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*                          ANALYSIS OF RESPONSE                               *
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Prepared by: Raja Iyer
Main Customers: DHSS, DES, DE, MSC and DOE

Analysis of response.

1. Introduction.

1.1. The purpose of this paper is to report on the results of the
comparisons made between those members of the National Child
Development Study who were interviewed at the fourth sweep
(NCDS 4) and those who were lost to the study for various
reasons. Few longitudinal studies succeed in retaining
all the individuals who were involved in the survey originally.
Subjects are lost to the cohort owing to death or emigration, or they
might refuse to participate in further surveys. Besides these
reasons, there are problems in contacting all members of the
initial cohort. The individuals being traced might be away
during the period of the survey or might simply have gone out
every time the interviewer called.

1.2. It is known from experience that individuals lost to the cohort
tend to be of a particular type - minority groups, low-achievers,
people with relatively poor financial backgrounds etc. - with
the consequence that the sample eventually obtained tends to
be biased*.   It is, therefore, important to test how
representative the achieved sample is of the population.

1.3. An attractive feature of longitudinal studies is that data
from previous sweeps are available on the non-respondents,
and hence it is possible to examine the type of people who are
lost to the study. The representativeness of the achieved
sample may also be tested by means of census comparisons. Ades,
in Working Paper No. 11, entitled "Comparing NCDS4 to the 1981
Census" highlights some of the shortcomings of estimating the
effect of non-response in NCDS4 by comparison with national
routine statistics.

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* Hutchison, D.   "Analysis of Response" in The Future of the National
Child Development Study: Report on a Feasibility
Study.   (submitted to the Department of the Environment
in 1978).

1.4. The remainder of this paper consists of three sections -
      Section 2 which follows immediately gives a brief overview of
      the methods employed in establishing contact with cohort
      members and a summary of the results of the response analysis.
      Section 3 is a detailed commentary on each variable examined and
      Section 4 contains the tables of percentages, chi-squared
      values and significance levels.

2. Methods and Summary of Results.

    2.1. Brief overview of methods.

    2.1.1. For the analysis of non-response, all individuals in the sample
           issued to the interviewers were grouped into three categories:-

           i) Unavoidable losses (N = 419). Those who had died or emigrated
              were termed "unavoidable losses" and omitted from the analyses.

          ii) Avoidable losses (N = 3500). Those who could not be contacted,
              those who were away during the survey and those who refused
              to participate were termed "avoidable losses".

         iii) Achieved (N = 12538) Those from whom interviews (full or
              partial) had been successfully obtained were termed
              "achieved".

              Further details of the numbers in these groups are given in
              Table 1 . The size of the sample available for any particular com-
              parison is, of course, determined by the numbers for whom data are
              available from earlier surveys. (The footnote in Table 1 details
              the attempts made to trace respondents).

TABLE 1.   Numbers.

Target sample.		16457
Unavoidable losses (discovered during field-work)		419
Deaths	22	
Emigrants.	397	
Avoidable losses		3500
Not issued to field (refusals etc. at NCB tracing stage)	437	
Respondent moved	1139	
Vacant/demolished premises, business etc.	215	
Address inadequate/not found	91	
Respondent never at address	292	
Refusals (after tracing)	920	
Others (including ill, incapable etc.)	406	
Achieved (full and partial interviews)		12538

FOOTNOTE.

Tracing.

The target sample for the 1981 survey comprised 16,457 individuals, i.e. all those who had participated in the earlier NCDS surveys at 7, 11 or 16, excluding those known to have emigrated or to have died.

For the first three sweeps of the National Child Development Study (NCDS1, 11 and 111), members of the cohort were traced by writing to schools. This would not have been profitable at the fourth follow-up (NCDS IV), since the respondents were 23 years of age; hence other methods were employed. The Bureau attempted to trace members of the target sample by writing to the last known address of each individual, seeking confirmation of the address or advice as to the whereabouts of the individual or someone who might know. Where no response was forthcoming, reminders were sent and any forwarding addresses wwere followed up. When the letters were returned indicating that the whereabouts of the individual were unknown and also when there was no response, other methods were employed - including seeking help from the media, Local Authority Housing Departments, Family Practitioner Committees, National Insurance records and the National Health Service Central Register. Following this exercise, a total of 16,020 names and addresses were issued to interviewers who carried out additional "detective work" to trace individuals for interviewing. Table 1 shows, in figures, the outcome of this tracing exercise.

2.1.2.   The avoidable losses were compared with the achieved sample to see
if the non-respondents were of a particular type, i.e. whether the
achieved sample was a representative one.   Among all the data
available, 56 variables relating to six areas of greatest interest
were chosen for investigation.   These were demographic, socio-economic
status, health, education, housing and employment.

2.1.3.   All the variables were cross-tabulated by whether the individuals were
in the avoidable losses group or the achieved group and two com-
parisons were made on each table:-

   i) Chi-squared tests were conducted to test the statistical signifi-
   cance of the differences between the avoidable losses and the
   achieved.   This was to see if the non-respondents were of a parti-
   cular type.

   ii) The achieved sample was compared with the "possible total" which is
   the sum of the avoidable losses and the achieved.   The "possible
   total" represents the sample that would have been obtained had there
   been no non-respondents i.e. if all (except the unavoidable losses)
   had been successfully interviewed.   To test the representativeness
   of the achieved sample, percentage biases were calculated as
   follows:-

$$\frac{(\text{achieved proportion} - \text{possible total proportion})}{\text{Possible total proportion}} \times 100\%$$

   A negative percentage bias means an under-representation while a
   positive percentage bias indicates an over-representation.

2.2.   Summary of results.

2.2.1.   Not surprisingly, greater proportions of the losses were from ethnic
minority groups (e.g. West Indian/Caribbean/African, Indian/Pakistani
etc) and from low-achievement groups (e.g. those with no 'O' or A'
levels, those with poor reading or numerical skills etc).   Physically
or mentally handicapped people, people with origins in relatively low
social classes, and people who were brought up under poor housing
conditions also formed a larger proportion of the losses.

2.2.2.   Almost all the statistical tests conducted were statistically signi-
ficant beyond the .001 level.   However, before jumping to the conclusion
that the NCDS4 sample is a totally unrepresentative one, it must be
borne in mind that, in samples of such size, statistical tests are
sensitive enough to detect minute differences.   In many respects, as
the percentage biases show, the achieved sample does not differ from
the possible total sample to too great an extent.

3.   Detailed Commentary on Findings.

   3.1.   There now follows a detailed commentary on the findings
         of the response analysis and tables follow the
         commentary.   All variables have been grouped under
         appropriate headings - demography, social class,
         health, education, housing and miscellaneous.   As noted
         in 2.2.2, almost all differences were statistically
         significant.   The percentage bias is explained in
         2.1.3 (ii).

   3.1.1.   Demographic variables.

      i)   Sex: The proportion of men in the achieved sample
            is 50.1% compared with a target figure of 51.5%.   Men
            are under-represented, the bias being -2.7% [Table 1.1].

      ii)   Area of world mother born: The sample contains a
            greater proportion of people whose mothers were
            born in Great Britain/Channel Isles (92.7% compared
            with an expected 91.8%) and in Europe (2.0%
            compared with 1.9%).   Those people with mothers born
            in the Indian sub-continent or Pakistan are under-
            represented, the proportion being 0.6% instead of the
            expected 0.8%— a bias of -25.0%.   People with
            West Indian or Caribbean born mothers also form a
            smaller proportion —0.6% instead of 0.9%.   The bias
            here is -33.0%.   People with Irish-born (Ulster and
            Eire) mothers are under-represented (3.1% compared
            to 3.4%), though the bias of 8.8% is not as high as
            the two preceeding ones.   Expected proportions were
            obtained of people with mothers born in other parts
            of Asia, in Africa, Cyprus, Gibraltar, Malta and
            other parts of the world [Table 1.2].

iii) <u>Area of the world father born:</u> The results show a
similar trend as above. People with fathers born in
Great Britain or the Channel Islands form a greater
proportion (92.0%) than expected (91.2%). The
proportions of people with fathers born in Asia, Africa,
and other parts were as expected. The following,
however, are under-represented:-

Father born in Cyprus/Gibraltar/Malta: Expected 0.4%,
        achieved = 0.3%, bias = -25.0%.

Father born in India/Pakistan: Expected 0.9%, achieved
        = 0.7%, bias = -22.2%.

Father born in West Indies/Caribbean: Expected 1.1%,
        achieved = 0.7%, bias = -36.4%

Father born in Ireland (Ulster and Eire): Expected 3.8%,
        achieved = 3.4%, bias = - 10.5%

[Table 1.3].

iv) * <u>Ethnic Group:</u>   More Caucasians feature in the sample
— 97.9%. People of Indian and Pakistani origin
are under-represented, the sample containing 0.5%
when 0.7% was expected. This is a bias of nearly
- 29.0%, but the bias of -36.0% for the Afro-
Caribbean group is greater - the expected percentage
was 1.1% and the sample contains 0.7% Afro-Caribbeans.
Other Asians are adequately represented (0.1%).
[Table 1.4]

*   The ethnic group of the respondents was assessed
by eye by the doctor carrying out the medical examination.

3.1.2 . Social Class/Economic status.

i) Occupation of father when cohort was aged 7. The sample
contains a larger than expected proportion of people whose
fathers had non-manual jobs when the cohort was aged 7.
Those people whose fathers had manual occupations comprise
65.6% of the sample, when 66.6% was the target figure.
Those with origins in the manual classes are under-
represented by 1.5%. [Table 2.1]

ii) Whether father stayed at school after school-leaving age:
76.5% of the sample said their fathers had left
school at the school-leaving age. The expected figure
was 77,1%. This group is slightly under-
represented in the sample. The bias is less than
- 1.0%. [Table 2.2]

iii) R.G.Social class at age 11: The proportion of people
whose fathers had manual occupations when the cohort
was 11 years old is 64.0%. This should have been 64.9%;
the bias is -1.4%. [Table 2.3].

iv) Any child in family getting free school meals at age 11:
9.2% of the sample consisted of people in whose family at
least one child received free school meals. The expected
percentage was 10.4% again an under-representation. The
bias is -11.5%. [Table 2.4]

v) Feelings of financial hardship at age 11: 9.8% of the
sample had experienced financial hardship of some sort
at age 11. This, too, is an under-representation. The
expected figure was 11.0%, the sample has a bias of
-10.9%. [Table 2.5]

vi) Parental R.G. Social class at age 16: 6.7% of the sample had
no male head of household at 16, 58.5% were classified as
manual and 34.8% as non-manual. The expected proportions
were 7.5%, 58.5% and 33.7% respectively. Those whose
fathers were in the manual class according to RG's
categorization, are under-represented. The bias is -0.5%
[Table 2.6].

vii) <u>Free schools meals at age 16:</u> People who received free meals at school when they were aged 16 are under-represented in the sample. The proportion is 8.7%, the expected proportion was 10.1% and the bias is -13.9%. [Table 2.7]

viii) <u>Feelings of financial hardship at age 16:</u> 9.3% of the sample had experienced some form of financial hardship at age 16. This proportion, too, is an under-estimate. The expected proportion was 10.6%. There is a bias of -12.3%. [Table 2.8]

3.1.3. <u>Health</u>

i) <u>Height at age 7</u>: In the sample, 11.6% were under 115 cms (3ft 9ins) tall at seven years of age, 27.3% were over 125 cms (4ft 1in). The expected proportions were 11.9% and 26.8%, but this difference was statistically significant only at the .05 level. In view of the sample size, this may be deemed non-significant [Table 3.1.]

ii) <u>Handicap at age 7</u>: In the sample 0.5% (expected 0.6%) reported having been physically handicapped at age 7 and 0.6% (expected 0.7%) mentally handicapped. The sample, therefore, under-represents the physically handicapped (bias -16.7%) and the mentally handicapped (bias -14.3%) [Table 3.2]

iii) <u>Height at age 11</u>: Those under 140 cms (4ft 7 ins) tall at age 11 are under-represented (42.4% compared with 45.7%, bias -7.2%) and those over 150 cms (4ft 11 ins) at age 11 are over-represented (15.8% compared with 14.6%, bias 8.2%) [Table 3.3].

iv) <u>Handicap at age 11</u>: 2.6% of the sample had had some handicap (physical or mental) at age 11. These, too, are under-represented. The expected proportion was 3.2%. The bias is -18.8% [Table 3.4]

v) <u>Height at age 16</u>: This is one of the few cases where the difference between avoidable losses and the achieved sample is statistically non-significant. [Table 3.5].

vi) <u>Handicap at age 16</u>: 7.2% of the achieved sample had had mental or physical handicaps at age 16. This group is under-represented. The expected proportion was 7.6% - a bias of -5.3% [Table 3.6].

3.1.4. Education

i) Whether 'O' levels taken (England & Wales):
11.6% of the achieved sample had not taken any
'O' levels, again an under-representation. The
expected proportion was 13.6%, the bias is -14.7% (The
figures are based on only those who were identified as being
at a school in England or Wales at age 16). [Table 4.1]

ii) Whether Scottish 'O' grades taken (Scotland)
25.7% of the sample had not taken Scottish 'O'
grades. The expected proportion was 28.4%, bias
being -9.5% [Table 4.2].

iii) Number of 'O' levels: Of those who had taken 'O' levels,
43.3% (expected 45.3%) did not have any 'O' level passes. The
bias is -5.0%. The proportion with over 5 'O' levels
is 24.2%, the expected proportion was 23.0%, the
over-representation bias is 5.0%. [Table 4.3].

iv) Number of 'O' grades (Scotland): 26.3% (expected
27.8%) in the sample did not have Scottish 'O'
grades. The figures are based on those who were
educated under the Scottish system (n=946). The
proportion with more than 5 'O' grades is 32.2%
when 30.8% was the expected figure. The difference
is significant only at the .05 level which , bearing
in mind the sample size, must be deemed non-significant.
[Table 4.4]

v) <u>Arithmetic score at age 7:</u> 17.1% of the sample
achieved a score of three or under in the arithmetic
test administered at age 7. This low-scoring
group is under-represented in the sample: the
expected proportion was 28.6%, and the bias is
-5%. Those who obtained between 8 and 10 marks
(maximum) are over-represented in the sample by
3.6% (20% in the sample compared with 19.3% expected).
[Table 4.5].

vi) <u>Reading score at age 7:</u> Here is a similar situation
to the arithmetic test scores. The low scorers (below
17 marks) are under-represented, there are 19.2% in the
sample when 21.1% were expected - the bias is -9.0%
High scorers are over-represented. In the sample, the
proportion was 18.8%, a bias of 5.3%. [Table 4.6].

vii) <u>Number of schools attended between ages 5 and 7:</u>
2.9% of the sample had attended 3 or more schools between
the ages of 5 and 7. This is an under-representation.
The expected proportion was 3.1% and the bias is -6.5%.
[Table 4.7].

viii) <u>Whether parents want child to stay on at secondary
school. (age 7).</u> In the achieved sample, parents of
10.2% did not want their children to stay on at secondary
school. The proportion expected was 10.7%; such children
are under-represented and the bias is -4.7%. [Table 4.8].

ix) <u>Teachers' assessment of parents' interest in
children's education (age 7):</u> 38.4% of the
achieved sample had parents who showed great interest in
their children's education; 32.5% had parents who showed
little interest. The former proportion is an over-
representation (expected figure was 37.1%, bias 3.5%).
and the latter an under-representation (expected pro-
portion 33.0%, bias -1.5%. [Table 4.9].

x) <u>Maths score at age 11</u>: 18.6% of the achieved sample
scored less than 6 marks out of 40 in a maths test at
age 11.   The proportion of low-scorers was expected
to be 20.5%, so the sample under-represents low-scorers,
the bias being -9.3%. High-scorers (over 28 marks) are
over-represented (expected proportion 19.0%, achieved 20.0%
bias 5.3%). [Table 4.10].

xi) <u>Reading score at age 11</u>; As for the maths score,
low-scorers (below 10 marks out of 35) are under-
represented. In the achieved sample 18.1% instead of the
expected 20% scored below 10 marks. The bias is -9.5%.
Those who scored over 22 marks out of 35 are over-
represented. The proportion of high-scorers in the
sample is 20.9%; compared with the expected 19.7%, this
is a bias of 6.0%. [Table 4.11]

xii) <u>Eleven-year intentions after school</u>: 59.3% of those who
expressed a preference said they wished to carry on with full-time
education after leaving school; the rest (40.7%) expressed the
intention of going into full-time jobs. The former
group is over-represented (bias 2.2%), the latter under-
represented (bias -3.1%). The corresponding expected
proportions were 58.0% and 42.0% respectively. (Those who
replied "Dont know" have been omitted). [Table 4.12].
xiii) <u>Parental aspirations regarding child's education</u>:
83.3% of the sample had parents who said they wished
their children to carry on their education after the age
of 16; the parents of 13.8% said they did not know, and the
rest (2.9%) said 'No' to further education. The first group
is over-represented (expected proportion 82.5%, bias
1%). The expected proportion of 'dont knows' was 14.4%,
a bias of -4.2%. The proportion expected of those whose
parents said 'No' to further education was 3.1%, a bias
of - 6.5%. [Table 4.13].

xiv) <u>Teachers' assessment of parental interest in child's education (age 11)</u>

In the sample, 41.7% have parents who were very interested in their children's education when the children were aged 11; the rest (58.3%) have parents who showed little or no interest. The latter group is under-represented (expected proportion 59.9%, bias -2.7%). [Table 4.14] .

xv) <u>Number of schools attended between ages 5 and 11:</u>
14.9% of the achieved sample had attended 3 or more schools between the ages of 5 and 11. They are under-represented in the sample. The expected proportion was 16.0% and the bias is -6.9%. [Table 4.15].

xvi) <u>Reading score at age 16.</u> As is the case in reading scores at ages 7 and 11, the low-scorers (19 marks or less out of 35) are under-represented. 17.8% of the achieved sample scored 19 marks or below. The expected proportion was 20.0% and the bias - 11%. High-scorers (31 to 35 marks) are over-represented (23.0% compared with an expected 21.8% - a bias of 5.5%). [Table 4.16].

xvii) <u>Maths score at age 16:</u> A similar situation to the reading score exists. The proportion in the achieved sample who obtained 6 marks or below out of 31 is 17.6%, when the expected proportion was 19.3%. Poor performers are under-represented. The bias is -8.8%. [Table 4.17].

xviii) <u>Likely age of leaving school, at age 16:</u> 66.5% of the achieved sample anticipated leaving school at age 16, 7.7% at age 17 and 25.8% at age 18 or over. The corresponding expected proportions are respectively 68%, 7.6% and 24.4%, and the respective biases are -2.2%, -1.3% and 5.7%. The sample under-represents those who anticipated leaving school early. [Table 4.18].

xix) <u>Post-school destination</u>: In the achieved sample,
27.1% said they would like to continue with full-time
study, 38.5% said they would like jobs that involved
part-time study and 18.8% said they wanted jobs that
required no further study. This last group is under-
represented. The expected proportion was 19.7% and the
bias is -4.6%. The expected proportions for the former
groups are respectively 26.0% and 38.3%. [Table 4.19].

xx) <u>School-type at age 16</u>: 93.6% of the achieved
sample had attended maintained schools. This compares
very favourably with the expected proportion of 93.8%.
The rest of the sample had attended non-maintained
schools. The difference between the avoidable losses
and the achieved was significant only at the .05 level,
i.e. the difference will be deemed non-significant.
Of the 93.6% who attended maintained schools, 62.1%
(expected 62.5%) attended comprehensive schools, 12.0%
(expected 11.2%) attended Grammar schools and 23.11%
(expected 23.06%) attended Secondary Modern schools.
The sample over-represents grammar school children
(the bias being 7.1%), and only marginally under-
represents Comprehensive school children and Secondary
Modern pupils. [Tables 4.20 and 4.21].

xxi) <u>Number of schools attended between ages 11 and 16</u>:
2.6% of the achieved sample had attended three or more
schools between the ages of 11 and 16, and they are under-
represented. The expected proportion was 3.0%, and
the bias is -13.3%. [Table 4.22].

xxii) <u>Teachers' assessment of parental interest in
child's education</u>:
39.4% of the sample are people whose parents showed a
keen interest in their children's education, when the
children were aged 16. This group is over-represented.
The group whose parents showed less interest is under-
represented - 52.2% in the sample. The bias for the
former group (expected proportion 37.5%) is 5.0% and
that for the latter group (expected proportion 53.7%)
is -2.8%. [Table 4.23].

3.1.5. Housing.

i) <u>Number of family moves since birth to age 7</u>: 37.2% of
the achieved sample come from families that had not
moved house at all since the birth of the cohort till age
7, 12.1% come from families that had made three or more
moves in the same period. This latter group is under-
represented. The expected proportion was 13.1% and the
bias is -7.6%. The expected proportion for the former
group was 36.4% - an over-representation bias of 2.2%.
[Table 5.1].

ii) <u>Tenure at age 7</u>:   The proportion of those who lived
in owner-occupied premises at age 7 is 43.0%, and the
expected proportion was 41.7%; 40.2% of the cohort had
lived in council-rented property - this group is well
represented, the proportion was 40.6% which is a bias
of less than 1%. Those who lived in privately-rented
accommodation at age 7 are under-represented. The
proportion of those in the achieved sample is 11.3%, which,
compared with the expected proportion of 12.3%, gives a
bias of -8.1%. [Table 5.2].

iii) <u>Amenities at age 7</u>: 82.6% of the achieved sample
said that at age 7 their household had sole use of
all amenities (bathroom, indoor lavatory and cooking.
facilities) and 17.4% said either they had not had such
amenities or they had had to share. The latter group is under-
represented in the achieved sample, with a bias of -7.4%; the
expected proportion was 18.8%. [Table 5.3].

iv) <u>Tenure at age 11</u>: As at age 7, those who had lived
in privately rented premises at age 11 are under-
represented in the achieved sample -6.8% instead of the
expected 7.5% which is a bias of -9.3%. The proportion
of those who lived in owner-occupied property at age 11
is 46.9%, the expected proportion was 45.4% and the bias
is 3.3%. Those whose parents were council-tenants at that
age are marginally under-represented - expected 42.1%,
in the sample 41.5%, bias - 1.4%. [Table 5.4].

v) <u>Amenities at age 11</u>: The proportion without sole use
of amenities (bathroom, indoor lavatory and cooking
facilities) at age 11 is 11.5% in the achieved sample.
This group is under-represented. The expected proportion
was 12.5%. The bias in this case is -8%. [Table 5.5].

vi) <u>Overcrowding at age 11</u>: 38.1% of the achieved sample
had lived in overcrowded conditions (i.e. over 1.5
persons per room) at age 11. With an expected proportion
of 39.4% the bias is - 3.3%, an under-representation [Table 5.6].

vii) <u>Number of moves since birth to age 16</u>: By age 16,
24.7% of the achieved sample had moved house three times
or more, compared with 22.0% who had never moved. The
corresponding expected proportions are respectively
26.5% and 21.2%. The former group (i.e. three or
more moves) is under-represented (bias = 3.8%). [Table 5.7].

viii) <u>Size of family at age 16</u>: 37.9% of the achieved
sample had three or more brothers and sisters, 7.1%
had no siblings. Those who were sole children at age
16 are over-represented. The expected proportions
without brothers or sisters was 6.9% - a bias of 2.9%.
Those with three or more brothers and sisters at age 16
are under-represented. The proportion expected was 39.2%

and the bias here is -3.3%. [Table 5.8].

ix) <u>Tenure at age 16</u>: The proportion who lived in
owner-occupied property at age 16 is 51.3% in the
achieved sample; 40% lived in council-rented
accommodation at that age and 4.8% in privately rented
places. The expected proportions were, in that order,
49.7%, 41% and 5.3%. Those whose parents were private
renters are under-represented (bias = 9.4%), as are those
whose parents were council tenants (bias = -2.4%),
but those who lived in owner-occupied homes are over-
represented (bias = 3.2%).   [Table 5.9].

x) Amenities at age 16: 5.9% of the achieved sample
    said that, at the age of 16 they did not have
    sole use of all amenities (i.e. bathroom,
    indoor lavatory and cooking facilities) in their
    homes. The sample under-represents such people.
    The expected proportion was 6.3%, the bias is
    -6.3%. [Table 5.10].

xi) Overcrowding at age 16: At the age of 16,
    30.7% of the achieved sample had lived in over-
    crowded conditions, i.e. with more than 1.5
    persons per room. Such people are under-represented
    (expected proportion 31.9%; bias -3.8%).
    [Table 5.11].

Miscellaneous.

i) <u>With lone parent at age 7</u>:   5.1% of the achieved
sample had lone parents when they were 7 years of age.
The sample under-represents this group. The expected
proportion was 5.7%, the bias being -10.5%. [Table 6.1].

ii) <u>Whether child was in care at age 7</u>:   0.3% of
the achieved sample had been in local authority
care at age 7 and 1.7% had been in care before, but not
at age 7. The corresponding expected proportions
were 0.4% and 1.9% respectively. The sample under-
represents those who had been in local authority
care at or before age 7; the bias is -13.0%.
[Table 6.2].

iii) <u>Whether child in care at age 11</u>:   3.0% of the
achieved sample either had been or still were in
local authority care at age 11, which is an under-
representation because the target sample proportion
was 3.4%. The bias is -11.8%. [Table 6.3].

iv) <u>Lone parent at age 16</u>:   13.1% of the achieved
sample had a lone parent at age 16, expected
proportion was 14.3% - a bias of -8.4%. [Table 6.4].

v) <u>Whether in care at age 16</u>:   3.3% of the achieved
sample had been or still were in local authority
care at age 16. The expected proportion was 3.9%.
Therefore, the sample under-represents children in
care at age 16. The bias is -15.4%. [Table 6.5].

3.1.7. The tables that now follow in section 4 are presented
in the same order as the preceding commentary. Variables
have been cross-tabulated by whether the respondents
were interviewed (termed "achieved") or lost to the
study ("avoidable losses"). The figures enclosed in
parentheses are column percentages. The chi-squared
tests compare the avoidable losses with the achieved,
but the comparison of interest is that between the
achieved and the target figures. A brief summary
follows each table, highlighting any marked
discrepancies between the achieved and the target
figures.

SECTION 4.

1. Demographic variables.

1.1. Sex.	Avoidable losses.	Achieved	Possible total
Males	1980 (56.6)	6276 (50.1)	8256 (51.5)
Females	1518 (43.4)	6259 (49.9)	7777 (48.5)
Total	3498	12535	16033

$$X^2 = 46.77, \ df = 1, \ p < .001$$
[Males under-represented, bias -2.7%]

1.2. Area of world mother born.

	Avoidable losses	Achieved	Possible total
Great Britain/Channel Isles	2147 (88.2)	9677 (92.7)	11824 (91.8)
Ireland (Ulster and Eire)	115 (4.7)	320 (3.1)	435 (3.4)
Europe	40 (1.6)	207 (2.0)	247 (1.9)
India/Pakistan	40 (1.6)	61 (0.6)	101 (0.8)
W.Indies/Caribbean	55 (2.3)	66 (0.6)	121 (0.9)
Asia	5 (0.2)	21 (0.2)	26 (0.2)
Africa	4 (0.2)	21 (0.2)	25 (0.2)
Cyprus/Gibraltar/Malta	17 (0.7)	39 (0.4)	56 (0.4)
Other	12 (0.5)	32 (0.3)	44 (0.3)
Total	2435	10444	12879

$$X^2 = 112.37, \ df = 8, \ p < .001$$
[Under representation of those with mothers born in Ireland (bias = -8.8%), India/Pakistan (bias = -25%), W.Indies/Caribbean (bias = - 33.3%)].

1.3 Area of world father born.

	Avoidable losses	Achieved	Possible total
Great Britain/Channel Isles	2105 (87.5)	9558 (92.0)	11663 (91.2)
Ireland (Ulster and Eire)	126 (5.2)	356 (3.4)	482 (3.8)
Europe	39 (1.6)	204 (2.0)	243 (1.9)
India/Pakistan	38 (1.6)	76 (0.7)	114 (0.9)
W.Indies/Caribbean	59 (2.5)	76 (0.7)	135 (1.1)
Asia	5 (0.2)	17 (0.2)	22 (0.2)
Africa	5 (0.2)	17 (0.2)	22 (0.2)
Cyprus/Gibraltar/Malta	18 (0.7)	32 (0.3)	50 (0.4)
Other	12 (0.5)	50 (0.5)	62 (0.5)
Total	2407	10386	12793

$$X^2 = 103.24, \ df = 8, \ p < .001$$
[Under-representation of those with fathers born in Ireland (bias = -10.5%), India/Pakistan (bias = -22.2%), W.Indies/Caribbean (bias = -36.4%), Cyprus/Gibraltar/Malta (bias = -25.0%)].

1.4 * Ethnic Group	Avoidable losses	Achieved	Possible total
Caucasian	2091 (95.3)	9803 (98.5)	11894 (97.9)
Afro-Caribbean	61 (2.8)	68 (0.7)	129 (1.1)
Indian/Pakistani	32 (1.5)	54 (0.5)	86 (0.7)
Other Asian	3 (0.1)	10 (0.1)	13 (0.1)
Other	6 (0.3)	17 (0.2)	23 (0.2)
Total	2193	9952	12145

$$X^2 = 98.86, df = 4, p < .001$$

[Afro-Caribbean under-represented (bias = -36.4%) and Indians/Pakistanis (bias = -28.6%).]

* Ethnic group was assessed by eye by the medical examiner.

2. Social class/economic status.

2.1 Occupation of father when cohort aged 7.

No male head	97 (3.6)	291 (2.7)	388 (2.9)
Non-manual	701 (26.0)	3455 (31.7)	4156 (30.6)
Manual	1895 (70.4)	7149 (65.6)	9044 (66.6)
Total	2693	10895	13588

$X^2 = 36.66$, df = 2, p< .001

[Manual group under-represented (bias = -1.5%).]

2.2 Whether father stayed at school

Yes. ..	525 (20.5)	2484 (23.5)	3009 (22.9)
No	2040 (79.5)	8108 (76.5)	10148 (77.1)
Total.	2565	10592	16038

$X^2 = 10.42$, df = 1, p< 0.1

[Very little difference between target and achieved samples].

2.3. Social class at age 11.

Non-manual	725 (31.1)	3717 (36.0)	4442 (35.1)
Manual	1603 (68.9)	6614 (64.0)	8217 (64.9)
Total	2328	10331	12659

$X^2 = 19.51$, df = 1, p< .001

[Manual group under-represented (bias = -1.4%).]

2.4 Any child in family getting
     free school meals (age 11).

	Avoidable losses	Achieved	Possible total
Yes	385 (15.8)	968 (9.2)	1353 (10.4)
No	2049 (84.2)	9555 (90.8)	11604 (89.6)
Total	2434	10523	12957

X^2 = 92.60, df = 1, p< .001

[Under representation of families with children receiving free schools meals (bias = -11.5%).]

2.5. Feelings of financial hardship
      at age 11.

Yes	393 (16.0)	1039 (9.8)	1432 (11.0)
No	2065 (84.0)	9536 (90.2)	11601 (89.0)
Total	2458	10575	13033

X^2 = 77.47, df = 1, p< .001

[Families with financial hardships under-represented; bias = -10.9%].

2.6. Parental RG Social class
      at age 16.

Non-manual	485 (27.7)	3194 (34.8)	3679 (33.7)
Manual	1061 (60.7)	5362 (58.5)	6423 (58.8)
No male head	203 (11.6)	615 (6.7)	818 (7.5)
Total	1749	9171	10920

X^2 = 70.26, df = 2, p< .001

[Children with manual-worker fathers under-represented; bias = -0.5%].

2.7. Free school meals
      at age 16.

Yes	304 (17.0)	810 (8.7)	1114 (10.1)
No	1488 (83.0)	8472 (91.3)	9960 (89.9)
Total	1792	9282	11074

X^2 = 112.66, df = 1, p< .001

[Children who receive free school meals under-represented; bias = -13.9%].

2.8 Feelings of financial hardship at age 16.

	Avoidable losses	Achieved	Possible Total
Yes	306 (17.5)	850 (9.3)	1156 (10.6)
No	1446 (82.5)	8323 (90.7)	9769 (89.4)
Total	1752	9173	10925

X^2 = 104.53, df = 1, p< .001

[Families with financial hardship under-represented; bias = -12.3].

3. <u>Health.</u>

3.1. <u>Height (in cms) at age 7.</u>

< 115	324 (13.2)	120)11.6)	1525 (11.9)
116 - 120	631 (25.8)	2545 (24.7)	3176 (24.9)
121 - 125	882 (36.0)	3755 (36.4)	4637 (36.3)
> 125	613 (25.0)	2813 (27.3)	3426 (26.8)
Total	2450	10314	12764

$X^2 = 8.90$, df = 3, p< 0.05

3.2. <u>Handicap at age 7.</u>

None	2482 (98.3)	10492 (98.8)	12974 (98.7)
Physical	17 (0.7)	57 (0.5)	74 (0.6)
Mental	25 (1.0)	67 (0.6)	92 (0.7)
Total	2524	10616	13140

$X^2 = 4.57$, df = 2, NS.
[Physically handicapped under-represented by 16.7%, mentally
handicapped by 14.3%].

3.3. <u>Height (in cms) at</u>
<u>age 11.</u>

< 140	2005 (57.4)	5292 (42.4)	7297 (45.7)
141 - 145	626 (17.9)	2735 (21.9)	3361 (21.0)
146 - 149	495 (14.2)	2495 (20.0)	2990 (18.7)
> 150	364 (10.4)	1972 (15.8)	2336 (14.6)
Total	3490	12494	15984.

$X^2 = 258.74$, df = 3, p < .001
[Those under 140 cms (4 ft. 7 ins) under-represented by 7.2%].

		Avoidable Losses.	Achieved	Possible total
3.4.	Handicap at age 11.			
	Yes	136 (6.0)	258 (2.6)	394 (3.2)
	No	2114 (94.0)	9649 (97.4)	11763 (96.8)
	Total	2250	9907	12157

$X^2 = 69.20$, df = 1, p< .001

[Handicapped under-represented by 18.8%].

3.5	Height (in cms) at age 16.			
	< 160	505 (29.6)	2584 (28.8)	3089 (28.9)
	161 - 165	356 (20.9)	1999 (22.3)	2355 (22.1)
	166 - 170	381 (22.3)	1834 (20.5)	2215 (20.8)
	171 - 175	288 (16.9)	1559 (17.4)	1847 (17.3)
	> 175	177 (10.4)	989 (11.0)	1166 (10.9)
	Total	1707	8965	10672

$X^2 = 4.83$, df = 4, NS

3.6	Handicap at age 16.			
	Yes	164 (9.7)	631 (7.2)	795 (7.6)
	No	1531 (90.3)	8137 (92.8)	9668 (92.4)
	Total	1695	8768	10463

$X^2 = 12.43$, df = 1, p< .001

[Handicapped under-represented by 5.3%].

4. Education.

4.1. Whether 'O' levels taken by age 16

Yes	1364 (77.4)	7000 (88.4)	8364 (86.4)
No	398 (22.6)	916 (11.6)	1314 (13.6)
Total	1762	7916	9678

$X^2 = 149.06$, df = 1, p< .001
[Fewer people who took no 'O' levels, bias = -14.7%].

4.2. (Scotland) - Whether 'O' grades taken by age 16.

	Avoidable losses	Achieved	Possible Total
Yes	146 (59.8)	800 (74.3)	946 (71.6)
No	98 (40.2)	277 (25.7)	375 (28.4)
Total	244	1077	1321

$X^2 = 20.42$, df = 1, p< .001
[Fewer people who took no 'O' grades. Bias = -9.5%].

4.3. No. of 'O' levels by age 16.

None	754 (55.3)	3038 (43.4)	3792 (45.3)
1 - 4	383 (28.1)	2265 (32.3)	2648 (31.7)
5 +	227 (16.6)	1697 (24.2)	1924 (23.00)
	1364	7000	8364

$X^2 = 71.19$, df = 2, p< .001
[Fewer people with no 'O' levels, bias = -4.2%].

4.4 No. of 'O' grades by age 16.

None	53 (36.3)	210 (26.3)	263 (27.8)
1 - 4	59 (40.4)	333 (41.6)	391 (41.4)
5+	34 (23.3)	257 (32.2)	291 (30.8)

$X^2 = 7.66$, df = 2, p< .05
[Fewer people with no 'O' grades. Bias = -5.4%].

4.5. Arithmetic score at age 7.

0 - 3	975 (34.6)	3012 (27.1)	3987 (28.6)
4	381 (13.5)	1567 (14.1)	1948 (14.0)
5	370 (13.1)	1551 (14.0)	1921 (14.o)
6	357 (12.7)	1486 (13.4)	1843 (13.2)
7	274 (9.7)	1271 (11.4)	1545 (11.1)
8 - 10	462 (16.4)	2219 (20.0)	2681 (19.3)
Total.	2819	11106	13925

$X^2 = 67.45$, df = 5, p< .001
[Low-scorers, (ie below 3) under-represented by 5%].

4.6. <u>Reading score at age 7.</u>

0 - 17	803 (28.5)	2135 (19.2)	2938 (21.1)
18 - 24	622 (22.0)	2305 (20.7)	2927 (21.0)
25 - 27	455 (16.1)	1937 (17.4)	2392 (17.1)
28	225 (8.0)	1021 (9.2)	1246 (8.9)
29	306 (10.8)	1527 (13.7)	1833 (13.1)
30	411 (14.6)	2207 (19.8)	2618 (18.8)
Total	2822	11132	13954

$X^2 = 147.05$, df = 5, p< .001
[Low-scorers (below 17 marks) under-represented by 8%].

4.7.

No of schools attended <u>between ages 5 and 7</u>	Avoidable <u>losses</u>	Achieved	Possible <u>total</u>
One	2028 (77.2)	8835 (80.9)	10917 (80.2)
Two	498 (18.5)	1771 (16.2)	2269 (16.7)
Three or more	115 (4.3)	313 (2.9)	428 (3.1)
Total	2695	10919	13614

$X^2 = 23.73$, df = 2, p< .001
[Those who attended 3 or more schools under-represented.
Bias = -6.5%].

4.8. <u>Whether parents want</u>
<u>child to stay on at</u>
<u>secondary school.</u>(Cohort aged 7).

Yes	2129 (87.3)	9074 (89.8)	11203 (89.3)
No	311 (12.7)	1028 (10.2)	1339 (10.7)
Total	2440	10102**	12542

$X^2 = 13.34$, df = 1, p< .001
[Fewer in the sample whose parents did not want them to stay
on at secondary school, Bias = -4.7%].

4.9. <u>Parental interest in</u>
<u>childs education (age 7)</u>

Very interested	905 (31.9)	4284 (38.4)	5189 (37.1)
Less interested	996 (35.1)	3618 (32.5)	4614 (33.0)
Other	940 (33.1)	3244 (29.1)	4184 (29.9)
Total	2841	11146	13987

$X^2 = 43.06$, df = 2, p< .001
[Fewer people in the sample whose parents showed little interest in
their children's education. Bias = -1.5%].

4.10 <u>Maths score at age 11.</u>

0 - 6	741 (28.3)	2001 (18.6)	2742 (20.5)
7 - 12	613 (23.4)	2123)19.7)	2736 (20.4)
13 - 19	477 (18.2)	2218 (20.6)	2695 (20.1)
20 - 27	406 (15.5)	2285 (21.2)	2691 (20.1)
28 - 40	384 (14.7)	2160 (20.0)	2544 (19.0)
Total	2621	10787	13408

$X^2 = 183.64$, df = 4, p< .001
[Low-scorers, i.e. with score less than 6 out of 40, under-
represented. Bias = -9.3%].

4.11. <u>Reading score at</u>
<u>age 11.</u>

	Avoidable losses	Achieved	Possible total
0 - 10	737 (28.1)	1950 (18.1)	2687 (20.0)
11 - 14	594 (22.7)	2310 (21.4)	2904 (21.7)
15 - 17	447 (18.2)	1963 (18.2)	2410 (18.0)
18 - 21	462 (17.6)	2309 (21.4)	2771 (20.7)
22 - 35	382 (14.6)	2259 (20.9)	2641 (19.7)
Total	2622	10791	13413

$X^2 = 167.12$, df = 4, p< .001
[Those scoring less than 10 marks out of 35 under-represented.
Bias = -9.3%].

4.12. <u>Eleven-year intentions</u>
<u>after school.</u>

Full-time study	696 (52.5)	3122 (59.3)	3818 (58.0)
Full-time job	630 (47.5)	2139 (40.7)	2769 (42.0)
Total	1326	5261	6587

$X^2 = 20.42$, df = 1, p< .001
[Those with no desire for any more study under-represented,
Bias = -3.1%]. Those who replied "Dont know" have been omitted.

4.13. <u>Parental aspirations re</u>
<u>child's education (age 11).</u>

Yes, further education	1946 (78.8)	8862 (83.3)	10818 (82.5)
No.	99 (4.0)	312 (2.9)	411 (3.1)
Don't know yet	425 (17.2)	1463 (13.8)	1888 (14.4)
Total	2470	10637	13107

$X^2 = 28.96$, df = 2, p< .001
[Fewer people whose parents said 'No' to further education,
Bias = -6.5%].

4.14 <u>Parental interest in</u>
<u>child's education (age 11)</u>

Very interested	810 (33.5)	4273 (41.7)	5083 (40.1)
Less interested	1611 (66.5)	5974 (58.3)	7585 (59.9)
Total	2421	9585	12668

$X^2 = 55.38$, df = 1, p< .001.
[Fewer people in the sample whose parents showed little interest
in their children's education. Bias = -2.7%].

4.15. <u>No. of schools between ages 5 - 11.</u>

	Avoidable losses	Achieved	Possible total
One	1117 (45.3)	5509 (52.0)	6626 (50.8)
Two	828 (33.6)	3499 (33.1)	4327 (33.2)
Three or more	520 (21.1)	1577 (14.9)	2097 (16.0)
Total	2465	10585	13050

$X^2 = 65.98$, df = 2, p< .001

[Those who attended 3 or more schools under-represented. Bias = -6.9%].

4.16. <u>Reading score at age 16.</u>

0 - 19	607 (30.3)	1695 (17.8)	2302 (20.0)
20 - 24	401 (20.0)	1738 (18.3)	2139 (18.6)
25 - 28	367 (18.3)	2036 (21.4)	2403 (20.9)
29 - 31	310 (15.5)	2036 (21.4)	2164 (18.8)
32 - 35	316 (15.8)	2188 (23.0)	2504 (21.8)
Total	2001	9511	11512

$X^2 = 193.29$, df = 4, p< .001.

[Under-representation of low-scorers (below 20). Bias = -11%].

4.17. <u>Maths score at age 16.</u>

0 - 6	543 (27.4)	1667 (17.6)	2210 (19.3)
7 - 9	428 (21.6)	1874 (19.8)	2302 (20.1)
10 - 13	421 (21.3)	1933)20.4)	2354 (20.6)
14 - 19	308 (15.5)	1993 (21.0)	2301 (20.1)
20 - 31	281 (14.2)	2003 (21.2)	2284 (19.9)
Total	1981	9470	11451

$X^2 = 149.40$, df = 4, p< .001.

[Those who scored below 6 marks out of 31 under-represented. Bias = -8.8%].

4.18. <u>Likely age of leaving school (cohort's view at age 16).</u>

16	1398 (74.8)	5865 (66.5)	7263 (68.0)
17	137 (7.3)	680 (7.7)	817 (7.6)
18+	333 (17,8)	2274 (25.8)	2607 (24.4)
Total	1868	8819	10687

$X^2 = 56.07$, df = 2, p< .001.

[Fewer people who wanted to leave school early. Bias = -2.2%].

4.19.   Post-school desti-
        nation (cohort's view   Avoidable   Possible
        at age 16).   losses   Achieved   total

	Avoidable losses	Achieved	Possible total
Full-time study	414 (20.7)	2583 (27.1)	2997 (26.0)
Job + P/T study	747 (37.3)	3673 (38.5)	4420 (38.3)
Full-time job	482 (24.1)	1792 (18.8)	2274 (19.7)
N/A	359 (17.9)	1496 (15.7)	1855 (16.1)
Total	2002	9544	11546

$X^2 = 55.43$, df = 3, p< .001.
[Fewer people who wanted no more study. Bias = -4.6%].

4.20. School-type at age 16.

	Avoidable losses	Achieved	Possible total
Maintained	2127 (94.9)	9356 (93.6)	11483 (93.8)
Non-maintained.	115 (5.1)	640 (6.4)	755 (6.2)
Total	2242	9996	12238

$X^2 = 5.13$, df = 1, p< .05.
[Very little difference between target and achieved samples].

4.21. School-type at age 16.

	Avoidable losses	Achieved	Possible total
Comprehensive	1360 (60.7)	5814 (58.2)	7174)58.6)
Grammar	163 (7.3)	1122 (11.2)	1285 (10.5)
Secondary Mod.	486 (21.7)	2126 (21.6)	2648 (21.6)
Other State	118 (5.3)	258 (2.6)	376 (3.1)
Independent	61 (2.7)	366 (3.7)	427 (3.5)
Direct Grant	36 (1.6)	243 (2.4)	279 (2.3)
Other maintained.	18 (0.8)	31 (0.3)	49 (0.4)
Total.	2242	9996	12238

$X^2 = 93.32$, df = 6, p< .001.
[Very little difference between target and achieved samples].

4.22. No. of schools attended
       between ages 11 and 16.

	Avoidable losses	Achieved	Possible total
One	1330 (73.9)	7466 (81.6)	8796 (80.3)
Two	378 (21.0)	1645 (18.0)	2023 (18.5)
Three or more	93 (5.2)	240 (2.6)	333 (3.0)
Total	1801	9351	11152

$X^2 = 50.54$, df = 2, p< .001
[Those who attended three schools or more under-represented,
 Bias = -13.3%].

4.23. Parental interest in child's education (age 16).	Avoidable losses	Achieved	Possible total
Very interested	610 (28.6)	3786 (39.4)	4396 (37.5)
Less interested	1288 (60.4)	5006 (52.2)	6294 (53.7)
Other	235 (11.0)	806 (8.4)	1041 (8.9)
Total	2133	9598	11731

$$X^2 = 90.32, \; df = 2, \; p < .001$$

[Fewer people whose parents showed little interest in the children's education, bias = -2.8%].

5. Housing.

5.1. No. of family moves since birth, to age 7.

None	881	(33.2)	4023	)37.2)	4904	(36.4)
1 - 2	1322	(49.8)	5492	(50.8)	6814	(50.6)
3+	454	(17.1)	1306	(12.1)	1760	(13.1)
Total	2657		10821		13478	

X² = 51.03, df = 2, p< .001
[Fewer people in the sample come from "mobile" families.
Bias = -7.6%].

5.2. Tenure at age 7 years.

Owner-occupied	984	(36.7)	4694	(43.0)	5678	(41.7)
Council-rented.	1122	(41.9)	4397	(40.2)	5519	(40.6)
Privately-rented	443	(16.5)	1232	(11.3)	1675	(12.3)
Other	132	(4.9)	602	(5.5)	734	(5.4)
Total	2681		10925		13606	

X² = 71.11, df = 3, p< .001
[Fewer private tenants. Bias 0 -8.1%].

5.3.* Amenities at age 7 years.

Sole use of amenities.	2021	(75.6)	8976	(82.6)	10997	(81.2)
Not sole use.	653	(24.4)	1889	(17.4)	2542	(18.8)
Total	2674		10865		13539	

X² = 69.62, df = 1, p< .001.
[Fewer people who shared amenities at home. Bias = -7.4%].
* Indoor lavatory, bathroom and cooking facilities.

5.4.	Tenure at age 11 years.	Avoidable losses	Achieved	Possible total
	Owner-occupied	970 (39.2)	4988 (46.9)	5958 (45.4)
	Council-rented	1102 (44.5)	4420 (41.5)	5522 (42.1)
	Privately-rented	267 (10.8)	720 (6.8)	987 (7.5)
	Other	136 (5.5)	514 (4.8)	650 (5.0)
	Total	2475	10642	13117

$X^2 = 75.30$, df = 3, p< .001.
[Fewer private tenants. Bias = -9.3%].

5.5 * Use of amenities at age 11.

	Avoidable losses	Achieved	Possible total
Sole use	2042 (83.6)	9313 (88.5)	11355 (87.5)
Not sole use	400 (16.4)	1215 (11.5)	1615 (12.5)
Total	2442	10528	12970

$X^2 = 42.58$, df = 1, p< .001
[Fewer people who shared amenities at home. Bias = - 8.0%]
*Bathroom, indoor lavatory and cooking facilities.

5.6. Overcrowding at age 11.

	Avoidable losses	Achieved	Possible total
1.5 or fewer persons per room	1369 (55.3)	6580 (61.9)	7949 (60.6)
Over 1.5 persons per room	1106 (44.7)	4055 (38.1)	5161 (39.4)
Total	2475	10635	13110

$X^2 = 35.9$, df = 1, p< .001
[People who were brought up under crowded conditions, under-represented, bias = - 3.3%].

5.7. No. of moves by age 16 since birth.

	Avoidable losses	Achieved	Possible total
None	310 (17.3)	2047 (22.0)	2357 (21.2)
1.	503 (28.1)	3177 (34.1)	3680 (33.1)
2.	342 (19.1)	1787 (19.2)	2129 (19.2)
3. or more	633 (35.4)	2304 (24.7)	2937 (26.5)
Total	1788	9315	11103

$X^2 = 95.90$, df = 3, p< .001
[Fewer people from "mobile" families. Bias = -6.8%].

5.8. <u>Size of family at</u>   Avoidable   Possible
<u>age 16.</u>   losses   Achieved   total

	Avoidable losses	Achieved	Possible total
1. (ie no siblings)	102 (5.7)	654 (7.1)	756 (6.9)
2.	445 (25.0)	2734 (29.7)	3179 (28.9)
3.	422 (23.7)	2334 (25.3)	2756 (25.1)
4 or more	810 (45.5)	3498 (37.9)	4308 (39.2)
Total	1779	9220	10999

$X^2 = 38.57$, df = 3, p< .001
[Fewer people with 3 or more siblings.   Bias = -3.3%]
[More people with no siblings.   Bias = 2.9%].

5.9. <u>Tenure at age 16.</u>

	Avoidable losses	Achieved	Possible total
Owner-occupied	740 (40.9)	4819 (51.3)	5559 (49.7)
Public rented	838 (46.3)	3751 (40.0)	4589 (41.0)
Private rented	138 (7.6)	453 (4.8)	591 (5.3)
Other	92 (5.1)	365 (3.9)	457 (4.1)
Total	1808	9388	11196

$X^2 = 76.15$, df = 3, p< .001
[Fewer private tenants.   Bias = -9.4%].

5.10.*<u>Amenities at age 16.</u>

	Avoidable losses	Achieved	Possible total
Sole use	1616 (91.4)	8699 (94.1)	10315)93.7)
Not sole use	152 (8.6)	547 (5.9)	699 (6.3)
Total	1768	9246	11014

$X^2 = 17.95$, df = 1, p< .001
[Fewer people who shared amenities at home.   Bias = -6.3%].
* Bathroom, indoor lavatory and cooking facilities.

5.11. <u>Over-crowding at age 16.</u>

	Avoidable losses	Achieved	Possible total
1.5 or fewer persons per room	1098 (62.0)	6438 (69.3)	7536 (68.1)
Over 1.5 persons per room	673 (38.0)	2856 (30.7)	3529 (31.9)
Total	1771	9294	11065

$X^2 = 35.88$ df = 1, p< .001
[People who lived in overcrowded conditions under-represented.
Bias = -3.8%]

6. <u>Miscellaneous.</u>

6.1.	Whether child had a lone parent at age 7.	Avoidable losses	Achieved	Possible total
	Both natural	2431 (88.6)	10235 (93.0)	12666 (92.1)
	Lone parent	226 (8.2)	557 (5.1)	783 (5.7)
	Other	86 (3.2)	211 (1.9)	297 (2.2)
	Total	2743	11003	13746

$X^2 = 58.59$, df = 2, p< .001
[Those with lone parents under-represented by 10.5%].

6.2.	Whether child was in care at age 7.			
	Yes	22 (0.8)	30 (0.3)	52 (0.4)
	Once, but no longer	69 (2.5)	187 (1.7)	256 (1.9)
	Never	2641 (96.7)	10764 (98.0)	10981 (80.1)
	Total	2732	13405	13713

$X^2 = 24.67$, df = 2, p< .001.
[Those ever in care under-represented by 13%].

6.3.	Whether child in care at 11.			
	Yes.	26 (1.1)	49 (0.5)	75 (0.6)
	Once, but no longer	104 (4.2)	260 (2.5)	364 (2.8)
	Never	2320 (94.7)	10246 (97.1)	12566 (96.6)
	Total	2450	10555	13005

$X^2 = 36.00$, df = 2, p< .001.
[Those in care (ever) under-represented. Bias = -11.8%].

6.4.	Did child have a lone parent at age 16.			
	Both natural	1395 (76.7)	8012 (85.1)	9407 (83.8)
	Lone parent	369 (20.3)	1233 (13.1)	1602 (14.3)
	Others	54 (3.0)	167 (1.8)	221 (2.0)
	Total	1818	9412	11230

$X^2 = 79.21$, df = 2, p< .001.
[Those with lone parents under-represented. Bias = -8.4%].

6.5.

Whether child in care at age 16	Avoidable losses	Achieved	Possible total
Yes	46 (2.6)	74 (0.8)	120 (1.1)
Once, but no longer	77 (4.3)	232 (2.5)	309 (2.8)
Never	1654 (93.1)	8919 (96.7)	10573 (96.1)
Total	1777	9225	11002

$X^2 = 63.15$, df = 2, p< .001.
[Those ever in local authority care under-represented.
Bias = -15.4%].