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## Differentials in the Length of the NSFH Interview

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## Differentials in the Length of the NSFH Interview

The NSFH interview and self-administered questionnaires are very long. The main interview schedule is 161 pages long, including 671 questions, many of which have several parts; in addition, the self-administered questionnaire (for the primary respondent) is 64 pages long. However, many sections of the interview (and most portions of the self-administered questionnaire) are asked of only a small portion of the total sample - e.g., those with children under age 19 living elsewhere; those with adult children in the household; or those with a household member with a disability.

We decided early in the process of developing the survey that we should try to have an interview with a mean length of no more than an hour and a half. We recognized that there would be considerable variance around that average length, with especially long interviews for persons with complex marriage histories and/or complex family histories while growing up, and/or large and complex current household structure. In developing the interview, we made an effort to keep the mean length to 90 minutes, and also to avoid having many interviews that would last over two hours. In many instances we dropped or shortened proposed question sequences, either because they would raise the mean interview length or because they would tend to be asked of persons who would be likely to have longer than average interviews.

This paper examines variation in the length of the NSFH interview, in relation to

characteristics of respondents and their family situation.

#### DISTRIBUTION OF INTERVIEWS BY LENGTH

Table 1 shows the distribution of interviews by length (in minutes). The mean interview length was 99.7 minutes. The modal length was 90 to 99 minutes. Only 4 percent of all interviews were completed in less than one hour; twenty-four percent took two hours or longer.

Table 1

#### Distribution of Interviews by Length

	Percent of All Interviews	Percent of Interview Excluding Length Unknown
<40 minutes	0.5	0.5
40-49	0.9	0.9
50-59	2.4	2.5
60-69	7.7	7.9
70-79	12.9	13.2
80-89	12.4	12.7
90-99	17.6	18.0
100-109	12.3	12.6
110-119	7.0	7.2
120-129	8.9	9.1
130-139	4.6	4.7
140-149	2.5	2.6
150-159	2.9	3.0
160-160	1.5	1.5
170-179	0.7	0.7
180 minutes and longer	2.7	2.8
unknown	2.4	
Total	100.0	100.0

## DIFFERENTIALS IN INTERVIEW LENGTH

How did the length of interview vary by characteristics of the respondent and by his/her family situation? There were three major question sequences that were administered to only a subset of the respondents, each of which took a fairly long time.

1. The work history and current employment status questions which were asked only of persons who had work experience and of those who were currently employed, respectively.

2. Persons who had been married, but were no longer married to their first spouse were asked not only the marriage history sequence, but also a series of questions about their first spouse.

3. Respondents who had children or stepchildren were asked questions concerning their children and parenting. Different sequences were asked of those with children under age 19 in the household; children age 19 and older in the household; step-children under age 19 in the household; children under age 19 living elsewhere, children age 19 and older living elsewhere; and children under age 19 in the household with other parent living elsewhere. The more of these different types of children a person had, the more of these sequences were asked and the longer the interview.

Table 2 presents the results of a multiple classification analysis of differentials in the length of interview (in minutes). The average interview length for the entire sample was 99.7 minutes; the results are expressed as category-specific deviations from this average length.

Ten characteristics of the respondent are included in the analysis - including basic social and demographic characteristics (such as race/ethnicity, sex, and age) as well as characteristics that are directly related to the question sequences asked (marital status, presence of children in the household). There are two columns of differentials. The gross differential column shows the average length of interview for persons with that characteristic, without controlling for other associated characteristics. The "net deviation" column shows the category-specific interview length, after adjusting for the confounding effects of other associated characteristics included in the model.

We will first describe differentials in interview length for these characteristics, then in later analyses we will delete those characteristics that do not seem to have affected interview length and add other characteristics that might.

#### **Age:**

The youngest respondents had the shortest interviews. Interview length increased with age through the mid-thirties, after which it stabilized and then declined slightly. However, age is associated with the presence of children under age 19 (both in and out of the household), marital status, education, and other characteristics that ought to affect interview length. After adjusting for characteristics of the respondent and his/her current family situation, interview length increases more or less linearly with age. Person under age 30 had an interview length that was 3 to 5 minutes shorter than average, and those age 45 and older had an interview that was 3 to 7 minutes longer than average.

Table 2

Differentials in Length of Interview by  
 Characteristics of the Respondent  
 Mean = 99.7 minutes

	N	Deviation	
		Gross	Net
<b>Age</b>			
<25	1636	-9.1	-4.5
25-29	1723	-3.3	-2.7
30-34	1845	.8	-1.5
35-39	1542	3.4	-.5
40-44	1132	4.4	-.2
45-54	1503	4.4	1.3
55-64	1343	2.5	3.8
65-74	1190	-1.3	2.6
75+	791	.6	6.7
NA	4	-	-
<b>Sex</b>			
Male	5101	-.8	.9
Female	7608	.6	-.6
<b>Race/ethnicity</b>			
Black	2345	5.4	4.8
Non-hispanic white	9197	-2.5	-1.9
Mexican American	612	10.8	4.3
Puerto Rican	186	8.0	9.1
Other	369	5.9	5.7
<b>Education</b>			
<12	3034	6.1	3.9
12	4828	-.2	-.2
13-15	2663	-1.4	-.8
16	1107	-6.5	-4.0
17+	1077	-6.0	-4.1
<b>Current Marital/Cohabitation Status</b>			
Married, spouse present	6625	2.0	.6
Married, spouse absent	77	7.2	3.8
Cohabiting	665	4.4	4.8
Separated	575	5.5	1.0
Divorced	1454	3.3	1.9
Widowed	1304	-1.4	-3.4
Never Married	1994	-11.4	-3.1

Table 2 (continued)

	N	Deviation	
		Gross	Net
<b>Employment Status Last Week</b>			
Not working	5268	1.0	.1
Working part time	1497	1.3	2.1
Working full time	5944	-1.2	-.4
<b>Presence in Household of Children &lt;18</b>			
No	7620	-4.7	-5.9
Yes	5089	7.0	8.8
<b>Metropolitan Area</b>			
Yes	9515	-.2	.5
No	3194	-.6	-1.6
<b>Region</b>			
Northeast	2481	-4.8	-4.4
Midwest	3383	-1.8	-1.0
South	4582	1.6	.6
West	2263	4.6	5.2
<b>Number of Child Types*</b>			
0	6899	-4.9	-4.4
1	4492	3.5	3.3
2	1189	12.2	10.7
3	114	27.8	22.5
4	15	26.1	18.0

\* See text for explanation

#### Sex:

The content of the interview was virtually identical for men and for women. The only difference was that employed mothers were asked questions about child care while they were working, while employed fathers (except single parents) were not. Other differences - men are more likely to have step-children and minor children living



elsewhere, but women were more likely to have children with absent parents - are controlled in the analysis.

As it turns out, there was virtually no difference in interview length between men and women, either before or after other characteristics were controlled. Men's interviews took about 1.5 minutes longer than women's.

### **Race/Ethnicity**

For reasons that are not at all clear, after controlling for other characteristics, majority whites had an average interview length that was 7 minutes shorter than blacks, 6 minutes shorter than Mexican Americans, and 11 minutes shorter than Puerto Ricans.

We will later look at differentials between interviews conducted in English versus those conducted in Spanish.

### **Education**

Education is inversely associated with interview length. Those who had less than a high school education had interviews that were 6 minutes longer than average, while those who had graduated from college had interviews that were 6 minutes shorter than average. These differentials were reduced by about 2 minutes when other characteristics were controlled.

Better educated respondents may have had less difficulty understanding the questions, and required fewer interviewer probes. It is possible also that the education difference is associated with the self-administered questionnaires, where the better-educated respondents may have read the questions more quickly and responded with less

thought about question intent.

### **Current Marital/Cohabitation Status**

There were sections of the interview that were different depending on the current marital/cohabitation status of the respondent. Persons with more complex marital/cohabitation histories were asked more questions than those who were never married or who remained in intact first marriages. Married and cohabiting respondents were asked extra questions regarding their relationship, while those who were not currently married were asked more questions about their marriage plans, etc. (Those who were under age 35 and not currently married or cohabiting were given a self-administered questionnaire that was probably about as long as the couple relationship questionnaire that was completed by the currently married or cohabiting.)

Interview length differed by current marital status. Net of other characteristics, persons who were cohabiting had an interview length that was 7 minutes longer than average (5 minutes longer than married respondents). Never married respondents had the shortest interviews, 11 minutes shorter than average. Marital status differences are attenuated, but not eliminated when other characteristics are controlled.

### **Employment Status**

Despite the fact that we asked a series of questions concerning employment status, occupation, work schedule, and child care arrangements for female respondents, there was only a very small differential in interview length by employment status.

## Parental Status

Respondents with children in the household were asked a long series of questions about their children and their parenting practices, both within the interview itself and in a self-administered questionnaire. The interviews of persons who had children under age 19 in the household were 12 minutes longer than those who did not. Net of other characteristics, their interviews were 15 minutes longer.

In addition to questions on parenting asked of persons with children under age 19 living in the household, there were additional series of questions that were asked when the respondent was:

- a. the step-parent of children under 19 in the household;
- b. the parent of a child under 19 in the household whose other parent did not live in the household;
- c. the parent of a child under age 19 living elsewhere;
- d. the step-parent of a child under age 19 living elsewhere;
- e. the parent-surrogate of a child under 19 in the household, when neither of the child's parent lived there;
- f. the parent of adult children living in the household; and
- g. the parent or step-parent of adult sons or daughters living elsewhere.

Later we will look at the effects of each of these different situations on interview length. As it turns out, each of them added a roughly equal amount of time to the

interview. Here we control for this by simply counting the number of different parenting sequences that were asked.

If there was one, the interview took 8 minutes longer than if there were none. A second added 7 more minutes and a third added 12 more minutes.

### **Type of Place of Residence and Region**

We were curious as to whether there might be variation in interview length by region and metropolitan status. Such differences could reflect differences in styles of interaction with the interviewer. For example, the interviewer may have to spend more time developing rapport with the respondent in metropolitan areas than in non-metropolitan areas, or in non-metropolitan areas there may be more casual conversation between interviewer and respondent.

As it turned out there was only a small difference between interviews in non-metropolitan and metropolitan areas, with non-metropolitan areas about 2 minutes shorter than in metropolitan areas.

However, there were strikingly large differences among the regions. Interviews in the Northeast were over four minutes shorter than average, while those in the West were 5 minutes longer than average. The interviews in the South and Midwest were intermediate in length.

### **OTHER DIFFERENTIALS IN INTERVIEW LENGTH**

To examine other differentials, we dropped metropolitan status and employment

status from the model, and added other characteristics one at a time.

### Month of Interview

We wondered whether the average interview length declined over time as interviewers became more experienced with it. (It is also possible that toward the end of the field period interviewers may have felt pressure to hurry through the interview, although this seems unlikely.) This is a difficult question to answer since later in the field period (in June and September) additional interviewers were added and trained.

It does appear that interviews which were done early in the field period took several minutes longer and those that occurred late in the field period took several minutes shorter (net of other characteristics) than average. It is possible that the long average interview for July is related to the addition of many new interviewers at that time.

Table 3  
Differentials in Interview Length by  
Month of Interview

Month of Interview	N	Deviation	
		Gross	Net
March 1987	316	2.6	2.4
April	1732	5.0	3.9
May	1812	.4	.4
June	1388	-1.2	-.9
July	1487	4.5	4.8
August	1210	.8	1.0
September	1034	-4.4	-4.5
October	1018	-2.1	-1.5
November	943	-3.3	-3.6
December	448	-1.3	-.6
January 1988	386	-4.9	-4.7
February	437	-7.0	-7.2
March	112	-6.9	-4.6
April	347	.4	.3
May	39	-3.1	-3.4

### Language of Interview

Interviews conducted in Spanish took almost 18 minutes longer than those conducted in English. Some of this differential is due to the association of language with other characteristics. We have already observed that interviews with Hispanic respondents took longer than those with majority whites. Similarly, the respondents interviewed in Spanish were more likely to have less than a high school education. When these, and the other, characteristics are controlled, the Spanish language interviews took about 8 minutes longer than those conducted in English.

As it turns out, only about one to two minutes of the excess interview length of Mexican Americans and Puerto Ricans is due to the fact that some of these interviews were conducted in Spanish. They were several minutes longer, even after controlling for language.

Table 4

Differentials in Interview Length by  
Language in Which Interview Was Conducted

Language of Interview	N	Deviation	
		Gross	Net
English	12456	-.4	-.2
Spanish	253	17.2	7.3

#### Self-administered Questionnaire Read to Respondent

In about seven percent of the cases the interviewer had to read the self-administered questionnaire to the respondent. This happened for a variety of reasons ranging from illiteracy, vision impairment, other physical impairment, and in a few cases because the respondent was doing something else (e.g., tending an infant) during the interview. As it turned out these interviews did not take any longer than those in which the respondent completed the self-administered questionnaire him/herself. In fact, net of other characteristics, those that were read to the respondent took a minute less.

Table 5

Differentials in Interview Length by Whether Interviewer  
Read Self-administered Questionnaire to the Respondent

	N	Deviation	
		Gross	Net
Respondent filled out the questionnaire	11829	-.2	.1
Interviewer read the questionnaire	880	2.0	-1.2

#### Householder Status and Presence in Household of Relatives

There were differences in the interview depending on whether or not the respondent was the householder. Respondents who were householders were asked detailed questions on the income sources of all members of the household while non-householders were asked only their own income. However, non-householders were asked questions on the economic relationship with the householder. In the case of respondents who were living in the household of their parents there was a special section of the self-administered questionnaire. Table 6 shows that interviews with non-householders were four minutes shorter than average, but after controlling for other characteristics (especially age and parental and marital status) they were about 7 minutes longer. Similarly, when there were adult relatives in the household, the interview was 4 minutes shorter, but after controls, the interview was about 6 minutes longer.



Table 6

Differentials in Interview Length by Whether Respondent Was the Householder and Whether or Not there Were Relatives in the Household.

	N	Deviation	
		Gross	Net
Respondent is Householder			
Yes	11580	.4	-.6
No	1129	-3.8	6.2
Adult Relatives Present in Household			
Yes	986	-3.9	5.2
No	11723	.3	-.4

Note: the "No" category includes non-householders and householders who have no adult relatives in the household.

## Interruptions

Interviewers were asked to complete a checklist after the completion of the interview. One item on the checklist was:

The interview was conducted:

- 1 - without interruption
- 2 .
- 3 .
- 4 .
- 5 .
- 6 .
- 7 - interrupted often

It is not surprising that frequency of interruption was related to the time it took to complete the interview. Nearly half (48%) of the interviews were not interrupted. These

interviews were completed 5 minutes faster than average. One interview in seven was interrupted often (middle of scale or higher). These interviews took 12 minutes longer than average. While controlling for other characteristics attenuates the relationship slightly, none of the other differentials is much affected by the inclusion of the interruption variable.

Table 7

Differentials in Interview Length by Interviewer's  
Report of Frequency of Interruption

	N	Deviation	
		Gross	Net
Frequency of Interruption			
1- without interruption	5918	-7.0	-5.1
2	3059	1.8	1.1
3	1639	6.0	3.8
4- 7 - interrupted often	1682	15.4	12.4
Not Ascertained	411	.4	-.8

### Physical and Mental Health

We have measures of the physical and mental health of NSFH respondents. Next we will examine how three of these measures are related to length of interview?

The first was a global measure of well-being: "Next are some questions about how you see yourself and your life. First, taking things all together, how would you say things are these days?" It was coded on a seven-point scale with the extremes labeled "very unhappy" and "very happy."

The second was a self-assessment of health, "Compared to other people your age, how would you describe your health? A five point scale was used, with the points labeled very poor, poor, fair, good, and excellent. The third was based on a series of questions concerning limiting conditions - such things as caring for personal needs, moving around inside the house, climbing stairs, etc. We distinguish between those respondents who report any limitations and those who report none.

There is a slight tendency for people who report being "unhappy" to have longer interviews. Those who report being in poor health had interviews lasting about 4 minutes longer on average than those reporting being in excellent health. Similarly respondents reporting limitation of activities had interviews lasting 6 minutes longer than those reporting no limitations.

Table 8

Differentials in Interview Length by Measures  
of Well-being, Health, and Limitation of Activities  
(each of these was included along with the 9 basic variables)

	N	Deviation	
		Gross	Net
Global Well-being			
1 to 3 - unhappy	951	3.6	2.3
4	1852	2.9	1.8
5	2611	-.6	.1
6	2993	-3.0	-1.7
7 - happy	2665	.7	-.4
NA	1637	.0	.2
Self-assessment of Health			
1-2 very poor or poor	627	5.6	2.8
3- fair	2193	4.1	2.2
4- good	5880	-.3	-.1
5- excellent	3296	-2.9	-1.2
NA	713	-1.9	-2.5
Limitation of Activities			
No	10116	-1.0	-.7
Yes	1767	6.3	5.1
NA	826	-1.7	-2.8

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## Age of youngest child

Next we substitute age of youngest child for presence of children under age 19 in the household. The older the youngest child, the longer the interview.

Age of Youngest Child			
0-2	1720	3.0	4.0
3-4	733	6.8	7.3
5-8	1144	7.4	7.6
9-11	662	9.8	9.3
12-14	565	12.3	11.1
15-18	586	12.7	10.2
No Children Under 19	7299	-5.4	-5.4

## Children

As described above, there were different sequences of questions for different types of children. In the analyses already reported, we controlled for the number of different child types on which the respondent reported. Here we examine the effects of the presence of each individual type. In these models age, sex, race/ethnicity, education, employment status, and the presence in the household of any children under age 19 are controlled.

The difference in interview length (in minutes) for respondents with and without children of the type are:

Respondent Has Biological Children in Household with Other Biological Parent not in Household (either one parent or step-parent family)	+6.5
Respondent Has Step-Child Under 18 in the Household	+10.7
Respondent Has Biological Child Age 18 or Older in Household	+10.7
Respondent Has Child(ren) Under Age 19 Living Elsewhere	+7.0
Spouse/partner Has Child(ren) Under Age 19 Living Elsewhere	+6.9
Spouse/Partner Has Child(ren) Age 19+ Living Elsewhere	+5.9

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