

ONS Longitudinal Study

Sampling quality at the 1991 Census

1991 sampling fractions by sex and age

In the 1991 Longitudinal Study (LS) sample, young adults in their 20s had the lowest observed sampling fractions (1.04 among people aged 20-24). As with the 1971 LS sample, this is the result of low tracing rates found among young people (see Table T91.1 describing 'not traced' rates by sex and age for 1991 LS sample members).

There were no significant differences between the sexes. The observed sampling fraction was 1.07 for both males and females.

Females between the ages of 50 and 54 had a lower observed sampling fraction (1.07) than males in this age group (1.10).

The largest difference between observed and expected values was for males aged 20 to 24 (1.03 and 1.06).

Table S91.1 1991 LS sampling fractions by sex and age: traced LS members

Age	Males				Females				All people			
	1991 LS Traced sample	1991 Census population	Sampling fractions (%)		1991 LS Traced sample	1991 Census population	Sampling fractions (%)		1991 LS Traced sample	1991 Census population	Sampling fractions (%)	
			Observed	Expected			Observed	Expected			Observed	Expected
0-4	18,020	1,696,098	1.06	1.08	17,470	1,620,130	1.08	1.08	35,490	3,316,228	1.07	1.08
5-9	17,091	1,599,581	1.07	1.08	16,283	1,523,042	1.07	1.08	33,374	3,122,623	1.07	1.08
10-14	16,466	1,532,019	1.07	1.08	15,655	1,455,517	1.08	1.08	32,121	2,987,536	1.08	1.08
15-19	17,704	1,636,124	1.08	1.07	17,124	1,569,340	1.09	1.07	34,828	3,205,464	1.09	1.07
20-24	19,081	1,844,532	1.03	1.06	19,838	1,886,843	1.05	1.06	38,919	3,731,375	1.04	1.06
25-29	20,379	1,957,808	1.04	1.06	21,277	2,013,101	1.06	1.06	41,656	3,970,909	1.05	1.06
30-34	19,445	1,800,696	1.08	1.06	19,613	1,822,012	1.08	1.07	39,058	3,622,708	1.08	1.07
35-39	17,961	1,645,575	1.09	1.07	18,005	1,662,607	1.08	1.07	35,966	3,308,182	1.09	1.07
40-44	19,392	1,824,168	1.06	1.07	19,929	1,837,947	1.08	1.08	39,321	3,662,115	1.07	1.08
45-49	16,673	1,537,361	1.08	1.08	16,589	1,536,262	1.08	1.08	33,262	3,073,623	1.08	1.08
50-54	14,979	1,360,870	1.10	1.08	14,510	1,358,987	1.07	1.07	29,489	2,719,857	1.08	1.07
55-59	14,053	1,274,953	1.10	1.08	13,977	1,291,916	1.08	1.08	28,030	2,566,869	1.09	1.08
60-64	13,466	1,235,649	1.09	1.08	14,176	1,323,056	1.07	1.08	27,642	2,558,705	1.08	1.08
65-69	12,241	1,152,977	1.06	1.08	14,357	1,337,539	1.07	1.08	26,598	2,490,516	1.07	1.08
70-74	9,296	870,015	1.07	1.08	12,216	1,144,379	1.07	1.08	21,512	2,014,394	1.07	1.08
75+	12,891	1,214,567	1.06	1.08	24,864	2,324,606	1.07	1.07	37,755	3,539,173	1.07	1.07
All people	259,138	24,182,993	1.07	1.07	275,883	25,707,284	1.07	1.07	535,021	49,890,277	1.07	1.07

Notes

¹ Source: Office for National Statistics Longitudinal Study (LS)

² LS members, usually resident in England and Wales

³ 'Traced' means the LS members' records were found on the National Health Service Central Register before or at the 1991 Census-LS link

⁴ Census populations are taken from HMSO (1993) '1991 Census Sex, Age and Marital Status Great Britain' Table 1

1991 sampling fractions by sex, age and marital status

There was little variation in observed sampling fractions by marital status. Married people had the highest observed sampling fraction (1.09), while never-married and divorced people had the lowest (1.06 each). Widowed Longitudinal Study (LS) members had an observed sampling fraction of 1.07.

There were small differences in marital status sampling fractions by sex: the biggest difference was for divorced people with a sampling fraction of 1.04 for males and 1.07 for females.

There were considerable differences in observed sampling fractions for various age groups but most of these are based on small groups.

Both male and female never-married LS members had low sampling fractions at ages 25 to 29 (1.01 each), 35 to 39 (1.03 and 0.99 respectively) and 50 to 54 (1.02 and 1.03 respectively).

Observed sampling fractions for never-married females aged 40 to 44 (1.07), 55 to 59 (1.09) and 75 and over (1.07) were higher compared to males (1.02, 1.05 and 1.01 respectively). On the other hand, never married males had higher sampling fractions than females in age groups 35 to 39 (1.03 and 0.99 respectively) and 70 to 74 (1.12 and 1.08 respectively).

Divorced females had higher sampling fractions than divorced males.

Among widowed LS members, females aged 40 to 49 had higher sampling fractions (an average of about 1.14) than widowed males in this age group (usually less than 1.00). Widowed males aged 60 to 64 had higher sampling fractions than widowed females in this age group (1.10 compared to 1.06).

Table S91.2 1991 LS sampling fraction by sex, age and marital status: traced LS members

Age & marital status	Males				Females				All people			
	1991 LS Traced sample	1991 Census population	Sampling fractions (%)		1991 LS Traced sample	1991 Census population	Sampling fractions (%)		1991 LS Traced sample	1991 Census population	Sampling fractions (%)	
			Observed	Expected			Observed	Expected			Observed	Expected
Never Married												
0-15	54,681	5,128,982	1.07	1.06	52,436	4,884,421	1.07	1.07	107,117	10,013,403	1.07	1.06
16-19	14,498	1,326,324	1.09	1.06	13,754	1,255,983	1.10	1.07	28,252	2,582,307	1.09	1.06
20-24	16,808	1,628,987	1.03	1.04	14,886	1,425,269	1.04	1.06	31,694	3,054,256	1.04	1.05
25-29	10,734	1,060,650	1.01	1.04	7,867	777,869	1.01	1.05	18,601	1,838,519	1.01	1.04
30-34	5,258	506,547	1.04	1.04	3,385	333,376	1.02	1.05	8,643	839,923	1.03	1.04
35-39	2,839	275,695	1.03	1.04	1,679	168,780	0.99	1.05	4,518	444,475	1.02	1.05
40-44	2,125	209,217	1.02	1.05	1,251	117,324	1.07	1.06	3,376	326,541	1.03	1.05
45-49	1,452	141,150	1.03	1.05	820	78,021	1.05	1.05	2,272	219,171	1.04	1.05
50-54	1,139	111,778	1.02	1.04	684	66,609	1.03	1.05	1,823	178,387	1.02	1.05
55-59	1,071	102,347	1.05	1.05	747	68,679	1.09	1.06	1,818	171,026	1.06	1.05
60-64	1,095	105,237	1.04	1.04	862	82,011	1.05	1.05	1,957	187,248	1.05	1.05
65-69	967	91,901	1.05	1.04	942	91,040	1.03	1.06	1,909	182,941	1.04	1.05
70-74	677	60,239	1.12	1.05	922	85,215	1.08	1.06	1,599	145,454	1.10	1.06
75+	792	78,285	1.01	1.03	2,592	242,813	1.07	1.06	3,384	321,098	1.05	1.05
Total	114,136	10,827,339	1.05	1.05	102,827	9,677,410	1.06	1.06	216,963	20,504,749	1.06	1.06
Married												
16-19	90	7,662	1.17	1.11	328	26,094	1.26	1.03	418	33,756	1.24	1.05
20-24	2,185	205,259	1.06	1.06	4,632	431,371	1.07	1.06	6,817	636,630	1.07	1.06
25-29	8,943	829,971	1.08	1.08	12,017	1,108,568	1.08	1.07	20,960	1,938,539	1.08	1.07
30-34	12,913	1,167,392	1.11	1.08	14,140	1,299,369	1.09	1.08	27,053	2,466,761	1.10	1.08
35-39	13,532	1,219,001	1.11	1.09	14,034	1,281,625	1.10	1.08	27,566	2,500,626	1.10	1.08
40-44	15,346	1,431,955	1.07	1.09	16,022	1,467,343	1.09	1.09	31,368	2,899,298	1.08	1.09
45-49	13,579	1,238,517	1.10	1.09	13,289	1,234,457	1.08	1.09	26,868	2,472,974	1.09	1.09
50-54	12,375	1,109,401	1.12	1.09	11,468	1,077,543	1.06	1.08	23,843	2,186,944	1.09	1.09
55-59	11,589	1,045,408	1.11	1.10	10,683	982,909	1.09	1.08	22,272	2,028,317	1.10	1.09
60-64	10,937	998,368	1.10	1.10	9,786	912,274	1.07	1.09	20,723	1,910,642	1.08	1.09
65-69	9,659	909,024	1.06	1.10	8,525	791,449	1.08	1.09	18,184	1,700,473	1.07	1.09
70-74	7,095	662,761	1.07	1.10	5,776	537,665	1.07	1.09	12,871	1,200,426	1.07	1.09
75+	8,086	760,171	1.06	1.09	5,771	539,843	1.07	1.08	13,857	1,300,014	1.07	1.09
Total	126,329	11,584,890	1.09	1.09	126,471	11,690,510	1.08	1.08	252,800	23,275,400	1.09	1.09
Divorced												
16-29	783	76,517	1.02	1.04	1,656	152,002	1.09	1.06	2,439	228,519	1.07	1.06
30-34	1,251	124,427	1.01	1.04	1,993	181,338	1.10	1.07	3,244	305,765	1.06	1.06
35-39	1,551	146,589	1.06	1.04	2,132	198,406	1.07	1.07	3,683	344,995	1.07	1.06
40-44	1,839	174,704	1.05	1.04	2,353	226,192	1.04	1.07	4,192	400,896	1.05	1.06
45-49	1,529	145,503	1.05	1.05	1,981	180,661	1.10	1.07	3,510	326,164	1.08	1.06
50-54	1,233	119,748	1.03	1.04	1,510	140,419	1.08	1.07	2,743	260,167	1.05	1.06
55-59	1,033	93,563	1.10	1.05	1,100	106,772	1.03	1.08	2,133	200,335	1.06	1.06
60-64	757	70,389	1.08	1.05	928	84,195	1.10	1.07	1,685	154,584	1.09	1.06
65-69	488	48,638	1.00	1.04	641	63,851	1.00	1.07	1,129	112,489	1.00	1.06
70-74	274	27,260	1.01	1.04	443	41,234	1.07	1.06	717	68,494	1.05	1.06
75+	234	23,741	0.99	1.02	464	45,800	1.01	1.06	698	69,541	1.00	1.04
Total	10,972	1,051,079	1.04	1.04	15,201	1,420,870	1.07	1.07	26,173	2,471,949	1.06	1.06

Table S91.2 1991 LS sampling fraction by sex, age and marital status: traced LS members

Age & marital status	Males				Females				All people			
	1991 LS Traced sample	1991 Census population	Sampling fractions (%)		1991 LS Traced sample	1991 Census population	Sampling fractions (%)		1991 LS Traced sample	1991 Census population	Sampling fractions (%)	
			Observed	Expected			Observed	Expected			Observed	Expected
Widowed												
16-29	19	1,810	1.05	0.94	71	6,396	1.11	0.99	90	8,206	1.10	0.98
30-34	23	2,330	0.99	0.96	95	7,929	1.20	1.05	118	10,259	1.15	1.03
35-39	39	4,290	0.91	1.01	160	13,796	1.16	1.05	199	18,086	1.10	1.04
40-44	82	8,292	0.99	1.05	303	27,088	1.12	1.07	385	35,380	1.09	1.06
45-49	113	12,191	0.93	1.04	499	43,123	1.16	1.06	612	55,314	1.11	1.05
50-54	232	19,943	1.16	1.07	848	74,416	1.14	1.06	1,080	94,359	1.14	1.06
55-59	360	33,635	1.07	1.06	1,447	133,556	1.08	1.07	1,807	167,191	1.08	1.07
60-64	677	61,655	1.10	1.06	2,600	244,576	1.06	1.07	3,277	306,231	1.07	1.07
65-69	1,127	103,414	1.09	1.07	4,249	391,199	1.09	1.08	5,376	494,613	1.09	1.08
70-74	1,250	119,755	1.04	1.08	5,075	480,265	1.06	1.08	6,325	600,020	1.05	1.08
75+	3,779	352,370	1.07	1.07	16,037	1,496,150	1.07	1.08	19,816	1,848,520	1.07	1.08
Total	7,701	719,685	1.07	1.07	31,384	2,918,494	1.08	1.08	39,085	3,638,179	1.07	1.07
All people												
0-15	54,681	5,128,982	1.07	1.07	52,436	4,884,421	1.07	1.07	107,117	10,013,403	1.07	1.07
16-19	14,600	1,334,840	1.09	1.07	14,096	1,283,608	1.10	1.07	28,696	2,618,448	1.10	1.07
20-24	19,081	1,844,532	1.03	1.05	19,838	1,886,843	1.05	1.06	38,919	3,731,375	1.04	1.06
25-29	20,379	1,957,808	1.04	1.05	21,277	2,013,101	1.06	1.06	41,656	3,970,909	1.05	1.06
30-34	19,445	1,800,696	1.08	1.06	19,613	1,822,012	1.08	1.07	39,058	3,622,708	1.08	1.06
35-39	17,961	1,645,575	1.09	1.06	18,005	1,662,607	1.08	1.07	35,966	3,308,182	1.09	1.07
40-44	19,392	1,824,168	1.06	1.07	19,929	1,837,947	1.08	1.07	39,321	3,662,115	1.07	1.07
45-49	16,673	1,537,361	1.08	1.07	16,589	1,536,262	1.08	1.07	33,262	3,073,623	1.08	1.07
50-54	14,979	1,360,870	1.10	1.07	14,510	1,358,987	1.07	1.07	29,489	2,719,857	1.08	1.07
55-59	14,053	1,274,953	1.10	1.07	13,977	1,291,916	1.08	1.07	28,030	2,566,869	1.09	1.07
60-64	13,466	1,235,649	1.09	1.07	14,176	1,323,056	1.07	1.07	27,642	2,558,705	1.08	1.07
65-69	12,241	1,152,977	1.06	1.07	14,357	1,337,539	1.07	1.07	26,598	2,490,516	1.07	1.07
70-74	9,296	870,015	1.07	1.08	12,216	1,144,379	1.07	1.07	21,512	2,014,394	1.07	1.07
75+	12,891	1,214,567	1.06	1.07	24,864	2,324,606	1.07	1.07	37,755	3,539,173	1.07	1.07
Total	259,138	24,182,993	1.07	1.07	275,883	25,707,284	1.07	1.07	535,021	49,890,277	1.07	1.07

Notes

¹ Source: Office for National Statistics Longitudinal Study (LS)

² LS members, usually resident in England and Wales

³ 'Traced' means the LS members' records were found on the National Health Service Central Register before or at the 1991 Census-LS link

⁴ Census populations are taken from HMSO (1993) '1991 Census Sex, Age and Marital Status Great Britain' Table 1

1991 sampling fractions by sex and socio-economic group

There was some variation in sampling fractions in the 1991 Longitudinal Study (LS) sample by socio-economic group. The highest value (1.15) was for agricultural workers and the lowest for people whose group was 'inadequately described' (0.77) and those in the armed forces (0.95). Care should be applied when interpreting figures for categories that represent small numbers of people and high not-traced rates, such as the armed forces (see Table T91.4b describing 'not traced' rates by sex and socio-economic group for 1991 LS sample members who were economically active and aged 16 and over).

The highest observed sampling fraction among men was for personal-service workers (1.18), and among women who were 'own-account farmers' (farmers and horticulturalists who were self-employed without employees) (1.34).

The lowest sampling fractions for both men and women were among those whose socio-economic group was 'inadequately described' (0.76 and 0.78 respectively) and those in the armed services (0.95 and 0.96 respectively).

Table S91.3 1991 LS sampling fractions by sex and socio-economic group: economically active traced LS members aged 16+

Socio-economic group	Males				Females				All people			
	1991 LS Traced sample	1991 Census population	Sampling fractions (%)		1991 LS Traced sample	1991 Census population	Sampling fractions (%)		1991 LS Traced sample	1991 Census population	Sampling fractions (%)	
			Observed	Expected			Observed	Expected			Observed	Expected
Employers and managers in large establishments	8,173	768,120	1.06	1.11	3,095	309,100	1.00	1.09	11,268	1,077,220	1.05	1.10
Employers and managers in small establishments	18,711	1,662,150	1.13	1.11	8,123	749,700	1.08	1.09	26,834	2,411,850	1.11	1.10
Professional - self-employed	1,976	183,910	1.07	1.11	318	27,510	1.16	1.08	2,294	211,420	1.09	1.10
Professional - employees	7,519	704,430	1.07	1.10	1,679	156,640	1.07	1.07	9,198	861,070	1.07	1.09
Intermediate non-manual workers	13,435	1,257,600	1.07	1.11	18,648	1,739,230	1.07	1.09	32,083	2,996,830	1.07	1.10
Junior non-manual workers	13,371	1,189,120	1.12	1.11	39,533	3,594,810	1.10	1.10	52,904	4,783,930	1.11	1.11
Personal service workers	2,398	202,830	1.18	1.05	9,194	842,820	1.09	1.09	11,592	1,045,650	1.11	1.09
Foremen and supervisors - manual	4,270	377,790	1.13	1.12	777	72,270	1.08	1.10	5,047	450,060	1.12	1.11
Skilled manual workers	31,157	2,768,930	1.13	1.11	3,077	268,720	1.15	1.10	34,234	3,037,650	1.13	1.11
Semi-skilled manual workers	18,046	1,579,650	1.14	1.11	10,886	968,630	1.12	1.09	28,932	2,548,280	1.14	1.10
Unskilled manual workers	6,644	604,330	1.10	1.10	7,471	678,620	1.10	1.09	14,115	1,282,950	1.10	1.10
Own-account workers (not professional)	13,731	1,230,860	1.12	1.11	3,221	282,180	1.14	1.09	16,952	1,513,040	1.12	1.10
Farmers - employers and managers	775	72,380	1.07	1.12	144	12,360	1.17	1.10	919	84,740	1.08	1.11
Farmers - own account	889	80,170	1.11	1.12	172	12,800	1.34	1.11	1,061	92,970	1.14	1.11
Agricultural workers	1,359	118,000	1.15	1.11	588	52,010	1.13	1.09	1,947	170,010	1.15	1.10
Members of armed forces	1,668	175,980	0.95	0.93	139	14,410	0.96	0.78	1,807	190,390	0.95	0.92
Inadequately described occupations and not stated	1,199	157,990	0.76	1.08	701	90,340	0.78	1.05	1,900	248,330	0.77	1.07
All people	145,321	13,134,240	1.11	1.11	107,766	9,872,150	1.09	1.09	253,087	23,006,390	1.10	1.10

Notes

¹ Source: Office for National Statistics Longitudinal Study (LS)

² LS members, usually resident in England and Wales

³ 'Traced' means the LS members' records were found on the National Health Service Central Register before or at the 1991 Census-LS link

⁴ Census populations are taken from HMSO (1994) '1991 Census. Economic Activity. Great Britain' Table 17. They are 10 per cent sample figures, multiplied by 10

1991 sampling fractions by sex and social class

Little variation was found in the 1991 Longitudinal Study (LS) sample by social class, with the exception of people in the armed services, a group with particularly high not-traced rates (see Table T91.5a describing 'not traced' rates by sex and social class for 1991 LS sample members who were aged 16 and over) and the lowest observed sampling fraction (0.84).

The biggest difference between sampling fractions for males and females was for those in the armed services (0.86 and 0.80 respectively). However, these figures should be interpreted with care due to the small numbers in this category, especially among females.

Table S91.4 1991 LS sampling fractions by sex and social class: economically active traced LS members aged 16+

Social Class	Males				Females				All people			
	1991 LS Traced sample	1991 Census population	Sampling fractions (%)		1991 LS Traced sample	1991 Census population	Sampling fractions (%)		1991 LS Traced sample	1991 Census population	Sampling fractions (%)	
			Observed	Expected			Observed	Expected			Observed	Expected
Non-manual												
I Professional	9,532	892,220	1.07	1.10	2,005	184,820	1.08	1.07	11,537	1,077,040	1.07	1.09
II Intermediate	39,784	3,624,940	1.10	1.11	29,160	2,722,340	1.07	1.09	68,944	6,347,280	1.09	1.10
IIIN Skilled non-manual	16,066	1,433,030	1.12	1.11	41,889	3,817,760	1.10	1.10	57,955	5,250,790	1.10	1.11
Total non-manual	65,382	5,950,190	1.10	1.11	73,054	6,724,920	1.09	1.09	138,436	12,675,110	1.09	1.10
Manual												
IIIM Skilled manual	46,804	4,177,870	1.12	1.11	7,776	697,270	1.12	1.09	54,580	4,875,140	1.12	1.10
IV Partly skilled	22,701	1,983,260	1.14	1.11	18,508	1,657,960	1.12	1.09	41,209	3,641,220	1.13	1.10
V Unskilled	7,567	688,950	1.10	1.10	7,588	687,250	1.10	1.09	15,155	1,376,200	1.10	1.10
Total manual	77,072	6,850,080	1.13	1.11	33,872	3,042,480	1.11	1.09	110,944	9,892,560	1.12	1.10
Members of armed forces	1,668	175,980	0.95	0.93	139	14,410	0.96	0.78	1,807	190,390	0.95	0.92
Inadequately described occu	1,199	157,990	0.76	1.08	701	90,340	0.78	1.05	1,900	248,330	0.77	1.07
All people	145,321	13,134,240	1.11	1.11	107,766	9,872,150	1.09	1.09	253,087	23,006,390	1.10	1.10

Notes

¹ Source: Office for National Statistics Longitudinal Study (LS)

² LS members, usually resident in England and Wales

³ 'Traced' means the LS members' records were found on the National Health Service Central Register before or at the 1991 Census-LS link

⁴ Census populations are taken from HMSO (1994) '1991 Census. Economic Activity. Great Britain' Table 17. They are 10 per cent sample figures, multiplied by 10

1991 sampling fractions by sex and country of birth

Observed sampling fractions for Longitudinal Study (LS) members born outside of the UK were high for those from several countries of birth, despite low rates of tracing for these groups compared to those born in the UK (see Table T91.6a describing 'not traced' by sex and country of birth rates for 1991 LS sample members).

As in previous censuses, sampling fractions for the 1991 LS population varied by country of birth. The lowest value (0.67) was observed among people born in the USA, many of whom were armed forces personnel.

The highest values were among people born in countries of the 'New Commonwealth' such as Bangladesh (1.73), Pakistan (1.63) and India (1.61). These figures contrast with the low expected sampling fractions for these groups (1.00, 1.01 and 1.02 respectively). As in previous censuses, these low sampling fractions are associated with low tracing rates. The difference between observed and expected sampling fractions is due to over-sampling as a result of date-of-birth preferences for people born in these countries.

Finally, males born in Pakistan (1.75) and India (1.66) have higher sampling fractions than females born in these countries (1.50 and 1.57 respectively), while females born in Bangladesh (1.84) have higher sampling fractions than males born in Bangladesh (1.64).

Table S91.5 1991 LS sampling fraction by sex and country of birth: traced LS members

Country of birth	Males				Females				All people			
	1991 LS	1991	Sampling fractions (%)		1991 LS	1991	Sampling fractions (%)		1991 LS	1991	Sampling fractions (%)	
	Traced sample	Census population	Observed	Expected	Traced sample	Census population	Observed	Expected	Traced sample	Census population	Observed	Expected
United Kingdom	238,620	22,442,910	1.06	1.08	253,987	23,821,558	1.07	1.08	492,607	46,264,468	1.06	1.08
Outside UK	20,518	1,740,083	1.18	0.98	21,896	1,885,726	1.16	0.99	42,414	3,625,809	1.17	0.98
Irish Republic	2,705	264,395	1.02	1.01	3,255	305,364	1.07	1.03	5,960	569,759	1.05	1.02
Old Commonwealth	696	73,921	0.94	0.93	852	88,074	0.97	0.99	1,548	161,995	0.96	0.96
New Commonwealth and Pakistan	11,252	819,298	1.37	1.01	10,832	825,324	1.31	1.00	22,084	1,644,622	1.34	1.01
India	3,226	194,386	1.66	1.03	3,230	205,630	1.57	1.01	6,456	400,016	1.61	1.02
Pakistan	2,032	115,806	1.75	1.02	1,630	108,890	1.50	0.99	3,662	224,696	1.63	1.01
Bangladesh	908	55,275	1.64	1.01	900	48,933	1.84	0.99	1,808	104,208	1.73	1.00
Africa	1,836	164,335	1.12	0.99	1,762	159,684	1.10	1.00	3,598	324,019	1.11	1.00
Caribbean	1,329	124,812	1.06	1.01	1,499	138,149	1.09	1.02	2,828	262,961	1.08	1.02
Mediterranean	758	59,201	1.28	1.03	700	58,316	1.20	0.99	1,458	117,517	1.24	1.01
Remainder	1,163	105,483	1.10	1.00	1,111	105,722	1.05	1.00	2,274	211,205	1.08	1.00
Europe, excluding USSR	2,911	289,814	1.00	0.98	3,905	370,762	1.05	1.02	6,816	660,576	1.03	1.00
USA	409	65,554	0.62	0.61	466	65,341	0.71	0.73	875	130,895	0.67	0.66
Elsewhere and not stated	2,545	227,101	1.12	0.90	2,586	230,861	1.12	0.91	5,131	457,962	1.12	0.91
All people	259,138	24,182,993	1.07	1.07	275,883	25,707,284	1.07	1.07	535,021	49,890,277	1.07	1.07

Notes

¹ Source: Office for National Statistics Longitudinal Study (LS)

² LS members, usually resident in England and Wales

³ 'Traced' means the LS members' records were found on the National Health Service Central Register before or at the 1991 Census-LS link

⁴ Census populations are taken from HMSO (1993) '1991 Census. Ethnic group and Country of Birth. Great Britain' Table 1

1991 sampling fractions by sex, age and ethnicity

Please note that calculations in many of the age groups here were based on small numbers and should be interpreted with care.

There were some similarities between the sampling fractions by ethnic group and sampling fractions by country of birth. The greatest variation was found among people who identified their ethnicity as Indian, Pakistani or Bangladeshi. For males, the highest sampling fraction was for Pakistani men aged 35 to 44 (2.09), and the lowest for men aged 35 to 44 describing themselves as 'Black other' (0.71).

Among females, Bangladeshi women aged 35 to 44 had the highest sampling fraction (2.30), while women aged 60 and over in the 'Other groups – other' category had the lowest sampling fraction (0.74).

The largest differences between observed and expected sampling fractions by sex were for Pakistani men aged 35 to 44 and for Bangladeshi women aged 35 to 44.

Table S91.6 1991 LS sampling fractions by sex, age and ethnic group: traced LS members

Ethnic Origin and age	Males				Females				All people			
	1991 LS Traced sample	1991 Census population	Sampling fractions (%)		1991 LS Traced sample	1991 Census population	Sampling fractions (%)		1991 LS Traced sample	1991 Census population	Sampling fractions (%)	
			Observed	Expected			Observed	Expected			Observed	Expected
White												
0-14	46,749	4,355,958	1.07	1.08	44,726	4,144,454	1.08	1.08	91,475	8,500,412	1.08	1.08
15-24	34,001	3,222,731	1.06	1.07	34,056	3,191,185	1.07	1.07	68,057	6,413,916	1.06	1.07
25-34	36,686	3,490,435	1.05	1.07	37,196	3,537,472	1.05	1.07	73,882	7,027,907	1.05	1.07
35-44	34,689	3,280,969	1.06	1.08	35,053	3,297,582	1.06	1.08	69,742	6,578,551	1.06	1.08
45-59	42,719	3,977,620	1.07	1.08	42,714	4,009,753	1.07	1.08	85,433	7,987,373	1.07	1.08
60+	46,620	4,379,429	1.06	1.08	64,649	6,050,273	1.07	1.08	111,269	10,429,702	1.07	1.08
Total	241,464	22,707,142	1.06	1.08	258,394	24,230,719	1.07	1.08	499,858	46,937,861	1.06	1.08
Black Caribbean												
0-14	507	52,352	0.97	1.05	512	51,217	1.00	1.06	1,019	103,569	0.98	1.05
15-24	373	37,825	0.99	1.05	409	42,026	0.97	1.05	782	79,851	0.98	1.05
25-34	495	49,617	1.00	1.02	644	62,671	1.03	1.03	1,139	112,288	1.01	1.03
35-44	224	21,102	1.06	1.02	318	29,971	1.06	1.05	542	51,073	1.06	1.04
45-59	500	48,006	1.04	1.02	572	50,077	1.14	1.04	1,072	98,083	1.09	1.03
60+	352	30,092	1.17	1.02	314	24,074	1.30	1.02	666	54,166	1.23	1.02
Total	2,451	238,994	1.03	1.03	2,769	260,036	1.06	1.04	5,220	499,030	1.05	1.04
Black African												
0-14	262	29,649	0.88	0.92	242	29,193	0.83	0.89	504	58,842	0.86	0.91
15-24	153	18,105	0.85	0.79	189	19,542	0.97	0.82	342	37,647	0.91	0.81
25-34	229	28,983	0.79	0.70	284	30,460	0.93	0.85	513	59,443	0.86	0.78
35-44	160	14,597	1.10	0.84	168	14,101	1.19	0.97	328	28,698	1.14	0.91
45-59	151	10,420	1.45	0.98	96	8,925	1.08	0.95	247	19,345	1.28	0.97
60+	39	3,458	1.13	0.90	28	2,156	1.30	0.82	67	5,614	1.19	0.87
Total	994	105,212	0.94	0.83	1,007	104,377	0.96	0.88	2,001	209,589	0.95	0.86
Black Other												
0-14	444	43,141	1.03	1.06	399	42,273	0.94	1.04	843	85,414	0.99	1.05
15-24	169	17,641	0.96	1.05	205	19,438	1.05	1.06	374	37,079	1.01	1.06
25-34	136	14,903	0.91	0.98	179	17,614	1.02	1.02	315	32,517	0.97	1.00
35-44	35	4,904	0.71	0.98	54	4,945	1.09	0.98	89	9,849	0.90	0.98
45+	48	5,509	0.87	0.93	54	5,387	1.00	0.95	102	10,896	0.94	0.94
Total	832	86,098	0.97	1.03	891	89,657	0.99	1.03	1,723	175,755	0.98	1.03
Indian												
0-14	1,329	117,920	1.13	1.06	1,210	113,688	1.06	1.07	2,539	231,608	1.10	1.06
15-24	720	69,376	1.04	1.04	738	70,324	1.05	1.02	1,458	139,700	1.04	1.03
25-34	1,005	72,397	1.39	1.03	1,208	79,425	1.52	1.03	2,213	151,822	1.46	1.03
35-44	1,067	68,665	1.55	1.03	1,120	66,750	1.68	1.03	2,187	135,415	1.62	1.03
45-59	1,140	59,886	1.90	1.04	873	54,944	1.59	1.00	2,013	114,830	1.75	1.02
60+	428	29,352	1.46	1.00	342	27,478	1.24	0.96	770	56,830	1.35	0.98
Total	5,689	417,596	1.36	1.04	5,491	412,609	1.33	1.03	11,180	830,205	1.35	1.03
Pakistani												
0-14	969	95,225	1.02	1.03	973	90,109	1.08	1.02	1,942	185,334	1.05	1.03
15-24	541	44,872	1.21	1.01	520	44,170	1.18	1.03	1,061	89,042	1.19	1.02
25-34	491	30,275	1.62	1.01	532	33,909	1.57	0.98	1,023	64,184	1.59	0.99
35-44	562	26,938	2.09	1.03	428	25,599	1.67	1.00	990	52,537	1.88	1.02
45-59	504	26,904	1.87	1.03	338	20,396	1.66	0.99	842	47,300	1.78	1.01
60+	172	10,548	1.63	1.05	74	6,418	1.15	0.92	246	16,966	1.45	1.00
Total	3,239	234,762	1.38	1.02	2,865	220,601	1.30	1.01	6,104	455,363	1.34	1.02

Table S91.6 1991 LS sampling fractions by sex, age and ethnic group: traced LS members

Ethnic Origin and age	Males				Females				All people			
	1991 LS		1991		1991 LS		1991		1991 LS		1991	
	Traced sample	Census population	Sampling fractions (%)		Traced sample	Census population	Sampling fractions (%)		Traced sample	Census population	Sampling fractions (%)	
		Observed	Expected			Observed	Expected			Observed	Expected	
Bangladeshi												
0-14	375	37,187	1.01	1.00	396	35,041	1.13	1.03	771	72,228	1.07	1.01
15-24	265	16,461	1.61	0.99	285	16,285	1.75	1.00	550	32,746	1.68	1.00
25-34	164	9,788	1.68	0.99	183	9,185	1.99	1.01	347	18,973	1.83	1.00
35-44	81	5,273	1.54	1.04	200	8,686	2.30	0.99	281	13,959	2.01	1.00
45+	294	15,601	1.88	1.05	142	8,194	1.73	0.98	436	23,795	1.83	1.03
Total	1,179	84,310	1.40	1.01	1,206	77,391	1.56	1.01	2,385	161,701	1.47	1.01
Chinese												
0-14	163	16,291	1.00	1.07	171	15,330	1.12	1.02	334	31,621	1.06	1.05
15-24	149	14,723	1.01	0.95	147	13,762	1.07	0.94	296	28,485	1.04	0.95
25-34	197	16,637	1.18	0.95	162	17,267	0.94	0.94	359	33,904	1.06	0.94
35-44	145	11,535	1.26	1.00	167	14,832	1.13	1.00	312	26,367	1.18	1.00
45-59	139	9,095	1.53	0.98	76	8,573	0.89	0.88	215	17,668	1.22	0.94
60+	63	3,906	1.61	0.94	63	4,511	1.40	0.90	126	8,417	1.50	0.92
Total	856	72,187	1.19	0.98	786	74,275	1.06	0.96	1,642	146,462	1.12	0.97
Other groups - Asian												
0-14	240	22,496	1.07	1.00	205	22,060	0.93	0.99	445	44,556	1.00	0.99
15-24	165	15,533	1.06	0.92	154	15,331	1.00	0.89	319	30,864	1.03	0.91
25-34	173	18,980	0.91	0.86	248	23,178	1.07	0.87	421	42,158	1.00	0.86
35-44	205	18,033	1.14	0.96	267	23,491	1.14	0.99	472	41,524	1.14	0.98
45-59	163	12,816	1.27	0.97	140	13,068	1.07	0.95	303	25,884	1.17	0.96
60+	58	3,585	1.62	1.02	53	4,359	1.22	0.98	111	7,944	1.40	1.00
Total	1,004	91,443	1.10	0.95	1,067	101,487	1.05	0.94	2,071	192,930	1.07	0.94
Other groups - Other												
0-14	539	57,479	0.94	1.04	574	55,324	1.04	1.04	1,113	112,803	0.99	1.04
15-24	249	23,389	1.06	0.97	259	24,120	1.07	1.01	508	47,509	1.07	0.99
25-34	248	26,489	0.94	0.94	254	23,932	1.06	0.95	502	50,421	1.00	0.95
35-44	185	17,727	1.04	1.03	159	14,597	1.09	0.93	344	32,324	1.06	0.98
45-59	139	13,183	1.05	1.00	107	10,868	0.98	0.97	246	24,051	1.02	0.99
60+	70	6,982	1.00	0.97	54	7,291	0.74	0.98	124	14,273	0.87	0.97
Total	1,430	145,249	0.98	1.00	1,407	136,132	1.03	1.00	2,837	281,381	1.01	1.00
All people												
0-14	51,577	4,827,698	1.07	1.08	49,408	4,598,689	1.07	1.08	100,985	9,426,387	1.07	1.08
15-24	36,785	3,480,656	1.06	1.06	36,962	3,456,183	1.07	1.07	73,747	6,936,839	1.06	1.07
25-34	39,824	3,758,504	1.06	1.06	40,890	3,835,113	1.07	1.07	80,714	7,593,617	1.06	1.06
35-44	37,353	3,469,743	1.08	1.07	37,934	3,500,554	1.08	1.07	75,287	6,970,297	1.08	1.07
45-59	45,705	4,173,184	1.10	1.08	45,076	4,187,165	1.08	1.07	90,781	8,360,349	1.09	1.07
60+	47,894	4,473,208	1.07	1.08	65,613	6,129,580	1.07	1.08	113,507	10,602,788	1.07	1.08
Total	259,138	24,182,993	1.07	1.07	275,883	25,707,284	1.07	1.07	535,021	49,890,277	1.07	1.07

Notes

¹ Source: Office for National Statistics Longitudinal Study (LS)

² LS members, usually resident in England and Wales

³ 'Traced' means the LS members' records were found on the National Health Service Central Register before or at the 1991 Census-LS link

⁴ Census populations are taken from HMSO (1993) '1991 Census. Ethnic group and Country of Birth. Great Britain' Table 6

1991 sampling fractions by sex and type of establishment

Among private households as a whole, there were no differences between observed and expected sampling fractions for Longitudinal Study (LS) members. However, sampling fractions were low in non-private households due to low rates of tracing for these groups (see Table T91.9 describing 'not traced' rates by sex and type of establishment for 1991 LS sample members).

Please note that calculations for many of the communal establishment categories are based on small numbers and should be interpreted with care.

As in 1971 and 1981, low sampling fractions of around 0.85 were observed for people living in communal establishments, with the exception of nursing homes (1.06) and residential homes (1.05). Please note that 'residential homes' and 'nursing homes' replace the 'homes for the elderly' category found in the 1971 and 1981 sampling fraction tables by type of establishment.

Observed sampling fractions for males in communal establishments were 0.88 overall, at their highest for males in residential homes (1.09) and their lowest for males in places of detention (0.72).

Among females in communal establishments, observed sampling fractions were also low (0.96), with the highest value for females in nursing homes (1.07) and lowest for females in places of detention (0.59).

Table S91.7 1991 LS sampling fractions by sex and type of establishment: traced LS members

Establishment type	Males				Females				All people			
	1991 LS Traced sample	1991 Census population	Sampling fractions (%)		1991 LS Traced sample	1991 Census population	Sampling fractions (%)		1991 LS Traced sample	1991 Census population	Sampling fractions (%)	
			Observed	Expected			Observed	Expected			Observed	Expected
Private households	248,401	23,178,690	1.07	1.07	264,732	24,642,562	1.07	1.07	513,133	47,821,252	1.07	1.07
Communal establishments	5,711	647,904	0.88	1.02	6,982	724,760	0.96	1.05	12,693	1,372,664	0.92	1.03
Hotels	1,122	134,068	0.84	1.01	854	101,268	0.84	1.02	1,976	235,336	0.84	1.01
Psychiatric hospitals	161	18,871	0.85	0.99	206	21,468	0.96	1.00	367	40,339	0.91	0.99
Other hospitals	785	84,693	0.93	1.04	1,262	133,311	0.95	1.05	2,047	218,004	0.94	1.04
Nursing homes	349	33,459	1.04	1.06	1,050	98,102	1.07	1.05	1,399	131,561	1.06	1.05
Residential homes	528	48,490	1.09	1.04	1,382	133,456	1.04	1.06	1,910	181,946	1.05	1.06
Childrens homes	51	6,447	0.79	1.06	55	5,298	1.04	1.05	106	11,745	0.90	1.06
Educational establishments	1,137	141,335	0.80	1.05	890	105,407	0.84	1.06	2,027	246,742	0.82	1.06
Places of detention	270	37,345	0.72	0.97	10	1,698	0.59	0.91	280	39,043	0.72	0.97
Defence establishments	466	52,783	0.88	0.95	75	7,744	0.97	0.96	541	60,527	0.89	0.95
Other establishments	842	90,413	0.93	1.02	1,198	117,008	1.02	1.05	2,040	207,421	0.98	1.04
All people	254,112	23,826,594	1.07	1.07	271,714	25,367,322	1.07	1.07	525,826	49,193,916	1.07	1.07

Notes

¹ Source: Office for National Statistics Longitudinal Study (LS)

² LS members, usually resident in England and Wales

³ 'Traced' means the LS members' records were found on the National Health Service Central Register before or at the 1991 Census-LS link

⁴ Census populations are taken from HMSO (1993) '1991 Census. Communal Establishments. Great Britain' Table 1 and Table 3

⁵ This table includes present residents and visitors to communal establishments and private households. Absent residents are not included