THE FAMILIES AND INDIVIDUALS WHO DID NOT COOPERATE ON A SAMPLE SURVEY

ANN CARTWRIGHT[1]

INTRODUCTION

IT IS sometimes argued that, on surveys concerned with the use of social services, the person who refuses to cooperate is of particular interest, and the enforced exclusion of such people from the inquiry may invalidate the results. One argument advanced in support of this hypothesis is based on the idea of the socially isolated person, who, finding it difficult to make contact with people, does not use the social services and, for the same reason, refuses to answer questions, or sometimes even to come to the door.

In a recent survey we were concerned with the problems of ill-health and the success of the health services in solving these problems, as seen from the viewpoint of the individuals and families concerned (1, 2, 3). It was, therefore, incumbent on us to look at the characteristics of the people who did not cooperate in an attempt to discover whether they were likely to have rather more health problems or different health problems than those who did, and also whether they made more or less use of the health services.

A DESCRIPTION OF THE SURVEY

This survey was part of a larger research program undertaken by the Public Health Department of the London School of Hygiene and Tropical Medicine. The study was carried out in a post-war housing estate just outside London. The population of the estate is about seventeen thousand and, as in many other new housing estates, the population is relatively young, with a high proportion of children and few elderly people (4).

[1] Department of Public Health and Social Medicine, University of Edinburgh. Formerly in the Department of Public Health, London School of Hygiene and Tropical Medicine.

The sample for this study was comprised of the families and individuals living in a randomly selected three-sixteenths of the dwellings on the estate. Our aim was to interview personally all the adults[2] in this sample of dwellings on two occasions at an interval of four weeks. In addition, mothers of school children and children under school age were to be interviewed about their children, on two other occasions, also at an interval of four weeks. This meant that these mothers were interviewed four times in all. In a third of the families they were interviewed about their own health first while in the other two-thirds they were questioned about their children at the first two interviews.

At the first interview we sought information about the subject's health at that point in time. At the second interview we concentrated on events that had occurred between the two interviews: new illnesses, consultations, incapacity, etc. Information concerning the work, education, and family of origin of the adult members of the sample was also obtained at the second interview, but data about the age, sex, and relationships of all the people in the household were obtained at the first contact with the housewife.[3] At the second interview dealing with children, mothers were asked certain questions about their own attitudes towards the estate, and about the friends they had there. Families without children were interviewed on a separate occasion to obtain this information, so that housewives in this group were interviewed on three occasions.

Sources of Information about the Non-Cooperators

It is possible, from the survey itself, to compare information obtained at the first interview about those who cooperated at the second interview and those who did not. In addition, information about the people and families who did not cooperate

[2] Adults were defined as people aged 15 and over who had left school.

[3] In the great majority of families the housewife was the first person contacted and this information was collected straight away to determine how many interviews were needed and for reference in case it was not possible to interview other members of the family.

at all was available from two sources: the London County Council housing records, and the records of the general practitioners on the estate.

The London County Council kept fairly detailed records about the families who moved into dwellings on the estate. This information was kept up-to-date by members of our research team who consulted the local notifications of births and deaths and also recorded any transfer of tenancies. This record provided information about the size and composition of the families and also whether, at the time of their application for a house to the London County Council they put forward any health condition. Houses were allocated on a points system which took account of such things as overcrowding, ill-health, especially tuberculosis, and lack of facilities in the previous accommodation.

There were six doctors practicing on the estate, five in a partnership and the other on his own. About 86 per cent of the people living on the estate were registered with these doctors. All six doctors took part in a study of their work on the estate, using a modified form of the National Health Service record card for each patient. On this they recorded certain details of each consultation for a period of one calendar year.

These two sources of data make it possible to compare non-cooperators with cooperators in respect of age, sex, family composition, health reasons for rehousing, rent record, registration with a general practitioner on the estate, and frequency of consultation with the doctor.

Number of Failures and the Reasons for Not Obtaining Interviews

No interview at all was obtained in 5.5 per cent of our sample of dwellings, all the interviews were completed for 73.2 per cent of the families, and in 21.3 per cent of the families incomplete information was collected, i.e. not all the individuals were interviewed the appropriate number of times. If we consider the individuals living in these dwellings, the corresponding propor-

tions are 14.5 per cent no interview, 4.7 per cent one interview only and 80.8 per cent both interviews completed. This last proportion includes some individuals for whom no information or only incomplete data was obtained about other members of their households or about the family itself. The reasons for failure are shown in Table 1.

The main reason for failure to obtain an interview was a refusal. This does not necessarily mean that an informant told the interviewer specifically that he was unwilling to co-operate, but if, for example, the door was not answered although the interviewer could hear someone inside, or if an appointment

Table 1. Number of failures and the reasons for not obtaining interviews.

	Families		Individuals (Adults and Children)	
	Number	Per Cent	Number	Per Cent
Complete	547	73.2	2,455	80.8
Incomplete	159	21.3	145	4.7
Refusal	122	16.3	104	3.4
Removed	19	2.5	10	0.3
Temporarily Away	8	1.1	7	0.2
In Hospital	—	—	4	0.1
Mother of Child Subject too Ill, in Hospital	—	—	5	0.2
No Contact	2	0.3	3	0.1
Too Ill	—	—	4	0.1
Other Reason	8	1.1	8	0.3
No Interview	41	5.5	440	14.5
Refusal	34	4.6	346	11.4
Removed	—	—	31	1.0[a]
Temporarily Away	—	—	22	0.7
In Hospital	—	—	14	0.5
Mother of Child Subject too Ill, in Hospital	—	—	8	0.3
No Contact	7	0.9	12	0.4
Other Reason	—	—	7	0.2
Total	747	100	3,040	100

[a] In these cases the family had removed after interviews had been completed for either the adults or the children only.

was not kept then this was classified as a refusal. In addition if one member of the family told the interviewer that he did not wish to participate in the inquiry, and the interviewer was unable to persuade him to change his mind, then each member of the family was classified as a failure because of a refusal although the interviewer did not speak to each of them individually. Interviewing individuals in samples of families rather than a sample of individuals such as that obtained from the electoral register is likely in this way, to increase the proportion of refusals.

Reasons for refusal seem to have been very varied. In a number of cases some crisis was involved, the family was about to move, or in two cases someone in the family had recently died. Sometimes interviewers had little or no opportunity to explain the nature and purpose of the inquiry before being told that an individual was not interested. "Why are people always worrying me? I have just about had enough of it what with Jehovah's witnesses and all the rest." More often people said they were busy at the time of the first contact and then failed to keep, often apparently deliberately, a subsequent appointment.

Only half of one per cent of all individuals were not interviewed because they personally were in hospital at the time. The effect of this omission on our estimate of people with in-patient experience during a year is to decrease it from $\frac{223}{2,614} = 8.5$ per cent to $\frac{209}{2,600} = 8.0$ per cent which does not represent a statistically significant difference. Nevertheless this loss may create a definite bias in that we have no further information about the health of these fourteen people, and their use of services.

The thirteen children for whom either no information or incomplete information was obtained because their mother was too ill or in hospital are another potential source of bias. They may be less healthy, have more nervous symptoms and be less

well cared for than children with more robust mothers. However because their mother could not be interviewed it was not possible to get comparable data for these children, as we had found on a pilot inquiry that information obtained from different sources varies very considerably (5). In our survey which was concerned with general levels of health and use of services, the numbers involved here were too small to be of any great significance; but, in an inquiry whose main purpose was for example the identification of children who might be neglected or socially deprived, further investigation would need to be made in these cases.

Failure to obtain interviews because people have moved, is a problem more commonly associated with samples of individuals selected from the electoral register than with samples of families living in particular dwellings. Our failure here arises solely from our desire to interview members of our chosen families over a period of time. It is not a large problem nor one which is likely to have any very definite biasing effect on our inquiry, although it is possible that the people who move from a new estate may be rather different from those who stay.

The most frequent reason for individuals being temporarily away from home was their work. In a very few cases the family was on holiday, but we did not attempt any interviewing in the school holiday period.

Apart then from two small groups of people who were in hospital and children whose mothers were ill, the main source of bias on this inquiry is likely to be due to our failure to obtain information from the families and individuals who refused to cooperate.

The Age, Sex and Marital Status of Individuals for Whom Incomplete Data Were Obtained

The proportion of complete successes was greater for children, (87 per cent) than for adults (77 per cent). There was little or no variation in this latter proportion for males and

	Males		Females		Both Sexes	
	Per Cent	Number[1]	Per Cent	Number	Per Cent	Number
Status Group						
Pre-School Children	85	181	89	164	87	345
School Children	85	428	88	446	87	874
Adults						
Single	68	157	64	183	66	340
Married	80	694	80	700	80	1,394
Widowed/Divorced	[a]	14	70	70	70	84
All Adults	77	865	76	954	77	1,820
All Status Groups	81	1,474	81	1,564	81	3,040

[a] Numbers too small to estimate percentage.
[1] The numbers are totals on which the percentages are based. There were two adults for whom the status and one for whom the sex was not known. For one child it was not known whether it was at school or under 5 years old.

Table 2. Proportion of individuals in sex and status groups for whom two interviews were obtained.

females, but for both men and women the proportion of failures was considerably greater among single adults than for people who were married. (Table 2.)

When the ages of the adults are considered, the success rate is highest for the age group 25–44. The difficulty of obtaining interviews from young single adults (82 per cent of the single

Table 3. Success rate for adults in different age groups.

Age Group	All Adults		Married Adults Only	
	Per Cent with Two Interviews	Number of Individuals	Per Cent with Two Interviews	Number of Individuals
Under 25	70	310	94	34
25–34	85	473	88	436
35–44	83	558	84	540
45–54	70	267	71	253
55–64	68	83	71	107
65 and Over	74	96		
Not Known	—	33	—	24
All Ages	77	1,820[a]	80	1,394

[a] There were 33 adults for whom the ages were not known. It is possible that these contained a high proportion of old people and that if they were included the success rate for those aged 65 and over would be appreciably lower.

	Complete Success		At Least One Interview		Sample as Drawn	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
Children	1,056	43	1,113	43	1,220	40
Adults	1,399	57	1,487	57	1,820	60
Total Number	2,455		2,600		3,040	
Marital Status of Adults						
Single	224	16	253	17	340	19
Married	1,116	80	1,168	79	1,394	76
Widowed or Divorced	59	4	66	4	84	5
Total Number	1,399		1,487		1,818	
Age of Adults						
Under 25	218	16	238	16	310	17
25–34	402	29	414	28	473	26
35–44	463	33	474	33	558	30
45–54	187	13	214	14	267	15
55–64	56	4	64	4	83	5
65 and Over	71	5	81	5	96	5
Unknown	2	—	2	—	33	2

Table 4. Effect of failures on the sample achieved.

adults were under 25) is well known among interviewers, but among married people the success rate declines with increasing age. (Table 3.)

Failure rates then tend to be higher for adults than for children and single adults are less likely to be interviewed than married people. The effect of these differences on the sample achieved is shown in Table 4.

Normally comparisons can only be made between the sample achieved and population estimates. If we use our sample as drawn to provide estimates of the expected number of single and other adults among those we interviewed at all we find $X_1^2 = 2.77$ $(.05 < p < .10)$. However, we know the actual numbers of single people and others whom we failed to interview at all, and if we calculate our X^2 with these data it is $X_1^2 = 15.19$ $(p < .01)$. This shows how comparisons which are normally made between the sample achieved and population estimates will not necesarily reveal existing biases among people who could not be interviewed.

The Reported Health of Individuals for Whom Only One Interview Was Obtained

It is possible to compare information obtained at the first interview about those who were and those who were not in-

Table 5. Reported health at first interview of women who completed the second interview and those who did not.

	Adult Females	
	One Interview Only	Two Interviews
Average Number of Illnesses Reported at First Interview	3.3	3.3
Average Number of Symptoms	5.3	4.9
Proportion Reporting	per cent	
No Illness	9	9
Backache	27	30
Breathlessness	18	25
Catarrh	18	27
Colds	20	23
Constipation	18	15
Coughing	9	17
Depression	25	23
Dizziness	22	15
Eyestrain	38	22
Headaches	33	39
Indigestion	18	16
Nerves	38	29
Painful Joints	20	18
Palpitations	25	17
Rheumatism	35	28
Sleeplessness	20	16
Stomach Pains	18	10
Swollen Ankles	18	18
Teeth	11	14
Undue Irritability	20	12
Undue Tiredness	16	16
Varicose Veins	18	18
Weak or Painful Feet	20	15
Women's Complaints	27	26
Worried About Their Health	25	23
Number of Individuals = 100 Per Cent	55	728

terviewed a second time. Rather more adult women than men completed only one interview, and since in addition the proportion of proxy interviews was high among men for whom only one interview was obtained,[4] the comparisons for adults were made for women only. (Table 5.)

There was no difference in the average number of illnesses reported by women who gave only one interview and women who were interviewed twice, and in each group similar proportions reported no illness at all. Of the twenty-four symptoms most commonly reported (i.e. by more than 10 per cent of adults) only one, eye strain, differed significantly in the frequency of occurrence in the two groups, and indeed one in twenty-four becomes insignificant. It could in any case be attributed to the slightly different age composition of the two groups.

It might have been expected that the psychosomatic symptoms would be more common in the group who only gave one interview and both "nerves" and "undue irritability" are in fact reported by a higher proportion of individuals in this group. However, the probability of the differences occurring by chance is greater than 1 in 10 in the first case and than 5 in 100 in the second. There was no significant difference either in the proportion who said they were worried about their health.

There is no clear evidence that the health of adult women for whom only one interview was obtained differed very greatly from those who gave two interviews.

For children however we find fewer illnesses reported for those with only one interview, than for those with two interviews.[5] A relatively high proportion in the former group had no reported illnesses. Looking at particular conditions, the difference between the two groups was greatest for catarrh, colds, coughs, and trouble with teeth or gums. For running ears or

[4] Seven out of 31 men with only one interview had proxy interviews compared with an overall rate of 7 per cent proxy interviews. Proxies were accepted only when the alternative was for the person to be omitted from the inquiry.

[5] The proportion of children under 5 years of age in the two groups was 25 per cent and 28 per cent respectively.

earache, possibly one of the more definite conditions, there was no significant difference.

Two possible and rather contradictory explanations of this difference occur to one immediately. One is that mothers with healthy children are less anxious about their children's health and less prepared to give up time to discuss it at a second interview. The second possibility is that the mothers who gave only one interview are less aware of ill-health in their children, or less inclined to regard coughs and colds as illnesses worth reporting at an interview.

We have found no evidence from the adult women themselves to suggest that healthy people are less willing to cooperate at a second interview, but mothers' attitudes towards

Table 6. Reported health at first interview for children for whom a second interview was obtained and those for whom it was not.

	Children	
	One Interview Only	Two Interviews
Average Number of Illnesses Reported at First Interview	0.7	1.3
	PER CENT	
Proportion Reporting:		
No Illness	44	33
Catarrh	7	19
Colds	14	21
Coughing	9	14
Eyestrain	5	9
Headaches	7	9
Kidney Trouble or Trouble Passing Water	5	3
Loss of Appetite	5	8
Nerves	12	13
Rashes or Itches	5	6
Running Ears or Earache	9	7
Sore Throat	4	7
Stomach Pains	5	6
Trouble with Teeth or Gums	2	9
Unusual Bleeding	5	4
Number of Individuals = 100 Per Cent	57	1,056

and willingness to discuss their own health may be rather different from their attitude towards and willingness to discuss their children's health. On the other hand the differences between particular conditions shown in Table 6 are not inconsistent with the second theory.

Further information on this point is available from the records of the general practitioners on the estate.

Use of General Practitioners on the Estate

An analysis of the records of the six general practitioners on the estate for the year 1953 showed that 86 per cent of the people living on the estate were registered with these doctors for some part of that year. The proportion of the individuals in our sample who were included in this study of general practitioners records are shown in Table 7.

A relatively high proportion of adults who did not cooperate at all, were not registered with general practitioners on the estate. Unfortunately, we do not know whether these people were registered with other doctors nearby or whether they were still going to their former doctors in London, or whether they had just not been ill since they came to live on the estate and

Table 7. Proportion of individuals living on estate who were registered with doctors on the estate during 1953.

	Adults			Children		
	No Interview (Per Cent)	One Interview Only (Per Cent)	Two Interviews (Per Cent)	No Interview (Per Cent)	One Interview Only (Per Cent)	Two Interviews (Per Cent)
Registered Whole Year	74	84	82	76	76	79
Registered Part Year	3	7	3	2	—	7
Not Registered with G.P.s on Estate During 1953	23	9	15	22	24	14
Sample[1] = 100 Per Cent	314	87	1,298	101	46	992

[1] The sample figures are slightly lower than those in Table 4 as only individuals living on the estate during 1953 have been included.

had not bothered to re-register for this reason. If they were registered and likely to go to doctors not on the estate, it would seem possible that these people were less "estate orientated" and more likely to reject an inquiry based specifically on the estate. If they were not registered, or just had not bothered to change their doctor since they came to the estate, it may be that they were not interested in health or alternatively did not like discussing illness, and for either reason they might refuse to participate in a health survey. Table 8 shows the frequency with which adults and children in our three groups who were registered with these general practitioners throughout the study year, consulted their general practitioner.

For adults, the group that stands out is that with only one interview. These people tended to consult their general practitioners more frequently than adults in either of the two other groups. Although there were more women than men in this group, an analysis by sex showed that for both men and women the average was unexpectedly high in this group. In contrast, those with no interview at all show a very similar distribution to those who completed both interviews.

Table 8. Frequency of consultation with general practitioner of individuals registered with G.P.s on estate throughout 1953.

No. of Consultations	Adults			Children		
	No Interview (Per Cent)	One Interview Only (Per Cent)	Two Interviews (Per Cent)	No Interview (Per Cent)	One Interview Only (Per Cent)	Two Interviews (Per Cent)
None	25	17	24	31	25	19
One or Two	24	15	28	26	55	32
Three–Five	24	32	23	31	17	27
Six–Eleven	18	19	17	5	3	18
Twelve or More	9	17	8	7	—	4
Average Number of Consultations	4.3	5.9	4.0	2.6	1.7	3.5
Sample = 100 Per Cent	233	73	1,062	77	36	790

For children the group with only one interview also showed the greatest variation from the general average, but here the average number of consultations was unexpectedly low. The number on which this average is based is small, but the difference between those with one interview and those with two is statistically significant. In addition the proportion of children with no consultations rose from a fifth of those with two interviews, to a quarter of those with only one interview and to nearly a third of those with no interview at all.

The smaller use of the doctor for children with one interview only is consistent with our earlier finding that mothers reported fewer illnesses for such children, but here again it is only possible to speculate on the possible reason for these differences. Do their mothers take these children to the doctor less frequently because they are, in fact, less ill, or do their mothers have a "higher threshold" of ill-health, being less inclined to regard certain conditions both as worth consulting a general practitioner about, and as worth reporting as illnesses to our interviewers?

In the case of adults however, those interviewed only once consulted their general practitioners more frequently than other adults although they reported similar numbers of illnesses. It would seem that these adults may be using their general practitioner in a rather different way. This possibility is examined in Table 9, which shows the average number of illnesses the general practitioners recorded for adults in the three groups

Table 9. Number of illnesses recorded by general practitioners for adults registered with G.P.s on estate throughout 1953.

	No Interview	One Interview Only	Two Interviews
Average Number of Illnesses Recorded by G.P.	2.4	2.7	2.5
Average Number of Consultations per Illness	1.8	2.2	1.6
Sample	233	73	1,062

and gives an estimate of the average number of consultations per illness.

Although there is some indication that the average number of illnesses is slightly higher for the individuals with only one interview, the differences in these figures are small. Somewhat larger differences are apparent when we consider the average number of consultations per illness. This would appear to indicate that the adult "partial cooperators" resembled the adults in the other two groups in their number of illnesses but consulted their general practitioners rather more frequently.

Health Reasons for Moving to Housing Estate

Some further information about the health of individuals in our three groups was obtained from the London County Council housing records. These indicated the families who had put forward some health reason to support their application for rehousing on the estate, together with the individuals who were involved.

Again the individuals with only one interview stand out, and once again this group of adults would appear to be less healthy than the other groups while the children in this group are apparently more healthy (Table 10).

Unfortunately, we cannot regard this information as objective evidence that the children with one interview were in fact more healthy since it only indicates that their parents did not

Table 10. Health reasons put forward for move.

	Adults			Children		
	No Interview (Per Cent)	One Interview Only (Per Cent)	Two Interviews (Per Cent)	No Interview (Per Cent)	One Interview Only (Per Cent)	Two Interviews (Per Cent)
Yes	20	33	22	20	9	16
No	80	67	78	80	91	84
Sample = 100 Per Cent	333	88	1,399	107	57	1,056

put forward their ill-health as a reason for being rehoused. There is no particular reason however for thinking that this group of parents would be less likely to use such information in their application for rehousing, and certainly there is no reason here for rejecting the hypothesis that children in this group are relatively healthy, although the alternative hypothesis, that their mothers are less aware of their ill-health cannot be completely dismissed.

Again we can only speculate on the reasons for the differences among adults. Those who gave only one interview, if they had had an illness in the past serious enough to be given medical priority for rehousing but from which they had now recovered, might, quite reasonably, consult their general practitioner more frequently when they were ill. They might also be reluctant to be interviewed again if they felt they were living on the estate "on false pretences" as they were no longer ill.

Families for Whom Incomplete Data Were Obtained

So far we have considered the effect of failure to obtain inter-

Table 11. Amount of data obtained for families.

Adult Interviews	Child or Family[1] Interviews	Families with Children Under 15 (Per Cent)	Families with No Children Under 15 (Per Cent)	All Families (Per Cent)
Complete	Complete	78	61	73
Incomplete	Complete	3	13	6
None	Complete	7	7	7
Complete	Incomplete	1	—	1
Complete	None	3	4	3
Incomplete	None	4	4	4
None	Incomplete		—	
None	None	4	11	6
Adult Interviews Complete		82	65	77
Child Interviews Complete		88	—	—
Sample = 100 Per Cent		563	184	747

[1] In families with no children under 15, the housewife was interviewed three times, twice about her own health and once about certain family circumstances. This latter interview is described as the family interview.

views on our sample of individuals. But we were also concerned to study the families in our area, and this section shows some of the effects of failure on the sample of families.

It has already been shown that very few families, 5.5 per cent, gave no interview at all. For 21.3 per cent some but not all the interviews were obtained, and for 73.2 per cent all interviews were completed. An analysis of the type of failure involved is given in Table 11.

In 82 per cent of the families with children under 15, all the adults cooperated fully, but this proportion was only 65 per cent in families without any children. The overall response rate was considerably higher in the families with children. This means that there is a considerable difference between the three groups of families, those who cooperated fully, partially, or not at all, in the proportion with children under 15.

	Per Cent With Children Under 15	*Number of Families*
Families Giving No Interview	51	41
Families Giving Incomplete Data	67	159
Families Giving Complete Data	80	547
ALL FAMILIES	75	747

Since the presence or absence of children is likely to affect other characteristics such as the size and composition of a family, Table 12 shows these factors separately for families with and those without children, in the three groups.

There is some indication here that the chance of failure increases with size of family in households with children. However, the composition of the family rather than the numbers in it appears to be a rather more important factor in determining chance of failure. Relatively few families consisting only of a basic family unit, a married couple and their children, were not interviewed at all. Families, on the other hand, which contained other adults living with a married couple either with or without children had a high failure rate. Families with incomplete in-

terviews again fell between the other two groups. This high failure rate among the structurally complicated families may be important in estimating the frequency of occurrence of certain types of problems which are more likely to occur in family units containing, for example, two mothers. One is tempted to surmise that it is the "normal" or more typical group who is more willing to be interviewed.

It might be thought that some refusals to cooperate may have been prompted by a desire to conceal certain facts, such as, for example, a failure to pay the rent regularly. This was not a serious problem for the London County Council on this estate; only 9 per cent of families were in arrears for 10 weeks or more over a period of two years, and in fact this proportion did not vary significantly with cooperation on this inquiry.

Table 12. Variations in the proportion of successes in completing interviews with family size and composition.

Size and Composition of Family	Children Under 15 and Still at School in the Family				Families with No Children Under 15 and Still at School			
	Number of Families (=100 Per Cent)	Per Cent of Families			Number of Families (=100 Per Cent)	Per Cent of Families		
		No Interview	Incomplete Interview	Complete Interview		No Interview	Incomplete Interview	Complete Interview
Size of Family								
One	—				40	13	30	57
Two	2				76	12	28	60
Three	95	2	20	78	46	9	30	61
Four	202	3	18	79	} –			
Five	147	3	14	83	} –22	9	36	55
Six	72	6	19	75	} –			
Seven+	45	9	33	58	} –			
Average Size		5.2	4.8	4.6		2.2	2.4	2.3
Family Composition								
Married Couple Only					71	11	28	61
Married Couple and Offspring Only	511	3	18	79	51	6	35	59
No Married Couple	15	(20)	(13)	(67)	48	13	25	62
Married Couple, Other Adults, with(out) Offspring	38	11	22	67	14	(21)	(36)	(43)

Note: Percents in parentheses are based on less than 20 families.

(Table 13.) Not surprisingly families with children were rather more likely to have several weeks of arrears than families without children.

It is possible to compare some of the families who only partly cooperated in the inquiry with those who cooperated fully for certain characteristics ascertained during the interview. Information obtained from the housewife about the family as a whole is given in Table 14 which shows that a relatively high proportion of families who do not cooperate completely regretted that they had come to live on the estate. A possible explanation for this may that some of these families moved away from the estate and failed to complete the interviews for that reason. However, the proportion is still high in families who did not cooperate for other reasons (mainly a refusal) being 10 per cent for families with children and 17 per cent for families without. It seems likely that dissatisfied people are less willing to answer questions than others.

Fewer housewives in the group of families with incomplete data said they had made friends since coming to live on the estate, but this difference is not statistically significant and

Table 13. Rents records of families with complete and incomplete data.

Number of Weeks Rent in Arrears (In Two Years)	Children in the Family			No Children in the Family		
	No Interview (Per Cent)	Incomplete Interviews (Per Cent)	Complete Interviews (Per Cent)	No Interview (Per Cent)	Incomplete Interviews (Per Cent)	Complete Interviews (Per Cent)
None	53	51	48	(77)	64	60
1-9	38	35	43	(23)	32	35
10 or More	9	14	9	—	4	5
Average Number	2.5	3.8	3.0	0.5	1.7	1.6
Number of Families = 100 Per Cent	21	87	398	13	47	96

Note: Figures in parentheses are based on less than 20 families.

	Children in the Family		No Children in the Family	
	Incomplete Interview (Per Cent)	Complete Interview (Per Cent)	Incomplete Interview (Per Cent)	Complete Interview (Per Cent)
On the Whole Would You Say You Are Glad or Sorry You Came to Live Here?				
Glad	73	78	71	71
Sorry	11	6	13	6
Qualified Answer	14	15	13	20
Don't Know	2	1	3	3
Have You Made Any Friends Since You Came to Live Here?				
Yes	61	70	47	53
No	39	30	53	47
Number of Families = 100 Per Cent	62	438	38	109

Table 14. Attitude towards the estate in families who cooperated fully and those who only partially cooperated, based on families for whom information available.

might have occurred by chance in a sample of this size.

One characteristic for which families with incomplete data conformed more closely to the general pattern of the estate than the families with complete interviews was religion. (Table 15). Housewives in the latter group more frequently reported membership of a church other than the Church of England, and more often said they went to church regularly.

Rather surprisingly more housewives in families with complete interviews went out to work than housewives in the other group, but this may be simply because the latter group were older.

It is possible that a number of these differences between the incomplete and complete interviews with families with children derive from this difference in ages of the housewives. Because the housewife in the incomplete group is older she is less

	Incomplete Interviews (Per Cent)	Complete Interviews (Per Cent)
Religion		
Church of England	85	69
Roman Catholic	9	15
Others	6	16
Church Going		
Regular	3	10
Not Regular	94	85
Qualified or Not Answered	3	5
Working		
Full-Time	11	14
Part-Time or at Home	9	25
Not At All	80	61
Number of Families = 100 Per Cent	35	438
	(Per Cent)	(Per Cent)
Age		
Under 30	15	18
30–39	39	52
40–49	40	27
50 or Over	8	3
Number of Families = 100 Per Cent	104	438

Table 15. Certain characteristics of the housewives in families with children who cooperated fully and those who only partially cooperated for families for whom information available.

likely to make friends and not so appreciative of the estate as a place in which to live (6). The implication for our inquiry is that we have to a small extent underestimated the dissatisfactions with the estate. If similar proportions of all families with incomplete data and families who did not cooperate at all were sorry they had come to live on the estate, this proportion would rise from just under 7 per cent to just over 7 per cent for families with children, and from 8 per cent to 9 per cent of families without children.

Summary

Certain information which was available for the entire sample is analyzed for families and individuals who cooperated

wholly, partially or not at all in an interview survey. In addition those who cooperated fully are compared with those who cooperated only partly, in respect of certain data obtained in the course of interviews.

The only bias which existed when the sample achieved was compared with the sample as drawn was in the ratio of adults to children. The proportion of success was greater for children than for adults.

There were, however, several differences between the three groups of full, partial, and non-cooperators. For a number of characteristics it was the partial cooperators who differed from both the full and non-cooperators while the two latter groups were similar. Some possible explanations of the differences are discussed.

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