Natural England Commissioned Report NECR075

What impact did Walking for Health have on the physical activity levels of participants?

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Foreword

Natural England commission a range of reports from external contractors to provide evidence and advice to assist us in delivering our duties. The views in this report are those of the authors and do not necessarily represent those of Natural England.

Background

When Walking for Health was launched in 2000 walking was not considered a serious form of exercise. Now the health benefits of short, regular, brisk walks are widely understood, and the Department of Health views such walks as a way of increasing people's levels of physical activity and improving their health.

In 2007, Department of Health and Natural England – working in partnership with local statutory and voluntary organisations – decided to invest in an expansion of Walking for Health as part of a package of public health initiatives aimed at getting people more active in order to benefit their health. As part of this expansion Natural England produced a comprehensive evaluation programme to measure the health and environmental outcomes of Walking for Health.

This report is part of a package of work commissioned to Ipsos MORI, and presents research examining the impact of Walking for Health on the physical activity levels of participants, undertaken via a longitudinal quantitative telephone survey.

A key aim of the Walking for Health expansion was to contribute towards moving sedentary and less active people (those who achieved at least 30 minutes of moderate intensity physical activity on fewer than three days a week) to a more active lifestyle (three days or more per week). The results of this work therefore show the degree to which Walking for Health achieved this aim.

The findings will be of use to local organisations delivering led-walk interventions, and policy-makers looking for evidence of the impact of large-scale physical activity interventions.

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Further information
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Summary

This report presents the results of a longitudinal study of people who have participated in Natural England's Walking for Health (WfH) scheme. The study, conducted by Ipsos MORI, consisted of measuring levels of physical activity among people who have stopped participating and those who continue to do so, across different age groups, gender and geographical regions. This was done via a telephone survey asking the following question (the Single Item Metric, or SIM);

> *In the **past week**, on how many days have you done a total of **30 minutes or more** of physical activity, which was enough to raise your breathing rate? This may include sport, exercise, and brisk walking or cycling for recreation or to get to and from places, but should not include housework, or physical activity that is part of your job.*

The same people were interviewed four times throughout 2010/11 and an average of their results was taken to minimise any seasonal impact (in order to be comparable with the baseline data).

This average was compared with their original response recorded from an Outdoor Health Questionnaire (OHQ), completed by participants on their first WfH walk, to determine whether there has been any long term behavioural change in levels of physical activity of those who have been involved in WfH.

The aim of the study was to identify whether there had been any increase in the proportion of participants who were physically active on three or more days per week. It found that 47% of respondents were achieving this level of activity, compared to the original OHQ level of 54%. It should be noted that this figure includes results from a period of extreme weather conditions in December 2010, during which respondents conducted physical activity on noticeably fewer days than in other waves.

The decreases in the proportion of those doing physical activity on three or more days per week were greater for those in the older age groups (65-74 and 75+) compared with those aged under 65. Following the findings of an earlier qualitative study in 2010 we feel this trend could reflect the way in which some older people approach WfH; as a means to help them step down and prolong their activity at a time when declining health and mobility can make this a challenge.

There are positive findings which show WfH has helped participants to maintain their original level of physical activity. Those who had been on a WfH walk in the six months preceding 11th February 2011 and had previously conducted physical activity on three or more days per week were more likely to continue to do so than those who had not been active in WfH. Women and those aged 55-64 were more likely to maintain levels of physical activity than other groups, across most regions. The average number of days on which respondents conducted physical activity increased from 2.91 (as recorded on the OHQ) to 2.98, indicating that the levels of activity did increase.

The results also show a decrease in the proportions conducting no physical activity per week and an increase in the proportions conducting physical activity on one or two days per week. This helps explain why there was an increase in the average number of days of physical activity, despite the proportion of those doing three or more days showing a decrease.

The decrease in the proportion of those doing physical activity on three or more days per week was found across all regions and for most demographic groups. This was found to a lesser extent in London and the West Midlands, where the decrease was not significant, and to a greater extent in the North and South East.

It is concluded that although WfH has not achieved the targets set, it has been successful at improving and maintaining levels of physical activity of those who are most sedentary. WfH has also been successful at helping those who are conducting physical activity on three or more days per week maintain that level to a greater extent than those who no longer participate in WfH.

Acknowledgements

Ipsos MORI and Natural England would like to acknowledge and thank all the people who took part in Walking for Health walks and gave their time to contribute to this research. We would also like to thank all those local schemes who have contributed to and maintained information on the Walking for Health database, without which this research would not have been possible.

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1 Introduction

1.1 Walking is one way in which adults, particularly older people, can become more active and the Walking for Health (WfH) intervention is a key tool aimed at encouraging people to introduce walking into their daily lives. Walking for Health involves local and regional partner organisations running set walks in local areas with walk leaders. It also has the dual aim of encouraging people to enjoy and engage with the natural environment.

1.2 Natural England and the Department of Health were aiming to achieve a four-fold expansion of participation in WfH by March 2012; specifically 130,000 people taking part per week and 200,000 sedentary adults becoming 'physically active' (defined as 30 minutes of moderate physical activity 3 times a week) by March 2012.

1.3 To monitor progress in this area, Ipsos MORI were commissioned to conduct a longitudinal study asking participants of WfH their levels of physical activity at four points across the year March 2010 – March 2011.

1.4 The aims of this evaluation were to specifically investigate changes in the number of people who:

- were doing physical activity lasting for 30 minutes on less than 3 days in a week (3x30) and are now doing 3x30 or more;
- have stayed the same;
- were already at 3x30 and are still doing 3x30 or more; and
- were doing 3x30 or more and are now doing less than 3x30.

1.5 When first taking part in the WfH scheme, walkers are asked to complete a short questionnaire – the Outdoor Health Questionnaire – before their first walk. In addition to collecting demographic information, this records data on current physical activity to act as a baseline for new members of WfH which is recorded in the Walking for Health database.

1.6 This report presents the results of the longitudinal study and compares these with the original response recorded on the OHQ to determine whether there has been any long term behavioural change in levels of physical activity of those who have been involved in WfH.

2 Methodology

Fieldwork

2.1 Fieldwork consisted of a longitudinal survey conducted four times throughout the year 2010/2011. The longitudinal element involved interviewing the same people each time. The four survey periods are referred to as waves throughout the report.

2.2 It was assumed that at each wave, 20% of people would drop out. Therefore we started with a target of 8,800 interviews, in order to achieve a final sample size of 4,500 interviews in the final wave. This would then allow 500 interviews in each region, and therefore sub group analysis could be carried out within each region.

2.3 The fieldwork dates for the four waves were as follows:

Table 1 Dates of fieldwork

Wave	Dates
Wave 1	29th June – 19th July 2010
Wave 2	13th September – 5th October 2010
Wave 3	29th November – 17th December 2010
Wave 4	21st February – 11th March 2011

2.4 The spacing of these was organised so that fieldwork would be conducted across all seasons, but with reasonable time between each fieldwork period for potential behaviour change to occur. This also minimised demands on respondents.

2.5 Interviews were carried out over the telephone using CATI (Computer Assisted Telephone Interviewing).

2.6 The following numbers of interviews were carried out over the four waves:

Table 2 Number of interviews achieved in each wave of fieldwork

Wave	Number of interviews
Wave 1	8,802
Wave 2	6,695
Wave 3	5,992
Wave 4	4,500

Sampling

2.7 The interviews were carried out using contacts from the WfH database. At the start of the project, this database contained c. 70,000 records. Of these, 51,606 contained walk history information, i.e. the date of the participant's most recent walk. These were needed in order to enable walkers to be divided into 'active' and 'inactive' walkers. Active walkers were defined as those who had been on a WfH in the six month period prior to the sample being received. Inactive walkers were defined as those who had not been on a walk in this period.

2.8 Walkers who had stated that they did not wish to be contacted for research purposes were removed, leaving a total of 35,745 records for inclusion in the survey.

2.9 In order to comply with the Market Research Society's Code of Conduct[1], respondents were asked after waves one and two if they were happy to be contacted for the subsequent waves of research.

2.10 Due to the definition of inactive walkers as participants in WfH who had not been on a walk in the last six months, the sample was refreshed after waves 3 and 4 to update these definitions and ensure that the sample was as up to date as possible. Consequently, those defined as inactive in wave 4 were those who had not been on a walk in the six months prior to 11th February 2011, the date at which the data became available. In wave 4, 49% of those interviewed were active and 51% inactive.

Outdoor health questionnaire single item metric

2.11 Respondents were invited to answer the following question from the Outdoor Health Questionnaire:

*In the **past week**, on how many days have you done a total of **30 minutes or more** of physical activity, which was enough to raise your breathing rate? This may include sport, exercise, and brisk walking or cycling for recreation or to get to and from places, but should not include housework, or physical activity that is part of your job.*

2.12 In addition to this question, during wave 2, inactive walkers were also asked about their participation in WfH; their reasons for no longer participating; and whether they had been participating in any other forms of physical activity that had prevented them from participating in WfH. Results from these questions can be found in the report '**NECR068 - Walking for Health: 'inactive' walkers – barriers to participation, and activity substitution**'[2].

Quotas

2.13 Across all four waves, interlocking quotas were set on region, gender, age and activeness in order to ensure that the respondents reflected the composition of the sample database. The details of the quotas and number of achieved interviews for wave four of the research can be found in Appendix B.

2.14 In addition to the quotas set every wave, quotas were also set on ethnicity in wave 1. However, given the predominance of people from white ethnic background in WfH, these quotas were not found to be practical and were therefore dropped for subsequent waves.

2.15 Across all waves, interviewers had difficulties in fulfilling the quotas for the London region. This was due to the relative paucity of sample in this region, and the shortfall was compensated for by carrying out additional interviews in the South East where there were a greater number of people on the database.

[1] Points B.11 and B.12

[2] Accessed at **http://naturalengland.etraderstores.com/NaturalEnglandShop/NECR068**

Weighting

2.16 Weights were applied to the data to account for slight variations from the proportions of demographic groups held in the WfH database (see Appendix A for details). Weights were applied to match the profile in each region, and then nationally.

Response rates

2.17 Response rates are calculated as the percentage of answered calls which resulted in a complete interview.

2.18 The following response rates were achieved across the four waves:

Table 3 Response rates achieved for each wave of fieldwork

Wave	Response Rate
Wave 1	77%
Wave 2	81%
Wave 3	93%
Wave 4	78%

Confidence intervals

2.19 The sample size achieved in wave 4 of the survey is sufficient to analyse whether physical activity levels have changed within particular demographic groups at both the national and regional levels.

2.20 Any survey has a margin of error due to the fact we interview a sample of people, as opposed to the entire population. The margin of error for the overall sample sizes, and each of the regions is shown below. This is based on a confidence level of 95%. As indicated below, the margins of error vary with the size of the sample and the size of the percentage result:

Table 4 Confidence intervals

Sample size (final wave)	10%/90%	20%/80%	30%/70%	40%/60%	50%/50%
4,500 - overall	0.8	1.1	1.3	1.4	1.4
500 - per region	2.6	3.5	4.0	4.3	4.4

2.21 For example, 44% of respondents in the East of England conducted physical activity on three or more days per week. The base size in this region is 500 so using the table above, we can be 95% certain that if spoke to everyone registered for WfH in the East of England that the true figure lies between 39.6% and 48.4% (i.e. 44% +/- 4.4%). The nearer the findings are to the absolutes of zero or 100% the smaller the margins of error.

Measuring change over time

2.22 The fact that levels of physical activity were measured using a longitudinal method, i.e. contacting the same respondents, means that changes observed are more likely to be significant than if changes had been observed among different, but comparable, sections of the population. To account for this, a paired T-test was used to determine if changes between the current and

previous levels of respondents who conduct physical activity on three or more days per week are significant at the 95% level.

2.23 Standard significance tests are used for significance testing between figures observed at the same point in time; for example, between active and inactive respondents currently, or between men and women previously.

2.24 Throughout this report, results should be counted as significant if mentioned in the text unless otherwise specified.

Review of fieldwork

2.25 The methods used for the evaluation have implications for the results obtained, and these need to be considered when looking at the results presented in this report.

2.26 For analysis, an average was taken of every respondent's answer over all waves to produce the final figures presented here and in the tables. This was done to minimise the effect of seasonal variation on the final figures, in order to make them comparable with the baseline OHQ figures obtained at different points of the year. However, as a result, any responses that are abnormally high or low will have a correspondingly strong impact on the final results. For example, wave 3 was conducted in the height of the very severe weather experienced at the end of 2010. As a consequence of this, the number of days of exercise that respondents reported was much lower than in the fourth wave, which was also conducted in winter. The results obtained from the third wave of the survey have lowered the average number of days of activity completed by respondents (see Figure 2, page 8).

2.27 One possible solution to minimise the effect would be to remove the wave 3 data from the averaged figure for each respondent. However, this would then bias the responses in favour of the waves conducted in 'summer' (July and September) as there would only be one wave conducted in 'winter' (February).

2.28 A second issue experienced related to the setting of quotas in the London region. As has already been discussed, this was a problem experienced across all four waves. The problem was the result of the relative lack of sample for that region. Although the regions of London and the South East have been merged in other Natural England activities, it was felt that the data collected from London specifically could provide valuable insight into the levels of physical activity in that region, as opposed to the South East more generally. Therefore the decision was made to continue to keep the London region separate. In wave 4 of fieldwork, 450 interviews were achieved in this region which is only 50 fewer respondents than in other regions.

2.29 With the exception of a small number of complaints in wave 1, fieldwork progressed smoothly in all waves. Where there were complaints, these were logged and Natural England was informed when appropriate. The complainant was then removed from the sample to ensure that they were not contacted again.

2.30 Overall, many respondents were very willing to participate in the research due to the nature of the survey (an activity with which they had involvement) and the minimal input required (one simple question). Therefore high response rates were achieved and the overall aim of conducting 4,500 interviews in the final wave was met.

3 Results

3.1 The results are presented in a variety of ways to demonstrate the changes in terms of the number of people who:

- did physical activity (lasting for 30 minutes or more) on nought to two days per week when they joined WfH but have increased to three days or more;
- have stayed the same i.e. either previously conducted physical activity on nought to two days per week and continue to do so, or previously conducted physical activity on three or more days per week and continue to do so;
- were doing physical activity on three or more days per week when they joined WfH and have continued to do so; and
- were doing physical activity on three or more days per week when they joined WfH but have decreased to nought to two days.

3.2 The figures are presented as 'previous' and 'current', where 'previous' refers to responses submitted on the Outdoor Health Questionnaire, completed at the start of the first walk with WfH. These figures come from a range of dates that are not recorded on the WfH database. To account for this, the 'current' figures presented are an average of each participant's response at each wave of the survey, as these are taken across the range of seasons.

England

3.3 Figure 1 shows the proportion of respondents who 'currently' do nought to two days physical activity in the week; and the proportion that do three or more days. These figures are compared to the previous levels of physical activity. The data for the current figures is an average of respondents' reported level of activity across all four waves of the survey. The data for the previous figures is taken from their responses to the OHQ.

3.4 The chart shows the same figures for three groups of respondents: all respondents who were surveyed; those who are active in WfH; and those who are no longer active in WfH. Respondents were either classed as active or inactive depending on whether they had been in a WfH walk in the six months prior to 11th February 2011.

3.5 One of the key aims of WfH is to contribute to participants achieving three or more days of physical activity per week. Respondents have therefore been grouped into those doing physical activity on nought to two days, and those doing physical activity on three or more days to enable analysis of whether or not this aim is being met.

3.6 The proportion of all respondents saying that they did physical activity on three or more days in the last week has fallen from 54% to 47%. Conversely, the number of respondents saying that they did physical activity on nought to two days in the last week has risen from 46% to 53%.

3.7 The drop in the proportion of respondents saying that they did physical activity on three or more days in the last week is reflected across both active and inactive respondents. The proportion of active respondents doing this fell from 59% to 51%, whilst the proportion of inactive respondents fell by a similar amount, from 50% to 43%. The proportion of respondents doing physical activity on nought to two days per week in both groups rose accordingly.

3.8 The main reason for this is likely to be the steep decline in levels of physical activity monitored in December 2010 during a period of extreme weather. It is also possible that, given that WfH walkers tend to be late middle aged or older, (73% of respondents in the final sample for wave four are aged 55 or over), some of this decline is a result of respondents ageing and becoming

less mobile, and may therefore be a result in a natural diminution in the levels of activity that they are able to achieve. In support of this point it's worth noting that the OHQs – from which the baseline physical activity data was taken – could have been completed up to three years ago following their introduction in 2008.

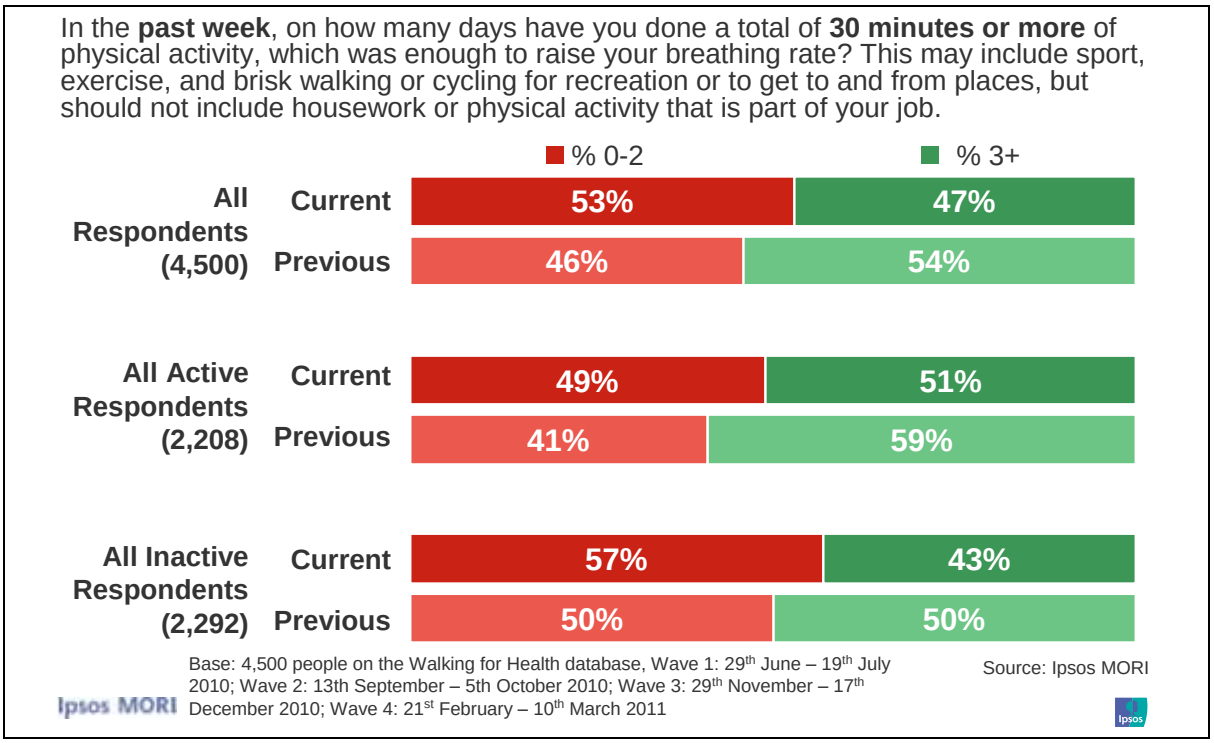

Figure 1 Physical activity levels active/inactive: England

3.9 As has been discussed in the methodology, wave 3 was conducted during the height of the severe weather experienced across England in late 2010. As a result, the number of respondents reporting doing physical activity on three or more days in the previous week was considerably lower in this wave than in other waves. Figure 2 shows the levels of physical activity broken out for each wave, as well as the reported levels of activity in the OHQ. This highlights the full impact of the weather at wave 3. It can be seen that wave 3 was the only wave in which the average number of days of physical activity undertaken by respondents in the last week fell below the levels reported in the OHQ (2.45 days compared with 2.91 days). Furthermore, it is also the only wave in which the proportion of respondents doing physical activity on three or more days in the last week fell below those levels reported in the OHQ (42% compared with 54%).

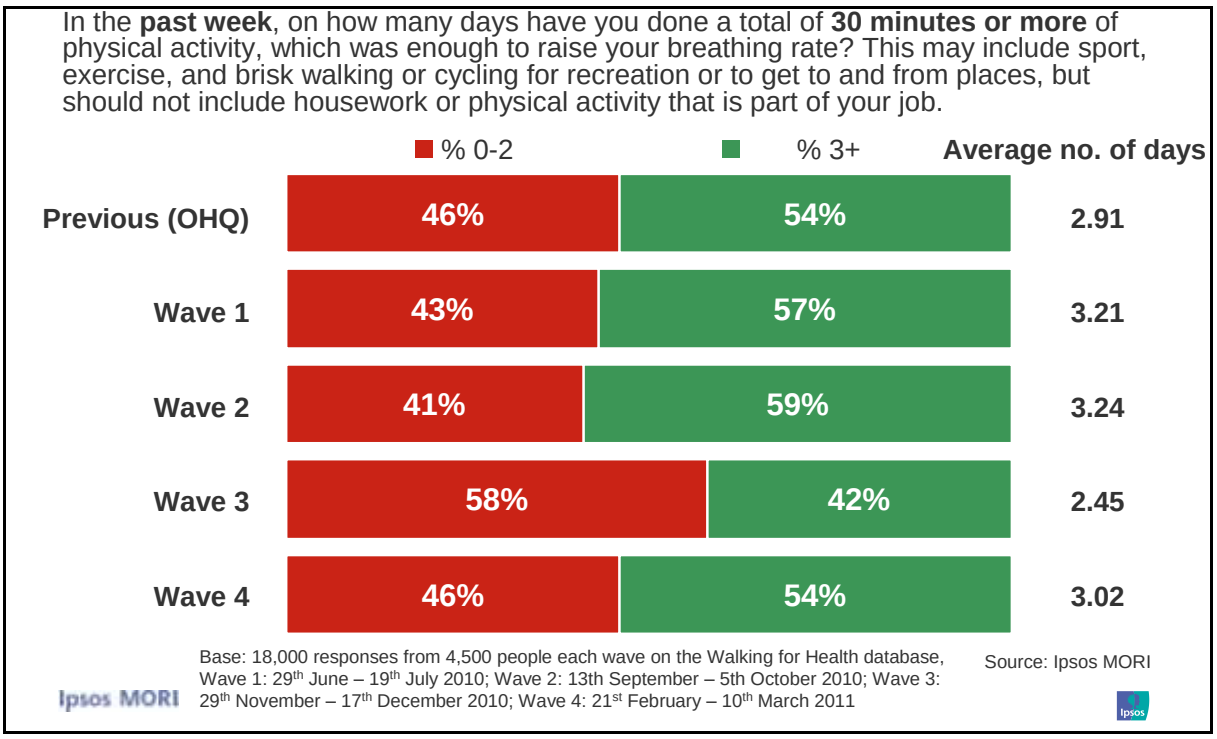

Figure 2 Physical activity levels waves 1 - 4 and OHQ responses

3.10 The decline in levels of physical activity in December 2010 due to the weather is supported by evidence from the Active People Survey[3].

3.11 Figure 3 shows data taken from the Active People Survey for National Indicator 8 (NI8) which is the percentage of the adult population who have conducted physical activity of moderate intensity lasting for at least 30 minutes on at least 12 days in the 4 weeks prior to the survey (equivalent to three or more days per week). This is plotted against data from the Met Office on the mean minimum temperature in England for the month of December in the years 2007 to 2010[4]. The Active People Survey data was collected during a fieldwork period of 10th December to 13th January each year. The correlation between levels of physical activity and temperature is clear and means we can be confident that the results for wave 3 of this survey are due to the extreme weather conditions.

[3] **http://www.sportengland.org/research/active_people_survey.aspx** Last accessed at 02/06/2011 at 14:17pm

[4] **http://www.metoffice.gov.uk/climate/uk/datasets/** Last accessed at 02/06/2011 at 14:19pm

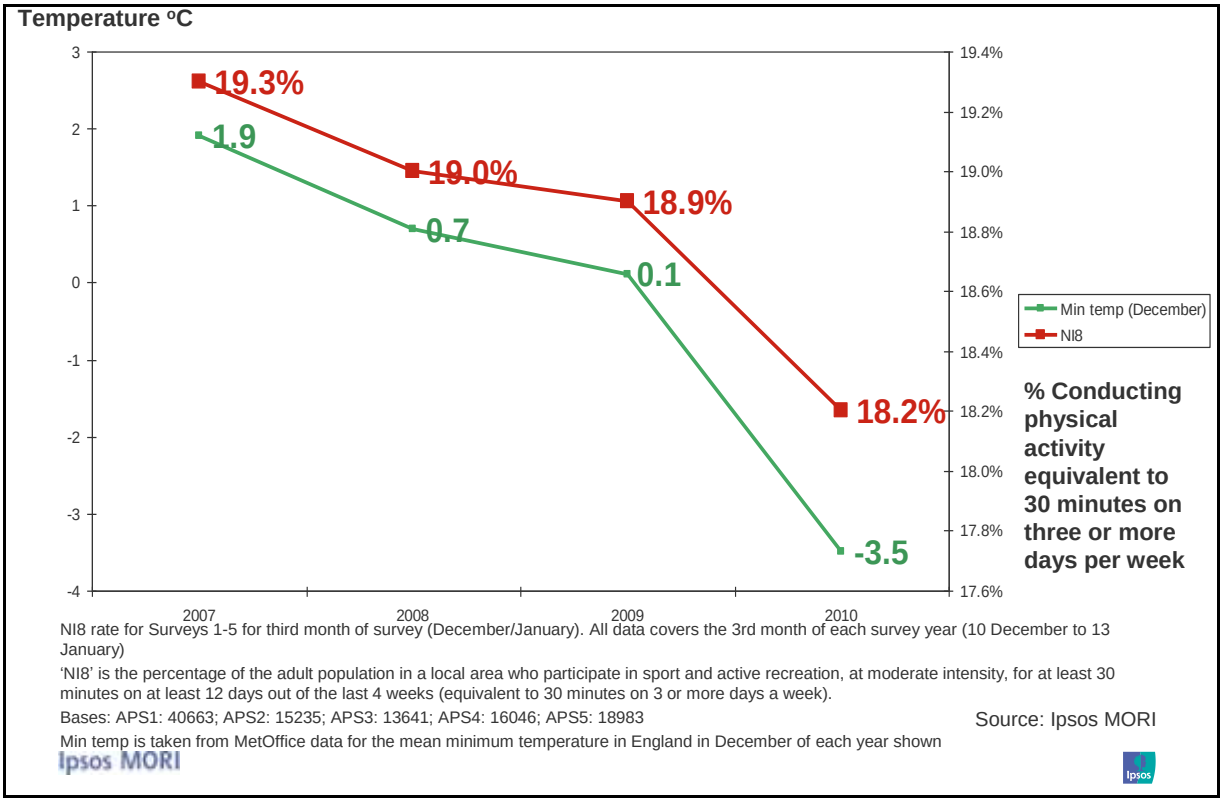

Figure 3 Active People Survey data showing levels of physical activity compared with minimum temperature in December

3.12 Levels of physical activity for those who have participated in WfH are greater than those in the general population. This is shown by comparing results of this survey with those of the Active People Survey. As shown above, in December 2010, around 18% of the population conducted physical activity equivalent to 30 minutes on three or more days per week, while in April and October 2010 this figure was 22%[5]. As already shown, around half of those participating in WfH conducted this level of physical activity.

England: Targets

3.13 Figure 4 shows the extent to which WfH has met its overall objective of encouraging people to become more physically active. It shows what proportion of those who previously did nought to two days physical activity continue to do so, and what proportion now do three or more days. It also shows the direction of travel for those who were previously doing three or more days, to see to what extent they have continued to do so, or have reduced their level of activity to nought to two days.

3.14 While 30% of those who previously did nought to two days physical activity now do three or more days. This is offset by 39% of those doing three or more days reducing their levels of physical activity from three or more, down to nought to two.

3.15 Encouragingly, the proportion of respondents who increased their level of physical activity from nought to two, to three or more, was higher amongst those active in WfH compared to those no longer active (34% compared with 27%). While active respondents who had previously done three or more days, were more likely to maintain this than those who are no longer active in WfH (63% compared to 59%).

[5] Data from National Indicator 8, recorded as part of Active People Surveys 4 and 5

3.16 These findings suggest that WfH is playing a role in helping those who are active in the scheme to maintain their levels of physical activity and, in some cases, to increase the amount of activity that they are doing per week.

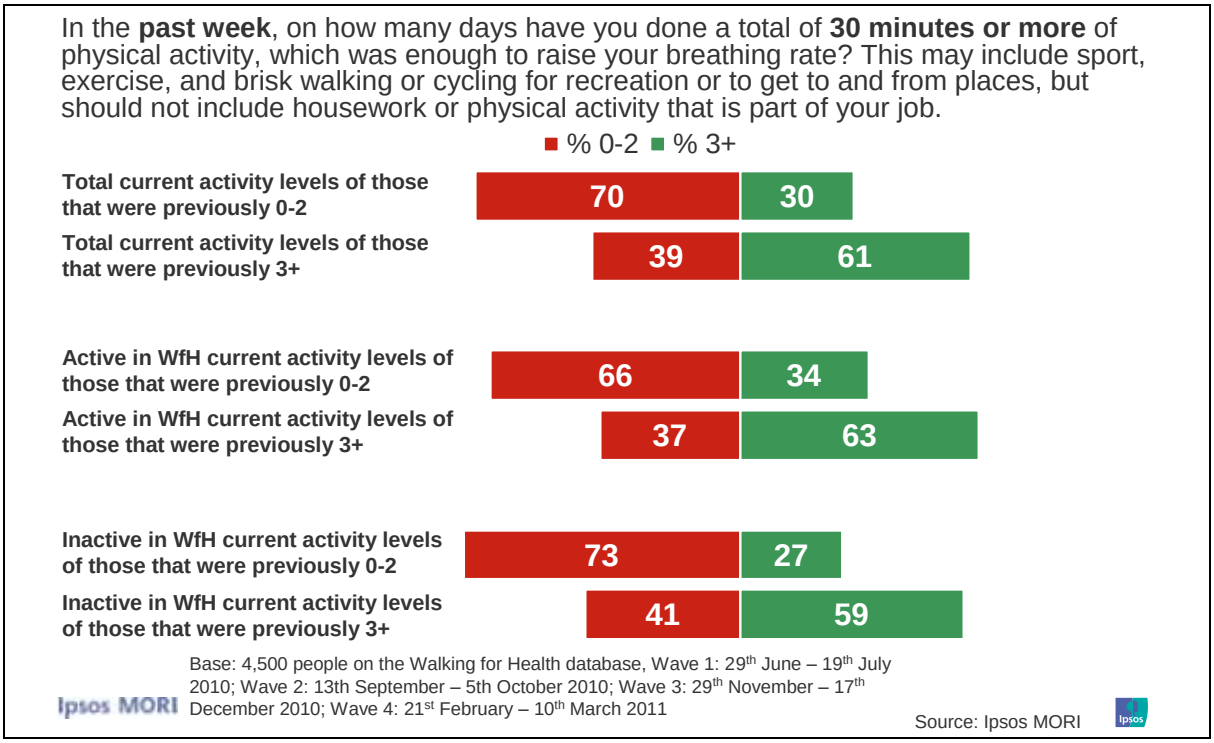

Figure 4 Targets: England

3.17 Figures 5-7 show the previous and current levels of physical activity, broken down by average number of days, from nought to seven. The average number of days of physical activity is also shown.[6] The charts show figures for all respondents (figure 5), those active in WfH (figure 6) and those no longer active (figure 7).

3.18 Positively, the average number of days on which respondents conducted physical activity has increased, 2.91 days to 2.98 days. However, the increase is more marginal for those active in WfH (3.12 to 3.15 days) than those no longer active (2.72 to 2.81).

3.19 These charts also highlight another key finding from this research; that WfH appears to cause sustained behaviour change in those who previously did not participate in any physical activity. Previously, 17% of respondents who are active in WfH stated they did not do any exercise, and this has now reduced to 6%. There is also a similar pattern for those who are no longer active in WfH (22% to 13%), although proportionately the decline is not as sharp as it is for those active in WfH.

[6] To calculate the average number of days on which respondents had done physical activity, a mean was taken of each respondent's answer across all four waves. The data for all respondents was then amalgamated, to produce a second average.

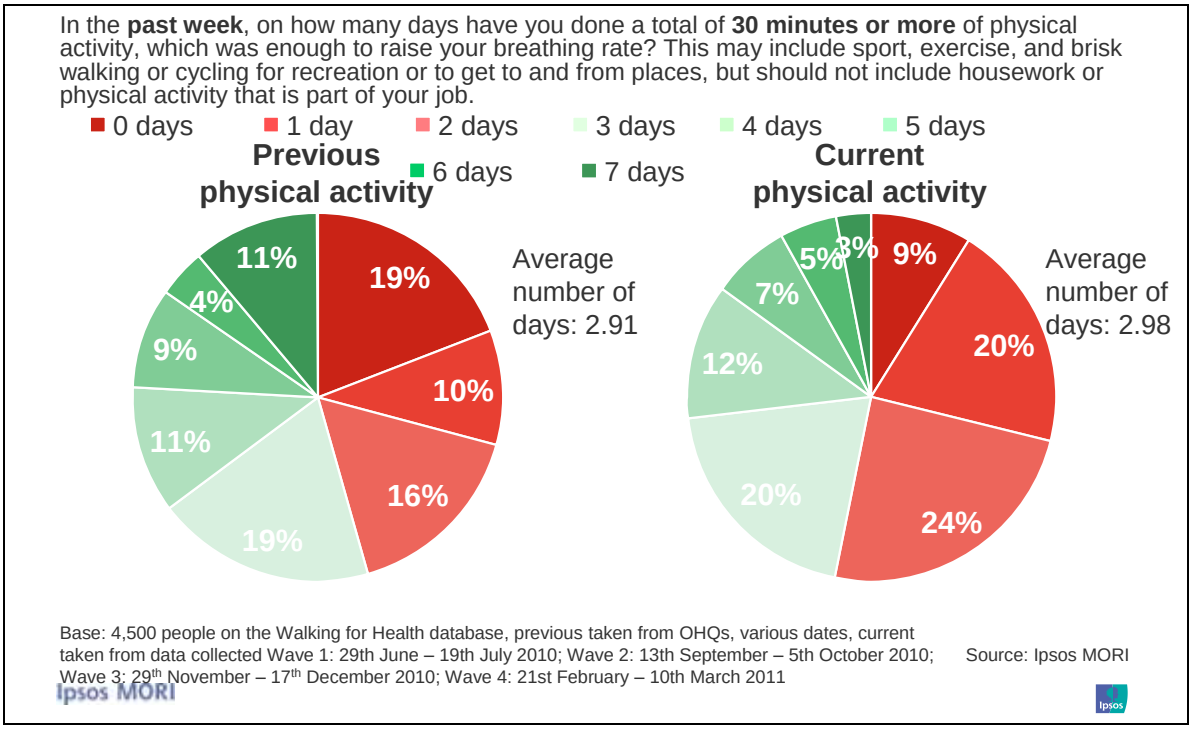

Figure 5 Spread of activity

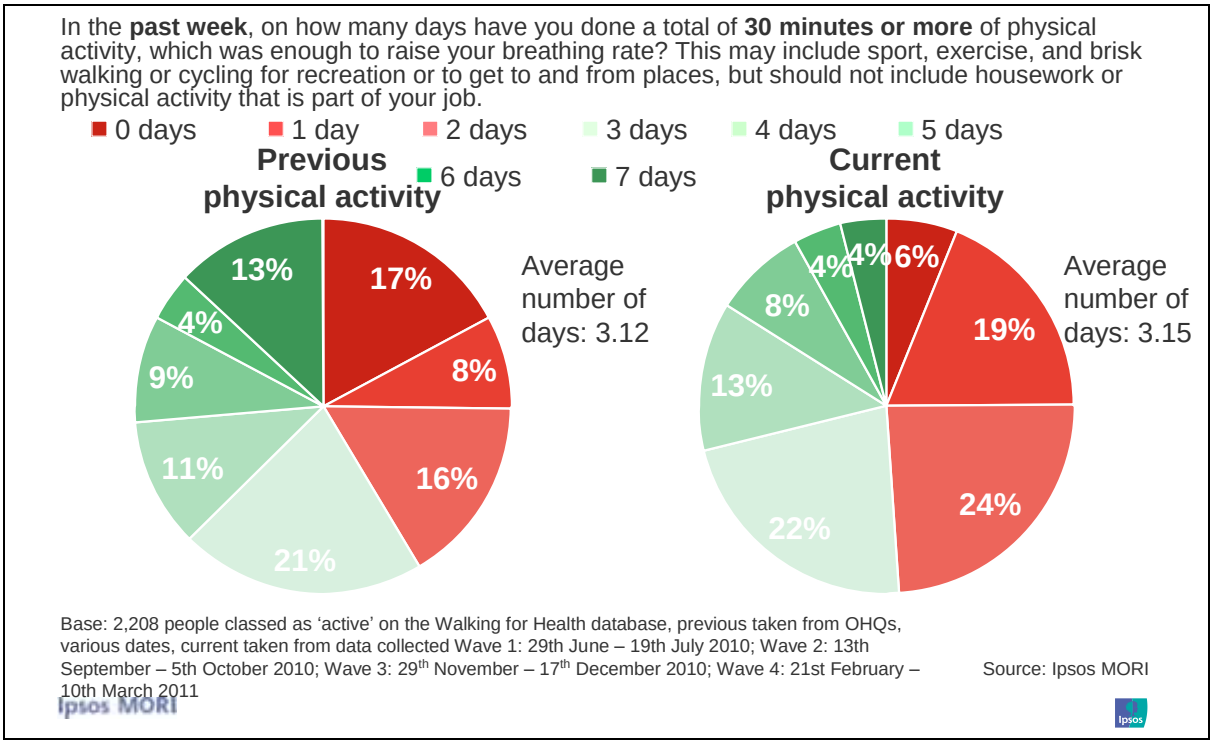

Figure 6 Spread of activity - Active respondents

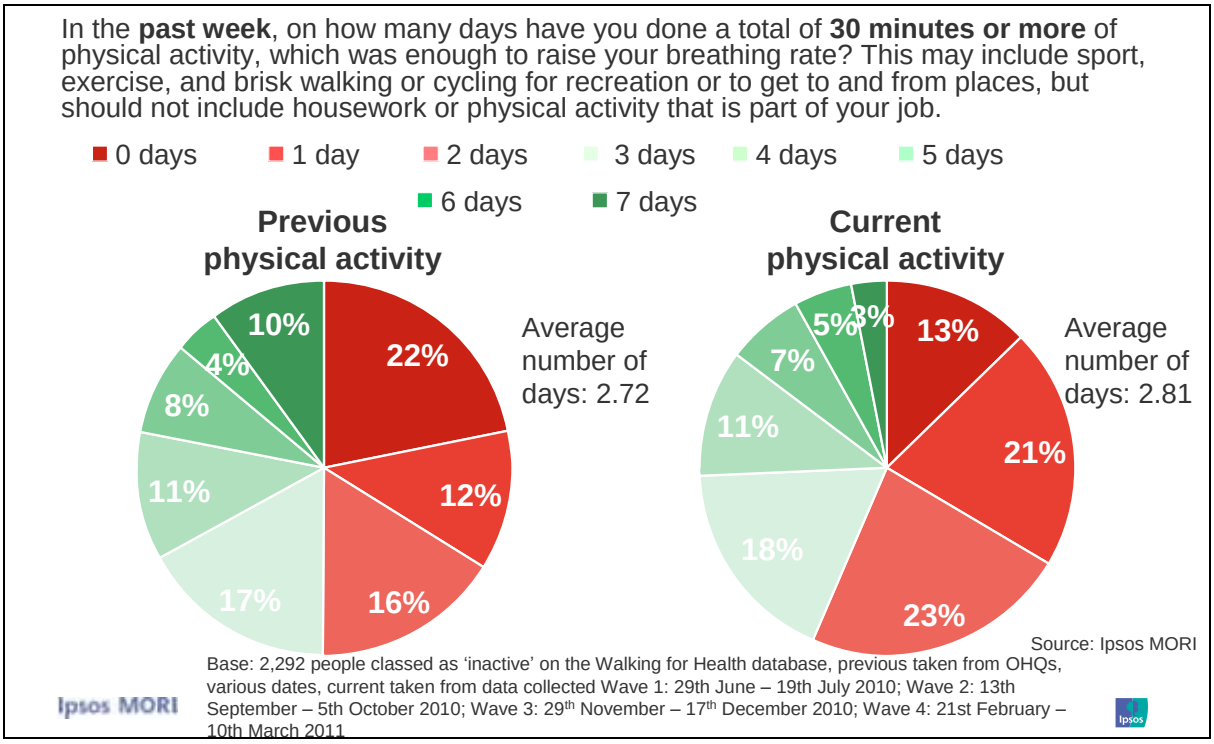

Figure 7 Spread of activity - Inactive respondents

3.20 Figure 8 shows overall changes in the amount of physical activity being done for all respondents. A third (33%) of respondents are now doing, on average, more physical activity than they were when they joined WfH. Twenty-one percent are doing the same amount of activity, whilst 47% are now doing less activity than previously.

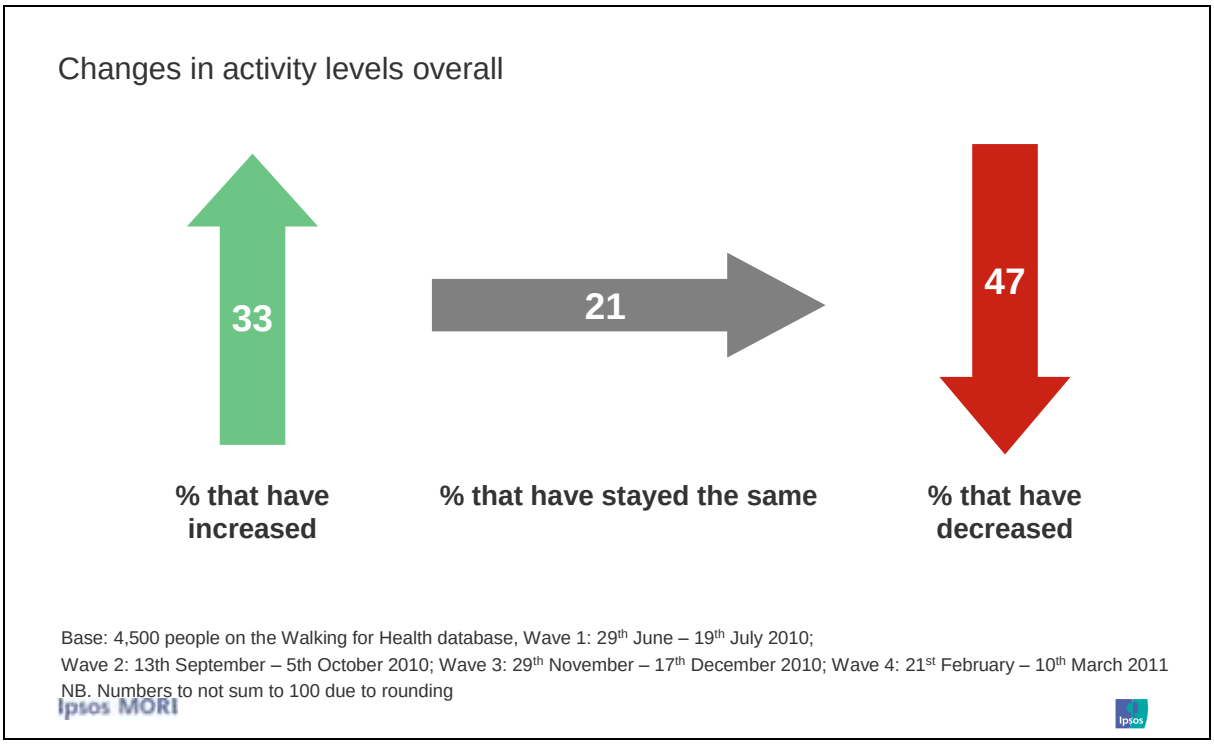

Figure 8 Increases and decreases in physical activity

3.21 Figure 9 also shows changes in the levels of activity being done. However, the data has been broken down to show the relative changes for those previously doing nought to two days of physical activity and those previously doing three or more days.

3.22 Positively, when the data is broken down by previous physical activity in this way, 56% of those who were previously doing physical activity on nought to two days per week are now doing more exercise than they were previously. This suggests that WfH is encouraging those who previously did very little exercise to increase the amount that they undertake per week. However, it should be noted that the 19% who previously did no activity, could only either continue or improve upon this.

3.23 Less positively, this breakdown also shows that 70% of those who were previously doing physical activity on three of more days are now doing less activity per week, whilst 13% of respondents in this group have increased the amount of physical activity that they are doing. The fall in the amount of exercise undertaken amongst this group may be due to natural ageing as already discussed. Furthermore, it would clearly be impossible for the 11% of respondents who were previously doing seven days of physical activity per week to increase their level of activity.

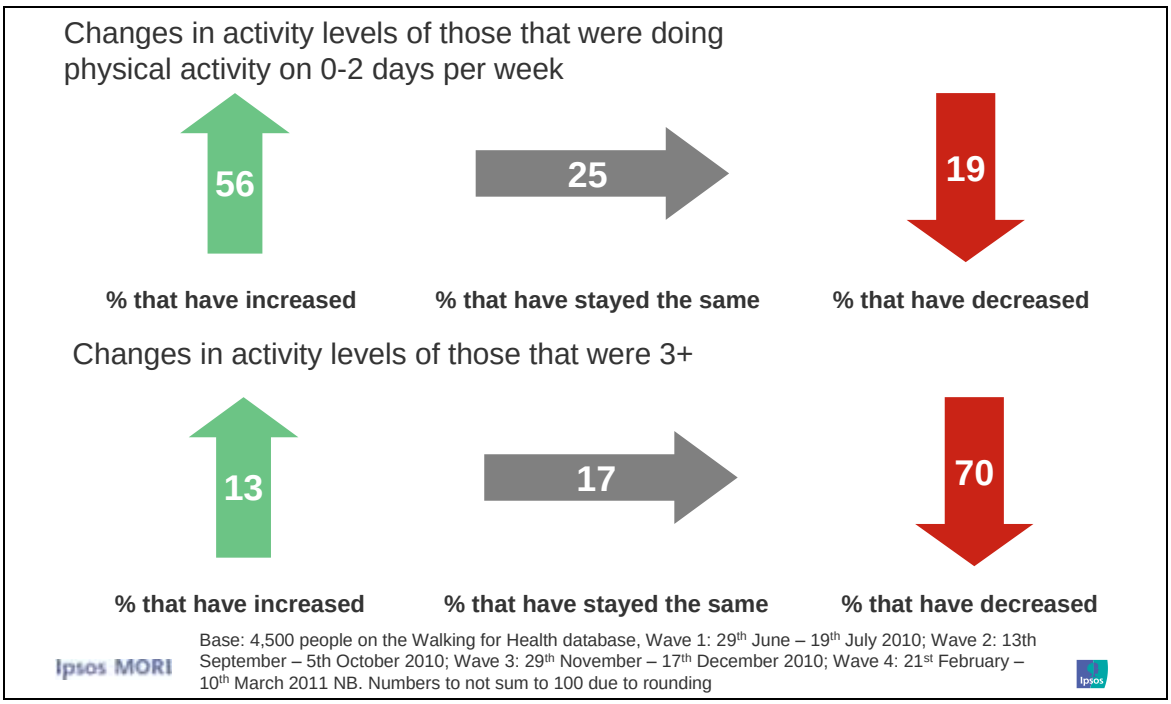

Figure 9 Increases and decreases in physical activity by original activity levels

3.24 Figure 10 shows increases and decreases in physical activity by active and inactive respondents. There are no notable differences between these two groups.

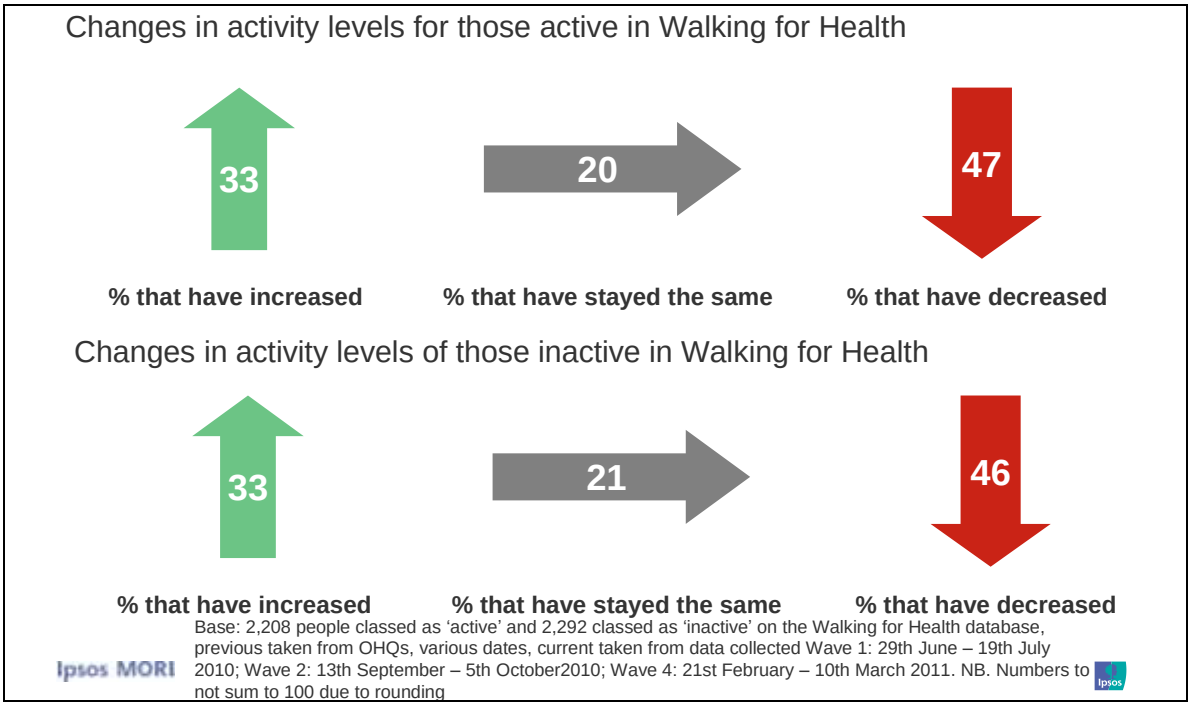

Figure 10 Increases and decreases in physical activity by participation in WfH

England: Demographic differences

3.25 The decline in levels of physical activity previously discussed was seen across all age bands. The following charts show that, unsurprisingly, this fall was greatest amongst the older age groups. In the 16-54 age groups and the 55-64 age groups, the proportion of respondents doing physical activity on three or more days fell by eight and seven percentage points respectively. However, in the 65-74 and 75+ groups, the proportion doing this fell by 13 and 12 percentage points respectively.

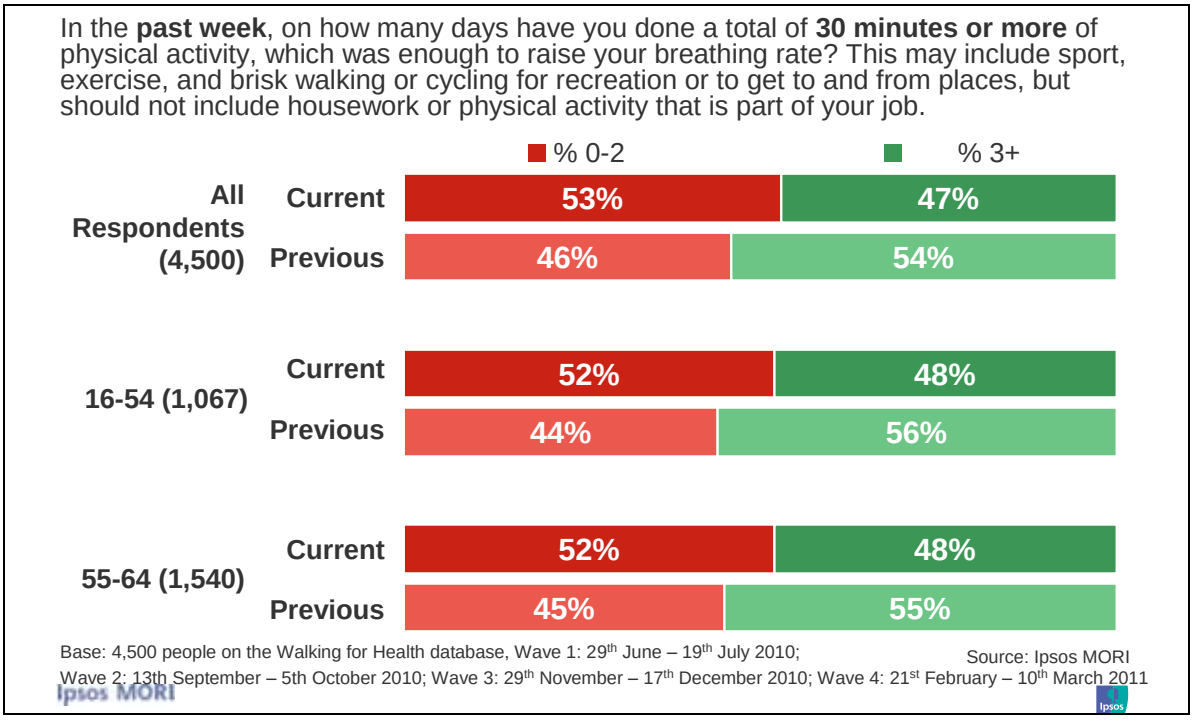

Figure 11 Physical activity levels - Age bands in England

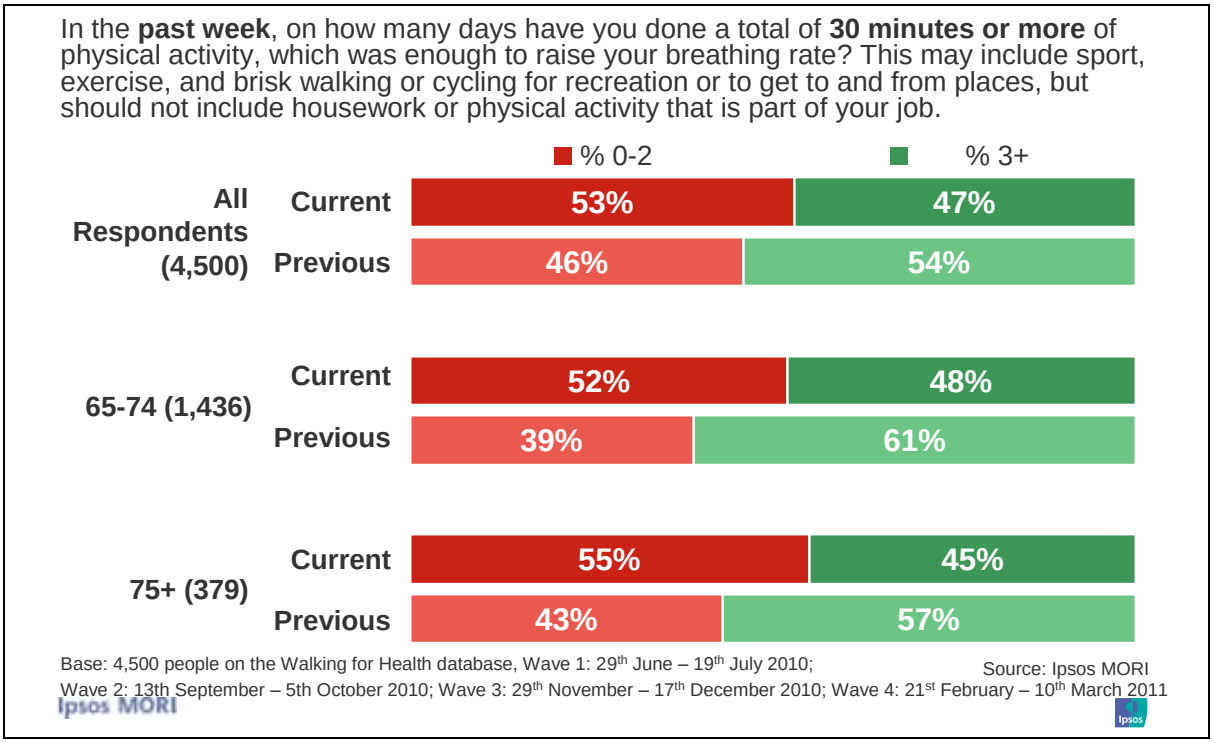

Figure 12 Physical activity levels - Age bands in England

3.26 Figure 13 shows the relative current and previous physical activity levels of male and female respondents. Male respondents saw a greater decline in physical activity than female respondents. Amongst female respondents the proportion doing physical activity on three or more days fell from 51% to 46%, whilst amongst male respondents it fell from 62% to 50%.

3.27 One reason for this could come from the research conducted with inactive walkers, who stated that they enjoyed the social aspect of WfH. As there are more women than men involved in WfH, it can be argued that it appeals more to women, and the social aspect for women helps them to maintain their involvement.

3.28 However this does not account for the number of days on which respondents conduct physical activity, as these may not necessarily be through WfH.

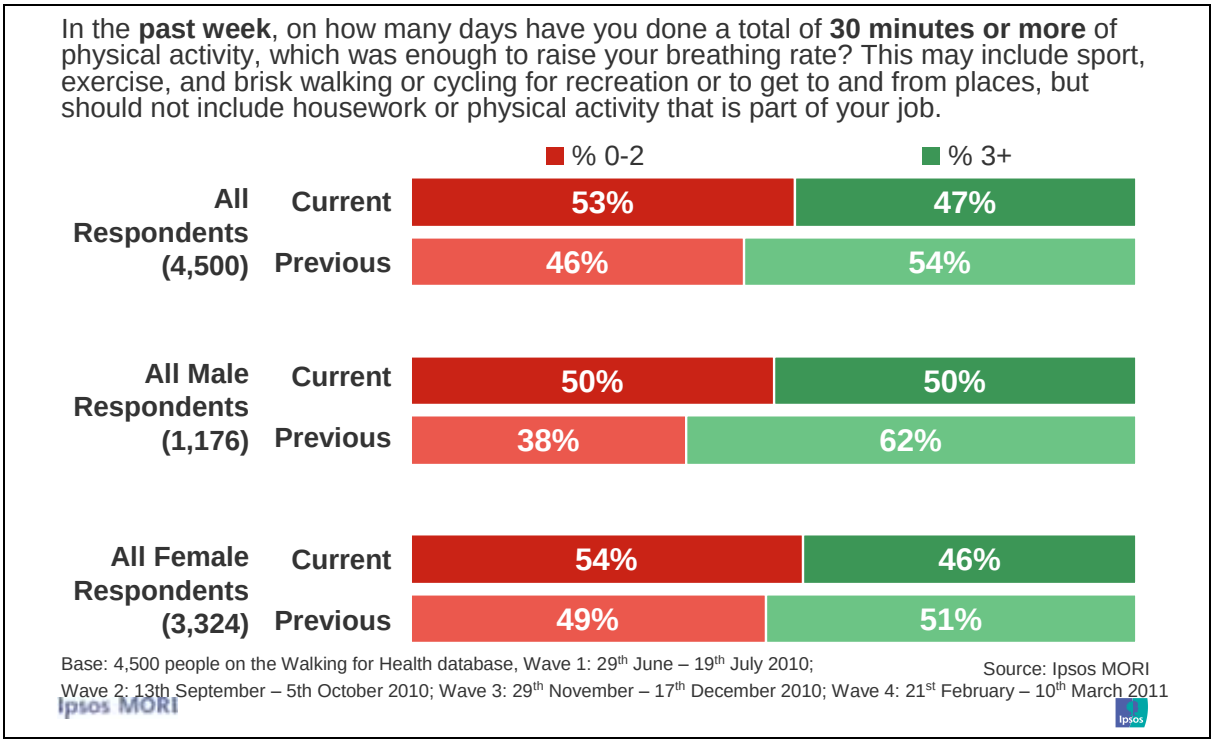

Figure 13 Physical activity levels - Gender in England

3.29 Figure 14 shows changes in physical activity level by ethnicity. There was a drop of ten percentage points in the proportion of white respondents doing physical activity on three or more days per week. Black and minority ethnic (BME) respondents saw a similar fall (eight percentage points).

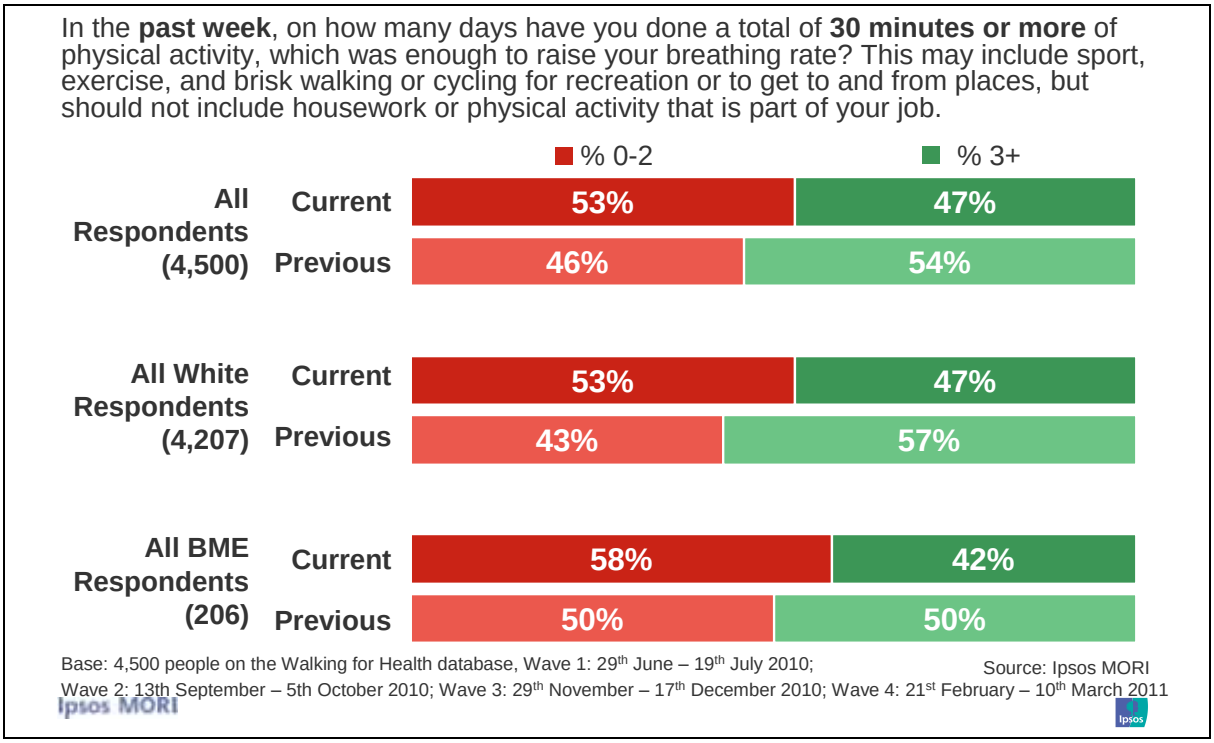

Figure 14 Physical activity levels - Ethnicity in England

3.30 Figure 15 shows changes in physical activity levels by respondents' health screening status. This was taken from their responses to the OHQ. In the chart, 'Yes' refers to all respondents who said that they have any one of the following problems: heart condition, balance issues, joint/bone issues or chest pain. Respondents in this group were more likely than those without any of these health conditions to have seen a sharper decline in the proportion doing three or more days physical activity (a decrease of twelve percentage points for those with health conditions, compared to six percentage points for those without).

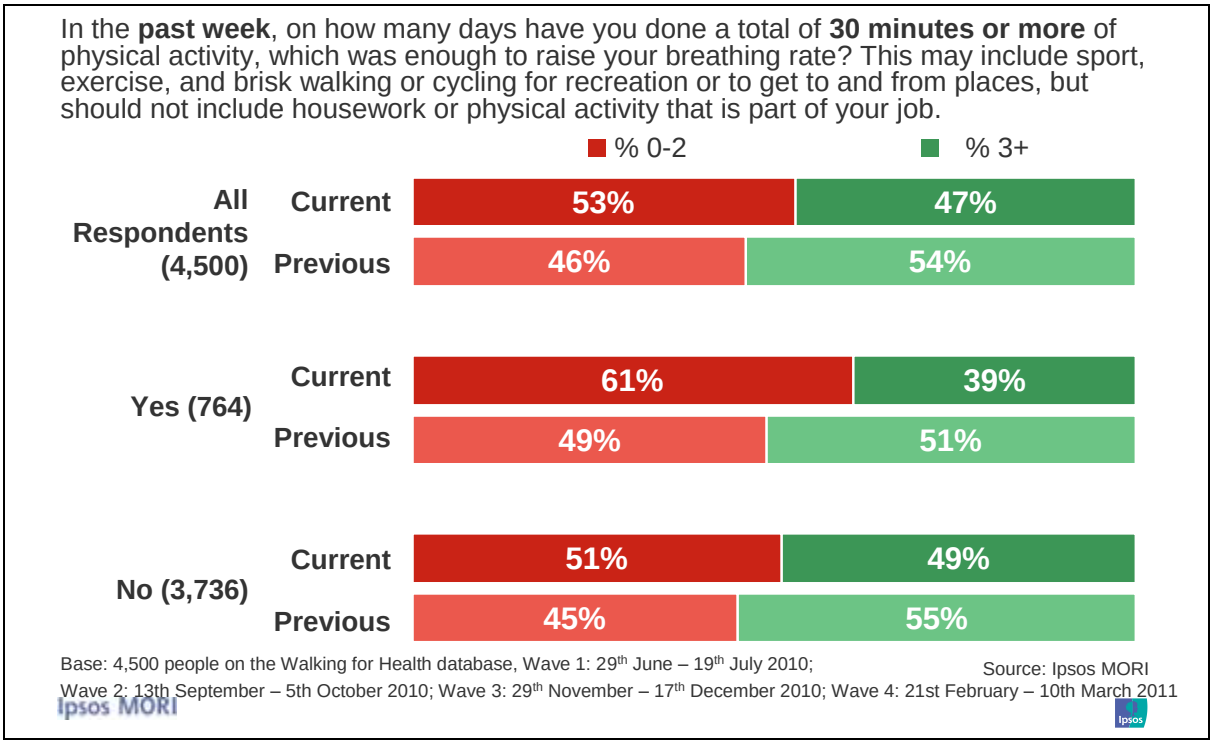

Figure 15 Physical activity levels: Health screening

3.31 For the purposes of this survey, data regarding respondents' health diagnoses were also taken from the OHQ database. Respondents were divided into those with high blood pressure, those who answered 'yes' to any other diagnostic questions, (heart disease, COPD, diabetes, asthma), and those with no health problems. Figure 15 shows changes in physical activity levels for these groups.

3.32 In keeping with the overall results, respondents across each of these groups have reduced their levels of physical activity. The sharpest decline was for those with high blood pressure (nine percentage points).

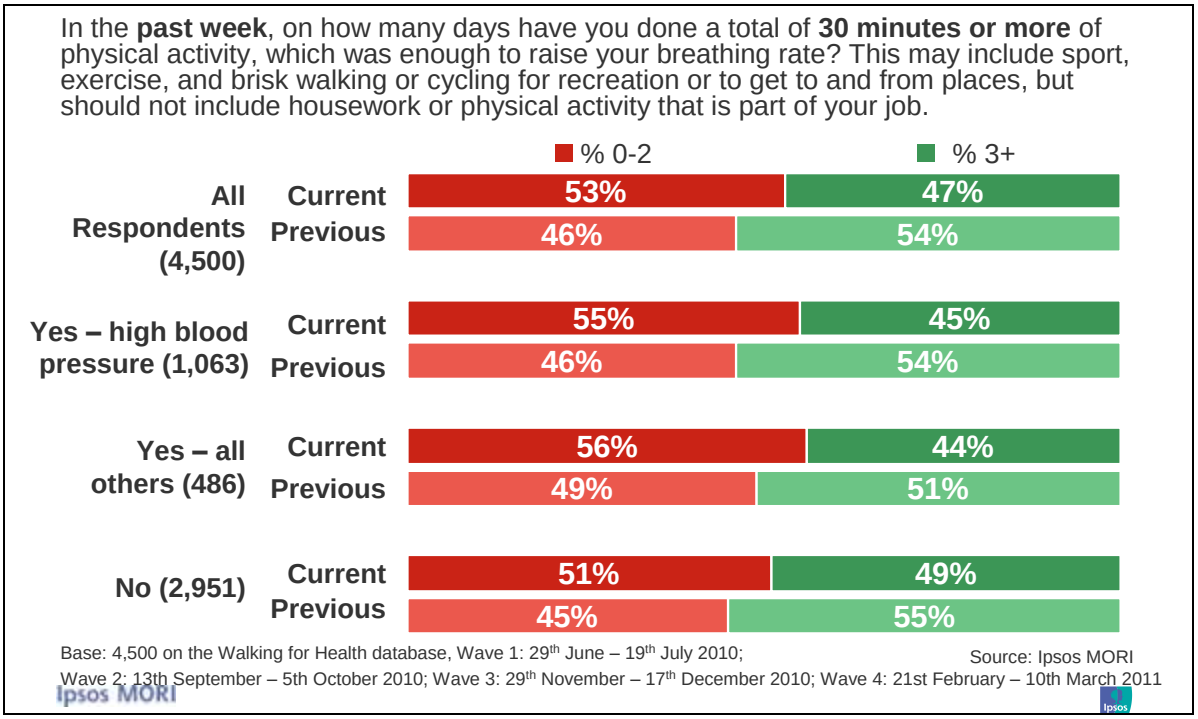

Figure 16 Physical activity levels: Health diagnosis

Regional findings

3.33 The national decline in the proportion of respondents doing physical activity on three days or more is repeated across the regions. Details for each region can be found in Appendix A.

3.34 The greatest decreases in physical activity are to be found in the North East and Yorkshire and Humberside where the proportion doing the higher level of physical activity fell from 62% to 51% and from 58% to 46% respectively. These areas were particularly affected by the extreme weather conditions experienced across England in December 2010, and this could account for the more pronounced decline in these regions.

3.35 The smallest decreases are in London and the West Midlands, where the proportion of respondents who are doing physical activity on three or more days has dipped from 51% to 48% and from 48% to 45% respectively. These decreases are not significant and therefore it can be argued that levels of physical activity in these regions were maintained. Positively, in every region a greater proportion of those active in WfH than those no longer active are currently doing physical activity on three or more days per week.

3.36 A further encouraging finding is that in most regions active respondents are more likely than those who are no longer active in WfH to be stepping up from nought to two days physical activity per week to three or more days. The exceptions to this are the South West and London. In addition, in most regions, respondents who are active in WfH are more likely to be maintaining three or more days physical activity than those no longer activity in WfH. The exceptions to this are West Midlands and Yorkshire and Humberside.

3.37 The decline in physical activity across every age band at a national level was mostly repeated across the regions. However, there were a couple of exceptions. In London, the proportion of respondents aged 16-54 doing physical activity on three or more days per week rose slightly from 46% to 49%. In the East of England the proportion of respondents aged 75+ doing physical activity on three or more days also rose slightly, from 40% to 44%. However as discussed in the methodology section, these figures are less than 4.4% so the change should be treated with caution.

4 Conclusions

4.1 When the survey results for all four waves are averaged, the proportion of respondents conducting physical activity on three or more days per week has decreased. This is found across all regions, gender groups and age groups with the exception of those aged 55-64 in East Midlands and those aged 16-54 in London.

4.2 As shown in figure 4, the overall results were clearly affected by the substantially lower levels of activity in wave 3 where the fieldwork period coincided with a prolonged spell of severe winter weather in December 2010. This is the only survey wave where levels of physical activity decreased. However, the increases outside of wave 3 are relatively modest, and so the question might be asked as to why WfH has not had a more significant impact on levels of physical activity.

4.3 The qualitative research conducted with inactive walkers in summer 2010 provides some potential explanations for this. This research found that Walking for Health might be used both as a way of 'stepping down' to reduced levels of physical activity, as well as 'stepping up' to higher levels of activity. Some of those interviewed found WfH a 'step up' as they had recently recovered from a short illness or accident that had temporarily forced them to do less exercise, or they had not previously been particularly active. Others interviewed who used to be more active found using WfH as a useful 'step down' to allow them to continue to be active despite declining health.

4.4 Results from the telephone survey support the idea of 'stepping down' as those who have long term health conditions (as identified in the OHQ), and those who are older (aged 65+), are more likely to have reported a lower level of physical activity than on their OHQ. Due to this, it may be that WfH does not in fact lead to a sustained increase in physical activity of its participants, as for those who are 'stepping down' this is not the intended outcome of their participation in WfH. There is however no particular evidence from the telephone survey to support the idea of 'stepping up'.

4.5 This said, there are some positive findings from the survey which indicate WfH is having a sustained impact on participants' levels of physical activity. Firstly, the average number of days on which respondents conduct physical activity has increased – from 2.91 to 2.98. This increase is not due to an increase in the proportion of doing physical activity on three or more days per week, but rather a decrease in the proportion of those doing zero days.

4.6 This highlights the shift away from participants doing zero days physical activity to doing one or two days per week. Due to the nature of WfH and who it targets, it may be that although not achieving the targets set (of three days or more physical activity), WfH can help to improve the levels of physical activity for some of the most sedentary in society.

4.7 Another positive finding is that those who are 'active' in WfH are more likely to maintain doing physical activity on three or more days per week than those who are 'inactive'. This indicates that while some declines in levels of physical activity cannot be avoided, the WfH scheme actually helps to reduce this effect by enabling some participants to maintain higher levels of physical activity, whether that is through participating in WfH walks directly each week or other forms of exercise.

4.8 WfH seems to have had greatest effect on female participants and those aged 55-64. These were the groups which experienced the lowest levels of decline in physical activity, overall and across most regions. Therefore it can be argued that targeting these groups appears to have worked. Again it must be reiterated there is no empirical evidence the findings are a result of participation in WfH, however it can be stated some people in these groups continue to conduct physical activity on three or more days per week, either due to WfH or other forms of exercise.

4.9 The results lead to the conclusion that although WfH has not achieved the targets set, it has been successful at improving levels of physical activity for the most sedentary, while helping others to maintain higher levels of physical activity.

Appendix A Regional findings

Please note that throughout the regional findings, changes noted in text are significant unless otherwise stated.

East Midlands

Respondents in the East Midlands are more active than those in England as a whole (52% currently doing physical activity on three or more days, compared with 47% overall).

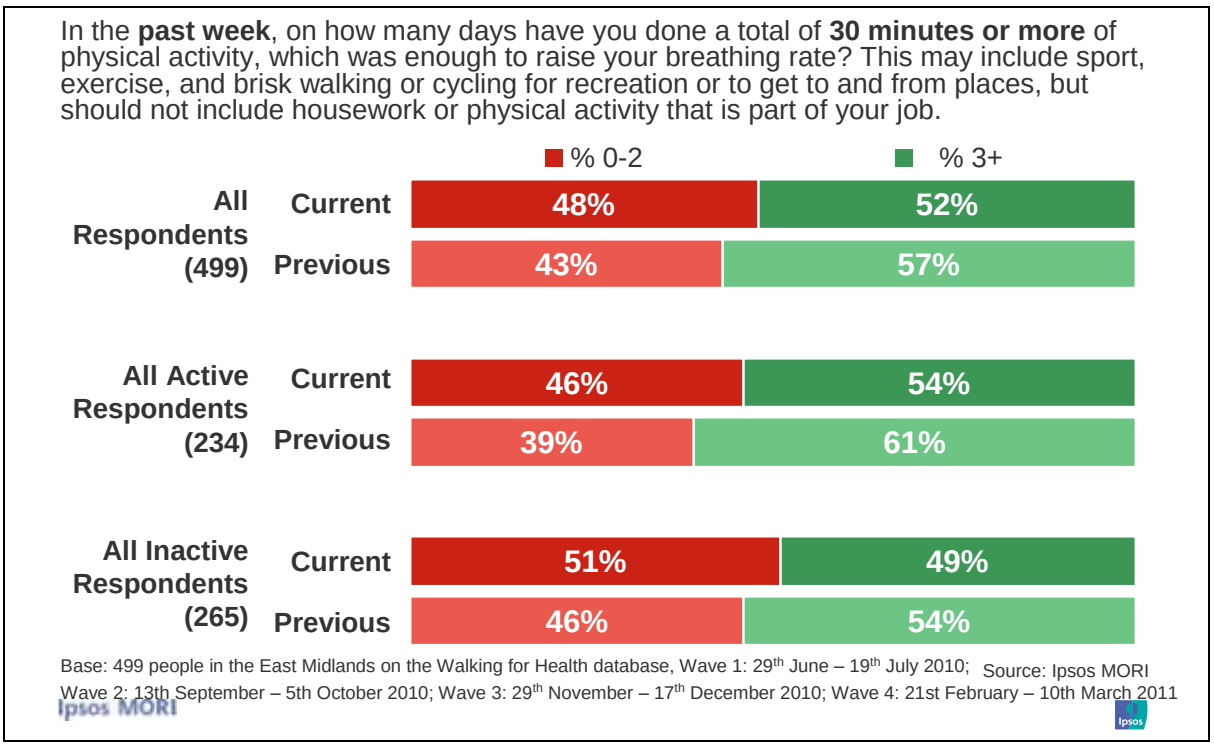

Figure 17 Physical activity levels active/inactive: East Midlands

Two thirds of respondents in the East Midlands who were previously doing physical activity on three or more days per week have maintained this level of physical activity (figure 18). This means respondents in this region are more likely to be maintaining greater levels of physical activity than respondents in England as a whole, where 61% of those who were previously doing three or more days of physical activity are still doing so.

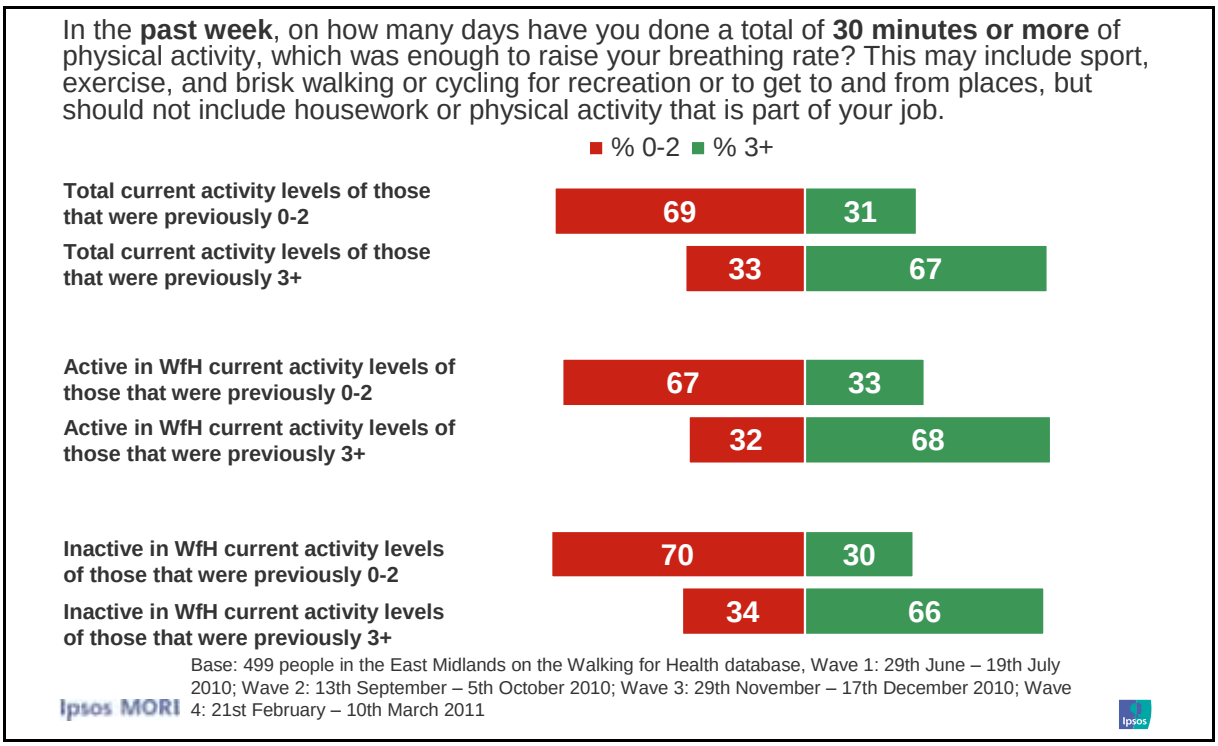

Figure 18 Targets - East Midlands

Reflecting the overall trends in the data, three of the four age groups (16-54, 65-74 and 75+) saw a decline in the proportions doing physical activity on three or more days per week (figure 19).

The East Midlands includes one of the only groups to have increased their level of physical activity, however due to the small base sizes this is not statistically significant.

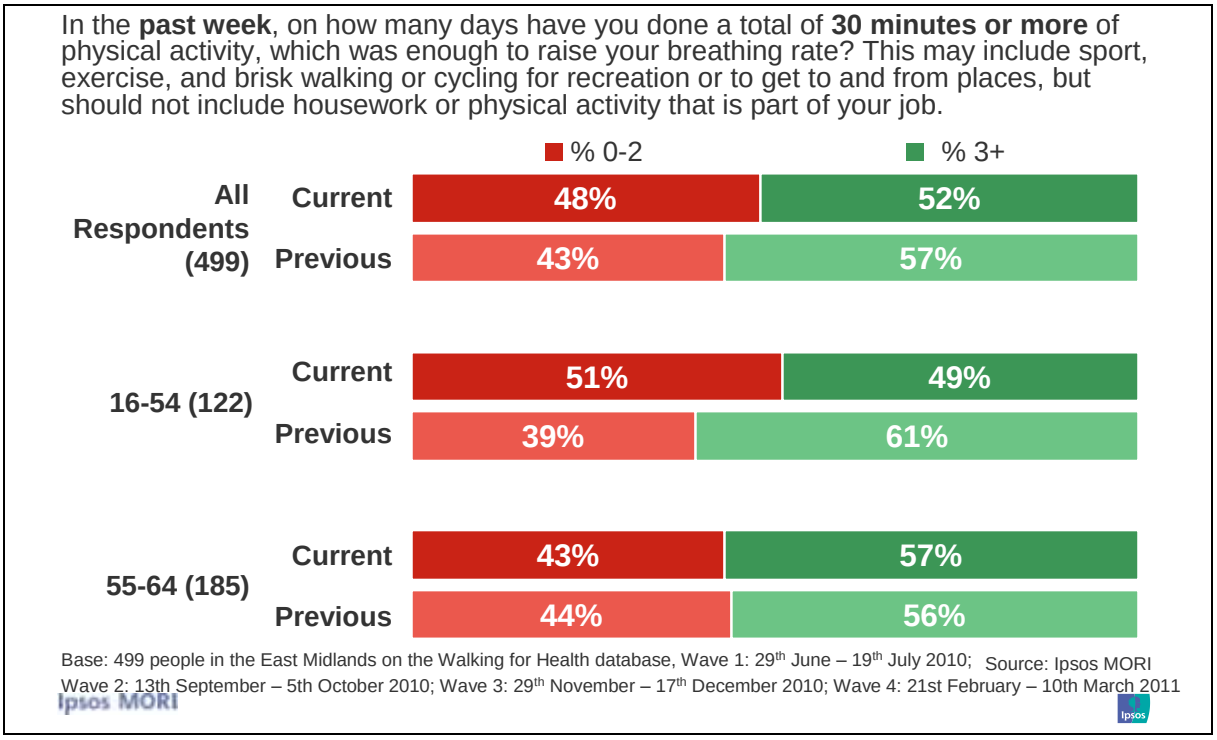

Figure 19 Physical activity levels - Age bands in East Midlands

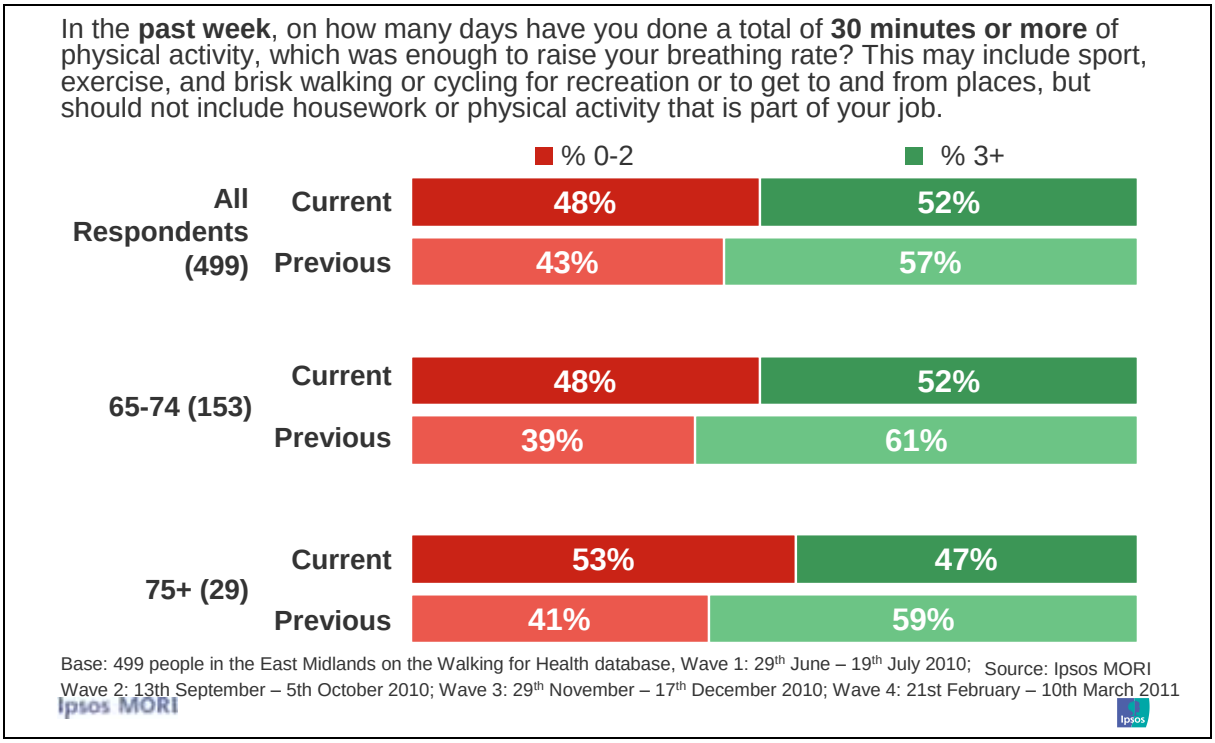

Figure 20 Physical activity levels - Age bands in East Midlands

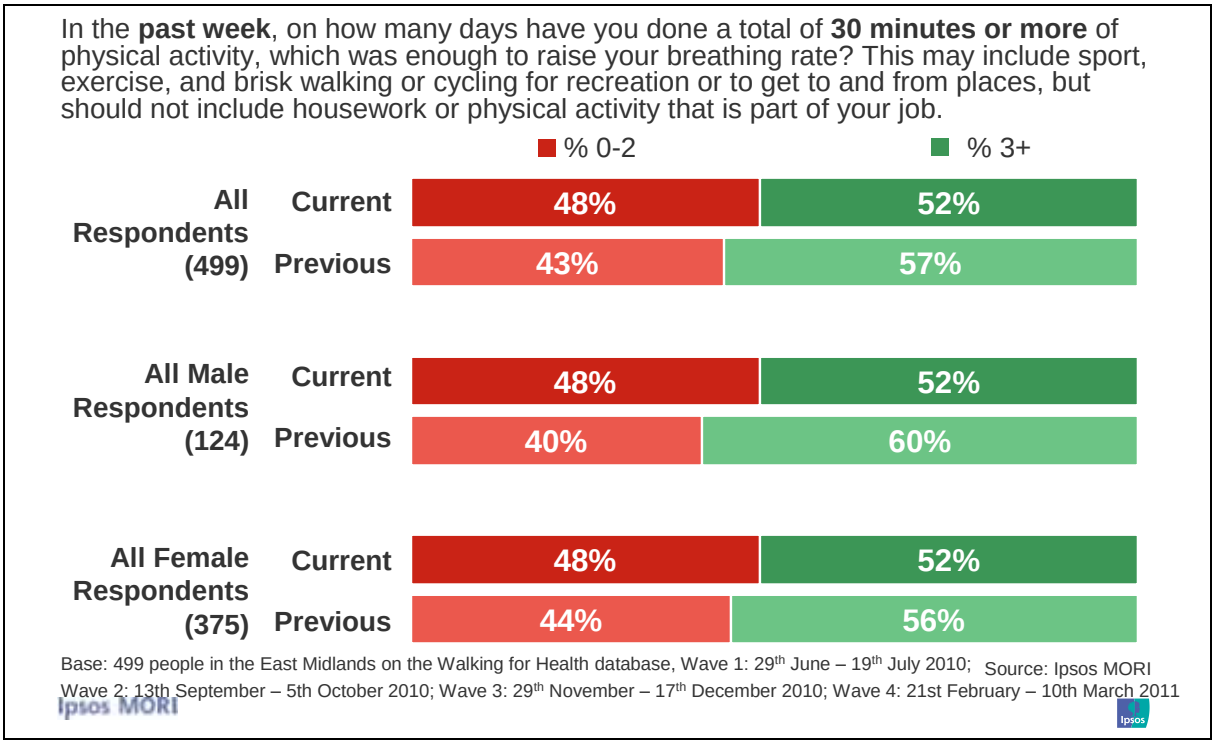

Figure 21 Physical activity levels - Gender in East Midlands

East of England

The proportion of respondents in the East of England doing physical activity on three or more days per week declined from 52% to 44% (figure 22).

The trends in physical activity levels amongst active and inactive respondents in the East of England are similar to those seen in the overall figures. Amongst active respondents, it has fallen from 57% to 47%. The decline amongst inactive respondents is not statistically significant.

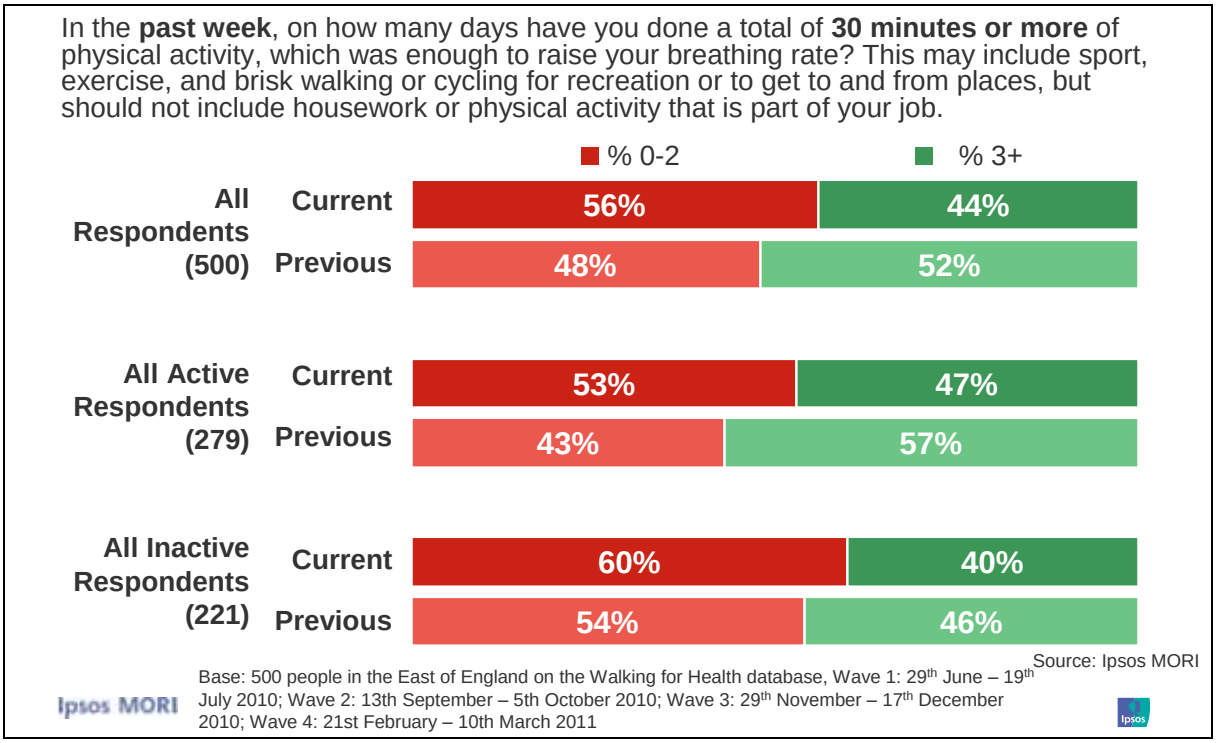

Figure 22 Physical activity levels active/inactive: East of England

Three in five respondents in the East of England who were previously doing physical activity on three or more days per week are maintaining this level of activity (figure 23). This is on a par with the results for England, where the figure is also 60%.

Of those previously doing physical activity on three or more days, 61% of those active in WfH had maintained this and 57% of those inactive. Once again, this is similar to the results for England as a whole, where 63% of active and 59% of inactive respondents who had previously been doing the upper level physical activity continue to do this.

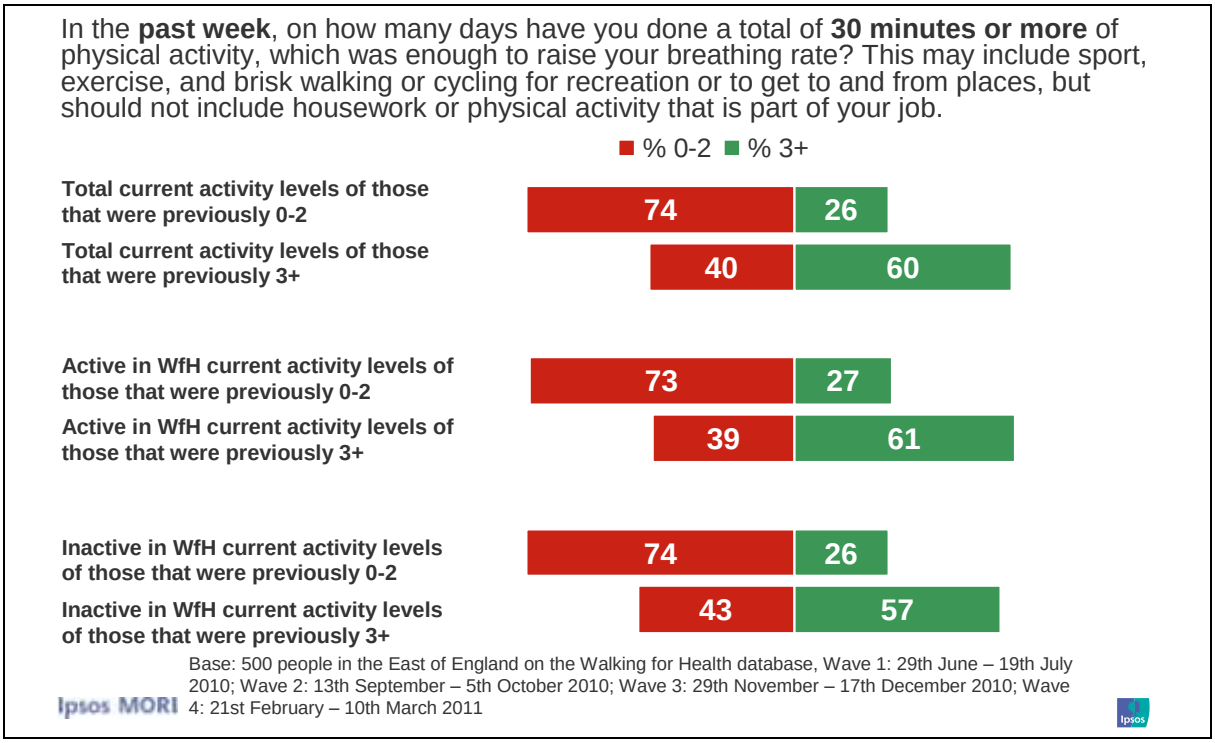

Figure 23 Targets - East of England

The proportion of respondents in the 75+ age group in the East of England who are currently doing physical activity on three or more days per week has increased slightly (figure 25); however, due to the small base size this is not statistically significant.

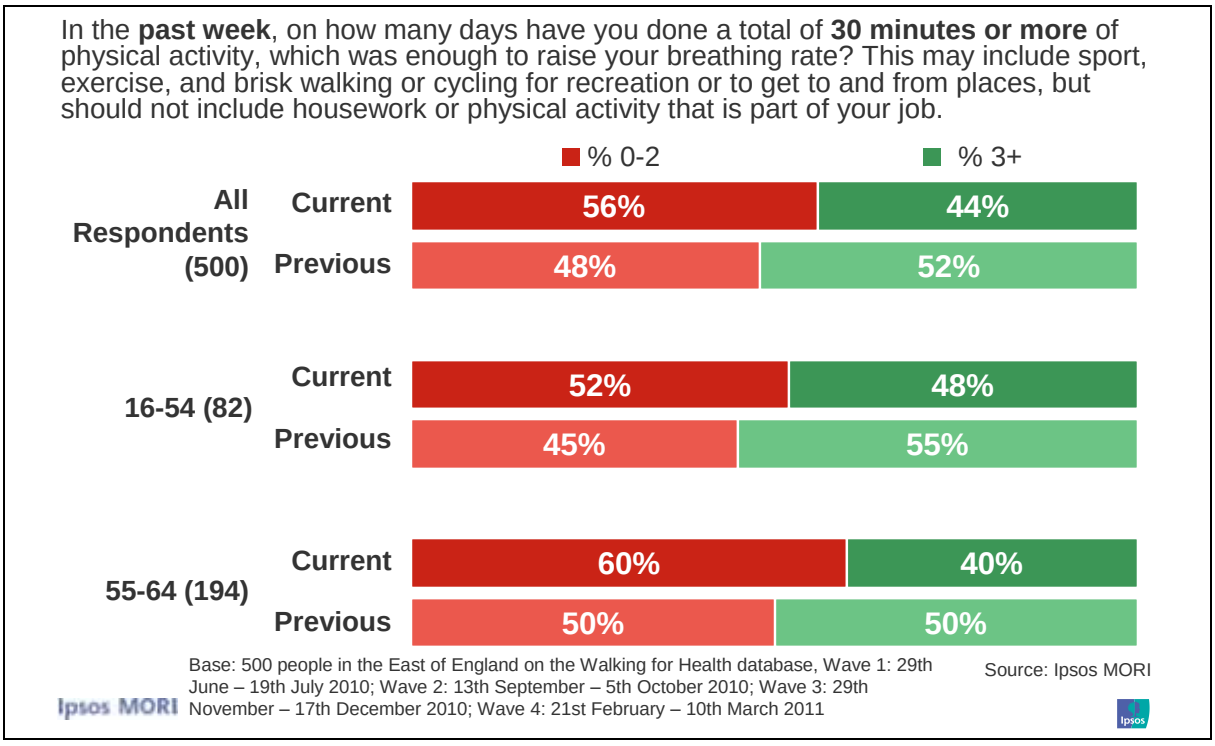

Figure 24 Physical activity levels - Age bands in the East of England

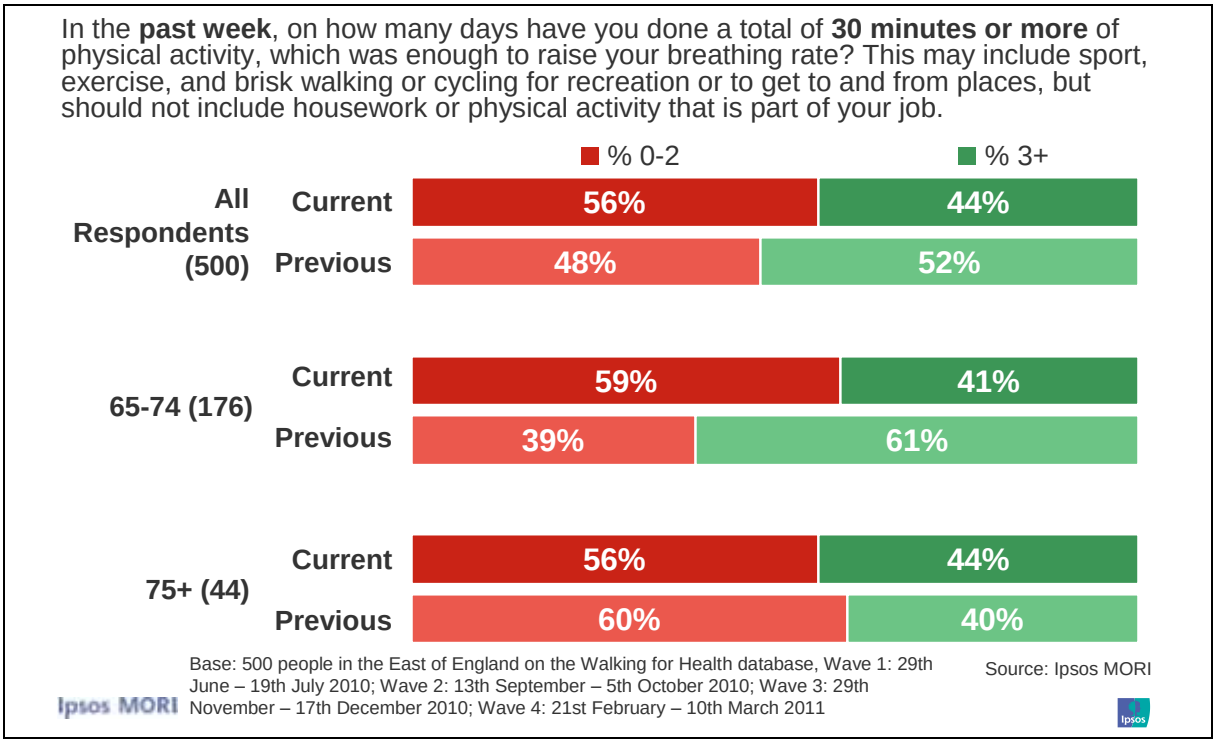

Figure 25 Physical activity levels - Age bands in the East of England

As in the overall results, male respondents in the East of England saw a greater decline in physical activity than female respondents. The proportion of men doing physical activity on three or more days per week fell from 64% to 49%, a drop of 15 percentage points (figure 26).

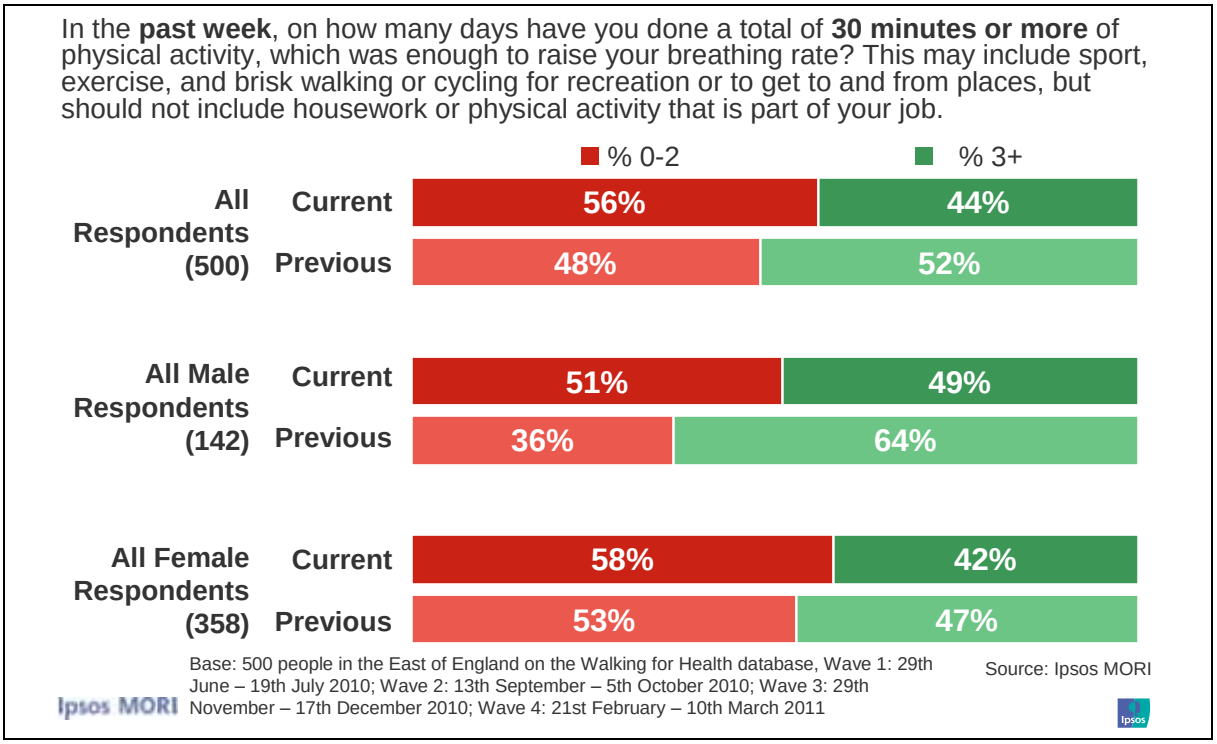

Figure 26 Physical activity levels - Gender in the East of England

London

The proportion of respondents in London who are currently doing physical activity on three or more days per week is on a par with the national figures (48% and 47% respectively). Due to the small base sizes in this region, results are not statistically significant.

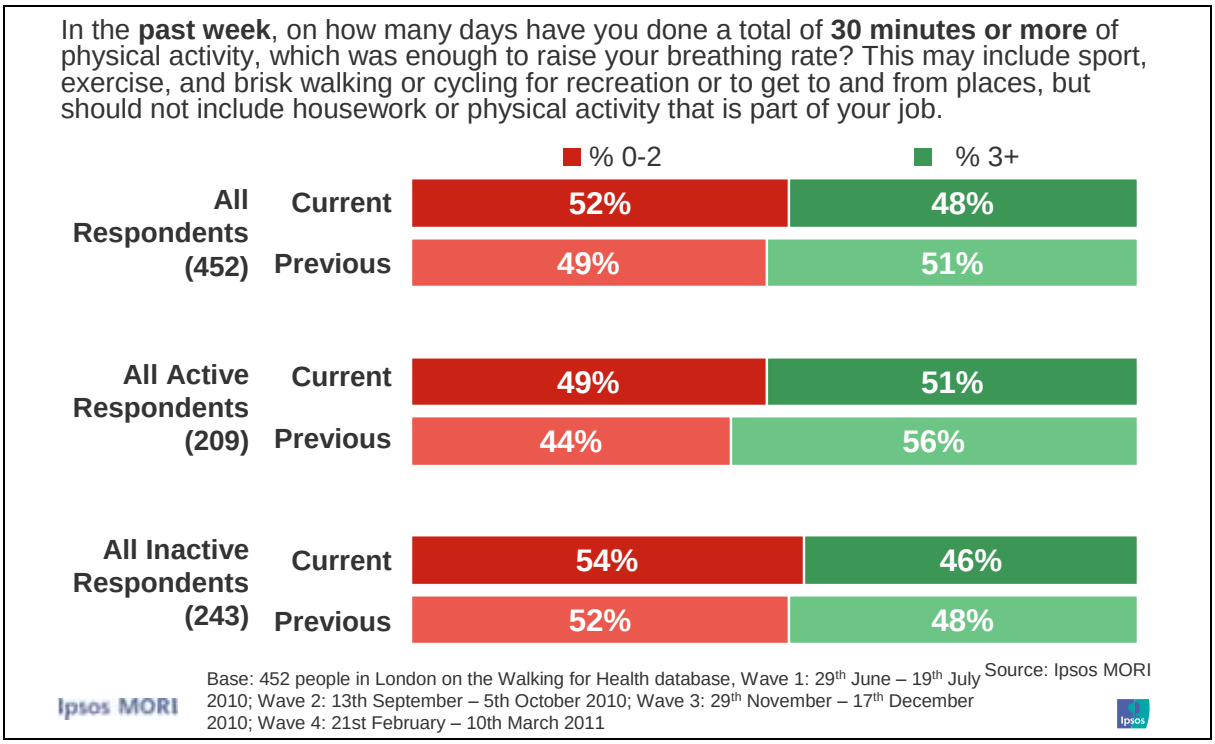

Figure 27 Physical activity levels active/inactive: London

Overall, 65% of respondents in London who were previously doing physical activity on three or more days are still doing so. The equivalent figure for those active in WfH is 69% (figure 28). These results are similar to those found at the national level.

As in the overall results, respondents who are active in WfH are more likely to be maintaining three days or more of physical activity than those who are inactive (69% compared with 61%).

Thirty-two percent of inactive respondents in London who were previously doing nought to two physical days are now doing three or more days. In contrast, 27% of active respondents in the same category are now doing three or more days.

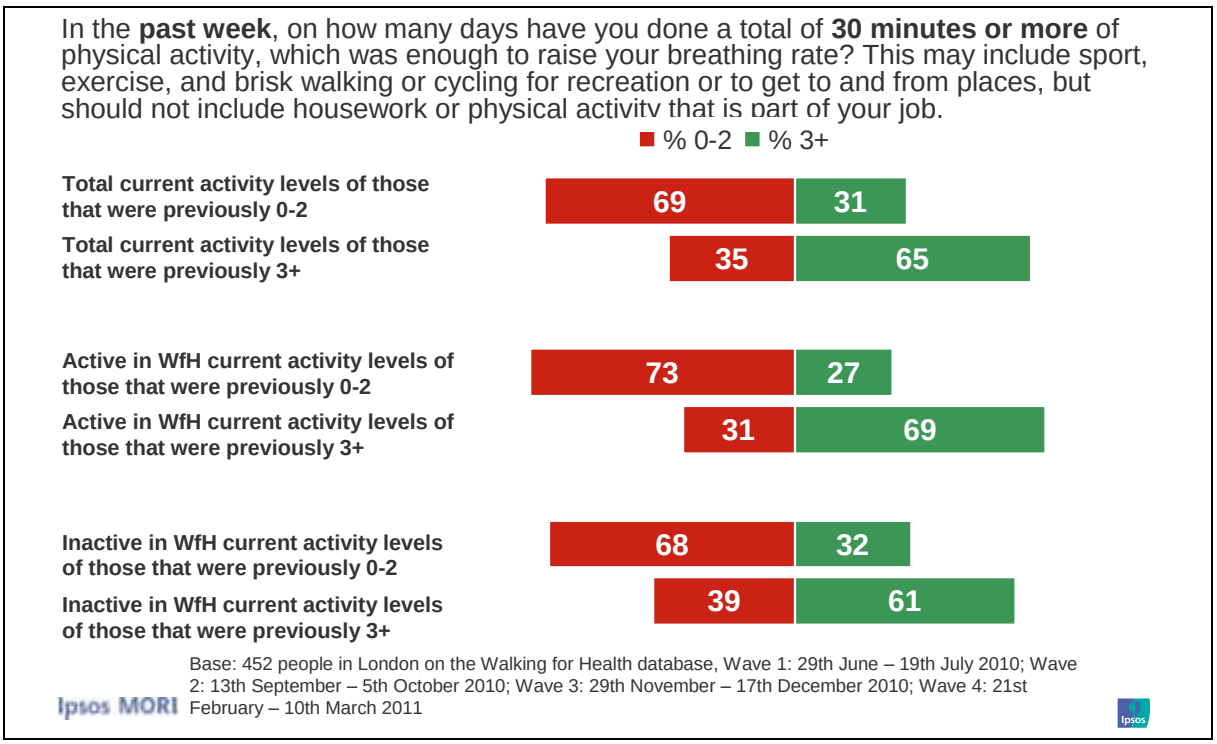

Figure 28 Targets - London

The data in figure 29 suggests the proportion of respondents in London aged 16-54 who are doing physical activity on three or more days per week has risen, however as already stated, due to the small base size this is not statistically significant.

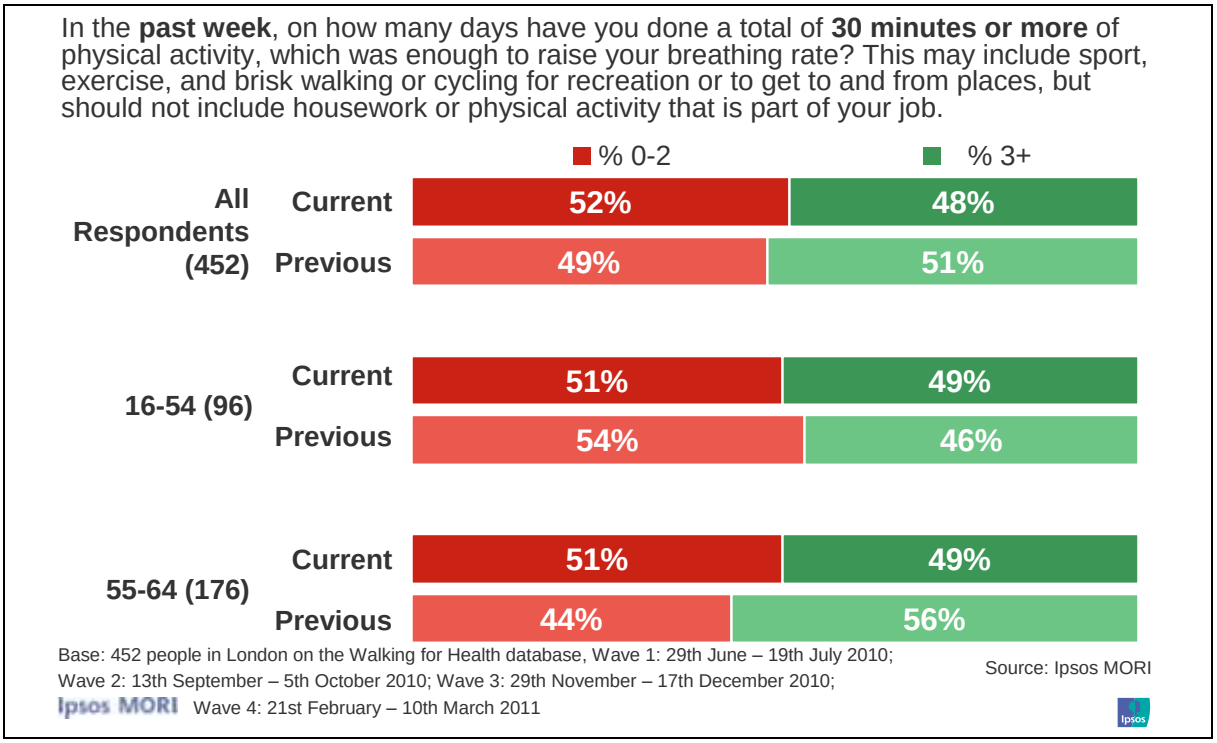

Figure 29 Physical activity levels - Age bands in London

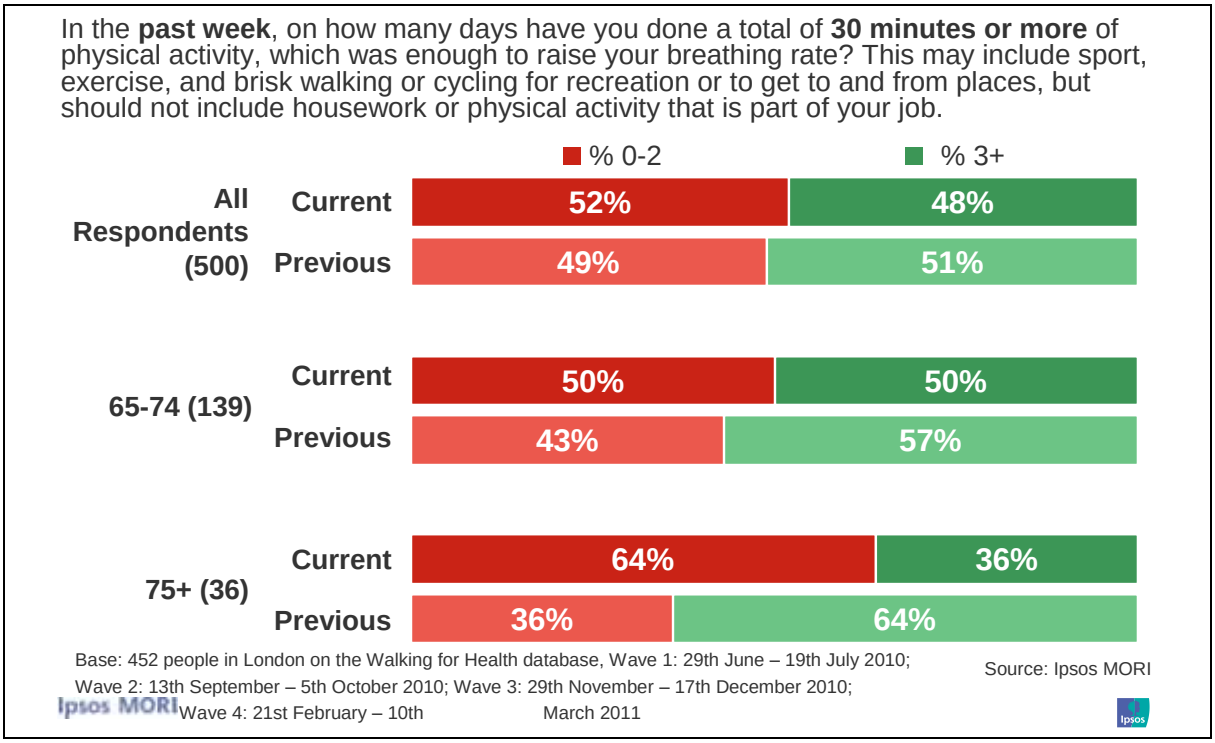

Figure 30 Physical activity levels - Age bands in London

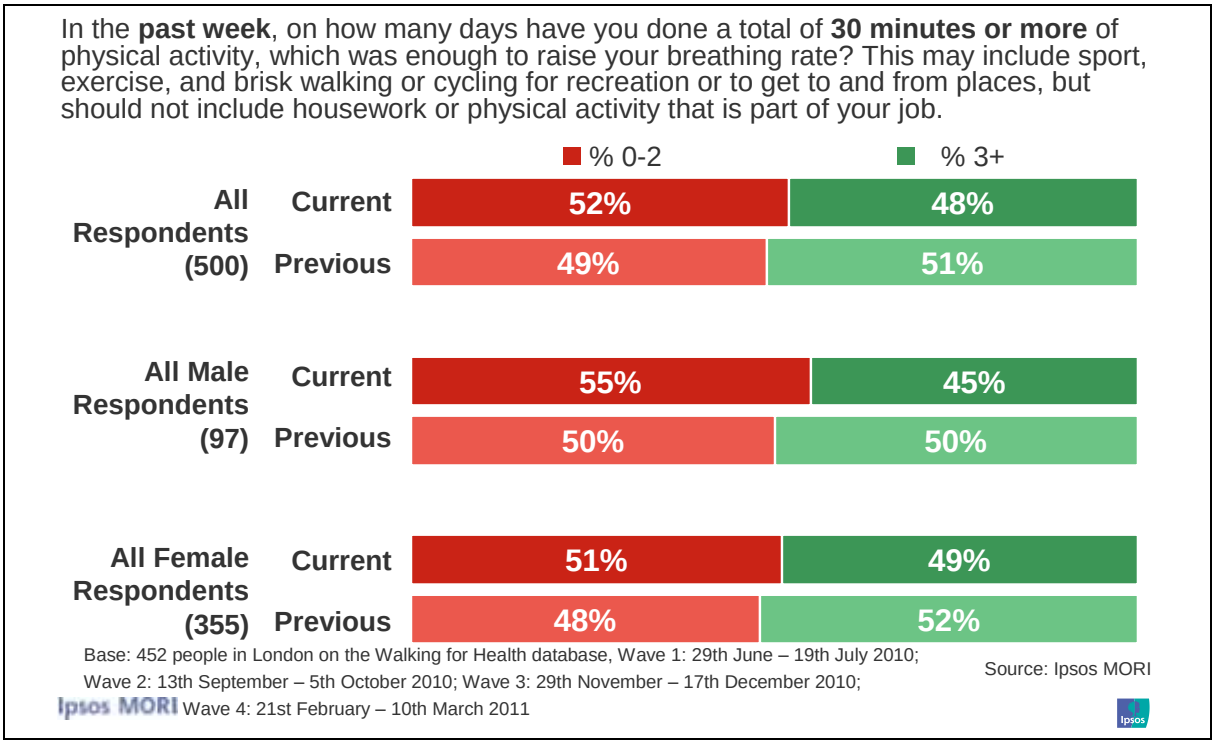

Figure 31 Physical activity levels - Gender in London

North East

Fifty-one percent of respondents in the North East are currently doing physical activity on three or more days per week (figure 32). This has fallen from 62%, and is the greatest drop found across all regions.

However, the decline in the proportion of respondents doing physical activity on three or more days is greater for inactive than active respondent (fifteen and eight percentage points respectively). This suggests that WfH may be helping people to maintain higher levels of physical activity.

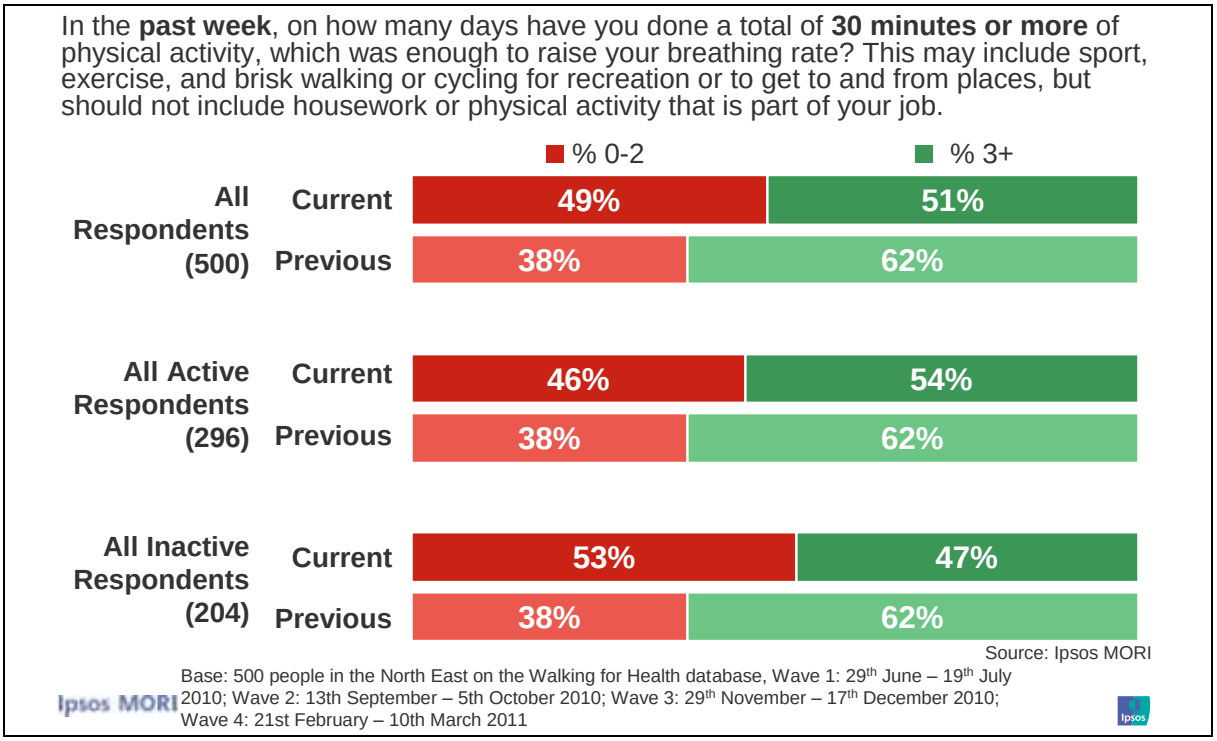

Figure 32 Physical activity levels active/inactive: North East

The proportion of respondents who were previously doing physical activity on three or more days per week and who continue to do this is the same in the North East as in the overall figures (61%) (figure 33).

Positively those who are active in WfH are more likely to have stepped up to three days or more than those who are no longer active (38% compared to 29%). Similarly, active respondents in this region who were previously doing physical activity on three or more days per week are more likely than inactive respondents in the same category to be maintaining this level of activity (63% compared with 57%). The overall pattern indicates that those who are active in WfH are more likely to have maintained greater levels of physical activity, or to have increased their level of physical activity than those who are inactive.

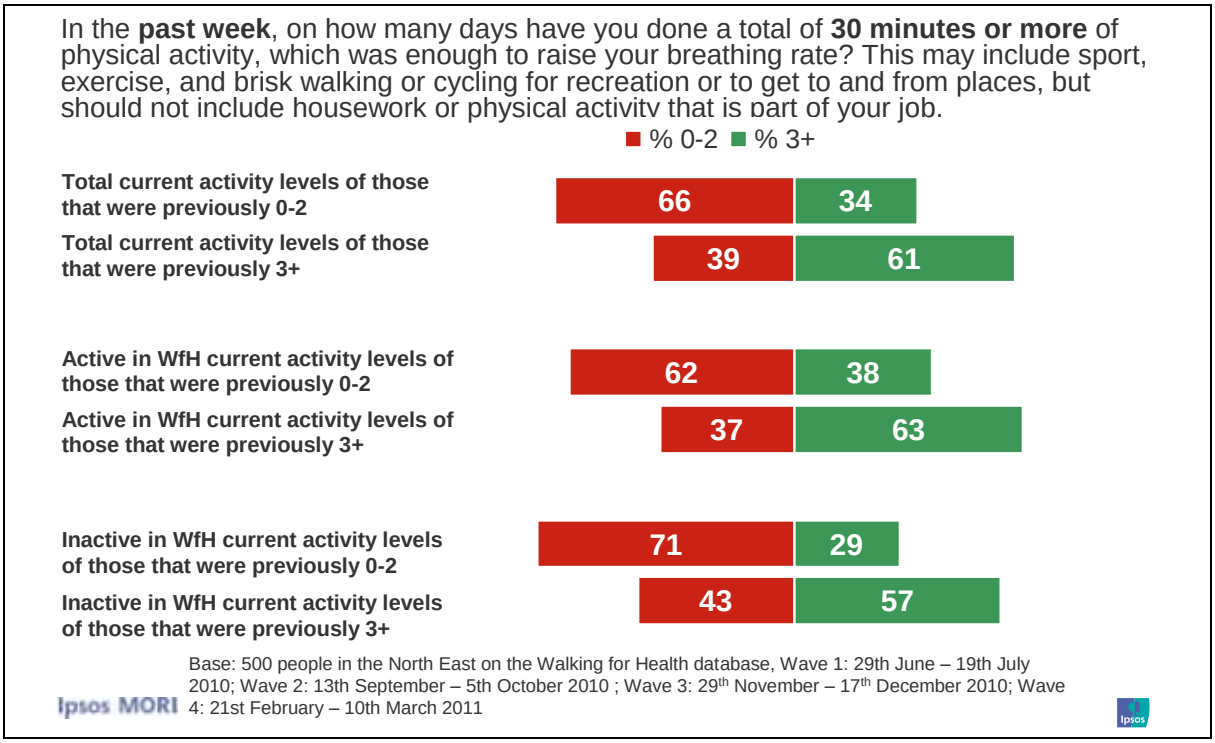

Figure 33 Targets - North East

In line with national trends, the proportion of respondents doing physical activity on three or more days per week fell in every age band. The greatest declines were seen amongst respondents aged 16-54 and 65-74 (figures 34 and 35).

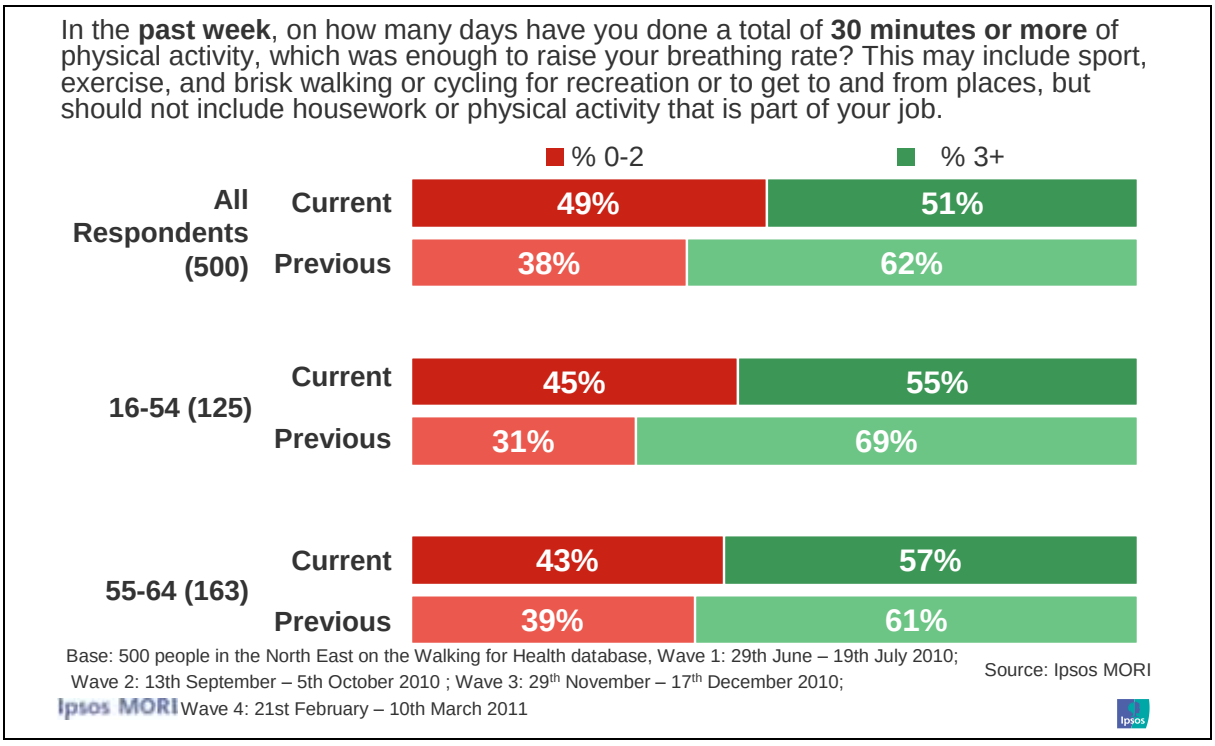

Figure 34 Physical activity levels - Age bands in the North East

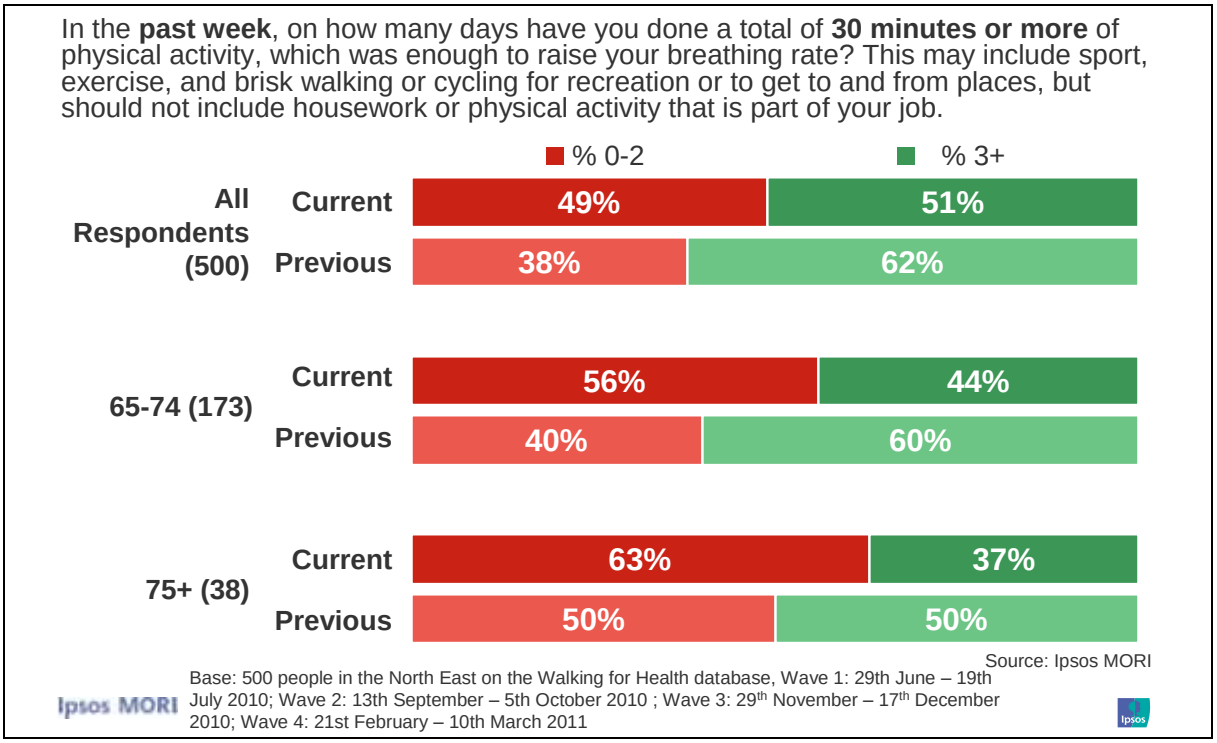

Figure 35 Physical activity levels - Age bands in the North East

One of the greatest declines in levels of physical activity is among men in the North East. The proportion of those conducting physical activity on three or more days per week dropped from 77% to 55% (figure 36).

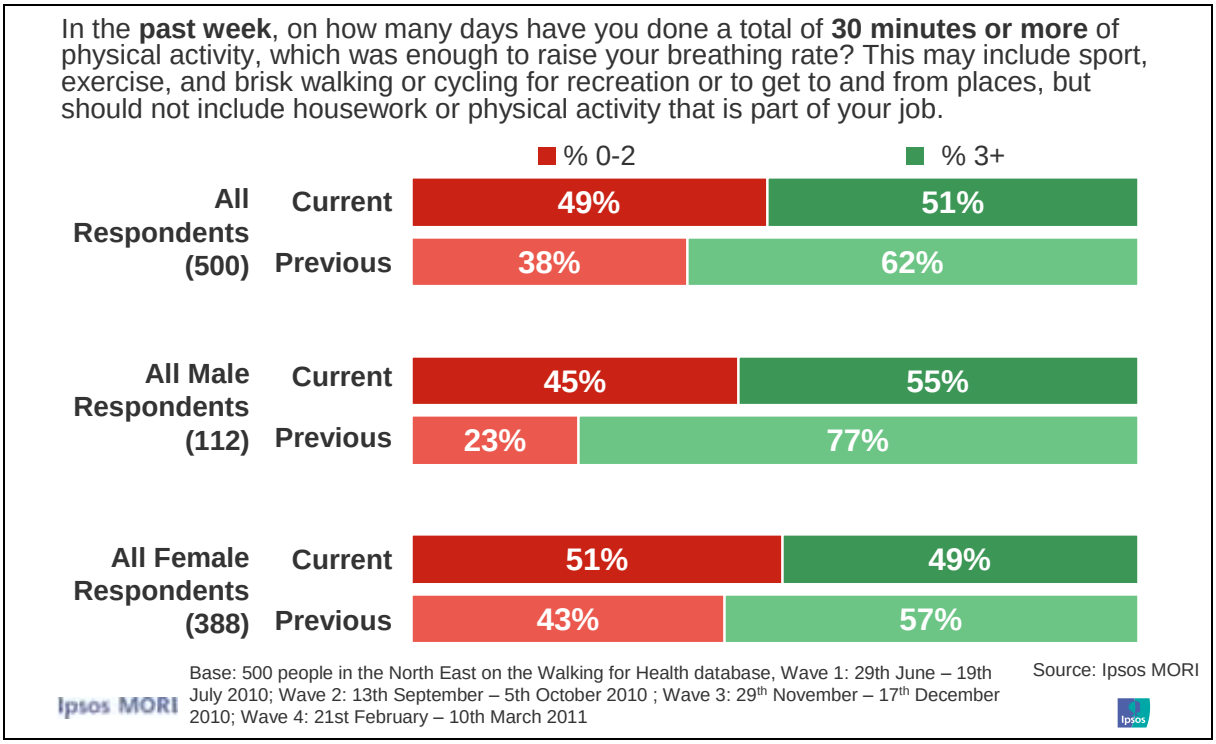

Figure 36 Physical activity levels - Gender in the North East

North West

The decline in those doing physical activity on three or more days per week is lower in the North West than many other regions (56% to 51%) (figure 37).

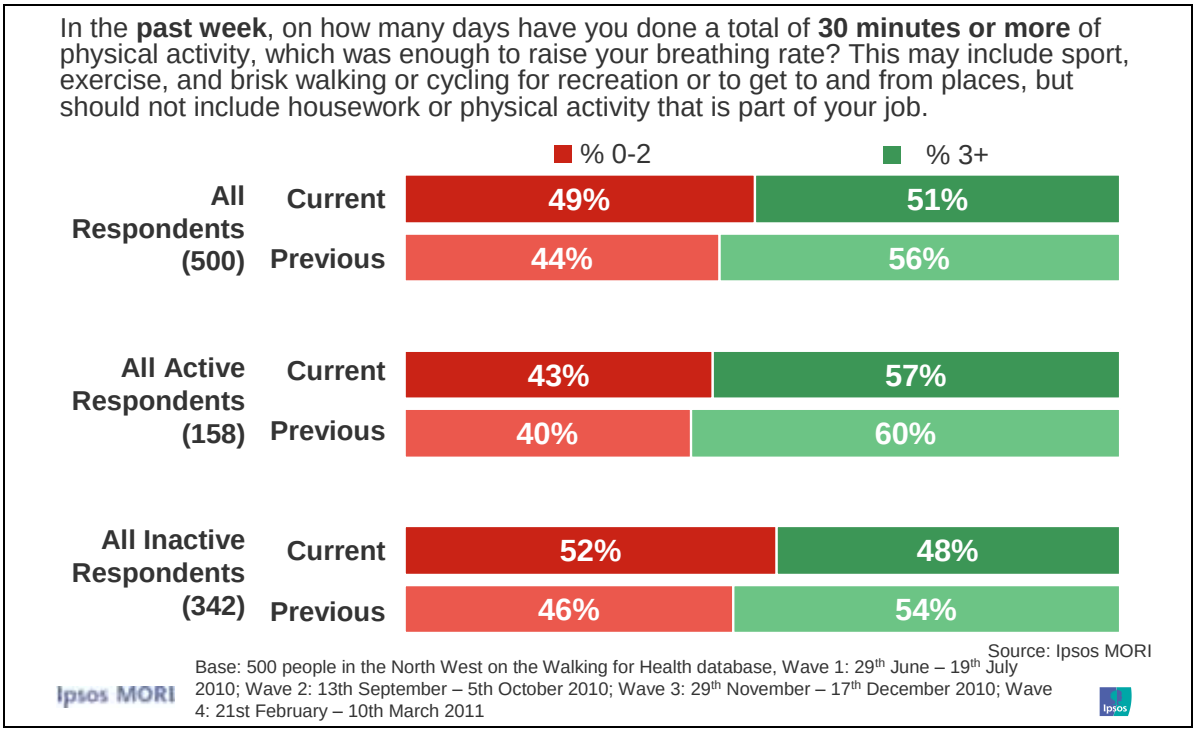

Figure 37 Physical activity levels active/inactive: North West

Encouragingly, respondents are more likely to have stepped up to three or more days in the North West than for England overall (36% compared with 30%) (figure 38). A further positive result is that respondents who are active in WfH are more likely to have stepped up to three or more days than those are inactive (47% and 32% respectively).

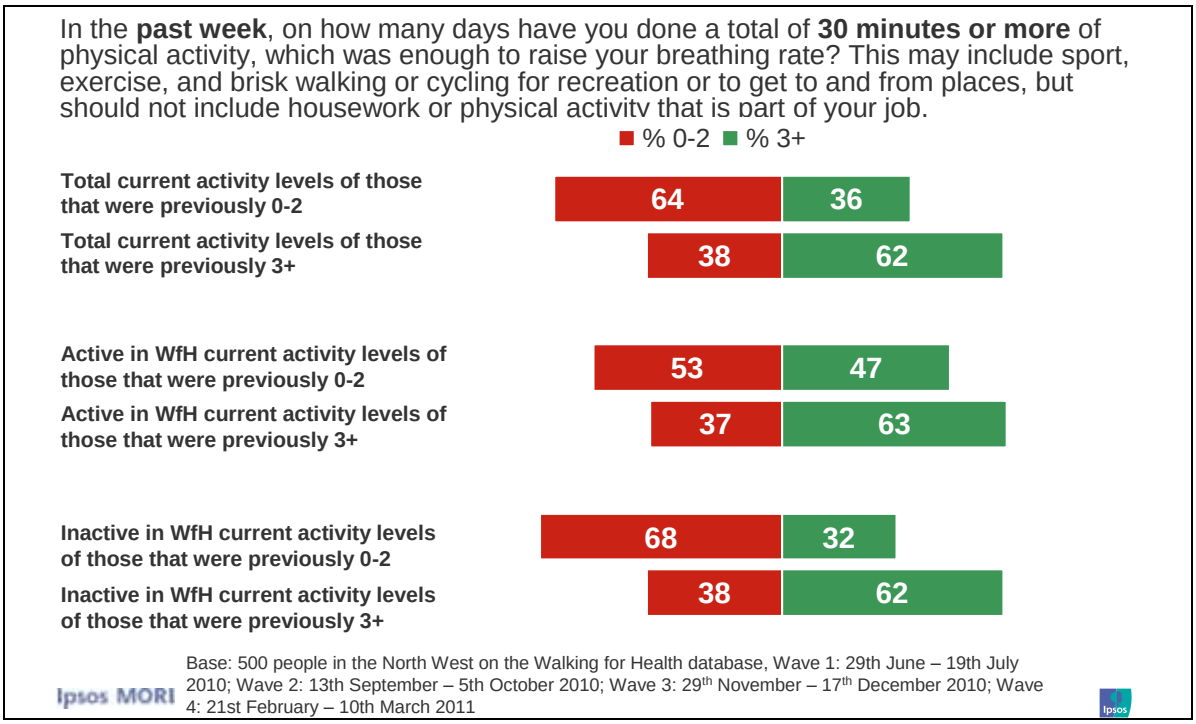

Figure 38 Targets - North West

As in the overall results, the decline in levels of physical activity has been greatest for those in the older age brackets. Previously, 65% of 65-74 year-olds were achieving this level of activity; this has now fallen to 52% (figure 40).

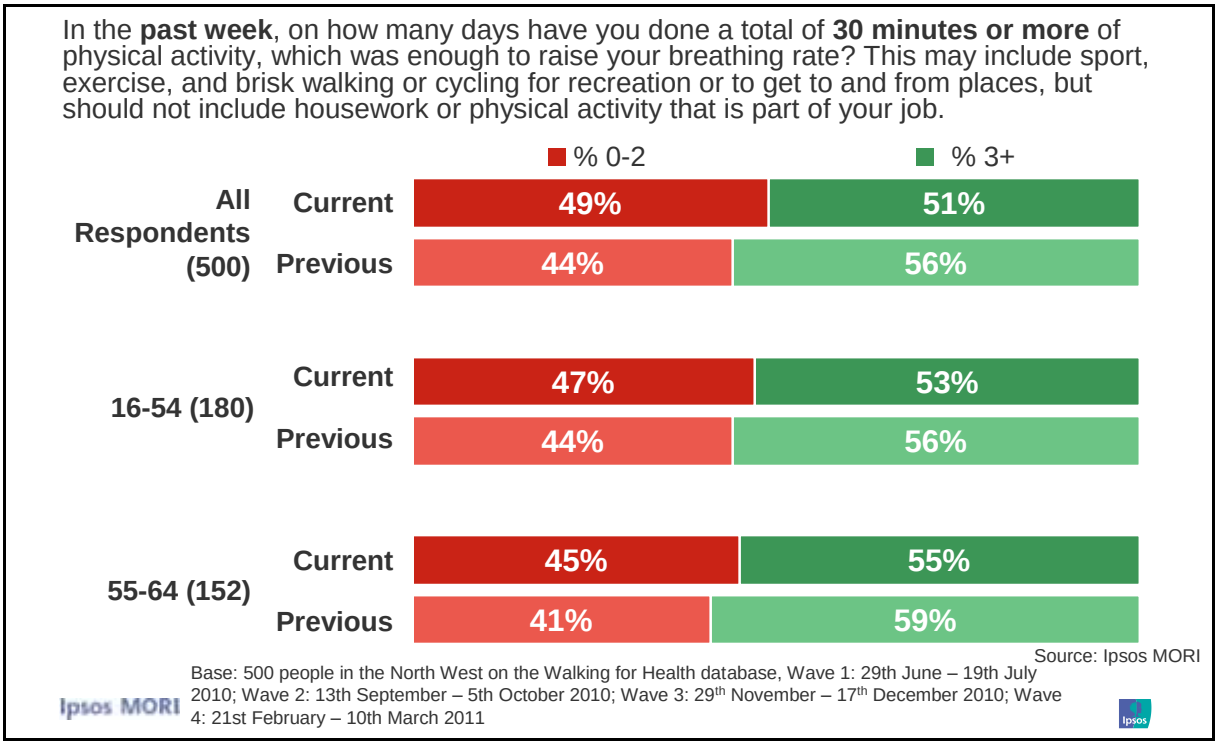

Figure 39 Physical activity levels - Age bands in the North West

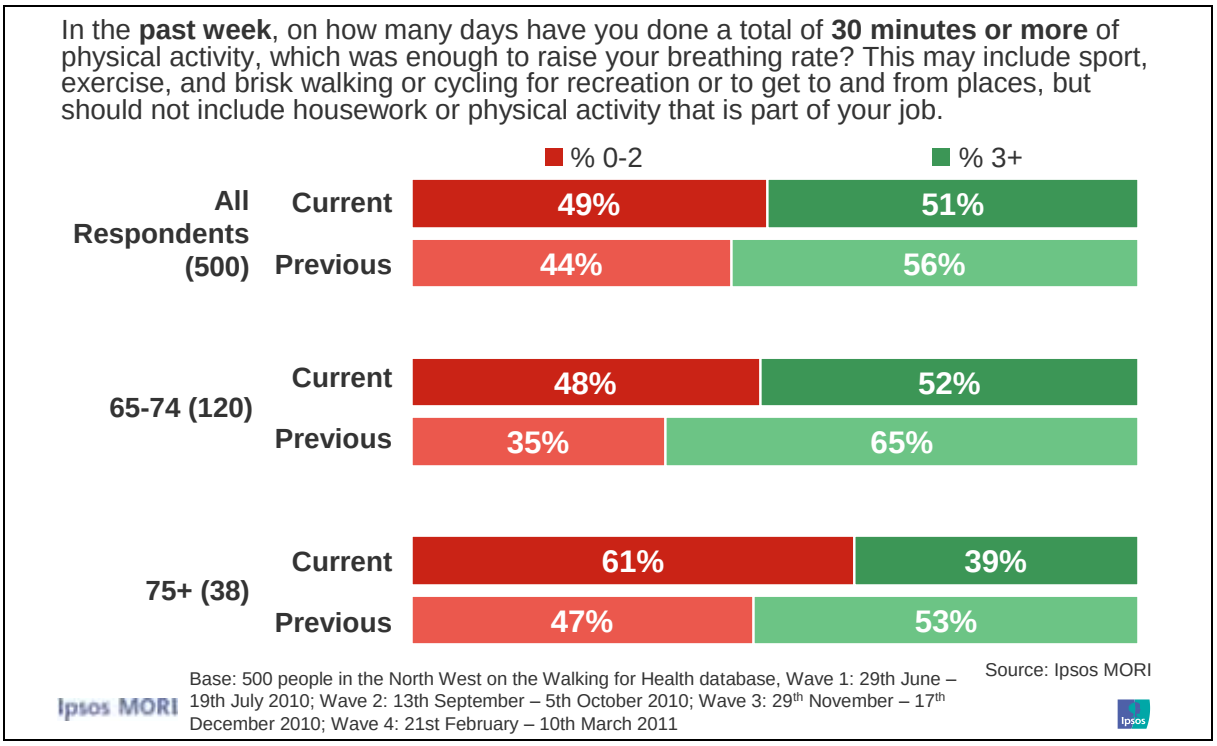

Figure 40 Physical activity levels - Age bands in the North West

The national results found that there has been a greater decline in the proportion of male respondents doing physical activity on three or more days per week than was the case for female respondents.

However, in contrast to the overall trend, this dip has been greater for female respondents in the North West than male. Amongst female respondents it has dipped six percentage points, from 55% to 49% (figure 41).

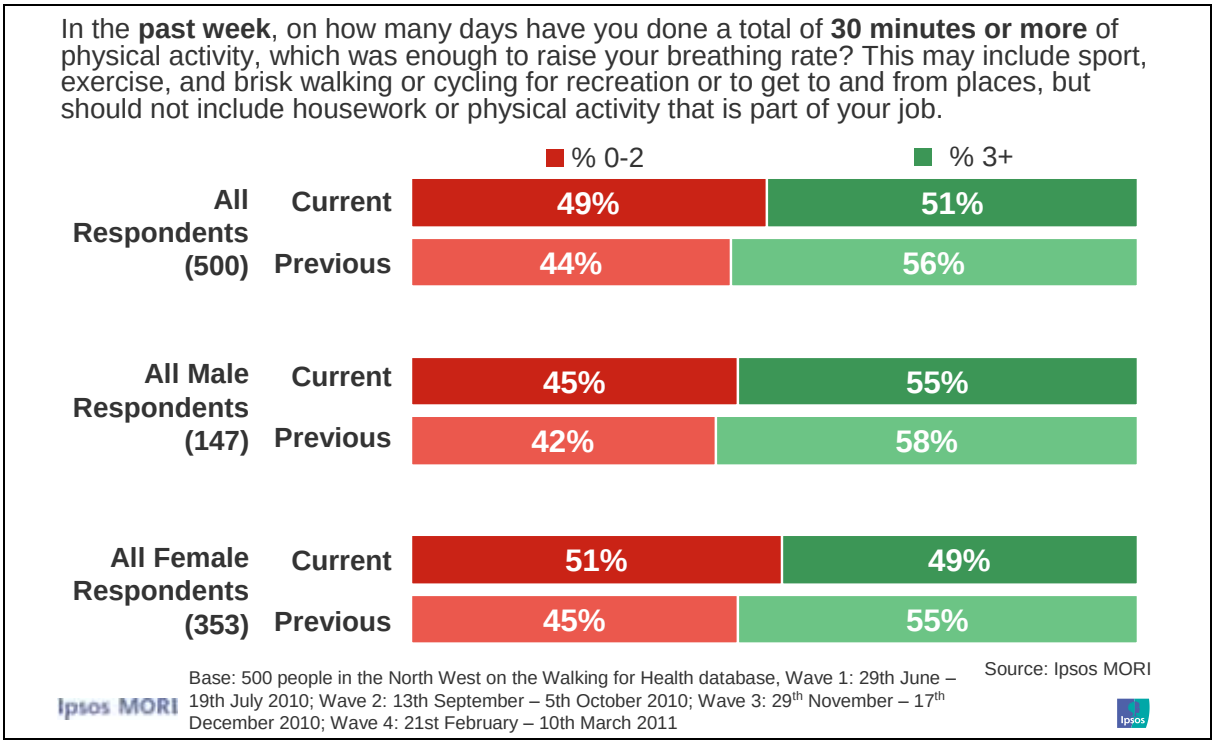

Figure 41 Physical activity levels - Gender in the North West

South East

Forty-four percent of respondents in the South East are currently doing physical activity on three or more days per week (figure 42). This is a similar proportion to respondents in England as a whole (where 47% of respondents are doing this level of activity).

As in the overall results, there has been a decrease in the proportion of respondents doing physical activity on three or more days. This applies to the total results for the South East, as well as to active and inactive respondents. Amongst active respondents the proportion doing this has dipped from 59% to 51%, whilst amongst inactive respondents the decrease has been slightly greater, from 48% to 39%.

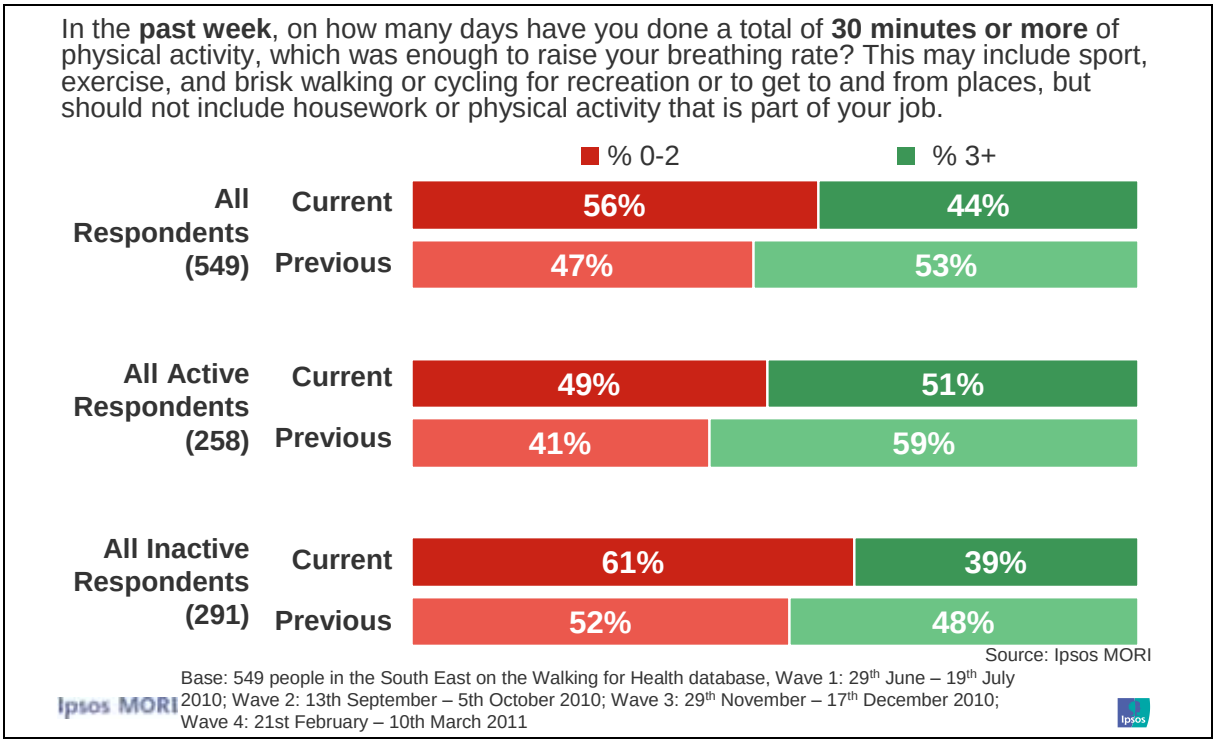

Figure 42 Physical activity levels active/inactive: South East

In line with wider trends, active respondents who were previously doing physical activity on three or more days per week are more likely to be maintaining this than inactive respondents (67% compared with 58%) (figure 43).

Additionally, respondents who are active in the scheme were more likely to step up to three or more days than those who are in active (27% compared with 22%).

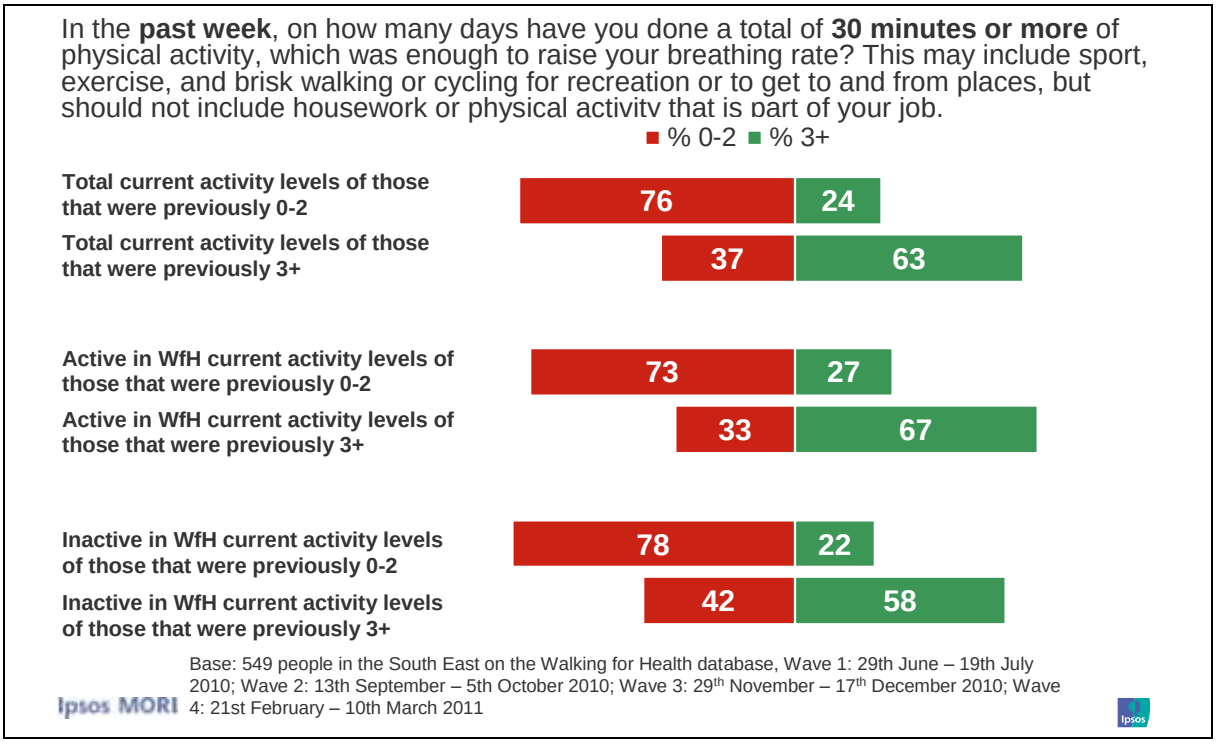

Figure 43 Targets - South East

As is the case in most other regions, the results from the South East show a decline in the proportion of respondents doing physical activity on three or more days amongst every age group. The greatest change is for respondents in the 65-74 age group, as 45% currently conduct physical activity on three or more days per week compared with 58% who did so previously (figure 45).

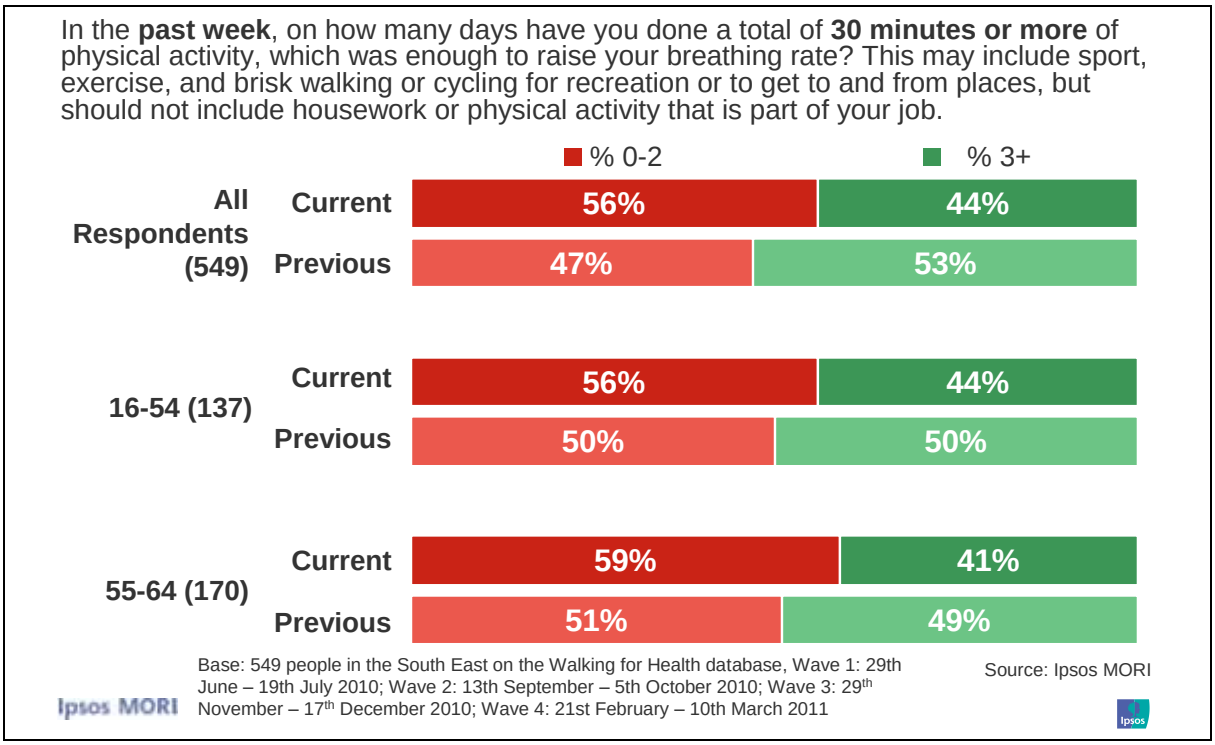

Figure 44 Physical activity levels - Age bands in the South East

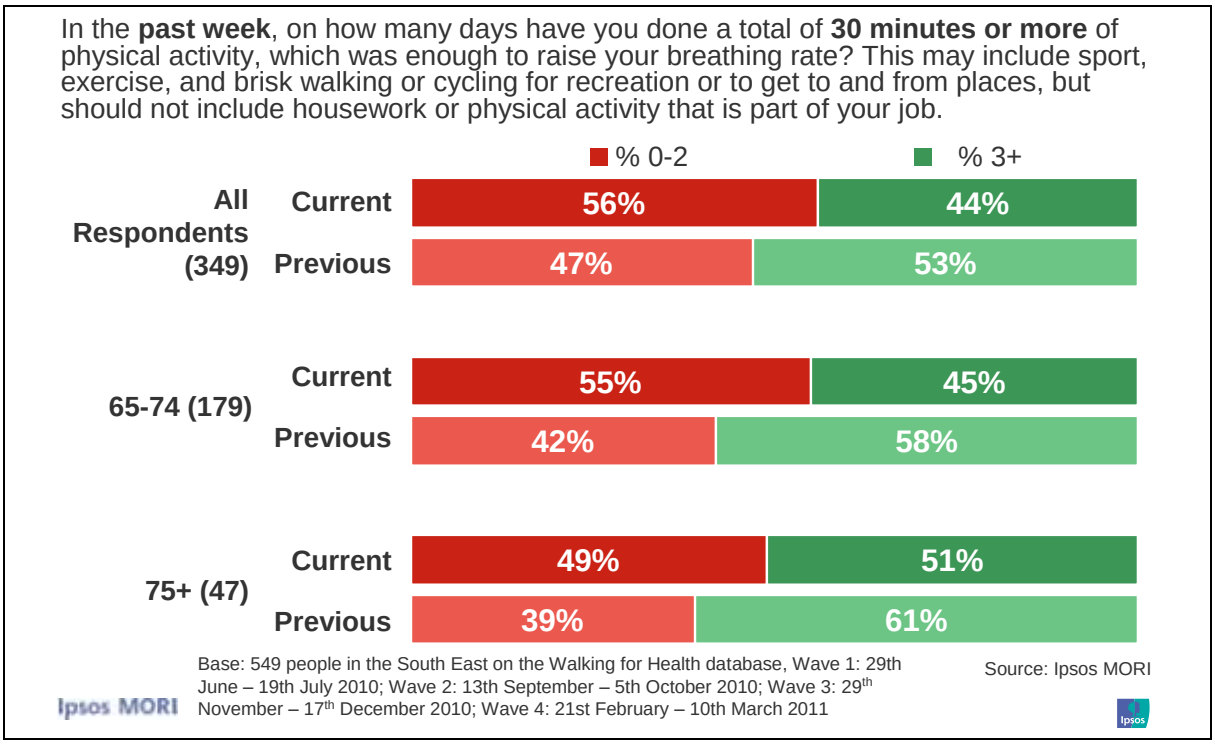

Figure 45 Physical activity levels - Age bands in the South East

The proportion of both male and female respondents doing physical activity on three or more days has fallen. For female respondents it has fallen from 50% to 44%, and for male respondents, from 60% to 47% (figure 46).

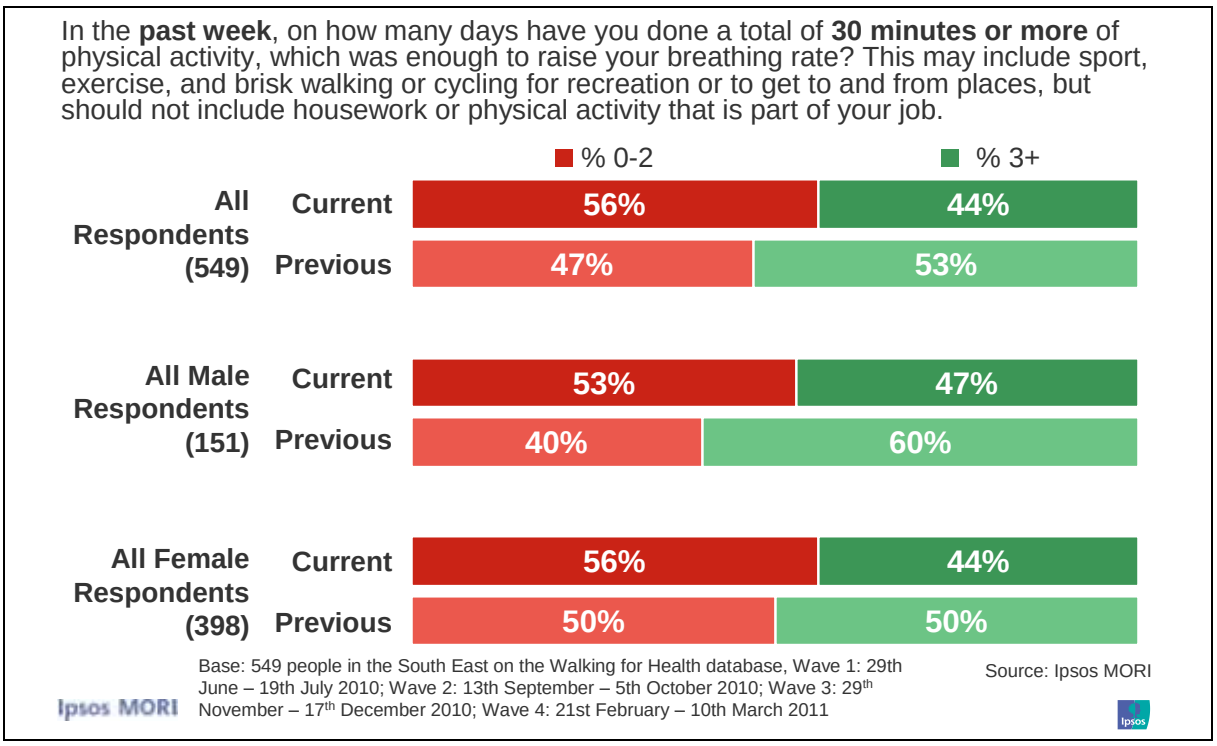

Figure 46 Physical activity levels - Gender in the South East

South West

As is the case elsewhere, the proportion of respondents doing physical activity on three or more days has declined. Whereas previously 57% of respondents in the South West were achieving this, it has now fallen to 50% (figure 47).

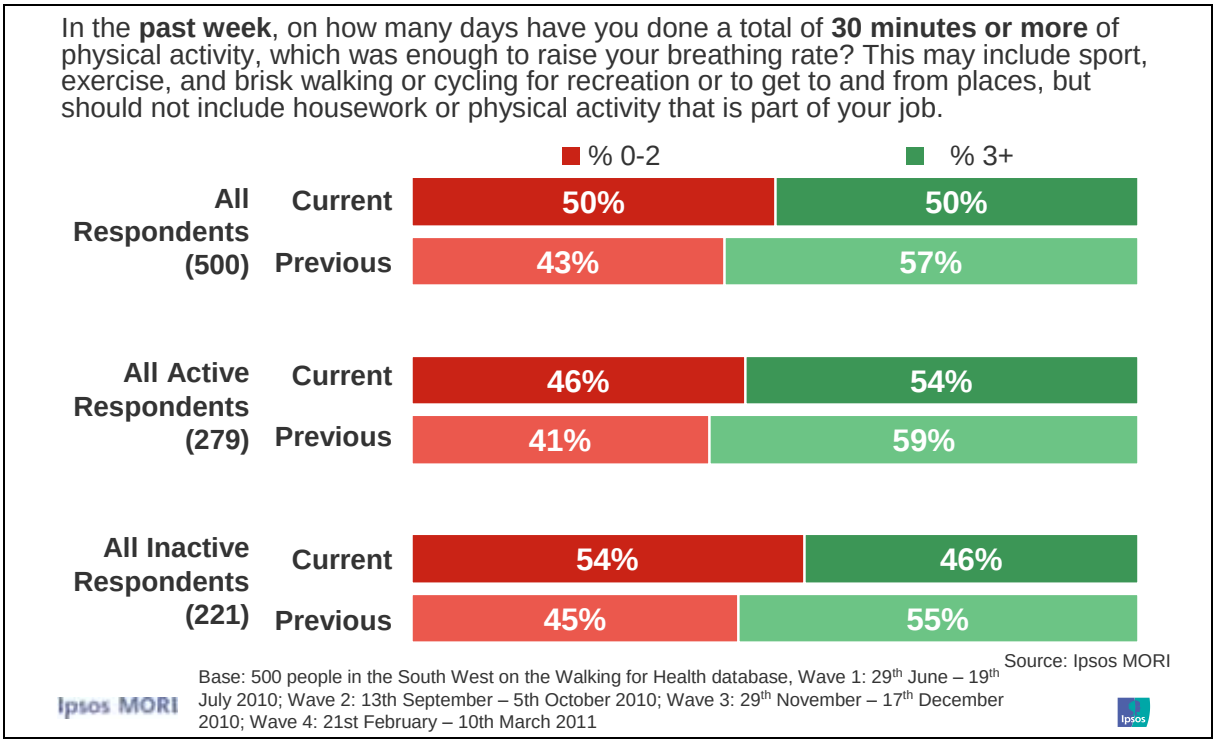

Figure 47 Physical activity levels active/inactive: South West

Figure 47 shows that 64% of those in the South West who were previously doing physical activity on three or more days per week continue to do so. Furthermore, 32% of those who were previously doing physical activity on nought to two days have increased to doing three or more.

Walking for Health appears to have had a positive impact on maintaining levels of physical activity. Those who are active in WfH are more likely than those no longer active to maintain physical activity for three or more days (70% compared with 55%).

A more negative result is that those who are active in WfH in the South West are less likely to have stepped up to three or more days than those who are no longer active (29% compared with 36%).

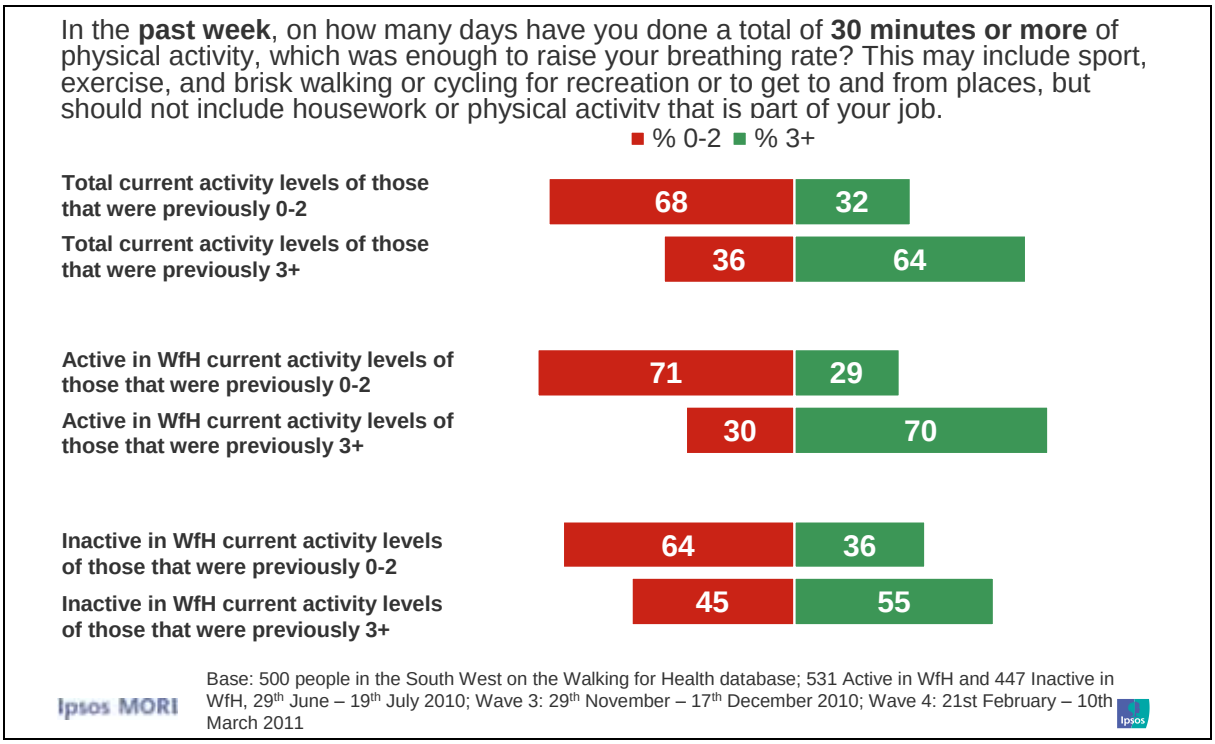

Figure 48 Targets - South West

Similarly to the national results, there has been a decline in the proportion of respondents in the South West doing physical activity on three or more days across all age brackets (all significant except the 75+ age group in figures 49 and 50).

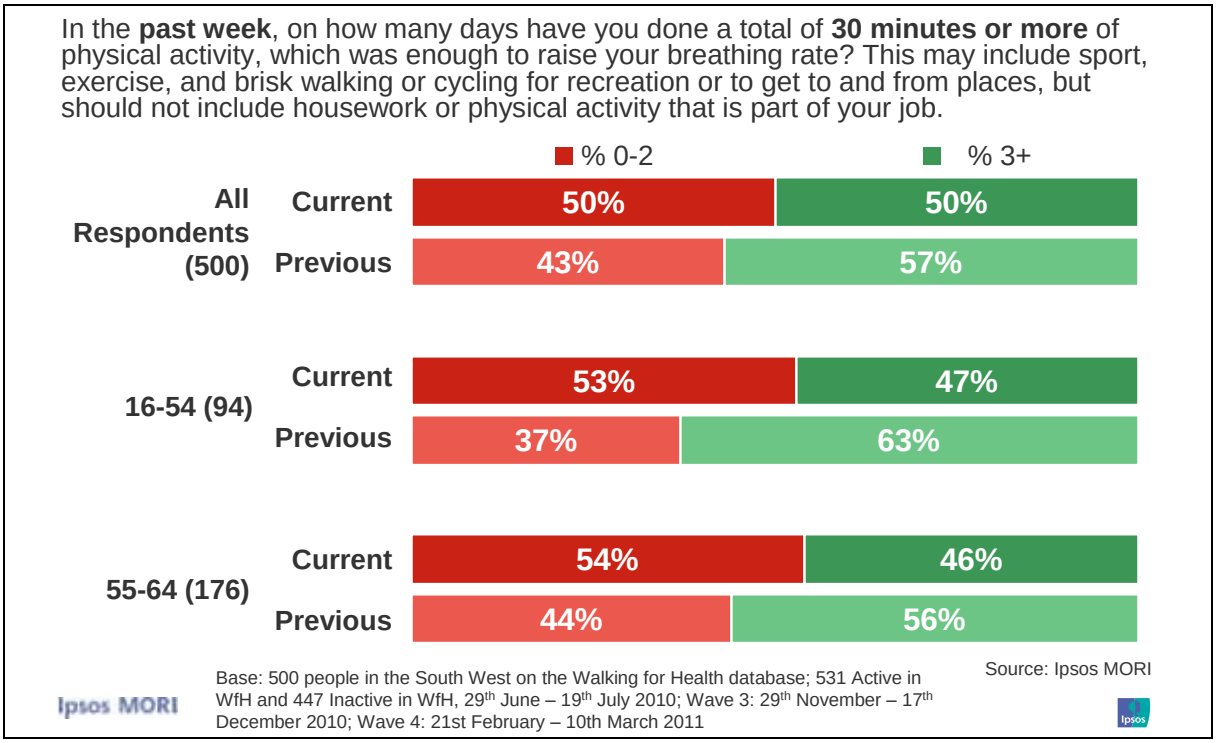

Figure 49 Physical activity levels - Age bands in the South West

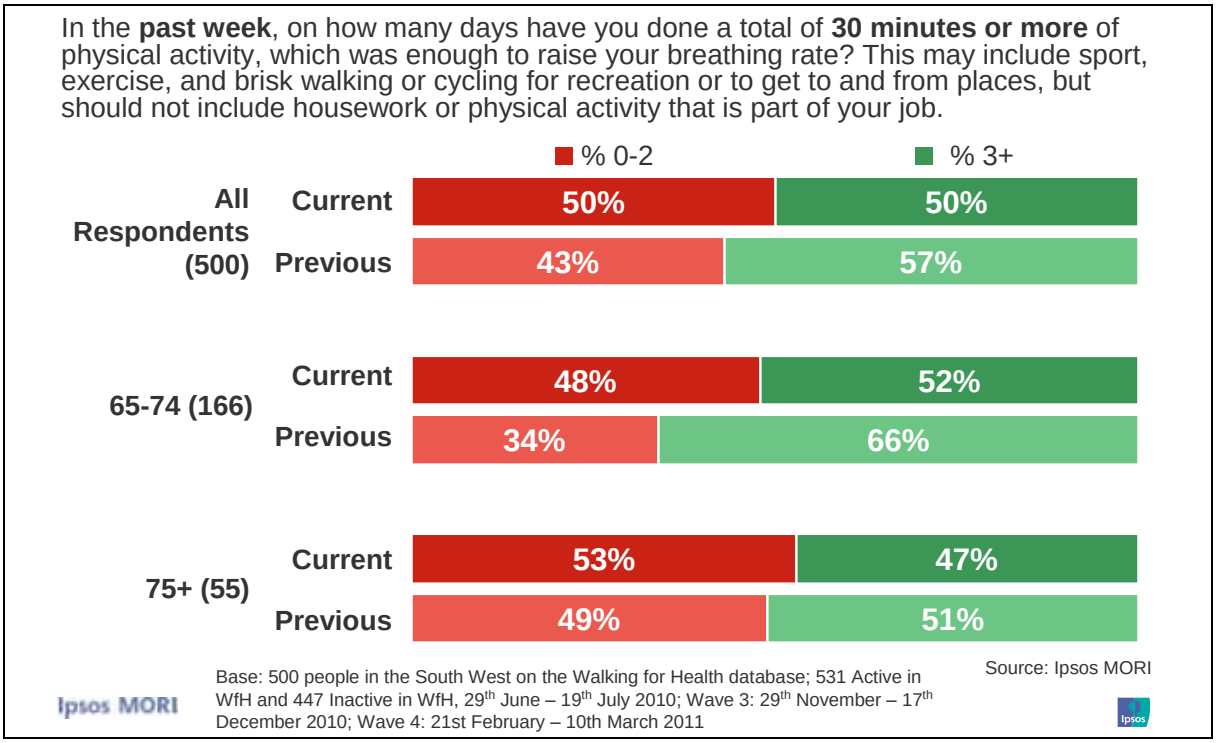

Figure 50 Physical activity levels - Age bands in the South West

There has been a dip in the proportion of both male and female respondents who are currently doing physical activity on three or more days per week (figure 51). As has been seen elsewhere, the decline has been greater for male than female respondents (11 percentage points for men).

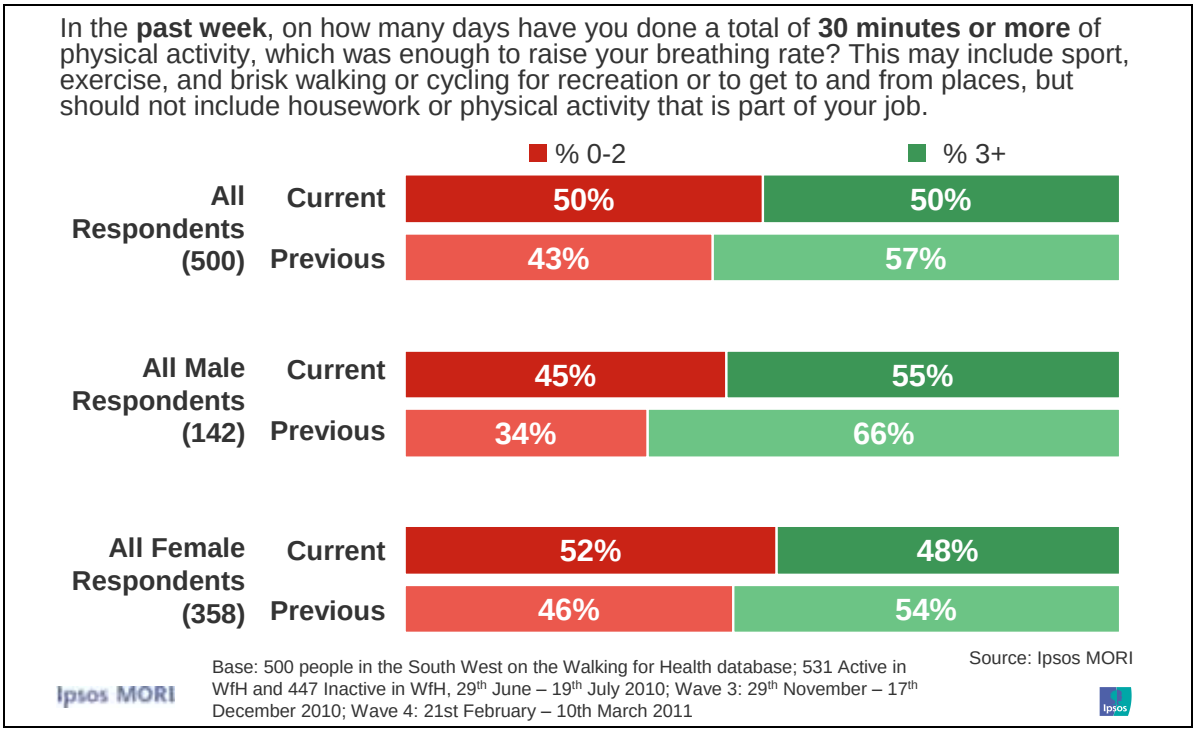

Figure 51 Physical activity levels - Gender in the South West

West Midlands

Respondents in the West Midlands have experienced less of a decline in levels of physical activity than at a national level. Indeed the decline in those doing physical activity of three percentage points (shown in figure 52) is not statistically significant, indicating levels may have been maintained. Interestingly, there has only been a one percentage point decline in those respondents who are no longer active in WfH doing three or more days physical activity. However, levels of physical activity remain higher amongst those who are active in WfH. Again, these decreases are not statistically significant, indicating levels of physical activity may have been maintained.

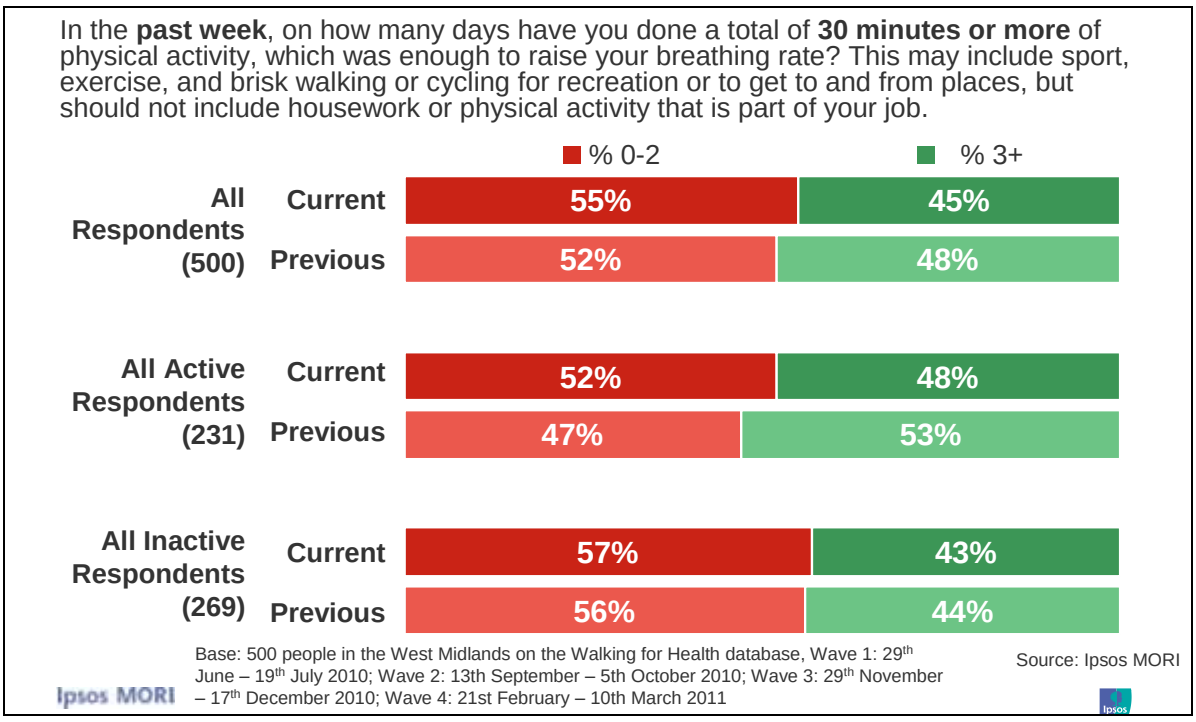

Figure 52 Physical activity levels active/inactive: West Midlands

Sixty-one percent of respondents in the West Midlands continue to do three or more days physical activity (figure 53). Furthermore, 31% of respondents in the region have stepped up to three or more days. These results are in line with those seen at a national level.

Positively, respondents in this region who are active in WfH are more likely to have stepped up to three or more days per week than those who are in no longer active (37% compared with 27%).

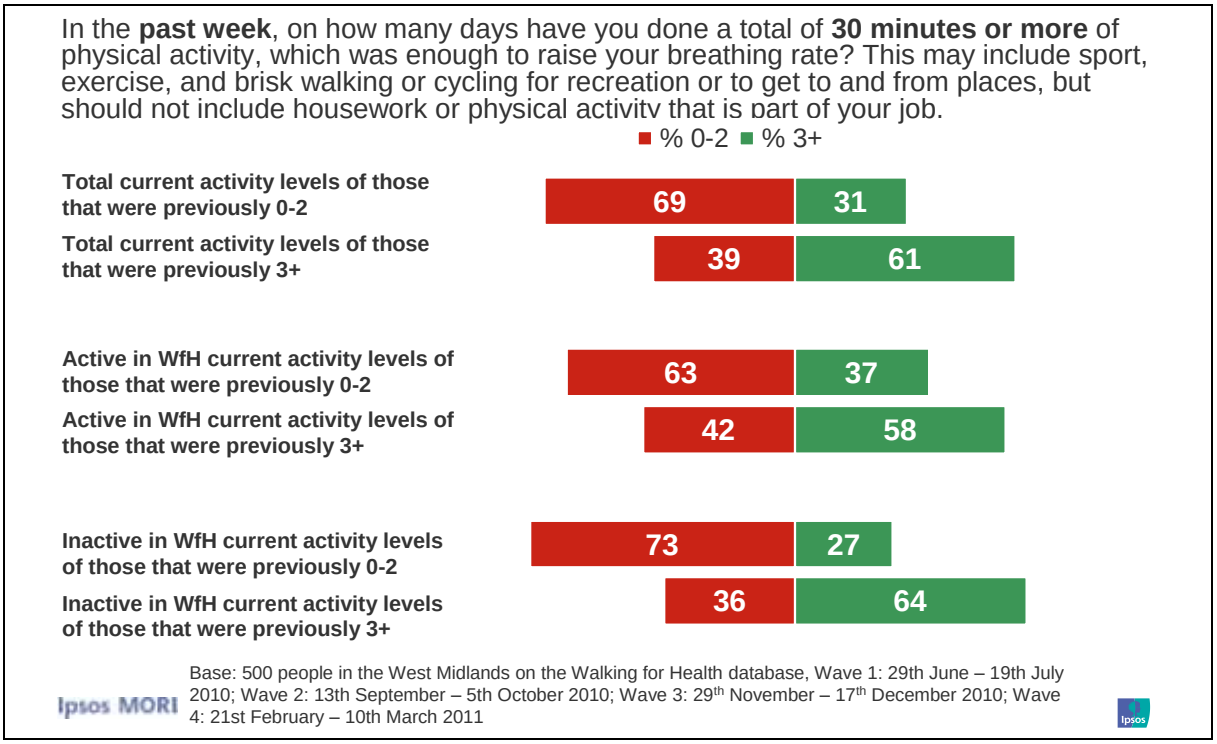

Figure 53 Targets - West Midlands

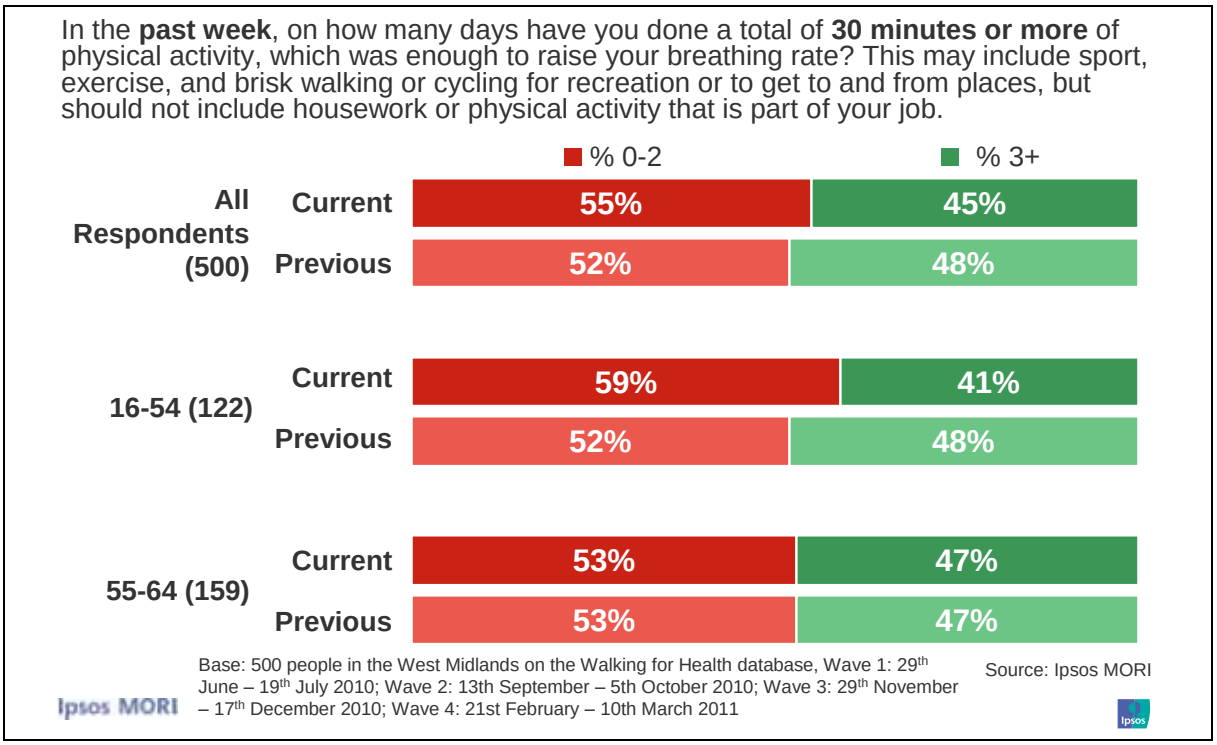

Figure 54 Physical activity levels - Age bands in the West Midlands

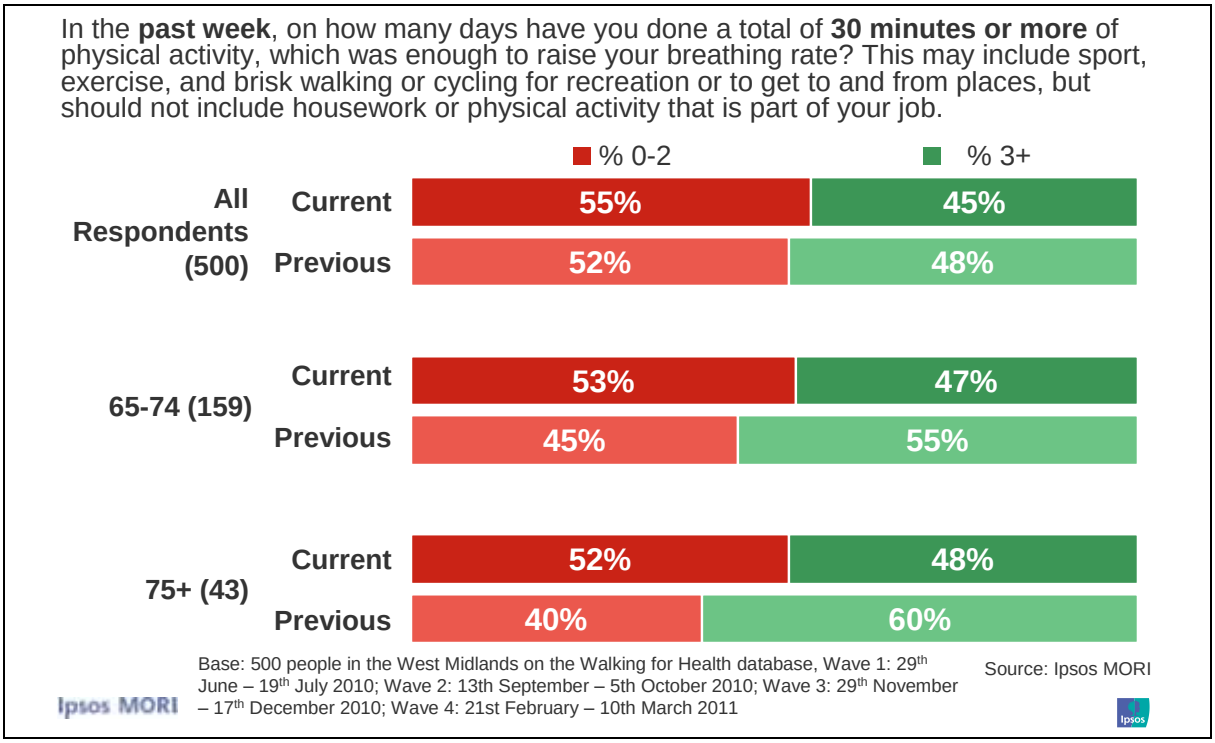

Figure 55 Physical activity levels - Age bands in the West Midlands

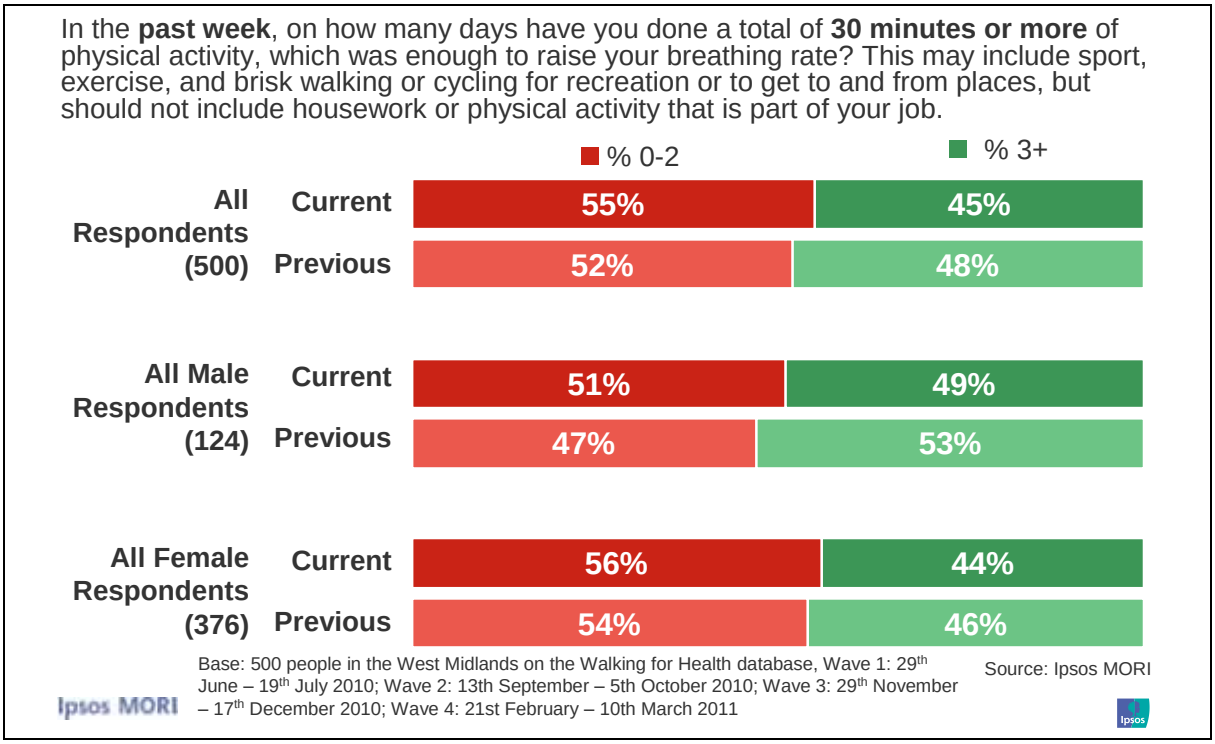

Figure 56 Physical activity levels - Gender in the West Midlands

Yorkshire and Humberside

The decline in physical activity in Yorkshire and Humberside is second only to respondents in the North East. Forty-six percent of respondents in Yorkshire and Humberside currently conduct physical activity on three or more days, down from 58% previously (figure 57).

As is the case in other regions, and at a national level, this overall decline is reflected in a fall in levels of activity being done by both active and inactive levels. However, in Yorkshire and Humberside, there has been a particularly steep decline in the proportion of active respondents doing the higher level of activity; it has fallen from 63% to 47%. The proportion of inactive respondents doing physical activity on three or more days per week has dipped from 52% to 45%.

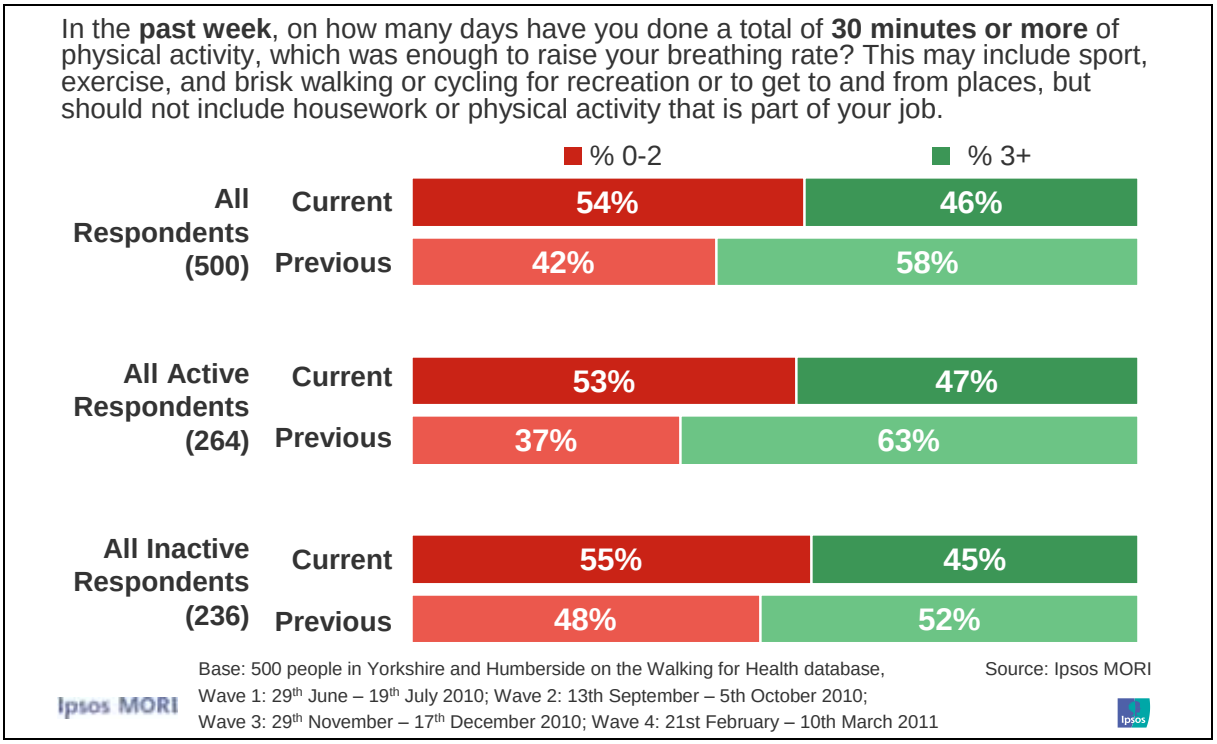

Figure 57 Physical activity levels active/inactive: Yorkshire and Humberside

Sixty per cent of respondents in Yorkshire and Humberside are maintaining three or more days a week of physical activity (figure 58). This is on a par with national results, where 61% maintained this level of physical activity. In addition, 26% of those doing nought to two days have stepped up to three days or more, which is again similar to the national figure of 30%.

The national results found that respondents who are active in WfH are more likely to be maintaining three or more days than those who are no longer active (63% and 59% respectively). However, in Yorkshire and Humberside, this trend is reversed and inactive respondents are more likely to maintain higher levels of physical activity than active respondents (64% compared with 57%).

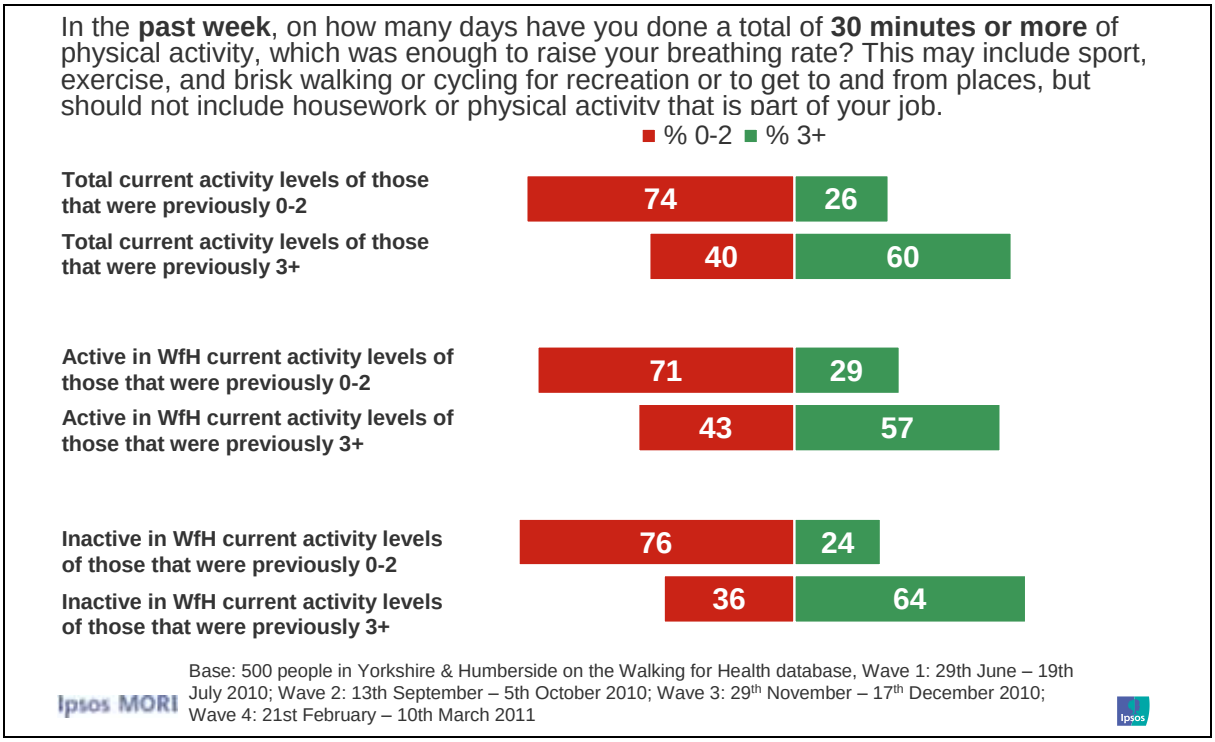

Figure 58 Targets - Yorkshire and Humberside

There has also been a decline in the levels of activity amongst respondents in Yorkshire and Humberside in every age group. The greatest decrease is in respondents in the 65-74 age group, where the proportion of respondents doing physical activity on three or more days per week has fallen from 67% to 49% (shown in figure 60).

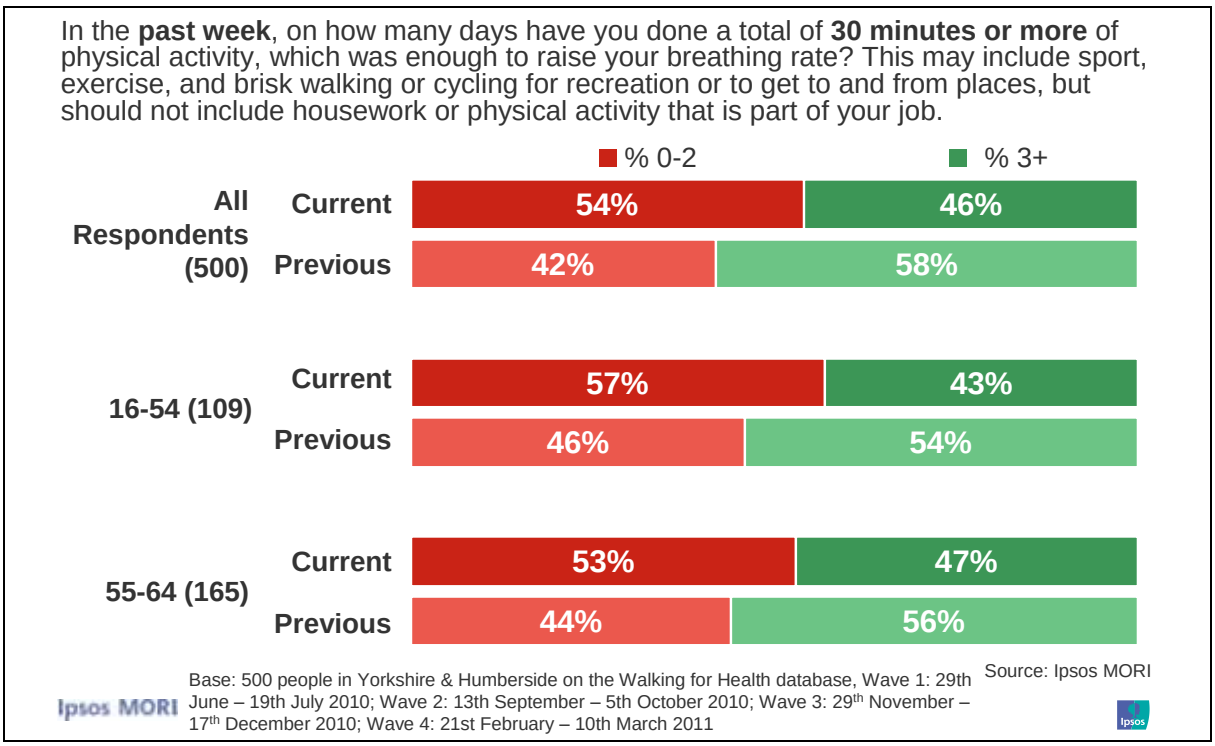

Figure 59 Physical activity levels - Age bands in Yorkshire and Humberside

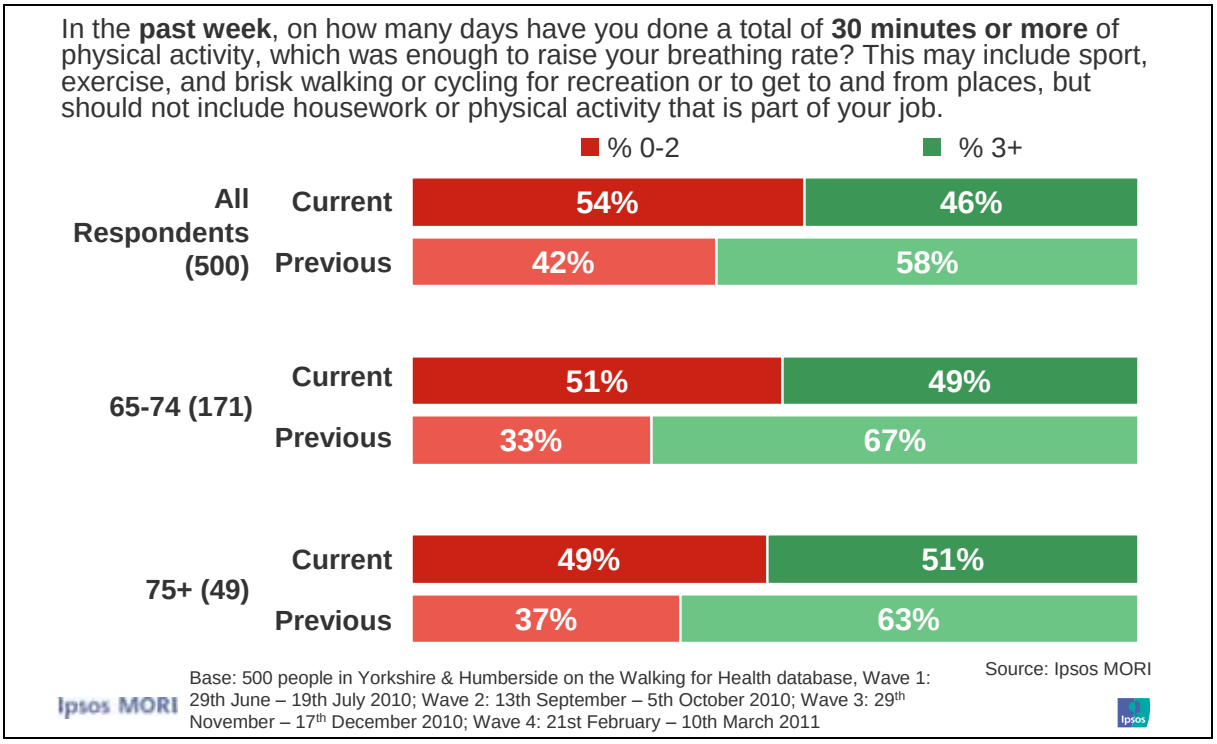

Figure 60 Physical activity levels - Age bands in Yorkshire and Humberside

At a national level, falls were found in the proportion of both male and female respondents who were doing physical activity on three or more days per week (figure 61). In Yorkshire and Humberside, a fall was found in the proportion of female respondents doing this (from 55% to 43%). A decline was also found amongst male participants, where the proportion doing the higher level of activity fell from 67% to 56%.

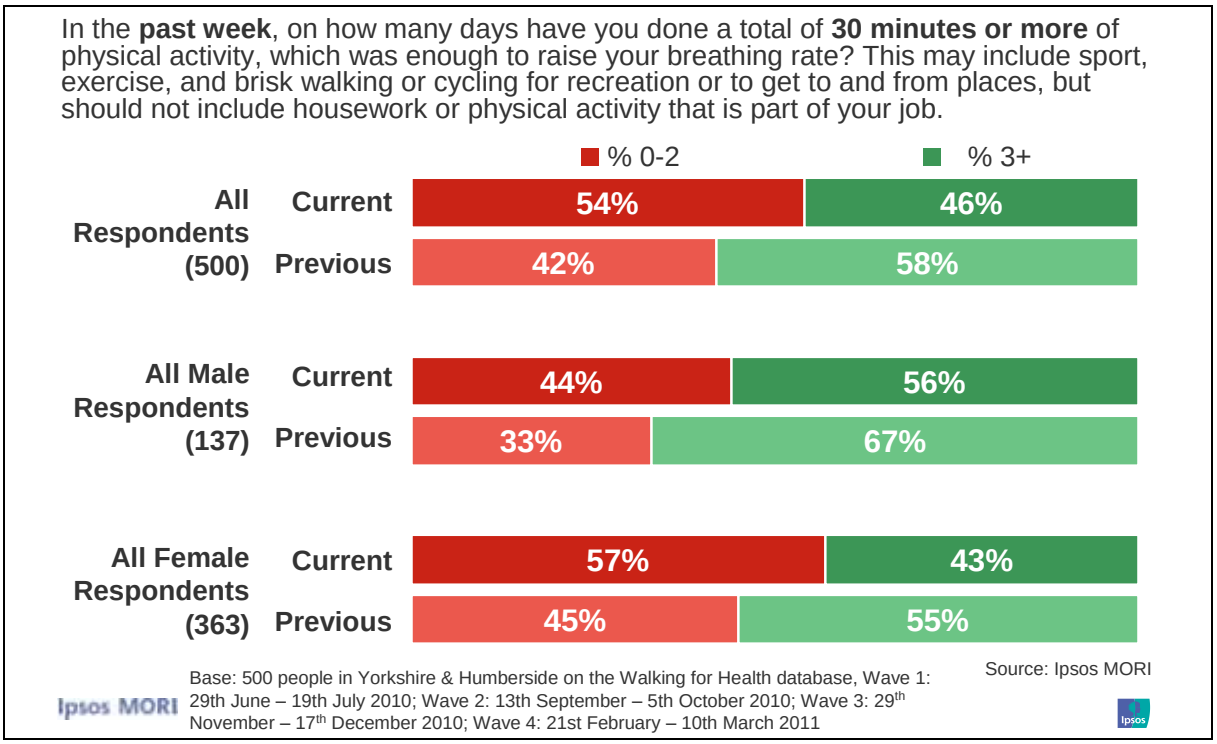

Figure 61 Physical activity levels - Gender in Yorkshire and Humberside

Appendix B Quotas

In these tables, quota index is defined as the number of achieved interviews as a percentage of the target interviews.

Wave 4

Regional quotas

Table A Regional quotas

Region	Target interviews	Achieved interviews	Quota index
East	500	500	100
East Midlands	500	499	100
London	498	452	91
North-East	500	500	100
North-West	500	500	100
South East	502	549	109
South West	500	500	100
West-Midlands	500	500	100
Yorkshire and Humberside	500	500	100

Quotas: East

Table B Quotas: East

		Target Interviews	Achieved Interviews	Quota Index
Activeness	Active	324	308	95
	Inactive	176	192	109
Gender	Male	142	142	100
	Female	358	358	100
	Not disclosed	n/a	n/a	n/a
Age	16-54	100	82	82
	55+	389	414	106
	Not disclosed	11	4	36

Quotas: East Midlands

Table C Quotas: East Midlands

		Target Interviews	Achieved Interviews	Quota Index
Activeness	Active	282	265	94
	Inactive	218	234	107
Gender	Male	142	124	87
	Female	358	375	105
	Not disclosed	n/a	n/a	n/a
Age	16-54	155	122	79
	55+	334	367	110
	Not disclosed	12	10	83

Quotas: London

Table D Quotas: London

		Target Interviews	Achieved Interviews	Quota Index
Activeness	Active	256	243	95
	Inactive	234	209	89
Gender	Male	105	97	92
	Female	385	355	92
	Not disclosed	n/a	n/a	n/a
Age	16-54	106	96	91
	55+	377	351	93
	Not disclosed	7	5	71

Quotas: North-East

Table E Quotas: North-East

		Target Interviews	Achieved Interviews	Quota Index
Activeness	Active	312	309	99
	Inactive	188	191	102
Gender	Male	130	112	86
	Female	371	388	105
	Not disclosed	n/a	n/a	n/a
Age	16-54	142	125	88
	55+	357	374	105
	Not disclosed	1	1	100

Quotas: North-West

Table F Quotas: North-West

		Target Interviews	Achieved Interviews	Quota Index
Activeness	Active	241	209	87
	Inactive	259	291	112
Gender	Male	153	147	96
	Female	347	353	102
	Not disclosed	n/a	n/a	n/a
Age	16-54	199	180	90
	55+	289	310	107
	Not disclosed	12	10	83

Quotas: South East

Table G Quotas: South East

		Target Interviews	Achieved Interviews	Quota Index
Activeness	Active	273	284	104
	Inactive	229	265	116
Gender	Male	134	151	113
	Female	374	398	106
	Not disclosed	n/a	n/a	n/a
Age	16-54	136	137	101
	55+	356	396	111
	Not disclosed	16	16	100

Quotas: South West

Table H Quotas: South West

		Target Interviews	Achieved Interviews	Quota Index
Activeness	Active	296	288	97
	Inactive	206	212	103
Gender	Male	142	142	100
	Female	358	358	100
	Not disclosed	n/a	n/a	n/a
Age	16-54	110	94	85
	55+	379	397	105
	Not disclosed	12	9	75

Quotas: West Midlands

Table I Quotas: West Midlands

		Target Interviews	Achieved Interviews	Quota Index
Activeness	Active	298	255	86
	Inactive	202	245	121
Gender	Male	139	124	89
	Female	361	376	104
	Not disclosed	n/a	n/a	n/a
Age	16-54	146	122	84
	55+	331	361	109
	Not disclosed	23	17	74

Quotas: Yorkshire and Humberside

Table J Yorkshire and Humberside

		Target Interviews	Achieved Interviews	Quota Index
Activeness	Active	304	279	92
	Inactive	196	221	113
Gender	Male	128	137	107
	Female	373	363	97
	Not disclosed	n/a	n/a	n/a
Age	16-54	124	109	88
	55+	369	385	104
	Not disclosed	6	6	100