

**Taking Part: England's Survey of
Leisure, Culture and Sport
(Year 6, 2010-11)**

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1. Introduction

This report outlines the methods used for the 2010/11 Taking Part survey. The survey was first commissioned by DCMS in 2005, and has been running on a continuous basis since then, making 2010/11 its sixth year of fieldwork. It is the key evidence source for DCMS and was commissioned primarily to provide a single evidence source on participation in culture and sport. The survey is currently used to measure and inform departmental indicators, inform the development and impact of DCMS policy, and to understand the drivers and barriers of participation in cultural and sporting activities.

Taking Part is a random probability survey of adults aged 16+ and of children aged 5-15 in England. In 2010/11, 14,002 adults and 1,116 children aged 11-15 were interviewed. Information was also collected from parents or guardians of 1,590 children aged 5-10. Interviews were conducted face-to-face in home by specially trained interviewers working on behalf of TNS-BMRB using Computer Assisted Personal Interviewing (CAPI).

The sample for this survey was issued on a quarterly basis, starting in April 2010. The 2010/11 survey comprises the April 2010, July 2010, October 2010 and January 2011 samples.

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2. Sample Design

2.1 Survey population and sample frame

The survey was designed to yield a representative sample of adults aged 16+ and of children aged 11-15 who are normally resident in England. Relevant adults also provided information about children aged 5-10 so this population is also covered.

For practical purposes, residents of institutional accommodation (armed forces barracks, student halls of residence, hospitals, care homes, prisons etc.) were excluded as is normal practice.

TNS-BMRB utilised the Residential Postal Address File (PAF) as the sample frame. This provides a list of almost all private residential addresses in the UK and is the most comprehensive frame available. Because it lists addresses, not individuals, interviewers were required to randomly select respondents from among those eligible.

2.2 Sample size

A key objective of the sample design for the 2008-2011 survey was to measure change in the key participation estimates between 2008/09 and 2010/11. A sample size of 14,000 in 2008/09 and 2010/11 would provide a high level of precision at the overall level and for most significant sub-group estimates. The sample of 2,500 in 2009/10 was sufficient to identify any substantial year-on-year changes in behaviour at the top level.

2.3 Selection of Primary Sampling Units

The primary sampling units (PSUs) selected for the 2008/09 survey were re-used in 2010/11. This was to minimise sampling error in the measures of change between 2008/09 and 2010/11 survey. When measuring change over a single specified period or on a rolling basis it makes sense to maximise overlap between the PSUs used for the baseline and 'result' waves. This is because the primary measure is the estimate of change rather than the single survey prevalence estimate. By doing this, it is possible to minimise the statistical 'noise' caused by sampling a different set of PSUs each time. Although any one sample of PSUs is representative in terms of the design strata, there is variance within these parameters.

In practice, the two sets are not identical because the 2010/11 sample is based on the primary 2008/09 sample (i.e. excluding those allocated to the reserve pool). Consequently, 27 'reserve' PSUs that were activated in 2008/09 were not re-used in 2010/11, and 10 'primary' PSUs withdrawn from the 2008/09 sample were included in the 2010/11 sample.¹ Despite this, overlap is 96% (848/885 PSUs used across the two surveys are common to both).

New address samples were drawn in each PSU used in 2010/11 so this is a panel survey of PSUs but not of individuals. It is also worth noting that, due to a change in the reporting timetable, the 2008/09 sample covered the period July 2008 to June 2009 while the 2010/11 sample covered the period April 2010 to March 2011.

2.3.1 Different Primary Sampling Units based on population density

As outlined in 2.3, the same PSUs selected in 2008/09 were used in 2010/11. In 2008/09 a new sample design was adopted in which the primary sampling unit varied based on the local area's population density. The objective of the 2008/09 redesign was to loosen the level of clustering in the most densely populated areas while tightening it in the least densely populated areas. The theory was that the statistical cost due to clustering would be reduced significantly in the most densely populated areas but not increased a great deal in the least densely populated areas².

A formula was developed to ensure that:

- approximately one third of PSUs would be 'double' Medium Layer Super Output Areas (MSOAs);
- approximately one third of PSUs would be single MSOAs
- approximately one third of PSUs would be paired Lower Layer Super Output Areas (LSOAs).

¹ The reserve pool was accessed early in 2008/09 survey but it later transpired that too many had been activated so a proportion had to be removed later in the year.

² An analysis of the results will follow in a later note to DCMS by end of 2011.

'Double' MSOAs were formed by linking MSOAs with adjacent ONS codes³. For the most part, those with adjacent ONS codes were also geographically adjacent, although this did not hold in every case. Two further rules were applied: no doubles could be formed that crossed local authority boundaries and no single MSOAs could be left unpaired. These singles were attached to adjacent doubles to form trio MSOAs. Census-derived data used for stratification was computed for each of these new PSUs.

Once this stage was complete, a measure of address density was formed. Following previous convention with this survey, 30 addresses were to be issued per PSU everywhere except London⁴ where 42 were to be issued per PSU. From this a 'selected addresses per square kilometre' value was computed for every 'double' MSOA. Where this value was greater than 1.50, the double MSOA would be used as the PSU. Where this value fell between 0.35 and 1.49, the standard single MSOA would be used as the PSU. Where this value fell below 0.35, standard single MSOAs would be sampled but a second sampling stage would take place: two LSOAs would be sampled from those within the sampled MSOA.

This design ensured an even division between the three PSU types and an expected average of 8.9 selected addresses per square kilometre, a little less than in previous editions⁵ but not by a large enough margin to make a major impact on costs.

2.4 PSU stratification

Before TNS-BMRB sampled the PSUs, the list of PSUs was stratified into 19 geographic areas: the 9 English regions (minus any local authorities in the Top Ten in terms of population) plus the 10 most populous local authorities which counted as

³ ONS codes start with the letter E (for England) and then an 8 digit number (starting with 02000001 for one of the MSOAs in the City of London). Thus they can be sorted numerically and double-MSOAs formed by batching adjacent pairs together.

⁴ For sampling purposes, London is defined as the London Government Office Region (GOR)

⁵ An expected average of 13.6 selected addresses per square kilometre in the 2007/08 survey.

separate strata: Birmingham, Leeds, Sheffield, Manchester, Bradford, Liverpool, Kirklees, Bristol, East Riding of Yorkshire, and the Wirral.⁶

Other levels of stratification were employed within each of these geographic areas. TNS-BMRB used forward stepwise regression techniques to analyse the individual-level associations between demographic values and the relevant performance indicators in the 2005-07 survey data. Where associations were strong, TNS-BMRB selected the equivalent PSU-level aggregate value as a stratification variable.

The precise stratification design varied based on the total number of PAF addresses in each geographic area.

Table 2.1 shows the 2010/11 Taking Part sample design.

MANPROF = Proportion of residents aged 16+ classified as managerial/professional according to Census 2001

AGED1635 = Proportion of residents aged 16-35 according to Census 2001

ACAT1-3 = Proportion of households classified in ACORN categories 1 to 3 ['wealthy achievers', 'urban prosperity' and 'comfortably off']

Table 2.1 PSU stratification design for Taking Part 2008/09 & 2010/11

Region	Stratification levels		
	Level 1	Level 2	Level 3
North East England	5 percentiles of MANPROF	2 percentiles of AGED1635	Sorted by ACAT1-3 (Implicit)
North West England	6 percentiles of MANPROF	4 percentiles of AGED1635	Sorted by ACAT1-3 (Implicit)
Yorkshire / Humber	5 percentiles of MANPROF	2 percentiles of AGED1635	Sorted by ACAT1-3 (Implicit)
East Midlands	5 percentiles of MANPROF	3 percentiles of AGED1635	Sorted by ACAT1-3 (Implicit)
West Midlands	6 percentiles of MANPROF	3 percentiles of AGED1635	Sorted by ACAT1-3 (Implicit)
East of England	6 percentiles of MANPROF	4 percentiles of AGED1635	Sorted by ACAT1-3 (Implicit)
London	7 percentiles of MANPROF	4 percentiles of AGED1635	Sorted by ACAT1-3 (Implicit)

⁶ These ten were selected in order to generate representative, if highly clustered, samples in each and compare the 2008/09 survey estimates with those generated by Sport England's concurrent Active People survey where question items were the same or similar.

South East England	8 percentiles of MANPROF	4 percentiles of AGED1635	Sorted by ACAT1-3 (Implicit)
South West England	6 percentiles of MANPROF	3 percentiles of AGED1635	Sorted by ACAT1-3 (Implicit)
Birmingham	4 percentiles of MANPROF	Sorted by AGED1635 (Implicit)	-
Leeds	3 percentiles of MANPROF	Sorted by AGED1635 (Implicit)	-
Sheffield	2 percentiles of MANPROF	Sorted by AGED1635 (Implicit)	-
Manchester	2 percentiles of MANPROF	Sorted by AGED1635 (Implicit)	-
Bradford	2 percentiles of MANPROF	Sorted by AGED1635 (Implicit)	-
Liverpool	Sorted by MANPROF (Implicit)	-	-
Kirklees	Sorted by MANPROF (Implicit)	-	-
Bristol	Sorted by MANPROF (Implicit)	-	-
East Riding of Yorkshire	Sorted by MANPROF (Implicit)	-	-
Wirral	Sorted by MANPROF (Implicit)	-	-

This design produced 197 explicit strata in total plus additional implicit stratification.

2.5 PSU sampling method

In 2008/09, TNS-BMRB sampled the PSUs with a probability proportionate to size (number of delivery points/addresses) using the method of random start and fixed interval.

The design called for a proportionate sample but sampling fractions varied slightly by region to take account of historically different conversion rates (interviews per sampled address) in different regions. TNS-BMRB calculated regional conversion rates based on Years 2006/07 and 2007/08 of Taking Part.

In total, TNS-BMRB sampled 858 PSUs for 2010/11.

In each PSU, TNS-BMRB sampled 30 addresses after sorting addresses by postcode and house number to maximise the spatial dispersion of the sample. In

London 42 addresses were sampled because of its historically relatively low response rate. In those PSUs where a sub-sample of two LSOAs was drawn, 15 addresses were sampled in each LSOA.

In all cases except the 10 PSUs that were not used in 2008/09, the first sampled address was 20 addresses up/down the list from the first sampled address in 2008/09⁷. The up/down allocation was random with equal probability of each. This method maximises the comparability of the 2008/09 and 2010/11 samples.

2.5.1 Month assignment

The 2010/11, PSUs were allocated to a month 21 months after that used in 2008/09. Consequently, they were all placed three months back from their 2008/09 placement. The alternative would have been to minimise seasonal differences by allocating each 2010/11 PSU to a month 24 months after that used in 2008/09 with the exception of the April-June 2008 PSUs which could be allocated to a month 12 months after that used in 2008/09 (i.e. April-June 2009). However, this unwelcome variation in time lapse was felt to be more of a problem than the seasonal inconsistency introduced by a fixed time-lapse design. The seasonal inconsistency may have reduced some of the between-survey PSU-level correlations but they are still substantial (see Section 7 for more details).

2.5.2 Sampling of individuals

At each sampled address, the interviewer would randomly sample one dwelling unit (if more than one), then randomly sample one household (if more than one) within the sampled dwelling unit. Interviewers used unique Kish Grids assigned to each address to assist them in this process.

The same Kish Grid was also used to randomly sample individuals within the household. Interviews were sought with:

- 1 adult aged 16+
- 1 child aged 11-15 (if resident)

⁷ An updated PAF file is received by TNS-BMRB on an annual basis – this was used to draw the sample on a quarterly basis.

Any parents or guardians of 5-10 year olds who were interviewed for the adult survey were asked to provide information about one randomly sampled child in this age range.

3. Fieldwork

All fieldwork was conducted on behalf of TNS-BMRB by interviewers trained and supervised by Kantar Operations⁸. Approximately 400 interviewers worked on the survey in 2010/11.

3.1 Briefings

All new interviewers working on the 2010/11 survey attended a face-to-face briefing. These were presented by TNS-BMRB researchers and Kantar Operations field staff. If available, representatives from DCMS also attended the briefings.

In 2010/11, the Taking Part interviewing team was refreshed significantly as 191 interviewers attended one of the 13 briefings held in London, Warwick or Manchester. Around 12-15 interviewers attended each briefing.

Each briefing included the following topics:

- Background and information on the Taking Part Survey and its use by DCMS.
- Information about sampling procedures; contact procedures and dwelling/respondent selection; the importance of high response rates, with methods of ensuring contact and encouraging co-operation; and the use of incentives.
- Description of the questionnaire, and interview procedures, including explanations of the more complex questions and question sequences. Particular attention was paid to the questions used to measure key participation measures.
- Group exercise to get interviewers to think of ways to respond to potential refusals on the doorstep.

In addition to attending the face-to-face briefing, interviewers were also required to read the written Interviewer Instructions (see Appendix A) and carry out at least two practice interviews before starting their first assignment. Practice interviews are

⁸ Kantar is the information, insight and consultancy arm of WPP. Kantar Operations manage all aspects of the operational side of research on behalf of TNS-BMRB. Further details can be found at <http://www.kantaroperations.com>.

carried out by the interviewer, using the same version of the CAPI script as the main survey. They are instructed to work through the interview at least twice in order to become familiar with the questions, prompt material and questionnaire routing.

Interviewers briefed in Years 2005/06 to 2009/10 were not required to attend a further face-to-face briefing. Interviewers were however, sent an updated set of Interviewer Instructions, highlighting the changes to their assignment in 2010/11.

In addition to the interviewer briefings, a number of interviewers were invited to attend one of two Taking Part review meetings held in late 2010, where they were encouraged to give feedback and exchange experiences of working on the survey with other interviewers. This proved to be a valuable experience, and the findings from the meetings were reported to the rest of the interviewer panel via the interviewer instructions and the interviewer newsletter, "Grassroots".

3.2 Supervision and quality control

Several methods were used to ensure the quality and validity of the data collection operation.

A proportion of interviewers, particularly those less experienced, were accompanied in the field by supervisors. All interviewers who were new to random probability sample surveys were accompanied on the first day of a Taking Part assignment by a supervisor.

A proportion of respondents were re-contacted to verify that an interview had taken place. In total, 12.4% of respondents were re-contacted in 2010/11 to verify that the interviewer had contacted someone and whether or not an interview was completed. Addresses for back checking were selected on the basis of Kantar Operations overall field quality procedures, whereby all interviewers have their work checked at least twice a year.

These back checking procedures were mainly carried out by telephone. Where no telephone number was available a short postal questionnaire was sent to the address to collect the same information. Of the back checks completed, 91.3% were validated by telephone and 8.7% by post.

3.3 Fieldwork dates and fieldwork management

Fieldwork was conducted between 19 April 2010 and 24 April 2011.

Fieldwork was managed on a quarterly basis and assignments were issued to interviewers prior to each quarter starting. Table 3.1 shows the number of assignments and core sample addresses per quarter.

Table 3.1 Assignments and core sample addresses per quarter

Quarter	Number of assignments	Number of core sample addresses
Quarter 1	213	6,738
Quarter 2	214	6,780
Quarter 3	222	7,032
Quarter 4	209	6,606

Interviewers had about 4 to 5 weeks to cover all the addresses in their assignment and report final outcomes. Interviewers were encouraged to start their assignment as early as possible in fieldwork to try to maximise the time available for making contact at the addresses.

Once all the issued addresses had been covered the Address Contact Sheets were returned to Kantar Operations and a decision was taken about re-issuing non-productive outcomes. As a general rule all non-productive addresses (non-contacts, refusals, broken appointments, etc.) were considered for re-issue unless there was a specific reason not to or it was not considered cost effective (e.g. response rate and interview projections were on track or if only one or two addresses in an assignment were available for reissue). Once the first re-issue period had been completed a decision was taken about whether to re-issue addresses that were still non-productive for a second or third time.

Table 3.2 shows the fieldwork dates for each sample quarter.

Table 3.2 Fieldwork dates for each sample quarter

Quarter	Fieldwork start	Fieldwork end
Quarter 1	19/4/10	31/8/10
Quarter 2	30/7/10	30/11/10
Quarter 3	18/10/10	16/2/11
Quarter 4	27/1/11	24/4/11

3.4 Fieldwork procedures and documents

3.4.1 Introductory letters and leaflet

All the sampled addresses were sent an advance letter and a Taking Part respondent leaflet. The letters and leaflets were sent by interviewers a couple of days before starting their assignment.

The letter and leaflet were designed to answer respondents' questions and encourage them to take part. No changes were made to these documents in the 2010/11 survey (having already been revised in the previous years of the survey to make them more respondent friendly and persuasive, these documents continued to work well).

The letter outlined the background to the survey, stressed the importance of the respondent taking part, the confidential nature of the survey and the respondent incentive for taking part. The letter was despatched on DCMS headed paper and signed by the project manager at DCMS to authenticate the survey.

There were also two 'reissue' letters – one for those addresses where the initial interviewer was unable to make contact at the address and one for those where a refusal had occurred. Both were despatched on TNS-BMRB headed paper and signed by the project manager at TNS-BMRB.

All letters provided a telephone number and an email address so that individuals could find out more about the survey, make an appointment for an interviewer to call, or opt out of the survey. Over the course of the year, 591 people, representing 2.2% of addresses issued, opted out of the survey by contacting TNS-BMRB, Kantar Operations or DCMS.

Copies of the letters and the leaflet can be found in Appendix B and Appendix C respectively.

3.4.2 Non-English speakers

In cases where the selected person had limited or no English, interviewers were permitted to use another person to interpret, provided such a person was appropriate (e.g. a close relative). The minimum age for an interpreter was set at 12 years old.

3.4.3 Address Contact Sheets

Each address was issued to the interviewer on a document called the Address Contact Sheet (ACS). The ACS used for the main sample served four main functions:

- it contained full address details for the sampled address;
- interviewers used it to make random selections of dwelling units and eligible adults;
- interviewers used it to complete the screening for the child interview, make the selection of the child and record parental permission to approach the child for interview;
- interviewers used it to record the outcome of their attempts to make contact and conduct an interview at the address;

Interviewers made a minimum of eight calls at each address before regarding it as a non-contact, recording details of these on the ACS. Calls had to be made on different days of the week and at different times of day: at least two of the calls had to be made on a weekday evening (after 7.00 p.m.) and at least one call at a weekend (10.00 a.m. – 9.00 p.m.), in order to make contact with households where everyone was working.

An example ACS is included in Appendix D.

3.5 The child survey

There are two parts to the child survey:

- 5-10 interview carried out by proxy with the adult respondent if they were the parent or guardian of the 5-10 year old;
- 11-15 interview carried out with the child, following parental consent being granted.

3.5.1 Screening procedures for the child sample

The child screening was carried out at all addresses in the sample. Where an eligible 5-10 year old and an eligible 11-15 year old were identified the interviewer

was instructed to attempt to carry out both extra interviews (a “child interview by proxy” for 5-10 year olds and a “child interview” for 11-15 year olds) at that household.

There were screening instructions for both the 5-10 proxy interview and the 11-15 interview on the main address contact sheet, but in order not to jeopardise the adult survey the child screening was left until after the adult interview unless brought up by the respondent. Once the selection of any children aged 11-15 had been made, the interviewer was required to obtain written parental permission before proceeding with the interview. The adult was shown the Parental Permission Card (see Appendix E) to indicate what the interviewer would be asking the child, and asked to sign the “parental/guardian permission” section of the address contact sheet. This was not required with the 5-10 proxy interview as this was completed by the parent on behalf of the child.

3.5.2 Attempting interviews with the children

For the 5-10 proxy interview, the interviewer was instructed to continue straight into the child survey after the adult interview if possible. For the 11-15 interview, the interviewer was only permitted to approach the child to attempt an interview once parent/guardian permission had been obtained. It was recommended that the 11-15 interview should be conducted during the same visit as the adult interview if possible, though appointments for a re-visit could be made for the 11-15 interview if necessary.

3.6 The questionnaires

3.6.1 Adult questionnaire

For the start of the 2010/11 survey, the adult questionnaire returned to its original length of approximately 40 minutes after it was reduced to 20 minutes in 2009/10. Many of the key sections that had been removed for the 2009/10 survey were placed back in the questionnaire, while it also provided the opportunity to incorporate some new questions. These included a battery of attitudinal questions on participation in general activities and specifically for DCMS sectors, and also a new section around barriers to participation in DCMS sectors⁹. In addition, some questions were included

⁹ The ‘Barriers to Participation’ project, commissioned by DCMS in 2009, was used to develop this set of questions. The report can be found on the DCMS website, at http://www.dcms.gov.uk/images/research/TP_Barriersreport.pdf

on swimming and cycling competency.

In January 2011 (Quarter 4), further changes were made to the adult questionnaire. Piloting work was conducted, and a section on charitable giving was included in the adult questionnaire to reflect the department's new policy priorities¹⁰. To make space for these new questions, several questions from the barriers section and all attitudinal questions that had been added at the start of 2010/11, were removed.

The questionnaires used in 2010/11 can be found in Appendix F (Quarter 1-3) and Appendix G (Quarter 4). The derived variables and classification variables in the adult dataset can be found in the 'Additional Dataset Variables' document in Appendix H.

3.6.2 Child questionnaires

An addition to the child surveys for 2010/11 was the inclusion of a question asking the parent or guardian of the child for permission to pass on the child's personal details (e.g. date of birth) to DCMS in order to link their answers to information from the Department for Education's National Pupil Database and conduct more in-depth analysis. These questions were added to the questionnaires at the beginning of the 2010/11 survey, along with questions about cycling and swimming competency.

The child questionnaires were restructured in January 2011 (Quarter 4). The 7-day activity diary section of the questionnaire, which previously existed to measure the 5-hour cultural and sporting offers, was removed, and the participation questions were amended and re-ordered to meet DCMS' new policy requirements. Instead of collecting detailed information about the last seven days' participation in sports and cultural activities, the new questionnaires focused less on specific frequency measures, while extra questions surrounding enjoyment of activities (for 11-15 year olds) and participation in competitive sport were also added..

The child questionnaires used in 2010/11 can be found in Appendix I (Quarter 1-3) and Appendix J (Quarter 4).

¹⁰ The pilot report can be found on the DCMS website, at <http://www.culture.gov.uk/publications/7911.aspx>

The changes to the child questionnaires that were made in January 2011 had a significant impact on the 2010/11 child survey dataset. A detailed overview of the child dataset, including guidance on which variables reflect the whole year, and which only allow analysis of either Quarters 1 to 3, or Quarter 4, is included in Appendix K.

3.7 Interview length

In 2010/11 the mean adult sample interview length was 42 minutes 36 seconds (median 40 minutes 42 seconds).

The 5 to 10 child interview mean length was 14 minutes 58 seconds (median 14 minutes 3 seconds), while the 11 to 15 child interview had a mean length of 25 minutes 41 seconds (median 24 minutes 16 seconds)¹¹.

3.8 Respondent incentives

Incentives remained the same between 2009/10 and 2010/11, following the continued success of the incentives piloted in 2006/07. As has been the case since 2006/07, each household received a non-conditional incentive of a book of six first class stamps with the advance letter. In addition, each household that completed the interview(s) received a £5 high street voucher.

No additional incentive was provided for the child surveys.

¹¹ All figures have been calculated after capping the lower and upper extreme values - adult interview – lower 0.42%, upper 1.9%; 5-10 interview – lower 0.4%, upper 1.5% and 11-15 interview – lower 0.4%, upper 2.4%. Extreme lower (including negative) and upper values are likely to have arisen from interviews being split into two or more sessions, since the computation is not date-sensitive (e.g. if an interview was concluded on a subsequent day but earlier in the day, the difference between relative start and end times could be negative, or unexpectedly small).

4. Coding open ended questions

The Taking Part adult and child questionnaires have a number of full and partial open-ended questions. Partial open-ended questions have response lists with an 'other specify' option. Code frames are created for these questions based on the verbatim answers collected during the interview. All code frames were reviewed quarterly in 2010/11, and new codes were added if the questionnaire had changed or, occasionally, on existing questions where respondents had given answers which they had not given in the previous years of the survey. All new or amended code frames were signed-off by DCMS.

The coding of open-ended questions was carried out using a web-based package called Ascribe by an experienced team of coders in Kantar Operations. Five per cent of open-ended answers were checked by senior coders. New coders had 100% of their work checked until the required standard was reached and thereafter their work was systematically spot-checked. On questions where the "Other" answer category exceeded 10%, answers were also reviewed.

The coding team also code socio-economic data for this survey to produce Standard Occupational Classification (SOC) and National Statistics Socio-economic Classification (NS-SEC) categorisation, from a series of standard questions which were designed for NS-SEC and SOC categorisation.

TNS-BMRB researchers kept in close contact with the coding team throughout fieldwork to ensure that coding was carried out at regular intervals. At least every quarter of the survey year the coding was accessed by the TNS-BMRB research team to check the quality of the coders' work in terms of what had been back-coded to each answer category, and to see what sort of answers had been left in "Other".

A list of all of the code frames used on open-ended and partially open-ended questions in 2010/11 can be found in Appendix L.

5. Fieldwork outcomes

5.1 Adult sample

Table 5.1 shows the fieldwork outcomes for the adult sample issued in 2010/11 for Taking Part. The final contact rate was 92.9%¹² and the final co-operation rate was 61.7%¹³. The (unadjusted) response rate was **57.3%**.

It is standard practice to assume that a proportion of the outcomes classified as 'Residential address but no contact with anyone at address' is actually deadwood. This proportion is equal to the proportion of other outcomes that is classified as deadwood.

27,156 (total number of outcomes) minus 1,477 (total residential non-contacts) = 25,679 outcomes, of which 2,559 are deadwood (9.97%).

$2,559 * 9.97\% = 255$ assumed deadwood addresses among the residential non-contacts.

This increases the total deadwood count to 2,814 (2,559 + 255) and the total non-deadwood outcomes is reduced to 24,342 (27,156 – 2,814).

The *adjusted* response rate = **57.9%**.

Table 5.1 Fieldwork outcomes (adult sample)

Outcome		Outcome grouping		% of total issues	% of non-deadwood
Not yet built/under construction	45	Deadwood	2,559	9.4%	-
Derelict/demolished	99				
Vacant/empty housing	1,505				
Non-residential address	334				
Communal establishment	62				

¹² (Interviews + Refusals + Other unproductive)/ Total non-deadwood.

¹³ Interviews / (Interviews + Refusals + Other unproductives).

Address residential & occupied but not main residence	250				
Other ineligible	90				
Inaccessible	19				
Unable to locate address	155				
Residential address but no contact with anyone at address	1,477	Non-contact	1,737	6.4%	7.1%
Person selected but no contact with selected person	260				
No contact with parent to get parental permission	-				
Information about occupants refused	2,758	Refusal	6,883	25.3%	28%
Office refusal	591				
Parent refused permission to interview	9				
Refusal by selected person	2,969				
Proxy refusal	556				
Broken appointment	483	Other unproductive	1,875	6.9%	7.6%
Selected person ill at home during survey period	142				
Selected person away or in hospital throughout survey period	253				
Selected person physically or mentally unable	306				
Selected person has inadequate English	200				
Other unproductive	462				
Interview reported but no data received	29				
Full interview	14,102	Interview	14,102	51.9%	57.3%
TOTAL			27,156		

5.2 Child sample

5.2.1 5-10 sample

Table 5.2 shows the fieldwork outcomes for the 5-10 child sample. The final contact rate should be **100%** as screening for the 5-10 child interview by proxy should only take place with households co-operating with the main (adult) survey and when the person participating in the adult interview is the parent or guardian of the child aged 5-10. However in five households the screening was completed and no contact (or re-contact) was made with the parent or guardian of the selected 5-10 year old.

The final co-operation rate was **85.2%**¹⁴ and response rate was **85%**. Occasionally, TNS-BMRB achieved a proxy child interview without the adult interview (due to lost data¹⁵ or when the adult refuses to do the main interview after completing the proxy interview¹⁶).

As a general formula, the *cumulative* response rate for the 5-10 survey is adult response rate * child response rate = 57.3%*85% = **48.7%**.

Table 5.2 Fieldwork outcomes (5-10 sample)

Outcome		Outcome grouping		% of total issues	% of non-deadwood
No child aged 5-10 in household or main interview not with parent of 5-10 year old	15,342	Deadwood	25,286	93.1%	-
Information for child screening refused	654				

¹⁴ (Interviews / (Interviews + Refusals + Other unproductives))

¹⁵ If an interviewer experienced problems uploading interviews, files may have become corrupted resulting in lost data.

¹⁶ Interviewers were instructed to do the adult interview before screening for children in the household. However, sometimes the screening may have been completed before this (see section 3.5.1). In these instances, if the adult respondent promised to do the main interview later, the interviewer may have conducted the proxy interview first.

Unable to complete child screening (non-response/deadwood in adult survey)	9,290				
Residential address but no contact with anyone at address (when seeking child interview)	-	Non-contact	5	0.02%	0.3%
Child selected but no contact (or re-contact) with parent of child	5				
Selection information refused	1	Refusals	208	0.8%	11.1%
Office refusal	-				
Refusal by selected person	174				
Proxy refusal	33				
Broken appointment	23	Other unproductive	67	0.2%	3.6%
Selected person ill at home during survey period	1				
Selected person away or in hospital throughout survey period	4				
Selected person physically or mentally unable	-				
Selected person has inadequate English	2				
Other unproductive	28				
Interview reported but no data received	5				
Interview completed by no adult interview received	4				
Full interview	1,590	Interview	1,590	5.9%	85%
Partial interview	0				
TOTAL			27,156		

5.2.2 11-15 sample

Table 5.3 shows the fieldwork outcomes for the 11-15 child sample. The final contact rate was **96.9%**¹⁷ and the final co-operation rate was **70.0%**¹⁸. The response rate was **67.8%**. It should be borne in mind that the request for an interview with an 11-15 year old could only be made in households co-operating with the main (adult) survey request. Occasionally, TNS-BMRB achieved a child interview without the adult interview (due to broken appointments with the adult or lost data).

As a general formula, the *cumulative* response rate for the child survey is adult response rate * child response rate = 57.3%*67.8% = **38.8%**.

Table 5.3 Fieldwork outcomes (child sample)

Outcome		Outcome grouping		% of total issues	% of non-deadwood
No child aged 11-15 in household	15,565	Deadwood	25,511	93.9%	-
Information for child screening refused	120				
Unable to complete child screening (non-response /deadwood in adult survey)	9,826				
Child selected but no contact with selected child	38	Non-contact	51	0.2%	3.1%
No contact with parent to get parental permission	13				
Selection information refused	5	Refusal	326	1.2%	19.8%
Office refusal	2				
Parent refused permission to interview	204				

¹⁷ (Interviews + Refusals + Other unproductive)/Total non-deadwood

¹⁸ (Interviews / (Interviews + Refusals + Other Unproductives)

Refusal by selected child	86								
Proxy refusal	29								
Broken appointment	42	Other unproductive	152	0.6%	9.2%				
Selected child ill at home during survey period	3								
Selected child away or in hospital throughout survey period	34								
Selected child physically or mentally unable	16								
Selected child has inadequate English	1								
Other unproductive	49								
Interview reported but no data received	7								
Full interview	1,116					Interview	1,116	4.1%	67.8%
Partial interview	0								
TOTAL			27,156						

6. Weighting

6.1 Adult data design weights

The adult data weights were separately computed for each quarter because of the requirement to generate a rolling dataset, updated each quarter.

The design weight is equal to the inverse of the individual's selection probability.

The individual's selection probability was computed as follows:

Address selection probability * (1/ number of dwelling units at address) * (1/ number of individuals aged 16+ in selected dwelling unit).

Because all sampled PSUs were sampled two years previously but the addresses were sampled each quarter from the latest Postal Address File, this leads to a very slight departure from the ideal of an equal probability sample of addresses.

6.2 Adult data non-response weights

Non-response weights were computed in two stages:

- 1) Area-type non-response weights;
- 2) Target population weights.

Area-based information was attached to each issued address in the core sample. This included;

- (i) region,
- (ii) the Census proportion of the working age population in managerial or professional occupations,
- (iii) the Census proportion of the population aged 16-35
- (iv) the proportion of the Census population living in neighbourhoods classified as ACORN types 1-3
- (v) type of final area sampling unit (double MSOA, MSOA or double LSOA). These five had proven to be significant factors in earlier Taking Part non-response models.

The CHAID¹⁹ procedure was used to classify addresses in terms of mean response rate. Four area-based variables were found to be significant in at least one quarter:

- % of PSU population aged 16-35+ according to Census (Q1-4)
- % of PSU working age population in managerial/professional occupations according to Census (Q1; Q4)
- Region (Q2-3)
- PSU type (Q4)

Table 6.1 Area-type non-response weights

Quarter	Region	% aged 16-35	% managerial/professional	PSU type	Mean response rate (RR)	Weight (1/RR)
1	All	<43.2%	<20.1%	All	53.1%	1.88
	All	<43.2%	>=20.1%<50.5%	All	60.3%	1.66
	All	<43.2%	>=50.5%	All	44.8%	2.23
	All	>=43.2%	All	All	36.7%	2.72
2	All except West Midlands, London, SW	<34.5%	All	All	62.5%	1.60
	All except West Midlands, London, SW	>=34.5%	All	All	54.0%	1.85
	SW	All	All	All	69.9%	1.43
	London, West Midlands	All	All	All	52.1%	1.92
3	Yorkshire & Humber, East Midlands, East of England, SE	<32.1%	All	All	62.4%	1.60

¹⁹ CHAID (CHi-squared Automatic Interaction Detector) is a technique used to detect interaction between variables in a dataset

	Yorkshire & Humber, West Midlands, East of England, SE	>=32.1%	All	All	55.5%	1.80
	NE, NW, East Midlands, SW	All	All	All	64.6%	1.55
	London	All	All	All	44.2%	2.26
4	All	<21.9%	<33.1%	All	78.0%	1.28
	All	<21.9%	>=33.1%	All	60.3%	1.66
	All	>=21.9% <39.1%	<38.3%	All	62.9%	1.59
	All	>=21.9% <39.1%	>=38.3%	All	56.7%	1.76
	All	>=39.1%	All	Double MSOA; double LSOA	46.0%	2.17
	All	>=39.1%	All	MSOA	59.6%	1.68

In the second and final non-response weighting stage, TNS-BMRB applied rim weights²⁰ to match targets provided by the 2009 ONS mid-year population estimates. The targets were based on sex, age, region, and (LFS²¹ estimate) ethnic group.

Table 6.2: Targets used for second stage non-response weighting

Age	Male	Female
16 – 19	3.3%	3.1%
20 – 24	4.3%	4.1%
25 – 29	4.2%	4.1%
30 – 34	3.9%	3.8%

²⁰ Rim (Random iterative method) weighting is a process of weighting data to match target population estimates – in the case of Taking Part, the rim weight is based on the 2009 mid-year ONS population estimates (42,105,600 adults aged 16+)

²¹ Labour Force Survey

35 – 39	4.3%	4.4%
40 – 44	4.7%	4.7%
45 – 49	4.4%	4.5%
50 – 54	3.8%	3.9%
55 – 59	3.5%	3.6%
60 - 64	3.6%	3.8%
65 – 69	2.7%	2.9%
70 – 74	2.3%	2.5%
75+	3.8%	5.8%
TOTAL	48.8%	51.2%

Region	
North East	5.1%
North West	13.3%
Yorkshire & Humberside	10.2%
East Midlands	8.6%
West Midlands	10.4%
East of England	11.1%
London	14.9%
South East	16.2%
South West	10.2%
TOTAL	100.00%

London/ethnic group	
Not London white	78.5%
Not London not white	6.6%
London white	10.6%
London not white	4.3%
TOTAL	100.0%

6.3 Final adult weights

Weights were ‘capped’ each quarter to avoid inflating the variance of the survey estimates. Although such caps may introduce extra bias to the estimates, this is likely to be minor when, as in this instance, only the top 1-2% of weights are capped²².

The four quarters were combined, with the sum of weights scaled so that each quarter equals 25% of the total.

6.4 Child data design weights

As before, the design weight is equal to the inverse of the sampling probability.

11-15 sample

The basic sampling probability for 11-15s was computed as follows:

Address selection probability * (1/ number of dwelling units at address) * (1/ number of individuals aged 11-15 in selected dwelling unit).

5-10 sample

For the 5-10s, the sampling probability was dependent upon the adult respondent sampling probability. However, it needs to take into account the fact that in two parent households, the child may have been sampled via either of the parents/caregivers. The basic sampling probability for 5-10s was computed as follows:

Address selection probability * (1/ number of dwelling units at address) * (number of parents/guardians in household / number of adults in household) * (1/ number of individuals aged 5-10 with a dependent relationship with adult respondent).

²² Most of the largest weights are due to unexpectedly large numbers of dwelling units at a single address. These are likely either to be interviewer errors or to be very unusual cases that happen to fall into this particular sample. The addresses used in a survey represent a random sample of the PAF which means that the proportion that turn out to contain multiple dwelling units is only an *estimate* of the proportion in the full PAF. This estimate is subject to natural sampling error so should not be taken as absolute.

6.5 Child data non-response weights

The PSU-level non-response weight computed for the adult dataset was also used for the child dataset since both the 11-15 interview and the 5-10 proxy interview were dependent upon the initial co-operation of the sampled adult.

In the second and final non-response weighting stage, TNS-BMRB applied rim weights to match targets provided by the 2009 ONS mid-year population estimates. The targets were based on sex, age, and region. At the same time, each quarter was given an equal weight.

Table 6.3 Targets used for second stage non-response weighting

Age	Male	Female
5	4.70%	4.48%
6	4.55%	4.31%
7	4.39%	4.21%
8	4.36%	4.21%
9	4.49%	4.29%
10	4.61%	4.40%
11	4.68%	4.49%
12	4.81%	4.59%
13	4.79%	4.57%
14	4.83%	4.58%
15	4.96%	4.70%

Region	5-10	11-15
North East	2.50%	2.32%
North West	7.06%	6.42%
Yorkshire & Humberside	5.28%	4.83%
East Midlands	4.47%	4.08%
West Midlands	5.76%	5.14%
East of England	6.04%	5.32%

London	7.99%	6.29%
South East	8.82%	7.88%
South West	5.08%	4.72%

7. Final design effects for key variables

7.1 Adult data

Significance tests assume that the achieved sample is a simple random sample from the survey population. The design effect takes into account the actual complexity of the sample design, reflecting the compromises necessary for real world survey practice.

The actual sample size divided by the design effect equals the *effective* sample size. The effective sample size, rather than the actual sample size, is used for tests of significance.

Table 7.1 shows a selection of key (weighted) 2010/11 results, the attendant design effects and the 95% confidence intervals for each result. The design effects range from 1.52 to 2.04 but all of the estimates are accurate to +/-1.2 percentage points or less.

Table 7.1 Design effects for key DCMS sector variables (2010/11)

Result	Weighted result	Design effect	95% confidence intervals [range]
% Using a library service at least once in the last 12 months	39.7%	1.54	38.7% - 40.7% [2.0pp]
% Visiting a museum/gallery/archive at least once in last 12 months	47.5%	1.52	46.5% - 48.5% [2.0pp]
% Visiting 2+ historic environment sites in last 12 months	57.8%	2.04	56.7% - 59.0% [2.3pp]
% Engaging in at least three arts activities in the last 12 months	61.2%	1.70	60.2% - 62.3% [2.1pp]
% Doing at least three '30 minute plus' sessions of moderate intensity sports / recreational physical activity in last week	24.2%	1.54	23.3% - 25.1% [1.8pp]

Table 7.2 details the design effects for a number of key sub-groups. The design effects tend to be lower, reflecting the fact that these sub-groups will be more thinly distributed between PSUs leading to a smaller cluster effect²³.

Table 7.2 Key sub-group design effects (adult data Y6)

	DCMS sector variables				
	Library use	Museum/gallery/archive visits	Historic site visits	Arts activity	Sport activity
All	1.54	1.52	2.04	1.70	1.54
Sex					
▪ Males	1.55	1.66	1.82	1.48	1.60
▪ Females	1.22	1.21	1.53	1.31	1.33
Disability status					
▪ Longstanding illness/disability/infirmity	1.06	1.07	1.36	1.24	1.38
▪ No longstanding illness/disability/infirmity	1.53	1.59	1.95	1.73	1.59
Ethnic group					
▪ BME	1.24	1.54	1.61	1.55	1.37
▪ White	1.46	1.50	2.00	1.60	1.55

²³ There are two versions of these design effects that can be calculated. One uses a notional simple random sample of the full population as the benchmark and one uses a notional random sample of the sub-group population as the benchmark. The former is a more realistic assessment of the impact of complex sample design but the latter makes calculation of standard errors simpler as these are derived simply by multiplying the standard error of the simple random sample by the square root of the design effect (also known as the 'design factor').

NS-SEC					
▪ NS-SEC 1-4	1.48	1.43	1.64	1.49	1.30
▪ NS-SEC 5-8	1.29	1.38	1.51	1.38	1.44
Age group					
▪ 16-24	2.04	1.87	1.83	1.93	1.85
▪ 25-44	1.49	1.50	1.70	1.59	1.33
▪ 45-64	1.11	1.27	1.43	1.37	1.29
▪ 65-74	0.94	0.86	0.88	0.85	0.90
▪ 75+	1.01	1.00	1.02	0.91	0.95
Average (nationally distributed groups)	1.38	1.41	1.61	1.46	1.41

For other measures, an average overall design effect of 1.411²⁴ (and an average design factor of 1.1888) may be used for calculating the effective sample size.

7.1.1 Estimates of change between 2008/09 and 2010/11

The basic standard error of an estimate of change between 2008/09 and 2010/11 can be calculated using the following formula:

$$\sqrt{(\text{sampling variance } Y_4 + \text{sampling variance } Y_6)}$$

However, given the matched PSU design, the standard error ought to take account of the correlation between PSU-level estimates in 2008/09 and those in 2010/11. The basic formula is adjusted to:

$$\sqrt{((\text{sampling variance } Y_4 + \text{sampling variance } Y_6) * (1 - (P_{y_4y_6} R_{x_{y_4y_6}})))}$$

²⁴ The average design effect is based on the average of all sub-group design effects for each key DCMS sector variable.

where $P_{y_4y_6}$ = the sample overlap between 2008/09 and 2010/11 (96%) and $R_{x_{y_4y_6}}$ = the correlation between PSU-level mean values of variable x produced for 2008/09 and 2010/11.

The correlations are substantial, despite there being no individuals sampled in both years. This reflects the fact that there are large PSU-level cluster effects observed for most of the key variables. The PSU-level correlations are shown in Table 7.3 as are the multipliers to use to adjust the 'basic' standard error of estimates of change between 2008/09 and 2010/11. Broadly speaking a general multiplier of between 0.8 and 0.9 would be safe to use when analysing this data.

The final row shows the design effect of the PSU-level panel sample design as opposed to a PSU-level independent samples design. On the whole, adoption of the panel design means that precision is equal to an independent samples design with a sample size 20-50% larger.

Table 7.3 Panel design statistics

	DCMS sector variables				
	Library use	Museum/ gallery/ archive visits	Historic site visits	Arts activity	Sport activity
Y4/Y6 correlation*	0.20	0.37	0.37	0.34	0.14
PSU overlap	96%	96%	96%	96%	96%
Standard error multiplier	90%	81%	80%	82%	93%
Design effect	0.81	0.65	0.65	0.68	0.87

**Unweighted PSU-level estimates*

7.2 Child data

Table 7.4 below shows a selection of key (weighted) 2010/11 results, the attendant design effects and the 95% confidence intervals for each result²⁵. The design effects range from 1.17 to 1.74. They are lower than the equivalent adult design effects because the child cluster sizes are smaller.

Table 7.4 Design effects for key child dataset variables (2010/11)

Result	Weighted result	Design effect	95% confidence intervals [range]
Whether done at least one arts activity outside of school in last 12 months (5-10s)	98.2%	1.17	97.5% – 98.9% [1.4pp]
Whether visited in last week - Library (5-10s)	18.7%	1.25	16.5% – 20.8% [4.3pp]
Whether visited in last week - Museum (5-10s)	5.2%	1.21	4.0% – 6.4% [2.4pp]
Whether visited in last week - Heritage (5-10s)	9.0%	1.18	7.5% – 10.6% [3.1pp]
Whether done at least one sports activity outside of school in last 4 weeks (5-10s)	85.4%	1.27	83.4% – 87.3% [3.9pp]
Whether done at least one arts activity in last 12 months (11-15s)	99.0%	1.35	98.3% – 99.7% [1.4pp]
Whether visited in last week - Library (11-15s)	24.9%	1.19	22.1% - 27.6% [5.5pp]
Whether visited in last week - Archive (11-15s)	0.9%	1.74	0.19% - 1.68% [1.49pp]
Whether visited in last week - Museum (11-15s)	3.7%	1.22	2.4% - 4.9% [2.5pp]
Whether visited in last week - Heritage site (11-15s)	7.8%	1.22	6.0% - 9.5% [3.5pp]
Whether done at least one sports activity in last 4 weeks (11-15s)	94.5%	1.21	93.0% - 96.0% [3.0pp]

²⁵ Computed using STATA. The design effects reflect only the highest level of stratification (region) due to a significant number of PSUs with one or fewer completed child interviews.

Table 7.5 details the design effects for a number of key sub-groups. The design effects tend to be slightly lower than for the full sample.

Table 7.5 Key sub-group design effects (child data 2010/11)

	All	Limiting disability	BME	White	Males	Females
Whether done at least one arts activity outside of school in last 12 months (5-10s)	1.17	1.09	1.13	1.18	1.20	1.12
Whether visited in last week - Library (5-10s)	1.25	1.59	1.36	1.18	1.29	1.22
Whether visited in last week - Museum (5-10s)	1.21	0.68	0.92	1.26	1.14	1.27
Whether visited in last week - Heritage (5-10s)	1.18	0.89	1.19	1.18	1.20	1.16
Whether done at least one sports activity outside of school in last 4 weeks (5-10s)	1.27	1.26	1.32	1.24	1.30	1.25
Whether done at least one arts activity in last 12 months (11-15s)	1.35	1.31	1.30	1.36	1.40	1.24
Whether visited in last week - Library (11-15s)	1.19	1.31	1.26	1.17	1.18	1.19
Whether visited in last week - Archive (11-15s)	1.74	N/A	0.75	1.93	2.15	0.78
Whether visited in last week - Museum (11-15s)	1.22	0.62	1.48	1.18	1.27	1.18
Whether visited in last week - Heritage site (11-15s)	1.22	1.28	1.16	1.24	1.18	1.26
Whether done at least one sports activity in last 4 weeks (11-15s)	1.21	1.24	1.13	1.24	1.02	1.29

Appendix

- A Interviewer Instructions

- B Respondent Letters
 - B1 – Advance Letter
 - B2 – Refusals Reissue Letter
 - B3 – Non-contact Reissue Letter

- C Respondent Leaflet

- D Address Contact Sheet

- E Parental Permission Card

- F Adult Questionnaire Q1-Q3 (sample issued in April 2010, July 2010 and October 2010)

- G Adult Questionnaire Q4 (sample issued in January 2011)

- H 2010/11 Additional Adult Dataset Variables

- I Child Questionnaires Q1-Q3 (sample issued in April 2010, July 2010 and October 2010)
 - I1 – 5-10 questionnaire
 - I2 – 11-15 questionnaire

- J Child Questionnaires Q4 (sample issued in January 2011)
 - J1 – 5-10 questionnaire
 - J2 – 11-15 questionnaire

- K 2010/11 Child Dataset Variable Summary

- L 2010/11 Codeframes