

## Interviewer opinions, attitudes and strategies regarding survey participation and their effect on response

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# Interviewer Opinions, Attitudes and Strategies Regarding Survey Participation and Their Effect on Response<sup>1</sup>

EDITH DE LEEUW, JOOP HOX, GER SNIJKERS AND WIM DE HEER<sup>2</sup>

**Abstract:** *Nonresponse is a threat to the validity of conclusions based on survey data. In general, two strategies are used to counteract this threat. The first strategy is to reduce the proportion of nonresponse as far as possible, the second is to statistically adjust for the remaining nonresponse. Interview surveys are still the norm for official statistics, social studies and market research in the Netherlands, and interviewers are an important factor in the battle against nonresponse. We focus on interviewers' opinions on nonresponse and their attitudes regarding the role of the interviewer in persuading potential respondents. In a special project at Statistics Netherlands the continuous survey on living conditions (POLS) was redesigned. During that study interviewer data were collected. It is shown that interviewer attitude and response rate are correlated. Interviewers with a positive attitude towards persuasion strategies attain a higher response rate. No differences between interviewers are found regarding self-reported 'door step' behaviour.*

**Keywords:** *interviewers, interviewers' attitudes, nonresponse, response rate, survey participation*

## 1 Introduction

Survey nonresponse is a growing problem in Western Europe and the US, and has been a source of concern for more than a decade (e.g., Steeh 1981; Goyder 1987; Groves 1989; Smith 1994; Schnell 1997; De Heer 1997). Nonresponse, and particularly the possibility of selective nonresponse, poses a serious threat to the validity of conclusions based on survey data. In general, two strategies are used to counteract this threat. The first strategy is to reduce the proportion of nonresponse as far as possible, the second strategy is to statistically adjust for the remaining nonresponse. We focus on the first strategy: reducing nonresponse.

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In interview surveys, be it by telephone or face-to-face, the interviewer is one of the most important means to improve response (Campanelli et al. 1997; Groves et al. 1992; Morton-Williams 1993). In mail surveys the researcher needs other approaches to reach an adequate response (e.g., Dillman 1978; De Leeuw and Hox 1988; Heberlein and Baumgartner 1978; Hippler and Seidel 1985). There is empirical evidence for considerable variation in response rates between interviewers (Lyberg and Lyberg 1991; Lyberg and Dean 1992). As a consequence several studies have addressed the role of the interviewer in nonresponse. There is little evidence that interviewer attributes, such as age and sex as such, influence response rates; however there is some evidence that interviewer experience positively influences response (cf. Groves and Fultz 1985; Couper and Groves 1992; De Leeuw and Hox 1996). What makes these experienced interviewers achieve higher response rates?

Interviewer behaviour at the moment that the first contact is made, has been the focus of recent projects of the International Workshop on Household Survey Nonresponse. Morton-Williams (1993) analyzes tape-recordings of survey introductions, and identifies successful strategies for obtaining respondent cooperation. Important factors were: appear trustworthy (e.g., always identify yourself immediately), appear friendly (e.g., smile, make a compliment), adapt to the situation at the doorstep, and react to the respondent. Interviewer-respondent interaction is also a central concept in the theoretical work of Groves, Cialdini and Couper (1992). Groves and Couper (1992, 1996) introduce the concepts of 'tailoring' and 'maintaining interaction' to emphasize the importance of flexible interviewer behaviour for a successful doorstep interaction.

A different perspective was introduced at the 1995 Helsinki workshop by Lehtonen (1996), who concentrated on interviewers' attitude towards persuasion strategies and the role of the interviewer. Those interviewers who have a strong belief in the importance of voluntariness of participation and feel negative towards strong persuasion strategies also had a higher probability of nonresponse.

Building on these two perspectives, we investigated the influence of the interviewer on survey response in a face-to-face interview. Main variables of interest were self-reported interviewer behaviour and interviewer attitude towards persuasion and the role of the interviewer.

## **2 Method**

### **2.1 Data**

During the months March to May 1996 a field experiment was carried out at Statistics Netherlands using mixed-mode computer assisted data collection. This experiment was part of a larger implementation study for the redesign of the continuous survey on living condition (POLS). During this field experiment interviewers had to perform special tasks such as registering of behaviour codes and using of special probes on the understanding of the survey questions asked. Twenty-two very experienced CAPI-interviewers were selected for this task. Selection criteria were among others, good social skills, research minded, a good response rate and good interviewer performance as evaluated by their supervisors (cf. De Leeuw et al. 1997). The interviewers worked in three separate geographical areas: Utrecht (highly urban), Eindhoven area (urban/rural) and North and Middle Limburg (highly rural). The interviewers were specially trained for this project. However, no special training in obtaining cooperation and doorstep interaction was given.

At the beginning of the training period all interviewers completed a questionnaire on nonresponse and cooperation in surveys<sup>3</sup>. This questionnaire contained general questions on experiences in gaining cooperation (e.g., the profile of refusers), questions on factual 'door step' behaviour during the introduction of the survey, and opinions and attitudes on persuasion strategies, and interviewer experience. This questionnaire was partly based on interviewer questionnaires of Campanelli et al. (1997) and Couper and Groves (1993). Included in the questionnaire was a general interviewer attitude scale developed by Lehtonen (1996). This scale contained five questions on interviewer attitude towards the role of the interviewer in persuading respondents to cooperate in surveys (for the precise wording of the attitude questions see the Appendix).

Based on the interviewer questionnaire four indices were constructed that described interviewer attitude and behaviour. The first index, the 'General Attitude Index' (GAI) based on the Lehtonen-items, indicates a positive attitude towards persuasion of respondents to cooperate. The second index 'Step Back' indicates the interviewers' opinion that it is more important to gain interest and leave a good impression at the first contact, than to push for a quick decision. If necessary one can step back and retry at a better moment. The third index 'Provide Interest Getting Information' indicates that the interviewers in their basic introduction usually give some information about the survey and the proceedings with the

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<sup>3</sup> Two questionnaires were developed: one for face-to-face interviewers and one for telephone interviewers. An annotated English translation of these questionnaires is available from the first author (e-mail edithL@educ.uva.nl).

emphasis on the positive aspects. The fourth index indicates that interviewers use the 'Social Validation argument' by pointing out that most people participate and enjoy the survey.

Although we also asked questions on how they start the introduction (e.g., Introduce yourself, show ID, mention survey) we were not able to use these data, because of lack of variance between the interviewers. Interviewers reported that they *always* introduce themselves properly<sup>4</sup>.

Furthermore, for each interviewer the following data were available through Statistics Netherlands: interviewer age, time worked at Statistics Netherlands, evaluation by two supervisors, number of instruction sessions attended since 1989. All interviewers were female. Also available were the total number of addresses handed to each interviewer and the total number of completed interviews of each interviewer for the Labour Force Survey 1995 and 1996. Based on these figures the proportion completed interviews was calculated as a conservative indicator of response.

## 2.2 Analysis

Our main research question was: Does interviewer attitude and behaviour influence response rate? An appropriate technique for binary and proportional response variables would be a logistic regression with response rate as dependent variable and interviewer attitude and behaviour as predictor variables. However, we did have interviewer level response data for the Labour Force Survey on two successive years. Therefore we used a multilevel logistic regression, which is an elegant approach to accommodate time-series data. The separate occasions define the lowest level, the interviewers the highest level. The model uses a logit link function to model the proportions, and second order Taylor expansion with penalized quasi likelihood estimation for the parameter estimates (for details see Goldstein 1995).

As predictor variables we used the interviewer background variables age, experience, number of instructions, supervisor's evaluation, and the four indices on interviewer attitude and behaviour (General Attitude, Step-back, Provide information, and Social-validation argument).

We also used 'district' as a covariate in the analysis. Interviewers worked in three districts ranging from highly urban to highly rural: Utrecht, Eindhoven, and North and Middle Limburg. These districts differed significantly in response. For practical reasons we could not use an interpenetrating design, and as a result the interviewers are nested within districts. We decided to correct for this statistically by using district as covariate in the analyses.

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<sup>4</sup> More details about the frequencies of the answers and the index construction are available from the first author.

### 3 Results

#### 3.1 Interviewer attitudes towards persuasion

We first looked into the answers on Lehtonen's attitude scale. Lehtonen (1996) investigated two groups of interviewers for the Finnish Health Survey, 120 professional interviewers of Statistics Finland and 93 public health nurses. The professional interviewers achieved a higher total response rate than the public health nurses: 88% for the first group versus 74% for the second. The two groups also differed markedly in their attitude towards the role of the interviewer in persuading potential respondents.

When we compare Lehtonen's data with our data (see Table 1), we see that the attitudes of professional interviewers of Statistics Netherlands are closer to those of the Finnish nurses, than to those of the interviewers of Statistics Finland.

**Table 1: Proportion of interviewers agreeing or strongly agreeing with questions A-E Netherlands (N=22) and Finland (120+93; Lehtonen 1995)**

Question	Stat Netherlands	Stat Finland	Finnish nurses
A. 'should always persuade'	36% (8)	60%	25%
B. 'can be persuaded'	5% (1)	29%	15%
C. 'respect privacy'	100% (22)	96%	99%
D. 'refusal accepted'	32% (7)	27%	82%
E. 'emphasize voluntary'	9% (2)	35%	87%

The right to privacy (C) was generally acknowledged in all groups. However the other question associated with 'research ethics' (E) showed marked differences. A large majority of Finnish nurses (87%) agreed that voluntariness of participation should always be emphasized, while only 35% of the interviewers of Statistics Finland agree with that statement. The interviewers of Statistics Netherlands do not think that voluntariness should always be emphasized; only 9% agreed with the statement. In the words of one interviewer: if I emphasize voluntariness, I never get cooperation. This illustrates the difficult 'survey climate' in the Netherlands.

There are some marked differences on the questions measuring *attitudes towards persuading* reluctant respondents. The responses of the Dutch professional interviewers resemble more those of the Finnish nurses than those of the professional Finnish interviewers. The majority of the Dutch interviewers does NOT think that reluctant respondents should always be

persuaded (A), and almost no-one agreed that with enough effort even the most reluctant respondent can be persuaded (B). One therefore should expect that most Dutch interviewers would agree with question D: 'If a respondent is reluctant, refusal should be accepted.' However, only a small number (32%) agreed; on this question the Dutch interviewers were closer to the Finnish professionals. A possible explanation of this contradictory result can be found in the context of the study. The interviewer data were collected at the beginning of a field experiment where among other things 'refusal conversion' of soft refusals was attempted, and interviewers were extensively instructed on the usefulness and practicability of refusal conversion. This clearly introduces the possibility that they have been sensitized towards this attitude question, and in another context they might have given less 'acceptable' answers.

Lehtonen (1996) showed that the professional Finnish interviewers as group reached a decidedly higher response rate than the Finnish nurses. He also showed that interviewers who have a strong belief in the importance of voluntariness of participation and feel negatively towards strong persuasion strategies had a higher probability of nonresponse. In the next section we investigate the influence of interviewers' attitude and behaviour on the response in two successive Labour Force Surveys.

### **3.2 Predicting interviewer-level response**

Using interviewers' background variables and indicators of interviewer attitude and behaviour as predictors we modelled interviewer-level response using a multilevel logistic regression. In this multivariate analysis the interviewer background variables age, experience (time worked at Statistics Netherlands), number of instructions followed, and supervisors' evaluation of the interviewer, were not good predictors of interviewer-level response rates. Also, two indicators of self-reported interviewer behaviour did not predict response rate significantly. These were the indicators concerned with the introductory stage (e.g., giving respondents interest getting information), and with the social validation tactic to persuade reluctant respondents (e.g., others do it too). The general attitude index, however, did significantly predict response rate. It should also be noted that the indicator 'step-back', which indicates the importance interviewers give to maintaining the interaction instead of pushing for a quick decision, showed a tendency in the predicted direction but did not reach statistical significance. The results are summarized in Table 2.

**Table 2: Results multilevel logistic regression analysis**  
**Dependent variable: response rate (proportion) for LFS 1995 and 1996**

	MODEL				
	I	II	III	IV	V
<b>PREDICTOR:</b>					
intercept	.60	.65	.32	-.10	-.20
year = '96		-.11	-.11	-.11	-.11
district			.39	.34	n.a
(2 dummy vars)			.62	.53	n.a
GAI				.03	.06
STEPBACK				(.05)	(-.01)
variance between itr's	.11	.11	.04	.03	.08
lowest level variance	1	1	1	1	1

Note: Model V is the final model without district as covariate. Therefore n.a. (not applicable) is mentioned for the control variables district.

Let us discuss the results in Table 2 in more detail. First of all model I, the intercept-only model, tells us that the mean response over 1995 and 1996 is .6 on a logit-scale. This translates to an average response of 65%. In model II the effect of year is modelled and we see that the response in 1996 was slightly lower than in 1995. We already knew this, of course. What is interesting, is the variance between interviewers. We see that 10% ( $0.10 = 0.11/(1+0.11)$ ) of all variance in response is interviewer-variance. In the next steps we attempt to model this interviewer variance. Because interviewers are nested within districts, we add district as a covariate in model III, using dummy coding. We see that district explains 64% of all interviewer variance. In the following steps we added the other predictors; the only statistically significant predictor was the general attitude index (GAI). The indicator 'step-back' showed a tendency in the predicted direction but did not reach statistical significance. In model IV the effect of the GAI is added, we also show between parenthesis the nonsignificant effect of 'step-back'. From model IV we see that GAI explains an additional 9% of the interviewer variance. Together region of interviewing and interviewer-attitude explain a total of 73% of all variance.

We used region as a co-variate, but there is a slight danger of 'overcorrection'. Some real interviewer variance could be hidden in the region effect. If we look at differences between the interviewers in the three regions, we see that there is no statistical difference regarding age, attitudes, experience, and evaluation by supervisors. However, there is a statistically significant difference regarding the reported door step behaviour (more information given in



introduction and more social validation arguments in the rural area Limburg), and regarding the number of instructions (more instruction sessions attended by interviewers in the urban region Utrecht, probably reflecting that more different studies are done in that region.)

As a control we repeated the analyses, but without region as a covariate (model V). This did not change the pattern; only interviewer attitude did significantly predict interviewer-level response.

#### **4 Conclusions and discussion**

In a pilot study we showed that interviewer-level response rates can be predicted by the interviewers' general attitude towards the interviewer's role. Those interviewers who were more inclined to favor persuading the respondent received a higher response rate, while those interviewers who were more inclined to favor acceptance of refusals and not persuading the respondent, received a lower response rate. Furthermore, our sample of Dutch professional interviewers scored rather low on attitude towards persuasion, when compared with Finnish professional interviewers. It would be worthwhile to try to stimulate a more favorable attitude towards persuasion and persuasion strategies among Dutch professional interviewers.

Changing attitudes is not simple, but a useful start would be a short intensive course to motivate interviewers and teach them successful persuasion strategies (cf. Morton-Williams 1993; Campanelli et al. 1997; Snijkers, Hox and De Leeuw 1996). At the same time, supervisors and trainers should be motivated and through a special 'remedial teaching' course be taught the latest theoretical and empirical findings on response inducement and the role of the interviewer.

However, before starting such an intensive program, we will undertake to replicate this study using more interviewers and more regions in the Netherlands. The main reason for this is the small sample size in the study reported here. Twenty-two interviewers is not a large sample, and although the small sample size is partly compensated by having response rates based on large numbers of respondents, the power for detecting specific interviewer effects is still not very large.

Also it would be extremely fruitful to compare results internationally. Two research questions should be central in an international comparison: 'do interviewers in different countries have different attitudes towards the interviewer role?' and 'does interviewer attitude predict interviewer-level response rate internationally?'. At present a large replication study is being done in Belgium. There are also contacts with Couper (USA) and Campanelli and Sturgis (UK), who used comparable attitude and behavioral questions, to pool the data.

Researchers, who are interested in participating in this international project, are requested to contact the first author.

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## Appendix

Full text of the General Interviewer Attitude-scale as used in this study

Responses were measured on a five-point Likert scale (1= strongly agree; 5= strongly disagree)

- A Reluctant respondents should always be persuaded to participate
- B With enough efforts, even the most reluctant respondent can be persuaded to participate
- C An interviewer should respect the privacy of the respondent
- D If a respondent is reluctant, a refusal should be accepted
- E One should always emphasize the voluntary nature of participation