate physical exercise; eating some fruit and vegetables and reporting that they have a long enough period of good sleep. Smoking rates are lower than previous nationally reported levels. The biggest area for concern is the 57% of people who report that they are drinking over the recommended limits of alcohol on at least one occasion per week.

As far as their environment is concerned, people are also on the whole satisfied with their neighbourhoods. Nine out of ten people are satisfied with the quality of their home and with their neighbourhood. Although a quarter feel that crime has increased in the past year, three quarters of people feel safe at night and a similar proportion felt hopeful about the future for their household.

In the next section we go on to look at how these factors are correlated with levels of wellbeing. First we report the WEMWBS scores.

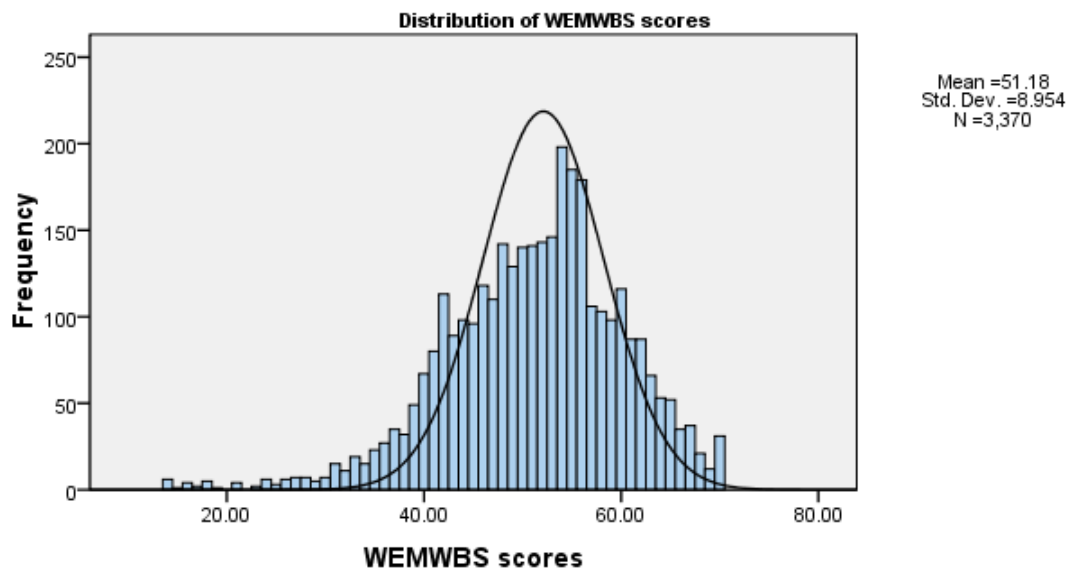
Figure 3: Participants' neighbourhood and environments



Wellbeing scores in Coventry using the WEMWBS

The average (mean) WEMWBS score for all participants combined was 51. The range of scores includes the bottom-most and topmost scores of 14 and 70.

The figure below illustrates the distribution of WEMWBS scores within the total sample, showing a reasonably good agreement with a 'normal distribution.'



Population characteristics

Tables 1-4 below show the percentages of the total sample and numbers for each characteristic we asked about. In the final column the WEMWBS score for each characteristic/response category is given.

Table 1: General profile characteristics

Variable	Percentage of total sample (%)	N=	Mean WEMWBS score
Total sample	100	3335-3370	51.2
Age Band		3368	
16-24	19.3	651	52.5
25-34	16.5	556	51.9
35-44	16.4	553	51.2
45-54	13.9	469	49.3
55-64	13.2	446	50.8
65-79	15.9	534	51.7
80+	4.7	159	48
Gender		3359	
Male	47.8	1604	52
Female	52.2	1755	50.5
Ethnicity		3335	
White	79.9	2666	50.8
Mixed	1.2	41	50.7
Asian	11.3	377	52.
Black	4.3	145	54.
Chinese/other	3.2	106	53.6
Marital status		3350	
Single	31.9	1068	51.2
Married/cohabiting	52.5	1760	51.7
Separated/divorced/widowed	15.6	522	49.4

Table 2: Socio-demographic variables

Variable	Percentage of total N	N=	Mean WEMWBS score
Deprivation		3363	
Quintile 1 (most deprived)	31.7	1067	49.7
Quintile 2	24.6	826	51.2
Quintile 3	21.3	716	52.6
Quintile 4	15.2	512	51.8
Quintile 5 (least deprived)	7.2	242	51.7
Education level		3360	
No qualifications	32.6	1096	49.3
Levels 1 and 2; other qualifications	33.3	1119	51
Levels 3, 4 & 5	34.1	1145	53.1
Employment status		3342	
In work	43.5	1455	52.4
Unemployed	12.4	413	47
Unpaid work	8.5	284	49.5
Retired	24.4	814	50.7
Student	11.3	376	53.2
Interview Date		3370	
Before Christmas holiday	51.2	1725	50.1
After Christmas holiday	48.8	1645	52.2

Table 3: Health and lifestyle characteristics

Variable	Percentage of total N	N=	Mean WEMWBS score
Self-rated health status		3367	
Good	76.1	2563	52.6
Fair	17.5	588	47.9
Poor	6.4	216	42.7
Disability		3363	
No disability	81.8	2750	52.2
Limited a little	10.4	349	48
Limited a lot	7.9	264	44.8
Quality of sleep (past month)		3360	
Good	59.4	1995	53.1
Average	28.3	950	49.6
Poor	12.4	415	45.5
Quantity of sleep (hours per night)		3355	
Fewer than 6 hours	32.2	1080	48.9
7-8 hours	59.4	1992	52.3
9 hours or more	8.4	283	52.1
Healthy eating: Daily fruit/vegetable		3295	
5+ portions	27.3	900	53.0
>1 to 4 portions	62.2	2051	50.8
1 or fewer portions	10.4	344	49.1
Physical activity: Any activity weekly (moderate)		3361	
5+ times per week	42.3	1423	51.9
1-4 times per week	42.2	1418	51.4
Never	15.5	520	48.5
Physical activity: Play sports weekly (vigorous)		3349	
5+ times per week	4.8	160	53.5
1-4 times per week	27.8	929	53.2
Never	67.5	2260	50.2
Smoking		3368	
Yes, Currently	25.8	869	49.6
Yes, Former	8.9	301	51.4
No, Never	65.3	2198	51.7

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Alcohol consumption: Days/ week drink > daily recc. amount		1805	
Never	43.3	782	51.2
1-3 days per week	49.2	888	52.2
4-7 days per week	7.5	135	49.3

Table 4: Neighbourhood characteristics

Variable	Percentage of total N	N=	Mean WEMWBS score
Neighbourhood satisfaction:		3347	
Satisfied	87.4	2927	51.5
Neither satisfied nor dissatisfied	5.1	171	49.4
Dissatisfied	7.4	249	47.4
Satisfaction with quality of home:		3362	
Satisfied	90.0	3027	51.5
Neither satisfied nor dissatisfied	4.0	135	50.7
Dissatisfied	6.0	200	46.7
Hopeful for household		3221	
Hopeful	75.3	2427	52.3
Neither hopeful nor worried	13.3	427	48.8
Worried	11.4	367	47.9
Night-time neighbourhood safety:		3289	
Feel safe	73.8	2429	52.1
Feel unsafe	26.1	860	48.8
Feel that crime has increased in neighbourhood in past year		3355	
Agree	23.6	792	49.7
Neither agree nor disagree	44.3	1486	51.4
Disagree	32.1	1077	51.9

Factors associated with mental wellbeing

The tables show that several factors are associated with mental wellbeing. The following factors were significantly associated with wellbeing scores and were considered for inclusion in the linear regression analysis.

Socio-demographic variables: Age, gender, employment status, ethnicity, education, marital status

Health and lifestyle characteristics: Self-rated health status; quality and quantity of sleep, fruit and vegetable consumption, frequency of physical activity and frequency of playing sport, smoking and alcohol consumption.

Neighbourhood characteristics: Satisfaction with neighbourhood, feeling safe at night, feeling satisfied with home, deprivation, perception of crime, housing tenure.

The following figures show results from the regression model which adjusts for all factors simultaneously so that reported differences are due to the factor illustrated for each figure. In the analysis, the regression coefficient (B) illustrates the strength of the association between a given factor and mental wellbeing, measured in WEMWBS score units. The farther away from zero the B coefficient is, the stronger the association. The association can be either positive or negative.

For example, WEMWBS scores are on average 2.3 points higher for those with higher education qualifications compared to those with no formal educational qualifications when adjustment has been made for all other relevant factors (e.g. age and gender etc).

Inequalities in Mental Wellbeing

The following figures describe what factors are associated with mental wellbeing in Coventry. Both positive and negative associations are shown in the bar charts. If there is a positive association, then the chart shows the WEMWBS score increasing (going above the horizontal line) compared to the reference (comparison) category. If the factor has a negative association then the bar will be below the horizontal line. In general, the longer the bar, the stronger the association.

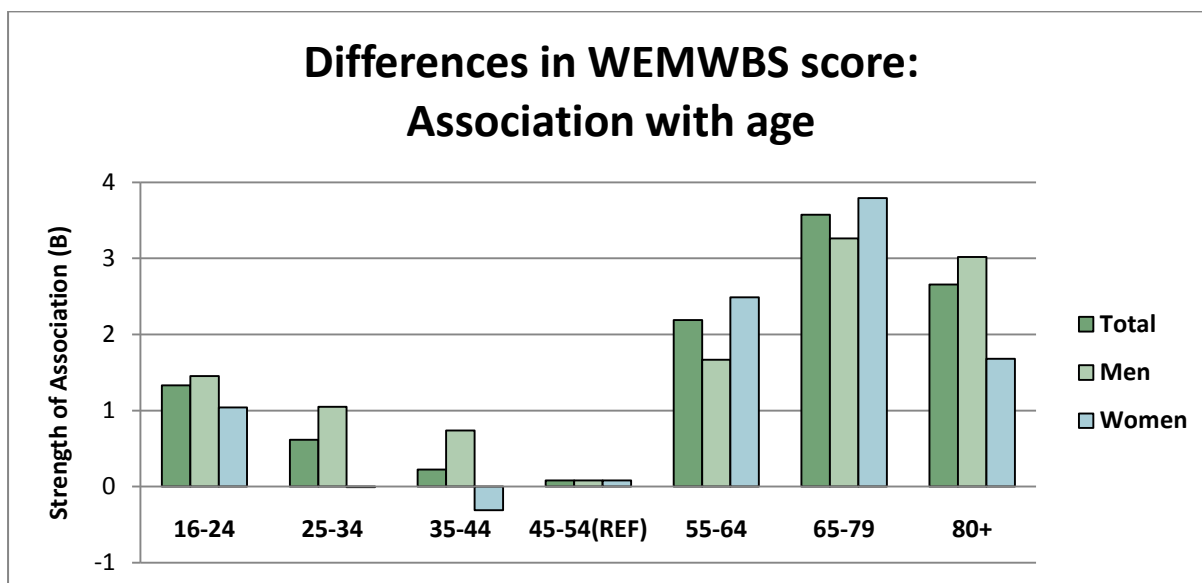
Associations with age

- Overall, middle aged people (aged 45-54) have lower levels of wellbeing compared to other age groups and are represented in the figure as the reference category in Figure 4.
- Older people (aged 55-80+) have higher levels of mental wellbeing, (the higher positive bars in Figure 4) and at 65-79 WEMWBS is around 3.6 points higher on average than for middle aged people (aged 45-54).
- Women aged 25-44 have the lowest levels of mental wellbeing on average.

Statistically significant associations:

- For the total population, being aged 16-24, and 55+ was significantly associated with higher levels of mental wellbeing.
- Among men, being 55 or older was significantly associated with higher levels of mental wellbeing.
- Among women, being 55-79 was significantly associated with higher levels of mental wellbeing.

Figure 4: Associations between age band and mental wellbeing scores



Associations with socio-demographic variables

Variables such as education and employment show significant associations with mental wellbeing scores.

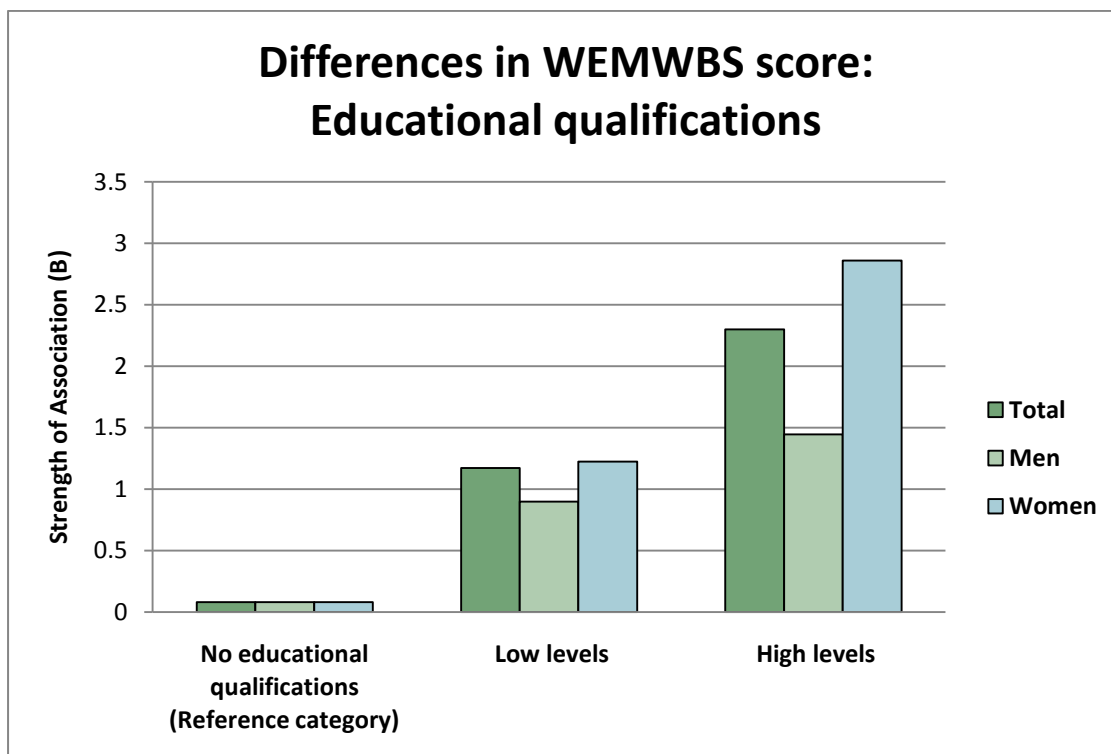
Education

- Overall, those with higher levels of education have higher levels of mental wellbeing.
- WEMWBS scores are on average higher by about 2.3 points for those with higher education qualifications compared to those with no formal educational qualifications

Statistically significant associations:

- Both lower and higher levels of educational qualifications were significantly associated with higher mental wellbeing levels in the total population and in women. In men, only high levels of education were significantly associated with mental wellbeing.

Figure 5: Associations between education level and mental wellbeing scores



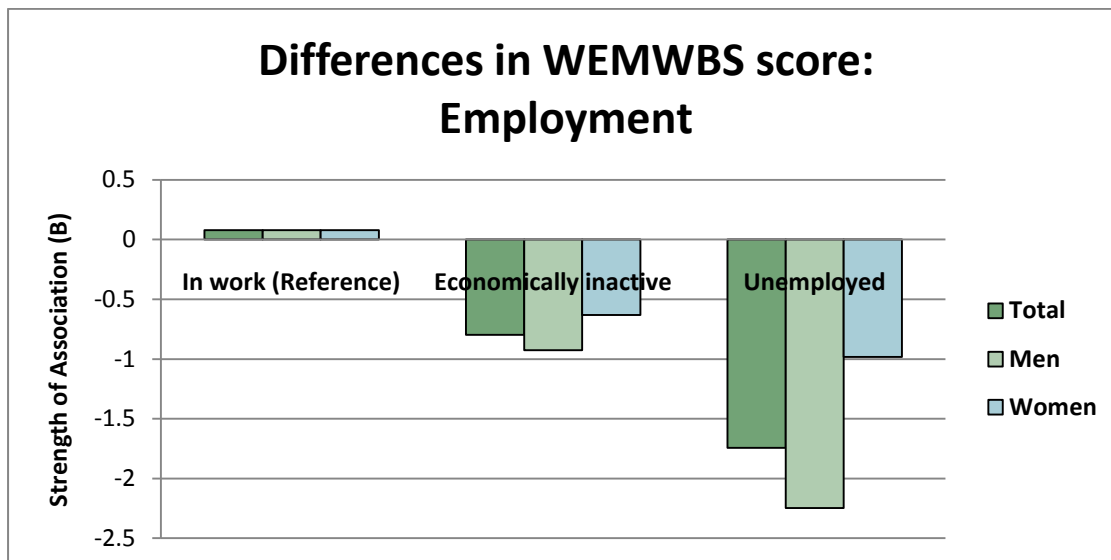
Employment

- Overall, mental wellbeing levels among the unemployed are significantly lower than those who are currently in work.
- Men who are unemployed have an average mental wellbeing score 2.2 points lower than employed men.

Statistically significant associations:

- In the total population, being economically inactive and being unemployed were significantly associated with lower levels of mental wellbeing.
- Among men, being unemployed was significantly associated with lower levels of mental wellbeing.
- The differences among women were not significant.

Figure 6: Associations between employment and mental wellbeing scores



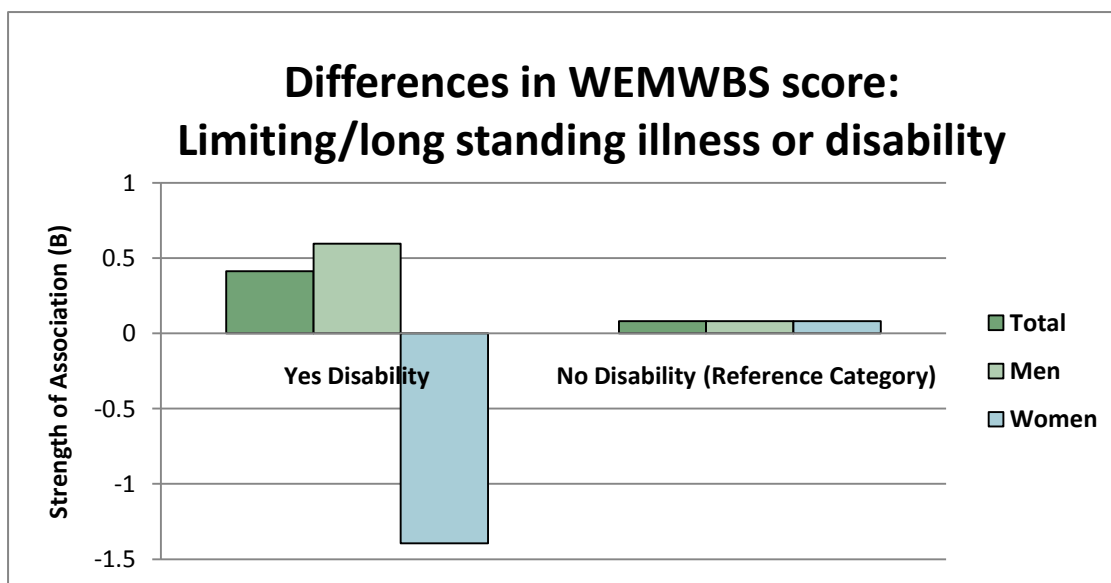
Disability

- Women with a longstanding illness/disability had a lower mental wellbeing score of about 1.4 points on average.

Statistically significant associations:

- There were no significant associations between longstanding illness/disability and mental wellbeing among the total population and also among men.
- In the figure below, the bars for total and men’s associations appear to show a positive association; however, this is not significant because the confidence intervals (Appendix A) show that for men and the total population with a disability, mental wellbeing levels are just as likely to be higher as they are to be lower.
- Among women, the association between longstanding illness/disability is statistically significant.

Figure 7: Associations between disability and mental wellbeing scores



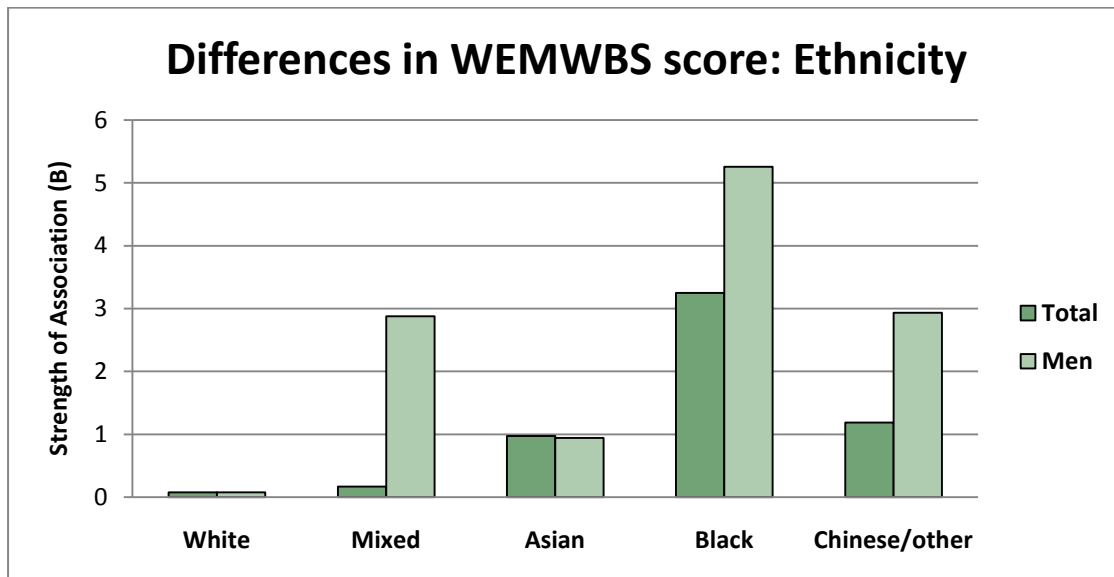
Ethnicity

- Ethnicity was associated with mental wellbeing levels in the overall population
- Positive mental wellbeing levels were on average higher among black men whose average levels were about 5.3 points higher than for white men.
- Men in the Chinese/other category also had higher levels of mental wellbeing.

Statistically significant associations:

- In the total population, being black and being Asian was significantly associated with higher levels of mental wellbeing.
- Among men, mental wellbeing levels were significantly higher among black and Chinese ethnic groups.
- Among women, ethnicity as a variable did not have a large enough impact to be included in the final regression model, and so it has no significant association. This is why it does not appear on in the figure below. This means that for women, there were other variables that had more of an impact on wellbeing than ethnicity.

Figure 8: Associations between ethnicity and mental wellbeing scores



Health and Lifestyle Characteristics

Sleep quality

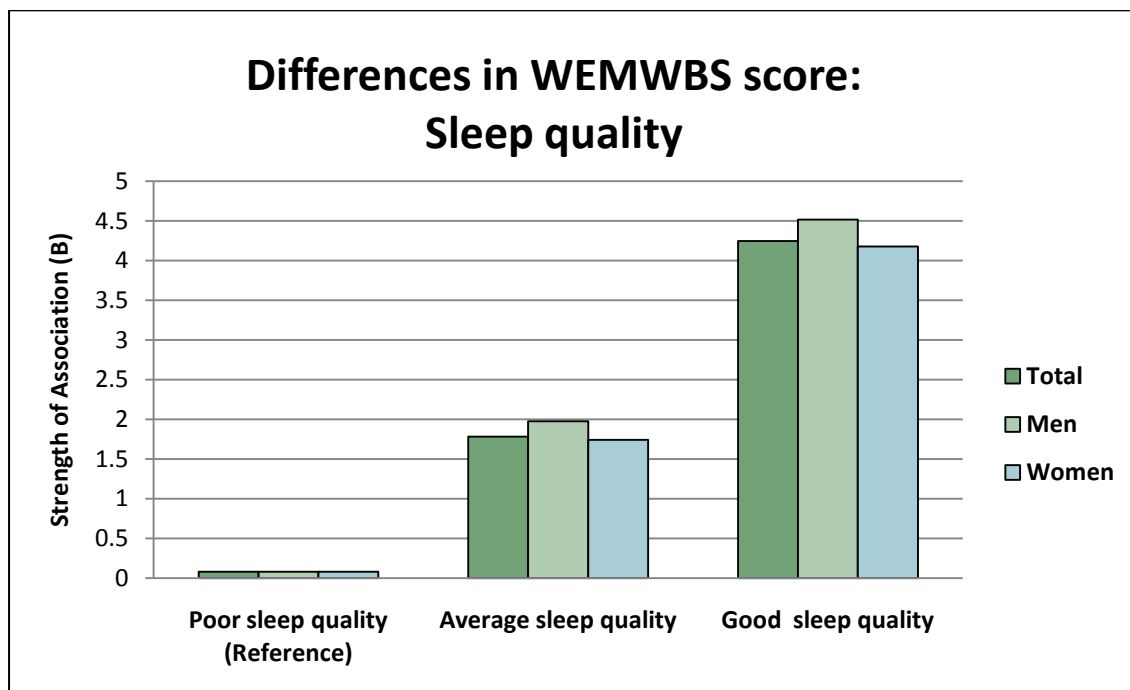
Quality of sleep is one of the strongest predictors of mental wellbeing observed in this sample. The better your quality of sleep, the higher your mental wellbeing level.

- Mental wellbeing scores were about 4.2 points higher on average among those with good sleep quality compared to those with poor sleep quality.

Statistically significant associations:

- In the total population and for men and women, both average and good levels of sleep quality were significantly associated with higher mental wellbeing levels.

Figure 9: Associations between sleep quality and mental wellbeing scores



Self-rated health status

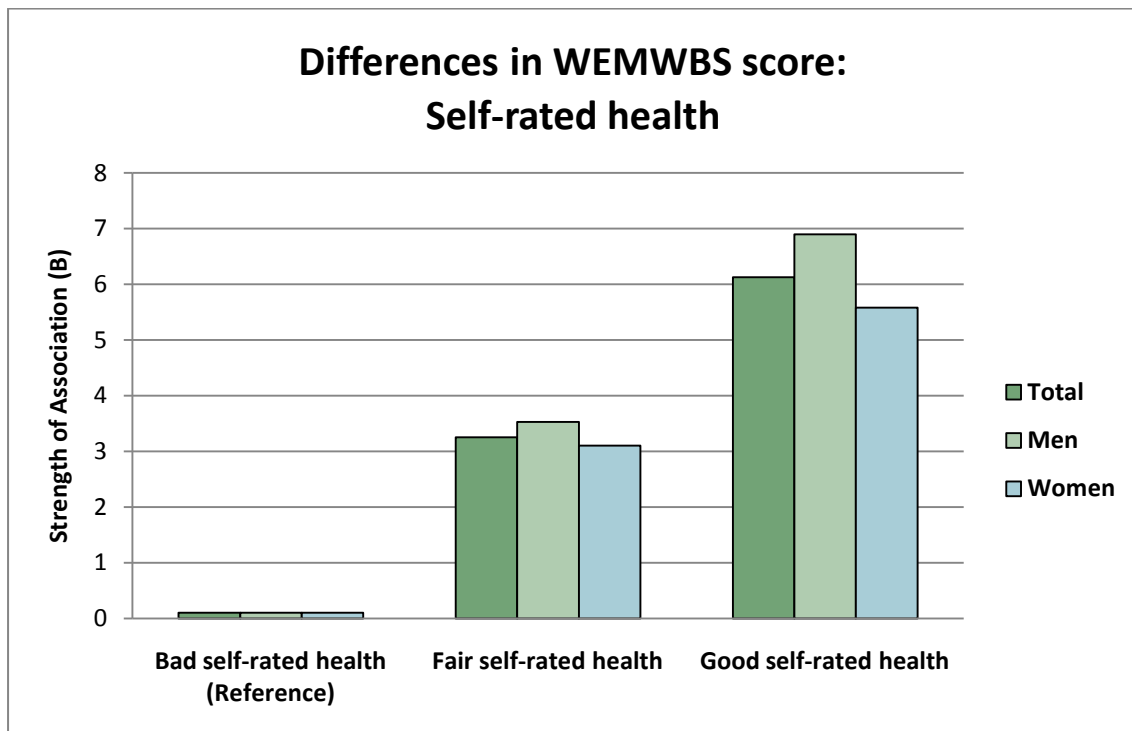
Self-rated health status is another important key factor for mental wellbeing in Coventry. It is strongly associated with mental wellbeing levels in the overall sample, and men and women.

- Mental wellbeing levels were on average 6 points higher in respondents with good self-rated health.

Statistically significant associations:

- In the total population and for men and women, both fair and good levels of self-rated health were significantly associated with higher mental wellbeing levels.

Figure 10: Associations between self-rated health and mental wellbeing scores



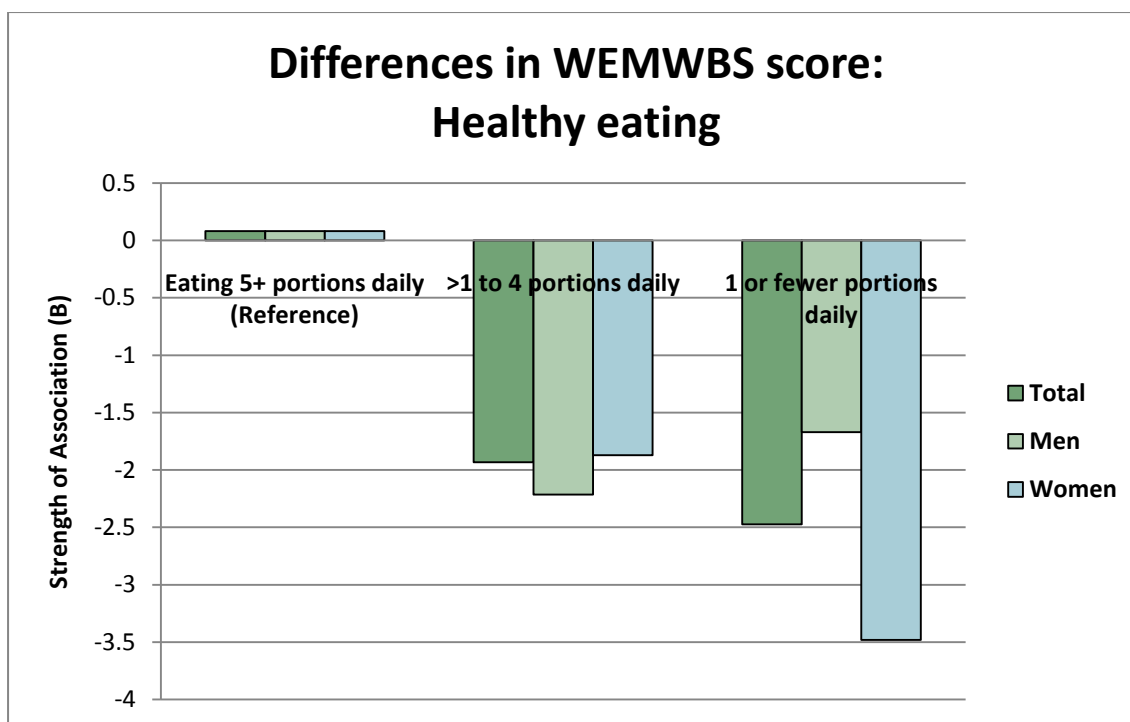
Healthy eating

- Mental wellbeing was highest among people who ate five or more portions of fruit/vegetables a day, and lowest among those who ate less than one portion a day.
- Respondents who eat around 1-4 portions had mental wellbeing levels around 2 points lower than those eating ‘five a day’.

Statistically significant associations:

- In the total population and for men and women, eating fewer than five portions of fruit and vegetables daily was significantly associated with lower levels of mental wellbeing.

Figure 11: Associations between healthy eating and mental wellbeing scores



Neighbourhood characteristics

- Mental wellbeing levels were significantly lower in respondents who were dissatisfied with their neighbourhood, although the association was only significant among men.
- Feeling unsafe at night was significantly associated with lower mental wellbeing in the overall population and in women, but not in men. Women who felt unsafe at night in their neighbourhood had a WEMWBS score 2.1 points lower on average.

Statistically significant associations:

- Feeling unsafe at night was significantly associated with lower levels of mental wellbeing in the total population and among women, but this was not a significant factor for men.
- Among men, being dissatisfied with one’s neighbourhood and with one’s home was significantly associated with lower levels of mental wellbeing.

Figure 12: Associations between safety and mental wellbeing scores

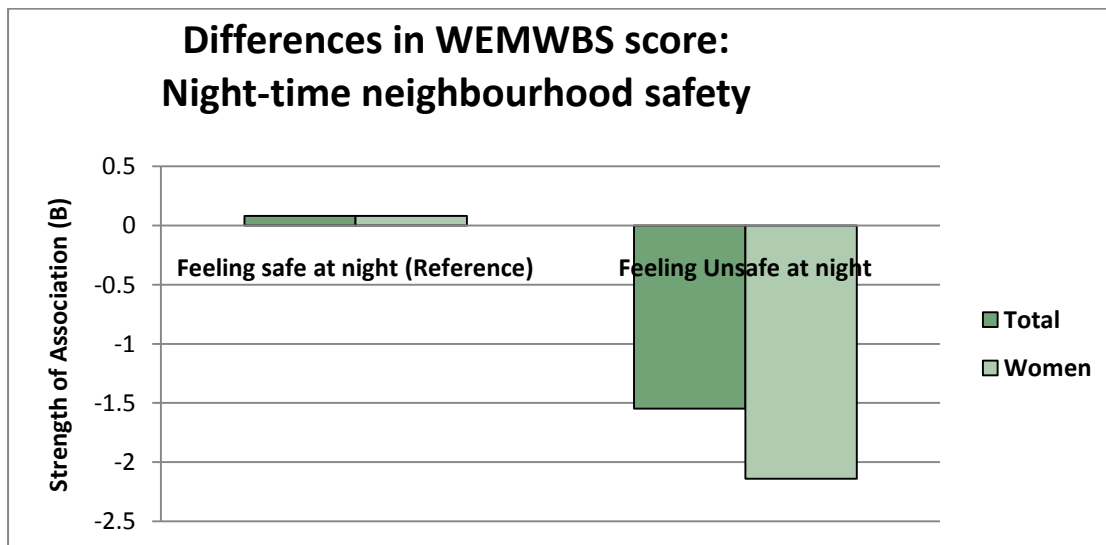
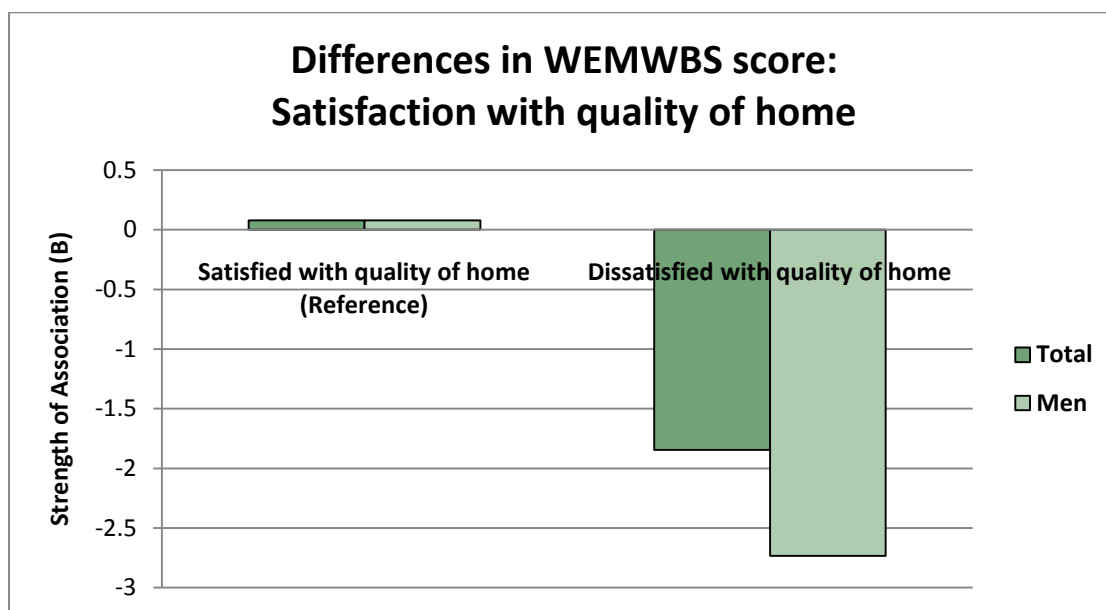


Figure 13: Associations between home satisfaction and mental wellbeing scores



Discussion and Key Point Summary

Coventry’s population

Overall the findings suggest that the sample for this survey are representative of Coventry as far as age, sex and deprivation categories are concerned. Mostly there is good news, with people in the main rating their health as good; taking moderate physical exercise; eating some fruit and vegetables and reporting that they have a long enough period of good sleep. Smoking rates are lower than previous nationally reported levels. The biggest area for concern is the 57% of people who report that they are drinking over the recommended limits of alcohol on at least one occasion per week.

As far as their environment is concerned, people are also on the whole satisfied with their neighbourhoods. Nine out of ten people are satisfied with the quality of their home and with their neighbourhood. Although a quarter feel that crime has increased in the past year, three quarters of people feel safe at night and a similar proportion felt hopeful about the future for their household.

Mental wellbeing in Coventry

Mental wellbeing in this Coventry sample compared well with mental wellbeing in other populations. The regression model pointed up some key insights into the mental wellbeing

of Coventry's population with some important differences between men and women and between different ethnicities.

Age: Overall, those who were middle aged had lower levels of mental wellbeing than either the younger or the older population groups. This effect of age has been observed in other communities (both in the US and the UK).

Education: There is a positive association between education and mental wellbeing, showing that the higher a person's level of education, the higher their mental wellbeing scores are likely to be. This relationship was more pronounced in women than it was in men, suggesting that education may have more of an impact on the mental wellbeing of women than on men.

Employment: Being unemployed was associated with lower levels of mental wellbeing and this effect was more clearly seen in men.

Ethnicity: Overall, black men had the highest levels of mental wellbeing. White people had lower levels of mental wellbeing than other groups.

Sleep quality: Good sleep was one of the strongest factors associated with mental wellbeing. The better the quality of sleep, the higher the level of mental wellbeing.

Self-rated health status: Self-rated health status was also one of the strongest factors associated with mental wellbeing in this population overall, and for men and women. The better a person rated their health status, the higher their mental wellbeing levels were likely to be.

Fruit and vegetable consumption: Eating the optimal amount of fruit and vegetables on a daily basis was related to higher levels of mental wellbeing.

Neighbourhood characteristics: Dissatisfaction with the quality of one's home was significantly associated with poorer mental wellbeing levels in the overall sample. Dissatisfaction with one's neighbourhood was also related to poorer mental wellbeing levels in men, but not in women. Feeling unsafe at night in one's neighbourhood was associated with lower levels of mental wellbeing in women, but not men.

Strengths & Weaknesses

This study included one of the largest samples undertaken using the WEMWBS scale. The data was rigorously collected using face to face interviews, and under strict quality assurance. It is valuable data for the city and people of Coventry, and can continue to be valuable in and of itself, but also as a baseline for future work into understanding mental wellbeing at the population level. However, it is important to note that this is a survey of data collected at one point in time, and the relationships reported describe a population at one point in time. Furthermore, it has to be emphasised that correlation between a factor and mental wellbeing does not automatically imply that the factor causes alteration in wellbeing scores. An association between two factors or variables does not imply a causal relationship. And even if there is a causal relationship, the direction of the cause of the associations found cannot be assumed. For example poor sleep may be either a cause of, or an effect of poorer mental wellbeing. Finally, an important area which was not addressed in this survey was social support factors. Given the evidence suggesting that this is an important area for mental wellbeing, future surveys should include questions gauging social support.

Conclusions & Recommendations

Overall the findings for this representative survey of the Coventry population show relatively good news for the majority, with people in the main rating their health, mental wellbeing and neighbourhoods well.

And the majority reported at least some good health habits e.g. as far as diet and exercise were concerned. One of our more surprising findings and the biggest area for concern is that 57% of people reported that they are drinking over the daily recommended limits of alcohol on at least one occasion per week. This finding is worthy of further investigation of information on alcohol consumption in Coventry.

From the point of view of mental wellbeing we have identified particular vulnerable groups in this survey. They include those who are middle aged, less well educated, unemployed, with poor quality sleep and poor physical health and those who are living in neighbourhoods and housing with which they are dissatisfied. Several factors found to be associated with

mental wellbeing in this study had associations which were different for men and for women.

Sleep quality is more important for mental wellbeing than sleep quantity, and increasing awareness of good sleep strategies, maintenance of good quality sleep, and investigating the causal processes of poor sleep quality are worthwhile public health concerns to address.

A lack fruit and vegetable consumption appears to have more of an impact on women than men, which might be beneficial for targeting audiences of particular campaigns.

Important neighbourhood characteristics differ for men and women. In men, dissatisfaction with home and neighbourhood were significantly associated with lower levels of mental wellbeing. In women, neighbourhood safety at night was more strongly associated with mental wellbeing. While these are more fundamental characteristics of environmental influences and are not immediately modifiable, action can be taken on the basis of the findings to promote ongoing services provided, or to seek out new collaborative efforts or campaigns through the Coventry Partnership.

The strong association between self rated health and mental wellbeing is an excellent confirmatory finding. It tells us that our findings are consistent with findings in other research and points out how mental wellbeing and physical health are closely interrelated. The associations found provide key insights on wellbeing for Coventry's population and will inform future studies, areas of concern and particular vulnerable populations where further investigation and action are indicated.

Key areas for further investigation

This research has shed light on some areas worthy of more in-depth analysis: investigation into the causal pathways and trajectories of poor versus good sleep quality; exploration of the differences between age bands where on average mental wellbeing is on lowest (e.g. 35-54) and highest (e.g. 65-79); examination of education and employment and the differences between men and women; in-depth examination of certain lifestyle characteristics such as fruit and vegetable consumption, alcohol consumption, geographic analysis and physical activity and mental wellbeing.

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