

Is There any Difference Between the Results of the Survey Marked by the Interviewer and the Respondent?

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Abstract

Systematic errors can significantly affect the results of research. Interviewer errors and respondents (participants) errors constitute a large portion of systematic error sources. The purpose of this study is to show whether there is a difference between the results of the questionnaire marked by the respondent and the results of the questionnaire marked by the interviewer. For this purpose, the responses of 150 participants to the questionnaire were compared and analyzed. The findings of the analyze reveal that there is a difference between the results of the questionnaire marked by the interviewer and the results of the questionnaire marked by the respondent. Another result is that the reliability of the questionnaire data marked by the interviewer is lower than other group. This study is part of a research carried out with the support of The Scientific and Technological Research Council of Turkey (TUBITAK – 115K155) and the results provide preliminary information.

Keywords: Survey Mode, Self-Administered Questionnaire, Interviewer-Administered Questionnaire

Introduction

Data collection by survey method is a widely used method especially in social sciences. As with many methods, the survey method is also open to some research errors. The interviewer and the respondent errors constitute a significant part of these error sources. An important issue that leads to errors during the implementation of the survey is the mode of application of the survey. Survey mode effect can have a key role in changing the rates of

interviewer and respondent errors. In this study, it was aimed to compare the questionnaires marked by the respondent (Self-administered questionnaire - SAQ) and the questionnaires marked by the interviewer (Interviewer-administered questionnaire – IAQ).

Literature Review

Non-sampling error is caused by various reasons and interviewing method is one of these reasons (Malhotra and Birks, 2007). Interviewer and respondent errors in attitude and behavior measurement may damage the accuracy of the obtained data. Exemplary, the measurement error associated with the self-reported behavior of the responder may appear in many different ways (Catania et al., 1990: 341): a) answering a question may be rejected, b) the behaviors performed can be declared as never performed, c) the behavior can be considered to be performed but the frequency can be neglected and d) behaviors that are never performed can be declared as if they were done. These mistakes consist of a combination of response and non-response errors. However, although they are both different types of error, they are both influenced by the presence, attitude and behavior of the interviewer. For this reason, it is important to examine self-administered questionnaire and interviewer-administered questionnaire modes.

In the interviewer-administered questionnaire (IAQ), the interviewer reads the questions aloud and respondent answer questions (Gribble et al., 1999: 17). The presence or participation of the interviewer may affect the responses, the presence or participation of the interviewer may activate or suppress some of the respondent's response tendencies (Moum, 1998: 282). The presence of an interviewer, especially when personal sensitive questions are asked, can distort the response of the respondent (Knapp and Kirk, 2003: 118). Direct measurement of the effect of the interviewer is difficult, since it is not known what the repeatability will be if there is no interview (Back et al., 1955: 444). It is not possible for any two interviewers to express the question in the same way while the questions are being asked, and especially unrecognized and repeated questions. In such a case, different responders have different stimuli that are likely to produce a variation in the responses (Boyd and Westfall, 1955: 316).

On the other hand, in the self-administered questionnaire (SAQ) mode, questionnaire paper is given to people either by hand or by mail or computer-assisted systems (Bowling, 2005: 282). SAQs are limited to participants' level of education and reading ability (Catania et al., 1990: 341).

According to Presser et al. (2004), one of the consequences of increasing data collection modes is to recognize that the answers to the questionnaires can be influenced by the mode the questions are asked. For this reason analyzes should take into account different methods and the

possible effects on the measurement error should not be overlooked. Both IAQ and SAQ have superior and weaker sides in terms of errors (see table 1).

Table 1. Comparison of IAQ with SAQ according to potential biases

	IAQ (Face to face)	SAQ (paper and pencil)
More complete population coverage for sampling	High	High
Cognitive burden	Low	Great
Survey response	High	Medium – low
Item response/completion of questionnaire	High	Low
Question order effects	Low	High
Response-choice order effects	Moderate	High
Recall bias	Low	High
Social desirability bias	High	Low
‘Yes-saying’ bias	High	Low
Interviewer bias	High	-
Length of verbal response / amount of information	High	-
Willingness to disclose sensitive information	Low	High
Respondents’ preferences for mode of administration	High	Low

Source: (Bowling, 2005: 284)

The effect of the survey mode was investigated in many areas, primarily in the field of health. Aquilino (1998) has found that there is no difference between face-to-face and telephone survey results in his research with depression scale, but the results of self-administered questionnaires produce high scores according to both methods. Kraus and Augustin (2001) have found that drinking and alcohol problems in their work are reported more easily in self-administered surveys than in telephone interviews. In another health survey, Bergmann et al. (2004) concluded that self-administered questionnaires did not produce the same information as personal interviews in a few specific contexts.

On the other hand, Kaplan et al. (1997) compared the self-administered questionnaire with interviewer-administered questionnaire in terms of scale availability (The Quality of Well-Being Scale). According to the results of this study, there was no difference between the two methods. Similarly, Knapp and Kirk (2003) compared three different survey methods (pencil and paper mail, Internet research or automated touch-tone telephone response system) and found no significant difference between the results.

The tendency to answer in the direction of social desirability is also a sensitive issue to be considered in the selection of the survey method. SAQ and IAQ are compared in terms of social desirability, and there are studies showing that the tendency to respond to social desirability is higher in interviewer-administered surveys (eg, Moum, 1998; Okamoto et al., 2002).

Methodology

Measurement Instrument, Sample and Data Collection

In this study, self-administered questionnaire and interviewer-administered questionnaire modes were used. Both modes included the same questions. The research instrument items were adapted from the Satisfaction With Life Scale – SWLS (Pavot and Diener, 1993). Likert type scale was used for measurement (5-point, strongly disagree to strongly agree). Data were collected from 150 individuals aged between 18 and 50 years. Half of the respondents answered the self-administered questionnaire and the other half answered the interviewer-administered questionnaire.

Data Analysis and Results

The normality test (Kolmogorov-Smirnov) and the homogeneity test (Levene) of variances were applied for the collected data by both modes. The results of the analysis showed that the data were normally distributed and the variances were homogeneous. Then, reliability analysis was performed with the collected data by both modes. Findings related to the reliability of the questionnaires are shown in table 2.

Table 2. Comparison of reliability analysis results in terms of modes

	IAQ	SAQ
Cronbach’s Alpha	0.771	0.834

When the reliability analysis results are examined, it is seen that the internal consistency coefficient of the data obtained by SAQ mode is higher than IAQ mode. Factor analysis followed the reliability analysis. As a result of factor analysis, a one-factor structure emerged in both modes. The variances explained by the factors are shown in table 3.

Table 3. Comparison of methods according to the variances explained by the factors

	IAQ	SAQ
Variences explained %	53.613	61.401

When the explained variance values are examined, it is seen that the SAQ mode has a higher value than the IAQ mode. Then t-test was performed to compare the means of the data obtained by both modes. The findings obtained from the t-test results are shown in table 4.

Table 4. Comparison of modes according to group statistics and t test results

		Group Statistics				t-test
		N	Mean	Std. Deviation	Std. Error Mean	p
Scale	SAQ	75	3,5173	,89024	,10280	0.005
	IAQ	75	3,0880	,96043	,11090	
Q1	SAQ	75	3,5600	,94783	,10945	0.191
	IAQ	75	3,3333	1,15470	,13333	

Q2	SAQ	75	3,4933	1,03157	,11912	0.110
	IAQ	75	3,2000	1,19684	,13820	
Q3	SAQ	75	3,8400	1,05318	,12161	0.040
	IAQ	75	3,4400	1,29698	,14976	
Q4	SAQ	75	3,6400	1,15828	,13375	0.004
	IAQ	75	3,0000	1,48870	,17190	
Q5	SAQ	75	3,0533	1,47862	,17074	0.016
	IAQ	75	2,4667	1,47349	,17014	

According to the results of t-test, a significant difference was found between the scale means of the data obtained from the two modes. From this result, it can be said that the respondents in the SAQ method give higher scores for the Satisfaction with Life Scale. When the means of the items were compared, a significant difference was found for three out of five items. For the three question items, the SAQ means higher than the IAQ.

Conclusion

In this study, it was researched whether there is a difference between the results of the questionnaire marked by the respondent (Self-administered questionnaire - SAQ) and the results of the questionnaire marked by the interviewer (Interviewer-administered questionnaire – IAQ).

The findings show that there is a difference between the data obtained with SAQ and IAQ modes. In addition, the results indicate that the SAQ scores are higher than the IAQ scores. When the reliability analysis and the explained variance are compared, it is concluded that the SAQ method is a better method. However, it should be taken into account that the results in this study may have emerged from the scale used (Satisfaction with Life Scale- SWLS). Because difference and especially which method produces higher or lower scores may vary depending on the measured subject or measuring instrument.

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