

Technical Report Q32



Public Attitude Survey 2012 - 13

Prepared for: Metropolitan Police Service



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Prepared by: BMG Research



Produced by BMG Research

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Investors in People Standard - Certificate No. WMQC 0614

Interviewer Quality Control Scheme (IQCS) Member Company

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1 Introduction

1.1 Context and Introduction

The MPS has commissioned a Public Attitude Survey (PAS) annually since 1983 with the objective of eliciting Londoners' perceptions of policing needs, priorities and experiences across the Metropolitan Police District (MPD).

Conducted on a continuous basis, through a programme of face-to face interviews at the homes of respondents, the Public Attitude Survey obtains responses from a random probability sample of residents in each of the 32 boroughs or Basic Operational Command Units (BOCUs) across London policed by the Metropolitan Police Service (MPS).

BMG were commissioned to undertake the Public Attitude Survey from April 2011. At this stage, the number of interviews to be conducted per borough per month was reduced from 160 to 33-34. Therefore, from April 2011 approximately 1,067 interviews per month are carried out, equating to approximately 100 interviews per Borough per quarter, and 400 interviews per Borough annually.

This technical report provides a full account of the design and conduct of the survey, and of the steps taken to weight and prepare the survey data for analysis.

2 Sample design

2.1 Sample requirements

The MPD consists of 32 BOCUs covering the 32 London Boroughs. The sample is required to be representative of London residents and large enough to allow analysis at a Borough level (annually).

As such, BMG Research was commissioned to undertake 33-34 interviews in each borough per month using random probability sampling techniques. The sample was designed such that the data could be analysed:

- Quarterly on a Met-wide basis
- Quarterly on a rolling annual borough basis
- Annually on a Met-wide or individual borough basis

This was the first time that the sample had been designed to allow for monthly reporting, and as such the fieldwork is undertaken and monitored on a monthly basis.

2.2 Address selection

The sample frame used for the study is the Royal Mail's Postcode Address File (PAF), for which BMG receives monthly updates. The PAF for London is stratified by borough, and then using a random start point in the file a '1 in n' selection is made for the number of (additional) addresses required in any period.

Each month and for each borough, approximately three times the number of addresses to required interviews are in circulation. At the start of fieldwork in April 2011, approximately 4 – 5 times the number of addresses to the number of interviews required were issued. This was to enable the achievement of 33 – 34 interviews in each borough during that month. Those addresses which were still valid at the end of April were carried forward into May's fieldwork, and this process has been repeated in subsequent months. New addresses are issued for each month, such that there are always a minimum of 3 – 4 times the number of addresses to interviews required in circulation, in each Borough and in each month.

Selected addresses are taken off the contact lists once: an interview has been achieved; they have been knocked 3 times with no reply; they have refused; they are derelict, unoccupied, or an invalid address (e.g. a business address).

Interviews can only be achieved from the addresses issued; interviewers cannot replace any addresses e.g. by going next door, or across the road.

Interviewers visit households at least three times on different days and times before these are recorded as a non-response.

Where the sample is not exhausted in that month, addresses are carried over to the following or later month.

These procedures ensure that all reasonable steps are taken to maximise response rates from valid addresses.

2.3 Dwelling unit/household selection

On their initial visits to the selected addresses, interviewers are required to establish cases where a single address describes more than one dwelling unit (addresses where there is more than one dwelling, or more than one household in each dwelling). In such cases, interviewers will typically use a Kish grid as a means to identify the particular dwelling to be targeted for a visit. The Kish grid can be found in section 7 of this report.

2.4 Respondent selection

On making contact with an occupant at each of the selected household addresses, interviewers establish if the household contains more than one person aged 15 years or over. In each such case, they select one person to be targeted for an interview. This is typically achieved by identifying the person whose next birthday is closest to the date of the interviewer's visit.

2.5 Minimising non-response and ensuring diversity

The sampling process itself should ensure that all people in London have a broadly equal chance of being asked to take part in the survey. Further steps are taken to ensure that no group is marginalised from participation by the way in which the survey is delivered.

BMG has worked with the client to ensure that the introduction to the survey and accompanying documentation are compelling, giving the respondents good reasons for wanting to take part, and ensuring that they see it to their benefit to do so.

A pilot exercise was undertaken to check all processes, and to establish any difficulties at any point in the delivery of the survey.

Another factor which can minimise the problem of non-response is the approach of the interviewer, and we ensure a competent and professional team of interviewers are deployed (see Fieldwork Administration, below).

We inform the local police that we are working in the area, giving added reassurance to respondents. All interviewers are provided with BMG coats, I.D. badges and bags. As part of our on-going quality control checks we monitor the appropriate use of interviewer ID.

BMG has a long established help-line facility that residents can call and clarify any queries they have concerning the survey or the questionnaire.

2.5.1 Languages

On contacting a respondent who does not speak English, the interviewer first determines if there is someone else in the household who speaks English and is able to interpret. Interpretation may not always be appropriate, and the interviewers would tread carefully to ensure that no one feels uncomfortable at any point.

The next step is to find out in which language the respondent wishes to be interviewed. Our interviewing team are ethnically, culturally and linguistically diverse. Where the interviewer language (or one of the pair of interviewers working in that COA) matches the respondent language, language support is provided there and then.

3 Fieldwork Administration

3.1 Method and Quality Control

The survey is undertaken using computer assisted personal interviewing (CAPI), in line with the method used since 2008 and as standard used by BMG in face to face interviewing. The CAPI script contains in-built quality/logic checks.

BMG has an established face to face field interviewing team of around 100 interviewers. Large numbers of our interviewers have been with the company for many years, and draw on extensive experience of delivering surveys to the public all over the country, including the most challenging locations and amongst the most difficult people to reach. They have extensive experience of working across London.

All interviewers are checked and vetted through the Criminal Records Bureau (CRB).

3.1.1 Verification of completed interviews

After the completion of each week's fieldwork an electronic contact file is produced from the CAPI downloads. These downloads contain the name and telephone number of the respondent and their answers to a number of selected questions, so that when they are re-contacted as part of our telephone back-checking procedure we can verify the respondent and to check the integrity of the interview. All interviews for which a telephone number is provided are tele-checked. Once validated, a summary file is sent to the Business Manager for review.

3.1.2 Verification of appropriate use of ID badges

BMG staff are required to carry and to display photographic ID whilst working. They are issued with photographic ID on employment. Adherence to this requirement is monitored through our telephone back-checking procedures. Section 8 of this technical report contains a summary of results from the tele-checking undertaken to date on this project.

3.1.3 CAPI system data reporting

Each week a series of reports are provided from all CAPI machines. These reports allow us to monitor the time taken to complete each interview and section timings within each interview.

3.1.4 Data frequency checks and monitoring grid

Mid-way through each fieldwork period a set of frequencies are produced showing the responses recorded by each individual interviewer and overall. It is the role of the Field Manager to check these reports and look for any anomalies. Research staff also make regular checks of the monitoring grid, which tracks the sample as it is achieved.

3.1.5 Field quality control meeting

Each week the Field Manager and MD meet and review all outputs from each element of the quality control process. As part of this process appropriate feedback and coaching is provided to individual interviewers as necessary, and an assessment is undertaken of how earlier feedback has impacted on performance.

3.1.6 Fieldwork Incident Reports

From time to time incidents occur which need to be reviewed or investigated: for example respondents might seek reassurance that our fieldworkers are bonafide and not bogus, or request follow up contact from the client to pursue a previously unresolved matter. In such instances the following procedure is followed:

- An electronic incident form is completed by a member of the fieldwork team or client service team;
- This form is logged on to our system and circulated to the field manager and client account manager. For certain categories of incident the managing director will receive a copy of the form;
- Where appropriate the request is formally acknowledged with the respondent within one working day, and if necessary the client is advised of the incident;
- The field manager or account manager are charged with taking the necessary follow up action and the client and respondent are informed accordingly.

In the vast majority of cases incidents are dealt with and all action communicated within a 24 hour period. It should also be noted that in the conduct of more than 150,000 interviews per year, BMG receives less than a handful of formal complaints.

4 Weights

As the number of interviews undertaken across the thirty-two boroughs is approximately equal over a selected time period, London-wide data require the application of a weight to account for the known population differentials between boroughs. In practice, this will mean that those boroughs with larger populations would be under-represented in the unweighted sample, so require a larger weighting factor to boost their representation in the final data. Weights are applied separately to the following cuts of data, and each require unique weighting variables within the SPSS dataframe:

- a) The quarter as a single unit;
- b) The financial year to date as a single unit. For the first quarter in a financial year (April-June), this is the same weight as a) above;
- c) The most recent twelve-month's data.

To calculate a) and b) above, the [target] proportional distribution by borough of the age 15+ population across London (PP_w – population proportion) is divided by the proportional distribution of the unweighted sample by borough (PS_u - sample proportion). The distribution of the London population is derived from census.

$$\text{Weight} = \frac{\text{Census population}}{\text{Quarter 32 sample}}$$

Table 1: Weighting by borough

	Census population		Quarter 32 sample		Weight
	N	% (PP_w)	N	% (PS_u)	(PP_w/PS_u)
Barking and Dagenham	127,818	2.20%	100	3.12%	0.70444
Barnet	254,522	4.39%	100	3.12%	1.405678
Bexley	175,283	3.02%	100	3.12%	0.967004
Brent	214,603	3.70%	99	3.09%	1.1967071
Bromley	240,082	4.14%	100	3.12%	1.325628
Camden	166,756	2.88%	101	3.15%	0.9130455
Croydon	262,343	4.52%	99	3.09%	1.4619232
Ealing	244,943	4.22%	98	3.06%	1.3788204
Enfield	219,162	3.78%	100	3.12%	1.210356
Greenwich	170,495	2.94%	100	3.12%	0.941388
Hackney	157,822	2.72%	100	3.12%	0.870944
Hammersmith and Fulham	139,386	2.40%	100	3.12%	0.76848
Haringey	174,463	3.01%	100	3.12%	0.963802
Harrow	168,025	2.90%	100	3.12%	0.92858
Harvington	182,610	3.15%	100	3.12%	1.00863
Hillingdon	194,478	3.35%	100	3.12%	1.07267
Hounslow	171,275	2.95%	100	3.12%	0.94459
Islington	145,220	2.50%	100	3.12%	0.8005
Kensington and Chelsea	135,234	2.33%	101	3.15%	0.7386792
Kingston upon Thames	121,015	2.09%	101	3.15%	0.6625921

Lambeth	217,847	3.76%	101	3.15%	1.1920317
Lewisham	199,328	3.44%	103	3.22%	1.0694058
Merton	153,330	2.64%	99	3.09%	0.8538667
Newham	184,092	3.17%	102	3.19%	0.9951314
Redbridge	190,698	3.29%	100	3.12%	1.053458
Richmond upon Thames	141,537	2.44%	101	3.15%	0.7735525
Southwark	197,853	3.41%	100	3.12%	1.091882
Sutton	144,285	2.49%	96	3.00%	0.8305188
Tower Hamlets	153,868	2.65%	100	3.12%	0.84853
Waltham Forest	174,184	3.00%	100	3.12%	0.9606
Wandsworth	219,698	3.79%	101	3.15%	1.2015426
Westminster	157,924	2.72%	100	3.12%	0.870944

To adjust for slight differences in sample size numbers between the four quarters of data over any given 12-month period, an extra level of weighting is required to equalise the impact of each quarter's data within the overall twelve-month total.

Marginal iterative weighting is used to adjust for differentials in both quarterly sample sizes and borough population sizes across London. First a weight is applied to the unweighted sample to equalise sample sizes by quarter. Where PI_w equals the target weighted proportion of interviews, and PI_u the unweighted number of interviews:

$$\text{Weight} = \frac{PI_u}{PI_w}$$

Table 2: Weighting by sample size

	Weighted number of interviews		Unweighted number of interviews		Weight (PI_w/PI_u)
	N	% (PI_w)	N	% (PI_u)	
Quarter 29	3210	25.00%	3208	24.98%	1.0007
Quarter 30	3210	25.00%	3209	24.99%	1.0004
Quarter 31	3210	25.00%	3216	25.04%	0.9982
Quarter 32	3210	25.00%	3202	24.95%	1.0021

5 Response rates

The following analysis is based on all addresses with a known and final outcome at the end of March 2013. These outcomes include:

- Interview complete
- Three calls to the address and no interview completed
- Respondent refused to take part, or was incapable of taking part due to other limiting factors (such as physical or mental illness)
- Address is invalid (business premises, empty or derelict property)

Addresses which have been called at fewer than 3 times, or at which a potential respondent has requested a further call, will be carried forward into subsequent months' fieldwork.

Table 3: Response rates by borough

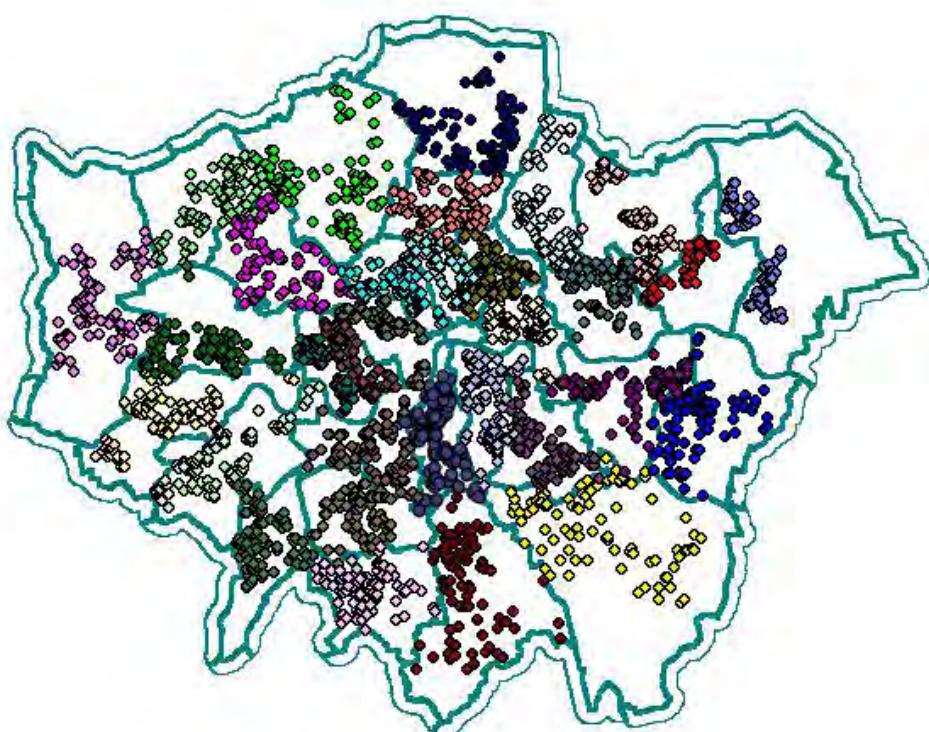
District_Name	Interview Complete	No Interview after 3 Calls	Refusal or other Non-Participation Code	Invalid Address	Total Valid
Barking and Dagenham	100	92.59%	8	7.41%	0
Barnet	100	57.47%	41	23.56%	33
Bexley	100	63.69%	40	25.48%	17
Brent	99	63.46%	45	28.85%	12
Bromley	100	45.87%	90	41.28%	28
Camden	101	55.80%	51	28.18%	29
Croydon	99	38.52%	143	55.64%	15
Ealing	98	82.35%	14	11.76%	7
Enfield	100	75.19%	31	23.31%	2
Greenwich	100	62.11%	42	26.09%	19
Hackney	100	45.25%	98	44.34%	23
Hammersmith and Fulham	100	98.04%	1	0.98%	1
Haringey	100	35.97%	128	46.04%	50
Harrow	100	98.04%	2	1.96%	0
Harvering	100	95.24%	3	2.86%	2
Hillingdon	100	85.47%	16	13.68%	1
Hounslow	100	81.97%	17	13.93%	5
Islington	100	49.75%	70	34.83%	31
Kensington and Chelsea	101	50.50%	78	39.00%	21

Kingston upon Thames	101	57.39%	34	19.32%	41	23.30%	2	176
Lambeth	101	80.16%	22	17.46%	3	2.38%	0	126
Lewisham	103	75.18%	26	18.98%	8	5.84%	1	137
Merton	99	72.79%	34	25.00%	3	2.21%	0	136
Newham	102	69.86%	42	28.77%	2	1.37%	1	146
Redbridge	100	96.15%	4	3.85%	0	0.00%	0	104
Richmond upon Thames	101	73.72%	29	21.17%	7	5.11%	2	137
Southwark	100	76.92%	30	23.08%	0	0.00%	3	130
Sutton	96	36.92%	129	49.62%	35	13.46%	2	260
Tower Hamlets	100	87.72%	12	10.53%	2	1.75%	3	114
Waltham Forest	100	86.21%	11	9.48%	5	4.31%	0	116
Wandsworth	101	69.66%	37	25.52%	7	4.83%	4	145
Westminster	100	72.99%	34	24.82%	3	2.19%	7	137
Total	3202	64.35%	1362	27.37%	412	8.28%	79	4976

5.1.1 Distribution of Q32 Fieldwork

The map below shows the distribution of the Q32 fieldwork by Borough.

Figure 1: Distribution of Q32 interviews by Borough



6 Using the survey results

Although the survey was designed to provide a highly robust analysis of the characteristics, experiences and attitudes of residents, some caution should be exercised when using the results of any analysis. These concern both the statistical reliability of results based on small sub-samples and the validity of comparing results with the findings of other surveys.

All of the survey percentages obtained from analysis of the survey data will be subject to sampling error. The degree of error in each case will depend on the actual percentage reported and on the size of the unweighted sample (denoted by "n") on which that percentage is based.

For example, a survey finding of 50% across the annual sample as a whole ($n = 12,800$) will be accurate within $\pm 0.9\%$ (the sampling error), with the true percentage, calculated at the 95% confidence level, falling somewhere between 49.1% and 50.9%.

The same finding for, for example, the Camden sample ($n = 400$) will be accurate within ± 4.9 . It follows that the range of sampling errors will be higher for findings that are based on even smaller sample sizes.

The key reason for drawing larger samples is when several distinctive segments exist within the population, and it is necessary to be confident that responses for each segment are representative. As a general rule, the more a population is stratified, the larger the overall sample will need to be in order to ensure that the data generated is representative of each segment as well as the population as a whole.

The level of standard error in any sample is not only dependent on the sample size achieved, but also upon the nature of the response to each question. The following table demonstrates the standard error associated with different sample sizes and different survey responses.

As an aid to determining the accuracy of particular findings, the table below provides further examples of sampling errors on a variety of survey percentages and sample sizes.

Table 4: Margins of error

MARGINS OF ERROR FOR DIFFERENT SAMPLE SIZES			
TOTAL NUMBER OF RESPONSES	MARGIN OF ERROR		
	10% OR 90% RESPONDENTS GIVING A PARTICULAR ANSWER	30% OR 70% OF RESPONDENTS GIVING A PARTICULAR ANSWER	50% OF RESPONDENTS GIVING A PARTICULAR ANSWER
	+/-	+/-	+/-
100 (per BOCU per quarter)	5.9	9.0	9.8
400 (annually, per BOCU)	2.9	4.5	4.9
1066 (monthly total)	1.9	2.7	3.0
3,200 (quarterly total)	1.1	1.6	1.7
12,800 (annual total)	0.5	0.8	0.9

7 Dwelling unit selection: Kish Grid

Kish Grid

		LAST DIGIT OF SURVEY REFERENCE NUMBER									
Please Ring		0	1	2	3	4	5	6	7	8	9
SECOND LAST DIGIT OF SURVEY REFERENCE NUMBER	0	4	3	6	0	7	5	1	1	2	9
	1	8	7	2	3	4	6	9	5	0	6
	2	1	3	3	9	0	4	2	1	6	2
	3	5	4	0	1	7	3	5	5	9	6
	4	3	0	2	8	4	1	9	7	6	3
	5	7	7	4	5	2	0	3	1	8	9
	6	2	6	6	1	5	7	8	0	9	4
	7	9	8	3	2	4	8	6	5	8	1
	8	7	9	1	0	5	6	7	1	4	4
	9	6	4	9	2	2	5	3	8	8	5

8 Fieldwork quality control: headline results Q32

The charts below represent feedback provided by respondents as part of the fieldwork verification process for January to March 2013.

These results are based on the following sample sizes: April (504), May (485), June (476), July (439), August (556), September (420), October (471), November (389), December (453), January (389), February (446) and March (455). Please note that telephone back-checking is ongoing throughout the life of the project.

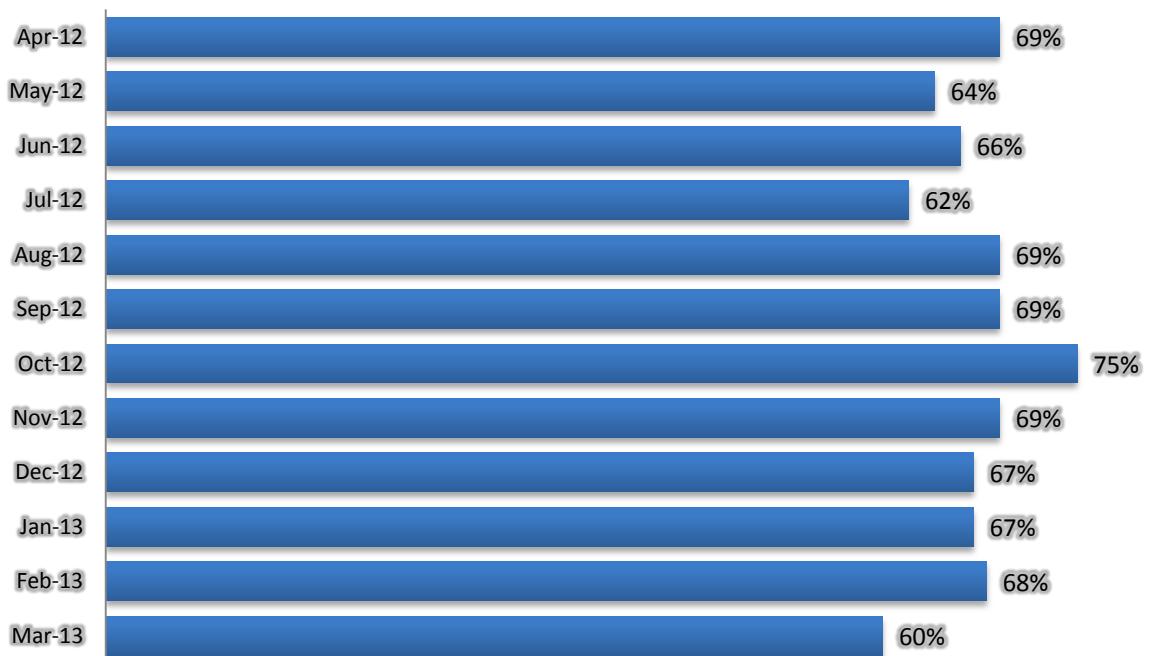
Survey purpose and client identity was fully explained - respondent confirmation



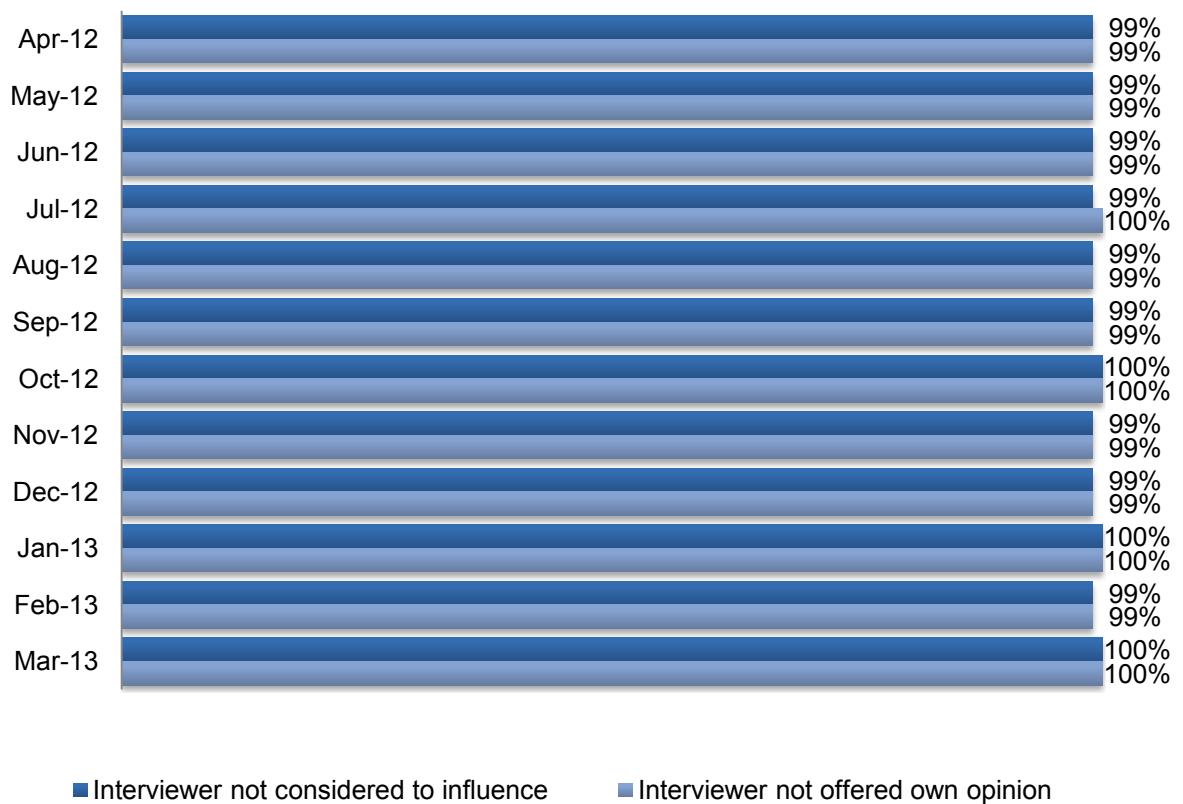
Interviewers were polite and presentable - respondent confirmation



Interviewed on doorstep or in-home - % on doorstep

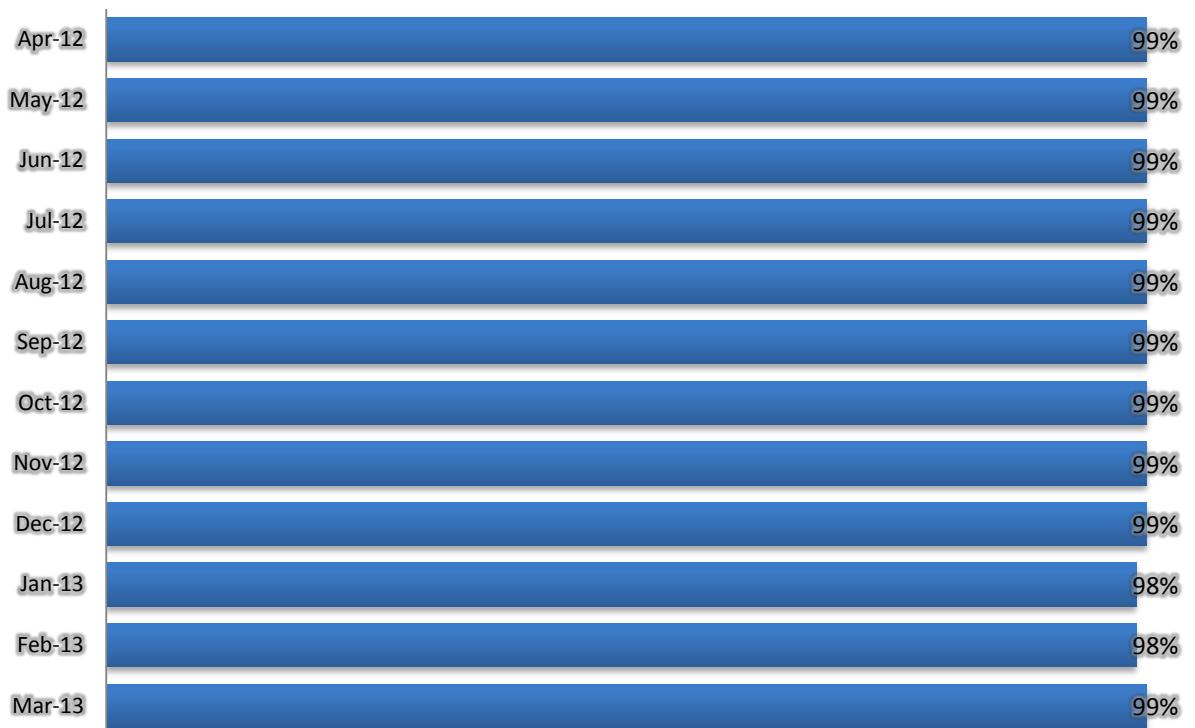


**Interviewer attitude not evident
- respondent confirmation**



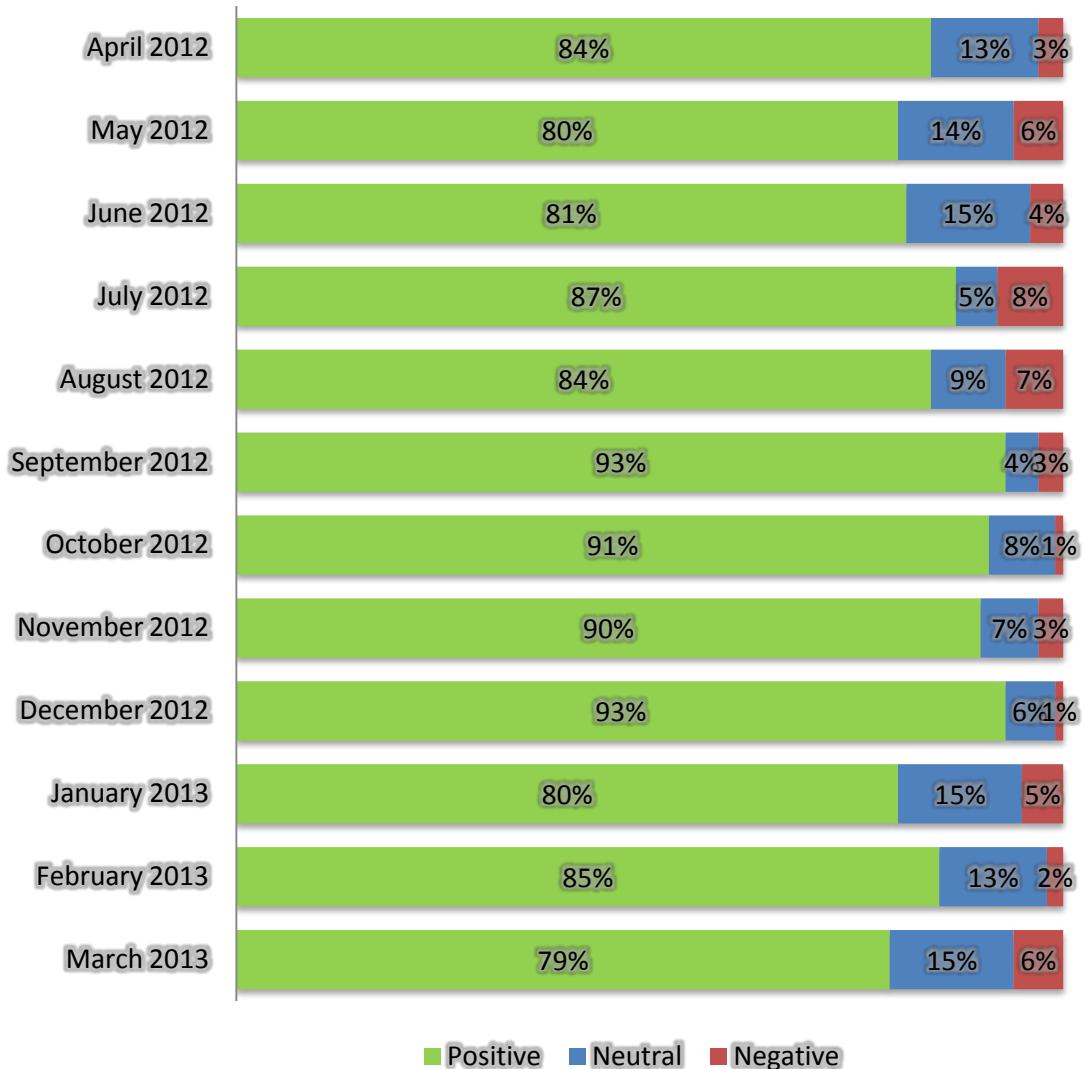
■ Interviewer not considered to influence ■ Interviewer not offered own opinion

Visible ID* - respondent confirmation



*NB Wording change in September from "Did the interviewer give you the opportunity to check their identification badge?" to 'Was their ID badge clearly visible when they approached you?'

Additional feedback 'Is there any other feedback you'd like to give?'





With more than 20 years' experience, BMG Research has established a strong reputation for delivering high quality research and consultancy.

BMG serves both the social public sector and the commercial private sector, providing market and customer insight which is vital in the development of plans, the support of campaigns and the evaluation of performance.

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