THE PRESENCE OF OTHERS AND SURVEY RESPONSE

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Interviews involve a special form of personal/social interaction. The consequences of a peculiar interaction are affected by the relationship between interviewer and respondent, the characteristics of the questionnaire, interviewer and respondent, and the condition of interview (Sudman and Bradburn 1974; Dijkstra and van der Zouwen 1982). It has been debated whether it is important to maintain an ideal interview situation without the presence of others, in order to increase the accuracy and the quality of responses. The presence of a third person during the interview may undermine a respondent's ability to provide true answers (under-report or over-report) and, may also degrade the quality of response (ambiguous response and non-response).

However, previous empirical studies have not been able to show a significant third-person response effect and to provide adequate theoretical explanation for the importance of privacy. This might be the case because the presence of others is usually treated as a minor situational variable in the response effect model. It is also possible that the effect of a third person's presence interacts with other major variables such as question content and survey administration, and interviewer and respondent characteristics.

It has been suggested that at the heart of the response effect model are methods of administration and question characteristics (Bradburn 1983) and that we need to pay more attention to the possible interaction effect between the presence of others and the nature of questions (Aquilino 1993; Smith 1997). Accordingly, this study attempts to examine the extent to which the presence of others affects survey responses to questions with various attributes.

Using two waves of national survey data collected in Taiwan, this study tries to answer three questions. First, is there a significant difference in the respondent characteristics between the presence and the absence of others in face-to-face interviews? What background characteristics of respondents would affect the presence of others? Second, what types of questions are likely to be susceptible to response effect in the presence of others? Third, is there an interaction effect on survey responses? What would be the interaction term with the presence of others?

Response Effect Model

The survey interview is theoretically defined as a typical social interaction in which a proposed conversation proceeds. The conversation involves a question-answer process and needs to be guided by certain rules of ordinary conversational interaction. Usually, the interviewer is trained to objectively ask respondents questions, and to acquire the actual answers from the respondent appropriately based on the purpose of survey. It is the interviewer who brings particular questions into the conversation, conducts the conversation, and plays the key role in developing a smooth, comfortable and two-person conversation with the respondent. The assurance of a dyad interview (private interview) and of confidentiality in interviews involving sensitive issues is especially crucial (Caplow 1956; Morton-Williamss 1993).

The consequences of the conversation, are associated with four groups of variables: (1) the survey task itself, (2) interviewer characteristics and performance, (3) respondent characteristics and performance, and (4) the condition/environment of the interview (Sudman and Bradburn 1974; Dijkstra and Van der Zouwen 1982; Bradburn 1983). The first group of variables is associated with the design and the administration of questionnaires. The structure, the length, the forms, the difficulty, and the mode of questionnaire administration, question content, question phrasing and wording, and the order of questions are all related to the task variable. The task characteristics are mostly defined by survey investigators and to a great degree determine the quality and substance of information collected from respondents.

The second group of variables is associated with interviewer characteristics and performance. The interviewer's gender, ethnicity, marital status, education, age, performance in the interview would influence the flow of interview conversation and his/her interaction with respondents. Similarly, respondent characteristics, motivation to be interviewed, and role behavior constitute the third group of variables.

Fourth, factors usually beyond the investigator's ability to control, such as the place and time of the interview and the presence of others in the interview are defined as environmental variables. In order to control environmental variables as much as possible, the investigator usually designs several questions for the interviewers to answer and record the time, place, and other situations or events happening during the interview. However, the interview environment is very much associated with how the interviewer and the respondent play their roles and interact with each other in order to achieve the success of the interview (Orne 1969).

In discussions of response effect, environmental variables are considered to be beyond the investigator's ability to control, and thus are seldom the subject of profound examination. It is argued that the conditions of the interview, such as the presence of others, affect

response behavior by interacting with interviewer or respondent characteristics (Sudman and Bradburn 1974; Blair 1979; Dijkstra and Van der Zouwen 1982; Bradburn 1983). However, the interaction effect has not yet been established conclusively because of scant attention and evidence.

The Presence of Others vs. Question Content

Until the 1990's studies associated with the presence of others were common. Previous studies mostly centered on the direct relation between the presence of others and survey responses. The examination mostly starts with the comparison of response distribution under the presence and absence of others. If we find a systematic and significant discrepancy in response distribution in making this comparison, we can conclude that the presence of others is the main effect on substantial differences in response (Taietz 1962; Sudman and Bradburn 1974; Martin 1984). However, this is not necessarily the case if we look into response effect theory and mixed results found in studies of the presence of others. Concerning the distribution of valid/invalid responses, respondents tend to refuse to respond in the presence of others (Hartmann 1995). However, in a national survey, Blair (1979) compared the actual and expected responses to family living arrangements and examined the distribution of item refusal rate. The results show no significant effect of the presence of others on the accuracy and quality of response.

Theoretically, the main effect is examined under the assumption that the response effect of the presence of others is randomized. However, randomization is necessarily true. The respondents interviewed in the presence of others are more likely to be male, young, highly educated and married (Blair 1979; Aquilino 1993). The importance of the interaction effect of respondent characteristics with the presence of others was also found in Hartmann's studies (1994, 1995).

While numerous articles focus on the relationship between the characteristics of respondents or interviewers and question content, very few studies explore the association between the presence of others depends and the questions asked. Basically, the characteristics of interviewers and respondents show no substantial influence on response effects except when it comes to sensitive, threatening or socially desirable topics. Two components of social sensitivity, anxiety or social desirability -- trait and need for socially approval -- are related to respondent's answers. The first involves questions of attitudes or behaviors illegal or not ordinarily discussed in public (Blair 1979; DeMiao 1984). The second component concerns questions the answers to which tend to be socially desirable. Based on the spiral of silence hypothesis in communications theory, individuals tend to search for support for their opinions. They tend to remain silent because of fear of social isolation in terms of the failure of support search (Noelle-Neumann 1984).

It has been found that the presence of others in an interview effects respondents' responses, including response quality and distribution, to questions with a high degree of social desirability and sensitivity such as items related to gender roles, political issues, sexual matters, and cultural norms (Taietz 1962; Aquilino 1993; Smith 1997). These factors, however, have no statistically significant effect on responses providing objective information (e.g., the place of birth) (Taietz 1962).

Data

Data used for the study is from the 1991 and 1995 Social Change Surveys. Social Change Surveys funded by the National Science Council have been carried out every year since 1983 in Taiwan, with themes recurring every five years. The respondents to the national survey are randomly selected every year from a stratified multistage probability sample of adults mostly aged 20 to 65. 2488 and 1720 respondents from the 1991 and 1995 surveys, respectively, are included in the final analysis.

There are two dependent variables. The first one is the quality of response. This study uses invalid responses to measure response quality. An invalid response is defined as an item non-response where respondents skip the question or refuse to answer, or provide ambiguous answers such as "do not know," "no opinion," or "do not understand the actual meaning of the question". The second dependent variable is the response to questions. The questions used to examine survey response are categorized into three groups: those which imply social desirability, anxiety (with the potential to be sensitive and offensive) and factual. The categorization is based on three criteria. The first is derived from the suggestions of the previous literature. The second criterion is the question evaluation done by interviewers in the two waves of Social Change Surveys. Interviewers were asked to rate the degree of social desirability, defense, readability, and salience of each question of the survey. Third, this study tries to select as many questions as possible that are also used in the General Social Survey in 1994 (Smith 1997), in order to compare the cultural-differences in the response effect.

The only factual question used in this study is the total number of family members respondents report. Personal and family incomes are defined as questions with sensitive implications. In the surveys, respondents report their monthly incomes and family monthly incomes in eight categories ranging from zero to more than 200,000 NT dollars. Two questions about gender role attitudes and three questions about special marriage relations are defined as socially desirable questions. Respondents are asked whether they agree to the statements "a preschool child is likely to suffer if his/her mother works" and "the man is the achiever outside and the woman takes care of the home and family." Three items ask respondents about their attitudes toward cohabitation before marriage, the possibility of forgiving a person who has had an

extramarital affair, and the right to marry for homosexual couples. Respondents' answers to each attitudinal question are marked in five categories: strongly agree, agree, disagree, strongly disagree and no opinion. No opinion is defined as an invalid answer. The codes for gender role attitudes are reversed so that all the scores for the five attitudes from low to high will represent modern to traditional attitudes.

The presence of others is defined as a situation in which a third person other than the interviewer or the respondent is present during the interview (Blair 1979). A broad definition is used in this study in that this third person may be the interviewer's or the respondent's friend, unfamiliar with or acquainted with the respondent, children, adults, or both together. Because of the limitations of the data available, this study only uses role-independent characteristics of the interviewer and the respondent (Dijkstra and Van der Zoumen 1982). Respondent characteristics used in this study are gender, education, age, marital status, religion and ethnicity, while the only interviewer characteristic is gender.

Descriptive Statistics

Table 1 displays the characteristics of samples collected in 1991 and 1995. In addition to basic descriptive statistics, this study uses x^2 and t-test to examine the possibility of combining two datasets. Basically, there is not much significant difference in the distribution of gender and marital status between respondents in 1991 and those in 1995. Concerning the rest of the characteristics statistically different between the two surveys, on average, respondents in 1995 are older and richer than those interviewed in 1991. Most of

Table 1: Descriptive Statistics

Waves Characteristics	1991 % (total N)	1995 % (total N)	Test X^2 (d.f.)
Female	50.8 (2488)	48.0 (1720)	3.06 (1)
Married	83.1 (2477)	82.8 (1720)	0.72 (1)
Ethnicity: Fukien	73.0 (2475)	77.1 (1714)	24.91***(3)
Hakka	9.9	12.0	
Mainland	11.7	10.3	
Aborginal	2.4	0.6	
Religion: Yes	72.1 (2431)	84.5 (1677)	86.92 ***(1)
Others Present	76.1 (2446)	71.3 (1720)	12.07***(1)
	Mean (S.D.)	N	Mean (S.D.)	N	t (d.f.)
Education (years)	9.41 (4.4)	2470	10.07 (4.4)	1719	-4.72*** (4187)
Age (years)	39.29 (11.2)	2488	40.26 (10.9)	1720	-2.79*** (4206)
Personal income/month (NT$ 1000)	20.77 (24.9)	2308	34.12 (35.9)	1683	-14.0*** (3989)
Family income/month (NT$ 1000)	44.78 (35.9)	2122	68.81 (50.9)	1628	-17.0*** (3748)

*P<0.05, **<0.01, ***<0.001

the respondents in this study have religious beliefs. The respondents in 1995 are more likely than their counterparts in 1991 to express religiosity. The respondents in 1995 tend to have higher educational attainments. The average personal or family incomes for the respondents in 1995 are higher than those for their counterparts in 1991. Based on the sample characteristics, of which some are significantly different between the two surveys, we cannot merge the two datasets for the final analysis.

The frequency of the presence of others in both waves of data is over 70 percent. In comparison with studies from Germany, the United States, and the Netherlands, and ranging from one-fifth to two-thirds, the control of privacy during interviews in Taiwan apparently requires further improvement (Taietz 1962; Blair 1979; Reuband 1992; Hartmann 1994). Among the interviews conducted in the presence of others, the third person is most often an adult. In 1995, 23 percent of the interviews were conducted in the presence of both an adult and a child. For the convenience of comparison, further discussion will only focus on the presence of any third person including all possible third persons such as children, and/or adults, and/or both.

Logistic regression is used to analyze respondent or interviewer characteristics which are important factors influencing the probability of the presence of others. For both the 1991 and 1995 surveys, the respondent's marital status, age and education are the three main significant factors predicting the presence of others in the interview (at 0.001 level).

Table 2: Logistic Regression of Others Present

Independent variables	1991 Ln (presence/no-presence)		1995 Ln (presence/no-presence)	
	Coefficient	Standard error	Coefficient	Standard error
Married	.9649***	.1577	.6631***	.1716
Age (years)	-.0329***	.0060	-.0295***	.0068
Education (years)	-.0802***	.0158	-.0789***	.0173
Personal Incomes	-3.4E10-6	2.8E10-6	-8.1E10-6***	2.1E10-6
Family Incomes	-4.8E10-6*	2.05E10-6	-2.2E10-6	1.5E10-6
Female	-2.107	.1205	-.1016	.1249
Religion (yes)	-.0349	.1251	.1890	.1606
Ethnicity: Fukien	-.6175	.4480	-.2475	.7971
Hakka	-.3658	.4824	.0526	.8140
Mainland	-.5207	.4752	-.2162	.8172
Female Interviewer	.1120	.1174	.1718	.1174
Constant	2.977***	.5197	2.365**	.8532
-2Log-likelihood	2047.59		1802.94	
Model X^2	77.76***		71.40***	
Total cases	1967		1568	

* p<0.05, ** p<0.01, *** p<0.001

Respondents who are married, poorly educated, or young tend to be interviewed in the presence of others.

Except for educational effect, this finding is the same as found in the United States (Blair 1979; Aquilino 1993). The results imply that respondents are not randomly assigned to two conditions of interview and that the interaction effect of the presence of others on survey response is possible.

Response across Different Questions

Chi-square and t-test are used to examine whether there is significant difference in the quality of response and response distribution between the presence of others and the absence of others. Table 3 (the third and sixth columns in the table) shows that the percentages of invalid item responses to sensitive and socially desirable questions are all higher than that to the factual question.

Table 3: Non-Substantive Response by Others Present

Non-substantive Response (%) Question item	1991			1995		
	Presence of others			Presence of others		
	No	Yes	Total	No	Yes	Total
Factual question						
Total family member	0. 0	0.0	0.0	0.0	0.0	0.0
Sensitive questions						
Personal incomes	6.7	7.4	7.2	1.6	2.4	2.2
Family incomes	15.6	14.4	14.7	5.5	5.3	5.3
Socially desirable questions						
Children suffer	9.6	10.7	10.4	4.1	6.8	6.0*
Woman in family	9.1	7.2	7.6	4.9	5.1	5.1
Homosexual marriage	26.4	31.7	30.4*	-	-	-
Extramarital affair	-	-	-	6.9	6.8	6.9
Cohabitation	-	-	-	8.5	9.2	9.0

* p<0.05, ** p<0.01, *** p<0.001

Concerning the privacy for an interview situation, Table 3 indicates that response quality significantly varies with the presence of others on the item concerning homosexual marriage in 1991. With the presence of others during the interview, the response quality significantly declines. The results imply that, in general, there should not be a strong main effect of the presence of others on response quality.

In addition to the quality of response, this study also examines actual responses by testing the average of the responses to three types of questions. According to Table 4, in the 1995 survey, for factual, sensitive and one of the socially desirable questions, there is significant difference in the average of the survey response between the interviews with others present and those without others present. However, this is not necessarily the case for the data from 1991, in that most of the response does not significantly vary with the presence of others for 1991 survey. Given this, we have a limited picture, that it is not necessarily true that sensitive and socially desirable questions are more susceptible to the presence of others than are factual questions.

Looking into the extent of significant differences in response between the presence and the absence of others during the interview, Table 4 also shows that the average of total family members living together for the respondents with others present is greater than that for

those without the presence of others in the interview. The

Table 4: T-test of Response by Others Present

Mean Response (S. D.) Questions	1991			1995		
	Presence of others			Presence of others		
	No	Yes	t(d.f)	No	Yes	t(d.f)
Factual question						
Total family member	4.62 (2.42)	5.12 (2.33)	-4.46*** (2444)	4.39 (2.07)	4.94 (1.99)	-5.20*** (1718)
Sensitive questions						
Personal incomes (NT$ 1000)	21.0 (21.8)	20.6 (25.6)	.375 (2267)	41.2 (40.8)	31.3*** (32.4)	5.28*** (1681)
Family incomes (NT$ 1000)	44.2 (35.1)	44.8 (35.8)	-.312 (2084)	74.7 (52.9)	66.5*** (49.9)	2.96*** (1626)
Socially desirable questions						
Children suffer	2.33 (1.09)	2.34 (1.07)	-.168 (2189)	2.94 (.66)	2.94 (.67)	-0.26 (1614)
Women in family	2.31 (1.17)	2.44 (1.16)	-2.28* (2257)	2.64 (.85)	2.73 (.82)	-1.96* (1631)
Homosexual marriage	3.22 (.77)	3.27 (.73)	-1.33 (1700)	-	-	-
Extramarital affair	-	-	-	3.10 (.67)	3.16 (.63)	-1.6 (1600)
Cohabitation	-	-	-	2.90 (.72)	2.91 (.75)	-.23 (1563)

* p<0.05, ** p<0.01, *** p<0.001

group with others present in the interview tends to underreport lower personal and family incomes. Concerning socially desirable questions, only attitudes toward the gendered division of labor in the family are found significantly different between those with the presence of others and their counterparts. The respondents in both 1991 and 1995 tend to be more traditional in gender role attitudes with the presence of others during the interview. This finding is very similar to Smith's study (1997) of the impact of the presence of others on some gender role attitudes.

The Prediction of Response Effect

This study utilizes logistic and multiple regressions to analyze response effect from two angles: response quality and response distribution. Since there is no any invalid response to the question on "total family members living together," this item is excluded from the logistic regression of response quality. For each set of data, I first examine main effect of the presence of others; then test the significant importance of the interaction effect of the presence of others with three independent variables: respondent's age, education and marital status. The final model for explaining the third-person effect will be determined based on the significant change of model chi-square or R square between two models.

According to Table 5, controlling for other independent variables, the presence of others in the interview significantly affects the quality of response to "effect of mother working on children," "homosexual marriage," and "extramarital affairs." The presence of others would decrease the quality of response. In addition to the main effect of the presence of others, the quality of response to "extramarital affair" is also affected by age-others' presence. The negative regression coefficient

Table 5: Logistic regression of non-substantive response to different questions

Independent Variables	Pincomes 1991	Pincomes 1995	Fincomes 1991	Fincomes 1995	Grole1 1991	Grole1 1995	Grole4 1991	Grole4 1995	Mideo5 1991	Mideo6 1995	Mideo9 1995
					Non-Substantive Response Across Ln (presence / non presence)						
Rspdnt Sex	-.475***	--	--	--	-.328*	-.562*	-.484*	--	--	-.644**	--
Age	--	--	--	--	.016*	--	.022***	--	--	--	--
Edu	--	--	-.046**	-.076**	-.052**	-.097***	--	--	-.035**	--	--
Married	--	--	-.844***	--	-.721***	--	-.469*	--	-.525***	--	-.932***
Interviewer Sex	--	--	--	.464*	--	--	--	--	--	--	--
Others Present	--	--	--	--	--	.522*	--	--	.289**	2.627*	--
Rspdnt.											
Married* Other										--	
Age*Other										--	
Edu*Other										-.154**	
-2 log likelihood	1188.1	--	1899.3	674.8	1517.4	725.5	1187.2	--	2832.6	761.4	972.8
Model X^2	21.2**	--	44.0***	30.6***	38.8***	35.7***	51.9***	--	38.0***	69.2***b	29.8***
N	2340	--	2340	1660	2340	1660	2340	--	2340	1660	1660

1.*p<.05 , ** p<.01, *** p<.001. ; b : X^2change is significant. 2.Pincomes: Personal Incomes; Fincomes; Family Incomes; Grole1: Children suffer if mother out of work; Grole4: Man achieves outside, woman takes care of family; Mideo5: The homosexual couples to marry; Mideo6:O.K. to have an affairs after marriage; Mideo9: O.K. to have sex relations before Marriage.3.Please note that in each logistic regression, the variables whose regression coefficients are not statistically significant are not shown in the table and replaced by "--". 4.The regression without "--" means the interaction terms not in the model finally selected in the study.

Table 6 : Standardized multiple regression of response to different questions

Independent	Live 1991	Live 1995	Pincomes 1991	Pincomes 1995	Fincomes 1991	Fincomes 1995	Grole4 1991	Grole4 1995	Mideo5 1991	Mideo6 1995	Mideo9 1995
					Non-Substantive Response Across Ln (presence / non presence)						
Rsppdnt Sex	--	--	-.276***	-.258***	--	--	-.127***	-.196***	-.044*	.100***	.131***
Age	-.208***	-.304***	--	--	--	-.138**	.107***	.127***	.073**	--	.223***
Edu	-.129***	--	.220***	-.340***	.391**	.359***	-.348***	-.347***	-.106***	.088**	--
Married	.129	.252***	.084***	.197***	-.043***	.115**	--	--	--	--	--
Religion (Yes)	--	.063**	--	-.054*	--	--	--	.060**	--	.059*	.049*
Mainlander	-.113*	--	--	--	--	--	--	--	--	--	--
Interviewer Sex	--	--	--	--	--	--	--	--	-.046*	.057*	--
Others Present	.055**	--	--	-.086***	--	-.374*	--	--	--	--	.323*
Rspdnt.											
Married* Other		-.197**				-.201**					--
Age*Other		.282*				.466***					-.242*
Edu*Other		--				--					-.165*
R^2	.064***	.068***b	.143***	.230***	.116***	.173***b	.184***	.229***	.028***	.023***	.057***b
N	2487	1719	2487	1719	2487	1719	2487	1719	2487	1719	1719

1.*p<.05 , ** p<.01, *** p<.001. ; b : R^2 is significant. 2.Live:Family member living together; Pincomes:Personal Incomes; Fincomes; Family Incomes; Grole4: Man achieves outside, woman takes care of family; Mideo6:O.K. to have sex relations before Marriage.3.Please note that for the ease of presentation, in each logistic regression, the variables whose regression coefficients are not statistically significant are not shown in the table and replaced by "--". 4.The regression without "--" means the interaction terms not in the model finally selected in the study.

indicates that poorly educated respondents with the presence of others during the interview will provide low quality of response to this question.

There is no significant third-person effect on the quality of responses to the questions other than earlier three questions mentioned earlier. The divergent findings are far from confirming the theoretical hypothesis that there is a main third-person effect on the response quality for sensitive and socially desirable questions. The respondents who were interviewed in the presence of others were not necessarily willing to respond to how much money they or their family earn.

As for the prediction of response variance, the multiple regressions of the factual, sensitive, and socially desirable variables show that the main and interaction effects of the presence of others occur with the responses to the factual question, sensitive questions and only one socially desirable question. Regardless of interaction effects, there is a significant main positive effect of the

presence of others on total family members living together, controlling for other independent variables (at 0.01 significant level) for the 1991 survey (Table 6). However, for the 1995 survey, after the interaction terms enter the model, the main effect disappears and two interaction effects (age-by-other present and marital status-by-other present) appear.

Table 6 also shows the importance of the third-person effect on respondent's reporting of personal incomes and family incomes for 1995 survey. With others present in the interview, respondents tend to underreport their personal and family incomes. In addition, there is an interaction effect on family incomes. Married respondents with others present in the interview are more likely than their counterparts to report lower family incomes. Older respondents with others present report higher family incomes than do older respondents without others present.

Except for the attitudes toward cohabiting before

marriage, there is no main or interaction effect of the presence of others in the interview on survey responses (Table 6). Those interviewed with a third-person's presence tend to hold traditional attitudes toward cohabitation. Those with high education and others present tend to be more modern in their attitudes toward.

Conclusion and Suggestions

This study starts with examining the characteristics of the presence of others in interviews and find that well thought of surveys conducted in Taiwan have a high percentage of third party presence during interviews. Among the important variables closely associated with the presence of others, respondent's marital status, age, and education are the three significant predictors of the presence of others. Generally speaking, the quality of response to factual questions is better than that to the rest of the questions. Howere, this study finds significant difference in response to all types of the questions between the presence and the absence of others in the interview.

The investigation of survey response predicted by the presence of others shows limited support for a significant effect on response to socially desirable questions. This deviates a bit from the hypothesis that the significant prediction of survey response or quality would be only for sensitive and socially desirable questions .However, this study still previous the following contributions. First, the effect of the presence of others can be found through its interaction with respondent characteristics. Second, at least for questions about incomes and cohabitation before marriage, the response quality can be predicted by the presence of others no matter whether it is a direct main or an indirect interaction effect. This limited support echoes a previous study done by Aquilino (1993). Third, this study provides a good beginning for the study of the third-person response effect in terms of theoretical development and empirical study.

As we confirm the importance of the effect of the presence of others on response, here remain several issues for further investigation in the future. First of all, we need more information on the nature of the third party presence. This study only focuses on the presence of others in general. The types of others, the number of others during the interview, the duration of the third-party presence, and the place of the third-party presence are all interesting and important, but not available in the current study.

Second, concerning theoretical development, the lack of information about role-restricted characteristics of interviewers and respondents are disadvantages of this study. It is hoped that in addition to role independent variables, future studies of the presence of others will examine role-restricted variables such as subjective attitudes toward the interview situation. Furthermore, the important variables related to interview condition, such as the place of the interview, remain unexplored in this study. It would be worthwhile if future studies of the presence of others would consider all possible situational variables.

Third,similar to Smith's study (1997), this study fails to confirm the effect of the presence of others by different types of questions on response quality of actual response. The selection of questions might be the source of the failure. For example, it is still questionable whether the selection of "total family member living together" which implies the presence of others, is appropriate. Fourth, it is certain that we need to pay more attention to ways to limit the effect of the presence of others on the quality of responses and true responses. Methods to reduce the presence of others should emphasize proper interviewer training and the administration of survey work.

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