

Active Lives Survey 2015/2016

Technical notes to accompany the year 1 report

The Active Lives Survey was conducted by Ipsos MORI on behalf of Sport England which commissioned the survey with additional funding from Public Health England, Arts Council England and the Department of Transport.

Fieldwork and survey design

The data presented here were collected between 16th November 2015 and 15th November 2016 in England. The data were collected using an online questionnaire (52%) and a paper self-completion questionnaire (48%). There were two types of questionnaire: one for adults (16+) and one for young people aged 14-15. Both versions had an online and paper version. Valid responses which could be used for analysis were received from 201,579 people in total. The analysis presented in this report includes adults aged 16 and over only. All those who completed the adult questionnaire (unless under aged 16) and any aged 16 or over who completed the young person questionnaire have been included in the data resulting in a total sample size for analysis in the report of 198,911. The reason for 16 year olds completing the young person questionnaire is that young people had sometimes turned 16 during the course of the fieldwork or their age had been mis-reported by parents. The table below shows the breakdown of numbers. The shaded cells are those which are included in the 16 and over analysis in the report.

	Adult questionnaire	Young person questionnaire	Total	Sample included in 16+ report analysis
Aged 16+	197,069	153	197,222	197,222
Aged 14-15	0	2,656	2,663	0
Unknown age	1,696	5	1,694	1,696**
Total	198,765	2,814	201,579	198,911

** 7 of these cases were not included in the data for analysis because of inconsistent information about age.

The Active Lives Survey is a 'push-to-web' survey involving four postal mail-outs designed to encourage participants to complete the survey online. The survey is 'device-agnostic' and can be

completed on mobile or desktop devices. The first two mail-outs are letters with information about how to access the survey online and a passcode for accessing the survey. At the third mailing a paper self-completion questionnaire is sent out to maximise response. A final letter reminder is sent as the fourth mailing which includes a reminder of how to access the online questionnaire (it does not include a paper questionnaire).

The sample is selected from the Postcode Address File using random probability sampling and one letter is sent to each address inviting up to two adults from the household to take part. Young people aged 14-15 years old are identified through responses to the adult questionnaire and an additional mailing is sent to named 14-15 year olds, where applicable. In total during the first year of the survey initial invitation letters were sent to 845,230 addresses.

The sampling was designed to achieve pre-determined numbers of returns from adults within each local authority across the year of the survey (mid-November 2015 to mid-November 2016). For the majority of the local authorities (267 from 326) the target number of completed questionnaires was 500 returns. For the two smallest Local Authorities (City of London and Isles of Scilly) the target was reduced to 250. There were also boosts for 57 of the local authorities to between 750 and 2,000 returns in total.

Weighting

Weighting is required to reduce the bias in survey estimates. Weights are produced to make the weighted achieved sample match the population as closely as possible. For the Active Lives Survey the weights correct for the disproportionate selection of addresses across local authorities and for the selection of adults and youths within households. They also adjust the achieved sample by month to control for seasonality. In addition, by weighting to population estimates and national estimates from the Annual Population Survey (2015-16), the weights should also reduce bias in the survey estimates.

There were five stages to the weighting strategy:

- 1) calculation of an individual (within household) selection weight;
- 2) initial calibration to local authority and age/sex population estimates and month counts assuming a proportionate sample;
- 3) a second stage of calibration to the same measures as well as national estimates from the Annual Population Survey;
- 4) trimming of the second stage of calibration; and

5) a final adjustment to regional counts.

Multiple weights have been produced to allow correct weighting of the variables for different types of analysis. Most analysis has used the weight which covers the whole sample and the weight for online cases only. These two weights will be provided on the main dataset. Full details of the weighting scheme will be provided in the technical report which will be published alongside the data together with information on the correct weight to use.

Confidence intervals

Confidence intervals for the measures presented in the report can be found in the linked report tables. Confidence intervals indicate that if repeated samples were taken and confidence intervals computed for each sample, 95% of the intervals would contain the true value. Confidence intervals vary for each measure and each demographic breakdown. Only differences which are statistically significant are reported on as differences in the commentary. Where results are reported as being the same for two groups, this means there is no statistically significant difference.

Confidence intervals have been calculated using the complex survey package in SPSS, which takes account of design effects. They are presented for rates (%) in the report tables. Confidence intervals would also apply to the population estimates presented in the report and report tables.

These are estimates of the number of people in a particular group (for example, the number of people in the inactive group, or the number of males who have attended a live sports event at least twice in the last year). These estimates, generated by Sport England, have been calculated using the rate (%) and the 2015 mid-year population estimates from the ONS, and therefore the true value would lie within a range around the estimates. The confidence intervals for the population estimates can be calculated by dividing the population estimate by the rate (%) and multiplying by the lower and upper confidence interval rates in the report tables.

For example, on Page 4 the report states:

26% of people (**estimated 11.3m**) do not take part in at least 30 moderate intensity equivalent (MIE) minutes of physical activity a week including any kind of walking, cycling, dance, fitness or sports (excluding gardening).

The report tables show the lower and upper confidence intervals for this figure to be: 25.3% and 25.9%. The rate is 25.6%.

The lower confidence interval for the population estimate is $(11,346,800/0.256) * 0.253 = 11,213,800$ (11.2m).

The upper confidence interval for the population estimate is $(11,346,800/0.256) * 0.259 = 11,479,800$ (11.5m)

Definitions used in the report

Activity data in the report

The data were collected by asking which activities from a list people had done in the last 12 months, on how many days they had done each activity in the last 28 days, how long they usually spent doing the activity per day and whether it raised their breathing rate or made them out of breath or sweaty.

Moderate activity: This is defined as activity where you raise your heart rate and feel a little out of breath.

Vigorous activity: This is where you are breathing hard and fast and your heart rate has increased significantly (you will not be able to say more than a few words without pausing for breath)

People could also mention activities which were not listed on the questionnaire and these were coded to the relevant activity. These data then fed into the measures presented in the analysis (inactivity and taking part). The data have been cleaned such that duplicated fitness activities within a single questionnaire have been removed, missing durations have been imputed using the median duration for that activity and extreme durations have been capped at the 95th percentile for that activity. The questionnaire was set up such that people selected the activities they did. Any activity which was not selected was assumed not to have been done.

1. Inactivity

KPI2: Decrease in the percentage of people physically inactive.

The Chief Medical Officer defines an inactive person as someone who, over the course of a week, does not achieve a total of 30 moderate intensity equivalent (MIE) minutes of physical activity. Breaking that down further:

- Moderate intensity equivalent (MIE) minutes means each 'moderate' minute counts as one minute. Any vigorous activity counts for double, so each vigorous minute counts as two moderate minutes.
- The 30 MIE minutes can be achieved in one go or in chunks of at least 10 minutes across different days through a combination of physical activities.

Associated measures are 'insufficiently active' which refers to 30-149 minutes by the same definition and 'active' which refers to 150 or more minutes. KPI2 in sporting future guidelines refer to all sports, fitness, cycling, walking, dance and gardening activity. Gardening does not however fall under Sport England's remit and so, unless referenced otherwise, this is excluded from the data presented.

2. Taking part in Sport and Physical Activity

KPI1: Increase in percentage of the population taking part in sport and physical activity at least twice in the last month.

This is measured as the equivalent of 30 minutes or more activity at least twice in the last 28 days. Each session must last at least 10 minutes and be of at least moderate intensity.

An individual can reach the minimum threshold by a combination of two 30 minutes sessions across the last 28 days or by six 10 minute sessions, for example. This is measured for all activities including sports, fitness, dance, cycling and walking (including for travel).

In the analysis, specific activities have been grouped together into composites in order to look at groups of sports or disciplines. When creating composites across activities anyone who did not tick any of the relevant activities which feed into the composite were treated as not having done that composite activity. Therefore, there are no missing values for these composites. In some cases intensity was assumed and not asked (assumed always to be light, moderate or vigorous). Activities done by those aged 65 and over were assumed to be at least moderate in all cases and therefore counted in the taking part measure.

Results are also presented for smaller groups of specific activities. The table below shows the specific activities which are included under each of the composite activity groupings on page 14. Where relevant, the wording or description given in the questionnaire is also included for reference.

Composite	Activities included
Walking for leisure	Walking for leisure (including dog walking and rambling and Nordic walking). Only walks of at least 10 minutes continuous walking are counted and walking around shops is excluded.
Walking for travel	Only walks of at least 10 minutes continuous walking are counted and walking around shops is excluded.
Cycling for leisure and sport	Cycling for leisure, Mountain biking, BMX, Road cycling or racing, Track cycling, Cyclo-cross, Cycling for Leisure and all other cycling, Exercise bike, Cycle class (e.g. spinning, RPM).
Cycling for travel	Cycling for travel (including commuting).
Creative or Artistic Dance	Creative or Artistic Dance. For example, ballet, ballroom, belly dancing, contemporary, contact improvisation, Flamenco, folk, hip-hop, historical/period, Irish, jazz, jive, Latin American, line or square dancing, salsa, street dance, South Asian, tango or tap.
Fitness activities	<p>Combining several activities in a gym.</p> <p>Fitness machines such as Cross training machine (e.g. Cross trainer, SkiErg), Exercise bike, Rowing machine, Step machine, Treadmill, Other exercise machine.</p> <p>Fitness class such as Pilates, Yoga, Boxing class (e.g. Boxercise, body combat), Cardio class (e.g. aerobics, step aerobics, body attack), Core strength class (e.g. legs bums and tums, body balance), Cycle class (e.g. spinning, RPM), Dance-based class (e.g. Zumba, fitsteps, raverise or body jam), Water-based class (e.g. aquaerobics, aquafit), Weights-based class (e.g. body pump, kettlebell), Other fitness or exercise class.</p> <p>Weights session such as Resistance weights machines, Free weights (includes kettlebells and dumb-bells), Weightlifting or powerlifting (using a barbell).</p> <p>Interval sessions, such as Circuit training, Cross training, Bootcamp (e.g. drill sergeant, military fitness), Cross fit, High intensity (e.g. HIT, insanity).</p> <p>Generic fitness session, covering things such as Body weight exercises (e.g. pull ups, press ups, sit ups), Skipping, Aerial fitness.</p>

Sporting Activities	<p>Team Sports: Football, Cricket, Rugby union, Rugby league, Touch rugby, Wheelchair rugby, Netball, Basketball, Wheelchair basketball, Field hockey, Volleyball, Rounders, Dodgeball, Baseball or softball, Lacrosse, Goalball, Handball, Gaelic sports, Other team sport.</p> <p>Racket Sports: Tennis, Badminton, Squash or Racketball, Table Tennis.</p> <p>Adventure sports: Hill or mountain walking or hiking, Rock climbing or bouldering, Climbing or bouldering wall, Caving or pot holing, Abseiling, Orienteering, Parkour or free running, High ropes.</p> <p>Water sports: Rowing, Sailing, Windsurfing, Gliding, paragliding or hang gliding, Canoeing or kayaking, Rafting, Water skiing or wakeboarding, Surfing, board surfing, body boarding, kite surfing, paddle boarding, Scuba diving or snorkelling, Life-saving, Other water sports such as dragon boat racing.</p> <p>Leisure games and activities: Angling or fishing, Archery, Fencing, Ice skating, Frisbee or ultimate Frisbee, Rounders, Garden trampolining, Ten-pin bowling, Croquet, Cue based sports (e.g. billiards, snooker and pool), Darts, Skittles, Other leisure activity or game.</p> <p>Combat sports, Martial Arts or Target Sports: Archery, Boxing, Fencing, Judo, Taekwondo, Martial arts, Shooting, Wrestling, Tai Chi</p> <p>Winter sports: Skiing, Snowboarding, Sledding, luge, tobogganing, Ice hockey, Curling, Ice skating, Other winter sports.</p> <p>Swimming, diving or water polo: Swimming indoors and outdoors, Diving, Water polo.</p> <p>Running, athletics or multi-sports: Track and field athletics, Running or jogging, Fell or trail running, Triathlon (includes aquathlon and duathlon), Modern Pentathlon, Obstacle course (e.g. Tough mudder, Spartan, Rat Race).</p> <p>Golf.</p> <p>Horse riding.</p> <p>Bowls or Boules.</p> <p>Gymnastics, trampolining or cheerleading.</p> <p>Roller or skating sports: Rollerskating, inline skating, rollerblading, Roller hockey, Skateboarding, Ice skating.</p> <p>Motorsports: Karting or go-karting, Motorcycle racing, Motorcar racing.</p>
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3. Sports spectating

KPI9: Number of people who have attended a live sporting event more than once in the past year.

This is measured as having watched two or more live sports events, whether professional or amateur, over the previous 12 months.

The question was asked as part of a list of different activities. They were asked:

- Have you done this activity (attended a live sports event) in the past 12 months?
- If you have done this activity in the past 12 months how many times have you done it?
Additional information provided was: Include all matches and competitions, including professional sport as well as watching family and friends compete.
- Answers of 'twice' or 'three or more' were included in this measure. There were some missing data from the postal questionnaire, if people did not answer this question. These people are excluded from the base. Therefore, the base for the analysis is 197,514.

Key demographic variables

1. Age and gender

The report contains breakdowns by **age and gender**. Gender includes the category 'in another way' but the data for this group have been suppressed owing to small numbers.

2. Number of long term limiting impairments

The questionnaire asked whether people had any physical or mental health conditions or illnesses that have lasted or are expected to last 12 months or more. Those who said yes were asked whether these physical or mental health conditions or illnesses have a substantial effect on their ability to do normal daily activities. All those who reported any conditions or impairments were asked whether the disability or illness affected them in any of 13 ways (including other). These were long term pain, chronic health condition, mobility, dexterity, mental health, visual, breathing, memory, hearing, learning, speech, behavioural, other (more detailed descriptions were provided on the questionnaire). Those who answered yes to the impairment having a substantial effect were considered to have a limiting impairment. The number of limiting impairments was derived from the question which asked about types of impairment. It should be noted that this is the number of impairments from a set list reported by people who said that any of their conditions or illnesses have a substantial effect.

Those in the no limiting impairments category are those who reported no conditions or illnesses and those who reported that any conditions they have do not have a substantial effect on their ability to do normal daily activities.

3. Social Status

The measure used is a National Statistics Socio-economic Classification (NS-SEC) measure derived using the self-coded method¹. This collects information about employment status (self-employed or employed), the size of organisation and supervisory roles. People are then asked to place themselves in one of eight occupational groups. From this a five class NS-SEC measure can be derived. Testing of this method by ONS showed a 75% agreement with the interviewer coded method. More details about this method can be obtained from ONS, since the standard self-coded method was used.

4. Current education stage

Those who reported that they were in full or part time education when asked about their working status were asked about where they are studying. In addition, those who did not report being in full or part time education were asked whether they were studying for a recognised qualification. Those who were studying for a recognised qualification were asked where they were studying. Young people (14-15) were all asked where they were studying as it was assumed they were in education. Note that the sample for analysis by education stage only includes online cases as the question was not included on the adult paper questionnaire. The analysis was weighted accordingly.

Note on terminology

In the report tables the term respondents is used as the heading for the unweighted base for each column. The term respondents has been used because the term participant which is usually used to refer to people who take part in a survey is confusing in the context of a survey about sports participation where participation has a different meaning.

The term rate (%) means the weighted percentage of respondents who gave that answer.

¹ Section 14 in the ONS Socio-economic classification guidance.
<http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/soc2010/soc2010-volume-3-ns-sec---rebased-on-soc2010--user-manual/index.html>