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Respondent Satisfaction and Respondent Burden among Differently Motivated Participants in a Health-related Survey

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Abstract

Response rates in surveys have declined in many countries over the last decade. Reasons for refusal by non-respondents have been discussed in many studies but less attention has been paid to motivation among respondents who do take part. One theoretical framework for studying motivation is self-determination theory, which distinguishes between extrinsic and intrinsic motivation. This article describes respondents' experiences of participating in a self-administered health-related survey. Experiences of respondent satisfaction and respondent burden were related to extrinsic or intrinsic motivation for participation in surveys. Qualitative content analysis was used to analyse data from semi-structured telephone interviews with 30 Swedish respondents aged 45–64 years. The results show a broad spectrum of positive as well as negative aspects of survey participation. Respondent satisfaction was described in terms of contribution, responsibility, being heard and reflection; respondent burden was described in terms of cognitive burden, unnecessary work, distrust, offending questions and distress. Characteristic of respondents with autonomous extrinsic motivation was the importance of being able to give usable and correct answers; respondents with intrinsic motivation stressed a trustful communication. Knowledge of respondents' experiences of satisfaction and burden and how these experiences differ according to the type of motivation for participation, may help the development of survey design from the respondents' point of view.

Introduction

Survey data are an important source of information in modern society. However, during the last decade, survey response rates have declined in many countries (Curtin et al. 2005; De Leeuw and De Heer 2002). The rationale for refusal by non-respondents has, therefore, been the subject of many studies. This has often been described in terms of respondent burden with the main focus on the cognitive burden and time burden (Biemer and Lyberg 2003). Such studies have increased our knowledge of the factors stimulating response among reluctant or unwilling persons. For example, the leverage–salience theory of survey participation suggests the possibility of increasing participation by reducing burden and increasing benefits (e.g. incentives) (Groves et al. 2000). However, the perceptions of willing respondents on the positive and negative aspects of participation may differ from those of non-respondents. Several authors have remarked that there is a paucity of research on respondents who do take part, and their motives for and experiences of participation (Singer and Bossarte 2006; Surkan et al. 2008).

One theoretical framework for studying motivation is self-determination theory. This theory has been widely used in, for example, developmental and educational practice (Deci and Ryan 1985; Ryan and Deci 2000), but, to our knowledge, has not been applied to survey research. According to this theory, the range of motivation goes from amotivation via controlled (non-self-determined) extrinsic and autonomous (self-determined) extrinsic motivation to intrinsic motivation. An amotivated person sees no value in the task or activity he/she is asked to perform, feels forced, or does not feel competent enough to perform the task. A person with controlled extrinsic motivation complies with the request to get, for example, an external reward or to avoid feelings of guilt and shame. An autonomous extrinsically motivated person participates because of

the future value for society or for him-/herself, whereas an intrinsically motivated person finds the task itself enjoyable and interesting. Higher levels of motivation are often associated with more active participation and commitment to the task. Self-determination theory may therefore be beneficial for survey practitioners to learn more about the needs and demands of respondents with different types of motivation.

The aim of the present study was to describe and analyse the experiences of respondents participating in a self-administered health-related survey. Experiences of satisfaction and burden were then related to extrinsic or intrinsic motives for participation in surveys.

Methods

Data collection

The Life conditions, Stress and Health (LSH) study is a longitudinal study aiming at analysing the effect of psychosocial factors in relation to socioeconomic status and health outcomes. The study population (1007 participants aged between 45 and 69 years), was randomly sampled from the catchment areas of ten primary health care centres in the south east of Sweden. The first data collection, performed in 2004 (participation rate 62.5 %), included questionnaires, a visit to the primary health care centre for biological measurements (saliva, blood and urine samples) and a brief health examination. The questionnaires included a broad range of items covering socioeconomic status, living conditions, psychosocial factors, stress, lifestyle and self-reported disease.

In the spring of 2006, the LSH study invited all participants to take part in a 2-year follow-up, aimed at assessing the stability of risk factors over time. This follow-up

included a new questionnaire in which most questions were the same as in 2004 (response rate was 79.5%). The questionnaire comprised 29 pages and approximately 450 questions, most of which (95%) were established scales. On the last page the participants were asked if they would participate in an interview regarding the questionnaire and, if so, to provide a telephone number at which they could be reached. A total of 347 out of the 795 participants who answered the 2-year follow-up questionnaire volunteered to take part in the interview. Approximately the same proportion of men and women volunteered. A stratified (health care centre, age group and gender) random sample of 30 participants was contacted by telephone, the study was described and an appointment for the interview was made. Four participants could not be reached and two declined participation. Their choice to drop out was not questioned and they were replaced by participants from the same stratum.

We then sent participants written information about the study and a new copy of the questionnaire. We asked them to read through the questionnaire prior to the interview and to mark three questions that evoked positive feelings and three questions that evoked negative feelings, although they were allowed to report a smaller or bigger number of questions if they wished. We told them that they could have any motives for their choice and that there was no right or wrong answer. They were also informed that the aim of the interview was to improve this kind of questionnaires for future studies and that the interviewer was not responsible for the present questionnaire design.

Interviews were conducted by two researchers (20 by MW and 10 by GHF), 2–3 months after the respondents had participated in the 2-year follow-up. We conducted four pilot interviews to evaluate the process and ensure dependability (Graneheim and Lundman 2004). As the answers in those pilot interviews were often one or a few short

sentences, and since we did not intend to analyse detailed transcripts, we decided not to record the interviews on tape. The answers were written down as precisely as possible during the interview. The meaning units identified and used in the analysis are based on these notes and cannot be used as quotations because they do not show the exact phrasing of the respondents' answers. As we found that these pilot interviews worked well, we included the data in the analyses. The telephone interviews were semi-structured and lasted 24 min on average (range 10–40 min).

The interview started with a closed question (How often do you participate in surveys?). Forty-eight percent of respondents reported that they participate in surveys never/seldom and 52% often/always. The interview continued with the following open questions used in the analysis:

(1) What factors influence your decision to participate or not in surveys?

(2) If you think of a really good questionnaire on health issues, how would you describe such a questionnaire that would appeal to you, so that you would answer and become motivated?

(3) Now let's continue with the questions you marked when you read through the questionnaire again. Have you found questions that gave you positive/negative feelings?

The study was approved by the ethics committee at Linköping University, registration number 02-324.

Data analysis

Data from the open questions (2) and (3) were analysed using qualitative content analysis, with the aim of providing knowledge and understanding of the phenomenon of respondent satisfaction and burden (Graneheim and Lundman 2004; Hsieh and Shannon 2005; Patton 2002). The interview notes were read several times by the first two authors (MW, GHF), independently. Meaning units were identified and grouped into categories that were then related to satisfaction or burden. The first two authors analysed the interview notes individually and then discussed the results. The other two authors (MK, TS) read some of the interview notes to get to know the interview material. As a final evaluation of the analysis, all four authors read all the meaning units in each category and the final categorization was discussed and agreed upon. The meaning units, as written down during the interviews, are used as illustrations in the text in italics within parentheses. In some cases they are descriptions of ideal or non-ideal general situations and in other cases specific examples from the present questionnaire.

With reference to self-determination theory we categorized respondents into one of three motivational groups on the basis of their answer to the first open-ended question: (1) participate to get a reward, to be seen as helpful or to avoid guilt or shame (controlled extrinsic motivation); (2) participate because it is important or valuable to society (autonomous extrinsic motivation); and (3) participate because it is an interesting or fun experience (intrinsic motivation). Respondents who gave several reasons were assigned to a group based on the main emphasis of their answer. We then analysed the categories of satisfaction and burden across the three motivational groups.

Results

Four categories of respondent satisfaction and five categories of respondent burden emerged in the analysis (Table 1).

Categories of respondent satisfaction

Contribution includes perceived importance (*The more important you find the questions, the more committed you become*) and relevance (*There should be a main thread*) of questions. Judgements on relevance are also made concerning questions in the context of the questionnaire and survey as a whole (*Very important factor that surely influences life and health*) as well as the usefulness of questions (*They must explain how they will use it so that you feel that you can contribute*).

Responsibility comprises expressions by respondents on the importance of the possibility of giving correct and truthful answers (*Important to understand the questions so that I know my answers are correct*). The responsibility also concerns the use of their answers (*If you don't understand the question the results could be misinterpreted*).

Being heard involves the respondents' wishes to be heard and their appreciation for the researcher's ability to listen to what they have to say (*Feels good to share my answers about this with someone*). They described it as important that the person behind the answers is revealed (*I can recognize myself*). Some respondents report that information that they find relevant is not asked for (*My life is very nice and comfortable. That is not shown*).

Reflections that were evoked by questions were appreciated by the respondents (*Positive when you get the questions as a help to reflect over your life and health*). They sometimes learned new things about their own life or lifestyle (*Made my own evaluation*

of my eating habits and was reminded that I need to eat more of certain things) and sometimes got confirmation that they are healthy or that they live a good life (*Fantastic to feel healthy when you see how your life could be*).

Categories of respondent burden

Cognitive burden refers to difficulties with reading or comprehending the questions (*I don't really understand this*) and difficulties with retrieval of the information asked for, judgements, inference or estimation (*Difficult to make judgements of time*).

Unnecessary work is described in terms of repetitive questions (*I already said I don't have pain. Why do I have to answer those questions again?*), questions that the respondent cannot answer (*There shouldn't be questions that you can't answer when you live alone*) and questions the respondent find irrelevant (*This has no relevance for the topic of the questionnaire*).

Distrust consists of respondents feeling manipulated (*Sometimes you realize that they are trying to find things out without the respondent noticing it*) or believing that questions are used as checks that they have understood properly or as a check of previous answers (*I feel they want to check that I am following*). Distrust also includes lack of confidence in the researchers' analysis (*They seem to interpret all kind of stress as negative. To me certain types of stress are positive*) or presentation (*I'm afraid that answers from questionnaires are often wrongly reported when they appear in the newspaper*). Respondents are also concerned about the implications the researcher may make about causes and effects (*You only know yourself if a traumatic event is relevant for stress and health*).

Offending questions on, for example, shame, sexual function, spiritual life and cynicism, are remarked upon (*If you have been offended, it will be offending to answer the question*). Sometimes questions are perceived as provocative or insulting by the respondents (*Provocative questions*) and sometimes as being too personal *(It's none of their businesses*).

Distress is reported by respondents when the questions made them realize things about their present life (*I don't have anyone. I think about it sometimes but now I saw it clearly when I answered the questions*), caused worry and anxiety about the future (*Anxiety about what the future will be like. Loneliness? Illnesses?*) and reminded them of negative aspects in life (*Was reminded of my divorce. You believe that you will stay together, but it didn't turn out that way*).

Experiences of satisfaction and burden in relation to motives for participation in surveys

When the respondents were categorized according to their motives for participation, the pattern of the categories of satisfaction and burden differed across the groups (Table 2).

Characteristic for respondents with controlled extrinsic motivation was that they valued questions that led to reflection but also experienced distress from some questions and were concerned about offending questions. This group was less bothered by distrust and the importance of being heard. Respondents with autonomous extrinsic motives expressed the importance of the opportunity to contribute and wanted to make sure that their answers would be correct and truthful, that is, took responsibility for their answers. They also expressed concern about cognitive problems but rarely spoke of distress and distrust. The intrinsically motivated group expressed the importance of being heard,

appreciated reflection and stressed the importance of a trustful communication. They were less concerned about cognitive problems.

Discussion

Our results show a broad spectrum of positive as well as negative aspects of survey participation. We refer to positive experiences as respondent satisfaction, which is a wider and more comprehensive concept than benefits of participation. For example, respondents can judge the benefit to society as high even if they are disappointed with other aspects of their participation. Our results also show that respondents with different self-determined motivation stress different aspects of satisfaction and burden.

Studies on experiences of participation in qualitative research interviews (Hutchinson et al. 1994) and in internet interviews (Beck 2005) have reported findings closely related to our results on survey participation. Even if the difference between the interview settings is obvious, it is plausible that a health-related questionnaire and a health-related qualitative interview can relate to similar aspects of satisfaction and burden and that survey practitioners can also get valuable knowledge from qualitative research.

To meet the needs of respondents with intrinsic motivation in this study, it is important to show genuine interest in listening to what the respondents have to say and avoid distrust. The importance of a trustful communication and opportunities for respondents to be heard is often stressed in the literature on qualitative interviewing (Patton 2002). In a self-administered questionnaire, communication is established through the introductory letter and through the questionnaire itself. Survey communication has been suggested to follow the same communication rules that govern social relations between strangers, and Dillman (2000) suggests a straightforward

communication that is not misleading to create a mutually respectful relationship (Dillman 2000; Sudman et al. 1996). Control and manipulation, as described in this study, are less discussed aspects of communication in survey methodology. The reason for this might be that aspects of respect and ethics sometimes become more a threat and an obstacle than an advantage (Grayson and Myles 2005). Persuasion techniques and refusal conversion techniques are sometimes used to increase participation and avoiding face validity has been recommended when assessing behaviours such as child abuse (Streiner and Norman 2003). Our results show that respondents are observant on such matters and appreciate a trustful and respectful communication.

For respondents with autonomous extrinsic motivation, allowing the respondents to take responsibility for their answers was particularly important. Other studies have demonstrated that respondents do take responsibility for their answers, for example, by giving explanations or providing more information than requested (Burke Draucker 1999; Ong et al. 2006). In this study, respondents even expressed concern that the researcher might study relationships between questions that would lead to misleading conclusions. However, this willingness to provide adequate answers is not always seen as beneficial in questionnaires. Notes in the margin, explaining or elaborating the answers are sometimes seen as a problem since most questionnaires are never read or evaluated by a person (Streiner and Norman 2003). In qualitative studies, informants can be asked to confirm transcripts and analyses, which gives them the opportunity to take responsibility for their answers and an important role in the research process (Patton 2002). A question for the future is how to improve the opportunity for respondents to take responsibility for their answers also in surveys.

Respondents with controlled extrinsic motivation were characterized by experiencing positive feelings of reflection and distress from questions in this study. Distress in interviews has been found to be associated with reduced willingness to take part in future interviews (de Graaf et al. 2004). Feelings of distress in self-administered questionnaires have mostly been discussed with regard to sensitive questions such as sex, drugs and crimes. This study indicates that the negative influence of questions can also be an issue in answering common questions about health and lifestyle. However, we found more comments on positive reflection than on negative feelings of distress. This is in line with a review of distress in 46 studies involving psychiatric research, in which positive reactions were more common than negative reactions, although the aim of most of the studies was to investigate negative reactions (Jorm et al. 2007). It is possible that self-administered questionnaires have greater positive and negative impacts on self-reflection because respondents have more time to think and reflect on questions than in, for example, a telephone interview. Our study suggests that positive reflection is beneficial for many respondents in health-related surveys and may play an important role in efforts to increase satisfaction of survey participation.

Some of the categories that we found in this study are well known and have been discussed in former participation theories (Groves et al. 2000), for example, expressions of cognitive burden were expected. Health-related questionnaires often comprise established questions and scales that cannot be changed because of copyright restrictions or comparability issues. Therefore, scales that are not ideal regarding cognitive function are still in use in the LSH study and many other research studies. Patient-perceived validity of such scales have also been questioned (Kim et al. 2006; Mallinson 2002). Cognitive interviews are now standard practice among survey researchers and have been shown to be a successful tool in identifying cognitive problems in questionnaire design

(Willis 2005). Such interviews could also include probing on other aspects of satisfaction and burden as shown in this study.

A methodological issue worth reflecting on is the use of telephone interviews. The advantages of using telephone interviews are that interviewer influence can be minimized and the respondents are interviewed in the same environment in which they filled in the questionnaire. One disadvantage of telephone interviews is that it is not possible for the interviewer to see body language or facial expressions. Without audio-recording, the possibility of noticing details in wording and expressions is limited. As the answers were often one or a few short sentences and we did not intend to analyse detailed transcripts, we chose to write down the answers as tested in the pilot interviews. Trustworthiness was increased by using all four authors at different stages of the analysis. In a final evaluation of the analysis, all four authors read all meaning units in each category. Meaning units are used as illustrative examples in the presentation of the results to give the reader the opportunity to trace the categories back to the interview documentation (Patton 2002).

These results are not necessarily transferable to other populations, survey topics or survey modes. Loosveldt and Storms (2008) discuss the difficulties in conducting surveys on surveys because there is a tendency to include only the most positive respondents. An advantage of our study population is that it does include people who usually participate in surveys and people who seldom do so.

Categorization into the three motivational groups based on a single question is crude. However, this is an explorative study which evoked ideas that need to be tested also in quantitative, experimental studies. Future studies are needed to measure different kinds

of motivation more thoroughly, and relate this to aspects of satisfaction and burden and quality of response in larger populations.

Efforts to follow-up on respondents' reactions have been pointed out to be especially important in panel surveys (Sikkel and Hoogendoorn 2008) and in trauma-focused research (Newman and Kaloupek 2004). However, we would argue that respondents' reactions should be taken seriously in all surveys to improve the respondents' willingness to become committed to the study and to have a positive influence on their choice to participate in upcoming surveys. Self-determination theory may provide new ideas on motivation in the survey task and seems to be applicable to survey methodology. Can the theory also provide ideas about how to increase autonomous motivation among respondents by stimulating factors that appeal to these motives is an intriguing question.

References

Beck, C. T. 2005. Benefits of participating in internet interviews: women helping women. *Qualitative Health Research* 15 (3): 411–22.

Biemer, P. P., and L. E. Lyberg 2003. *Introduction to survey quality*. Hoboken, NJ: John Wiley & Sons.

Burke Draucker, C. 1999. The emotional impact of sexual violence research on participants. *Archives of Psychiatric Nursing* 13 (4): 161–69.

Curtin, R., S. Presser, and E. Singer. 2005. Changes in telephone survey nonresponse over the past quarter century. *Public Opinion Quarterly* 69 (1): 87–98.

de Graaf, R.et al. 2004. Negative and positive participant responses to the composite international diagnostic interview – results of the Netherlands Mental Health Survey and Incidence Study. *Social Psychiatry and Psychiatric Epidemiology* 39 (7): 521–27.

de Leeuw, E., and W. de Heer. 2002. Trends in household survey nonresponse: a longitudinal and international comparison. In *Survey nonresponse*, edited by R. Groves, D. Dillman, J. Eltinge, and R. Little, 41–54. New York: Wiley.

Deci, E. L., and R. M. Ryan 1985. *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.

Dillman, D. A. 2000. *Mail and Internet surveys : the tailored design method*. Hoboken, NJ: Wiley.

Graneheim, U. H., and B. Lundman. 2004. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today* 24 (2): 105–12.

Grayson, J. P., and R. Myles. 2004. How research ethics boards are undermining survey research on Canadian university students. *Journal of Academic Ethics* 2 (4): 293–314.

Groves, R. M., E. Singer, and A. Corning. 2000. Leverage-saliency theory of survey participation: description and an illustration. *Public Opinion Quarterly* 64 (3): 299–308.

Hsieh, H. F., and S. E. Shannon. 2005. Three approaches to qualitative content analysis. *Qualitative Health Research* 15 (9): 1277–88.

Hutchinson, S. A., M. E. Wilson, and H. S. Wilson. 1994. Benefits of participating in research interviews. *Image: Journal of Nursing Scholarship* 26 (2): 161–4.

Jorm, A. F., C. M. Kelly, and A. J. Morgan. 2007. Participant distress in psychiatric research: a systematic review. *Psychological Medicine* 37 (7): 917–26.

Kim, M.-Y., A. Dahlberg, and P. Hagell. 2006. Respondent burden and patient-perceived validity of the PDQ-39. *Acta Neurologica Scandinavica* 113 (2): 132–37.

Loosveldt, G., and V. Storms. 2008. Measuring public opinions about surveys. *International Journal of Public Opinion Research* 20 (1): 74–89.

Mallinson, S. 2002. Listening to respondents: a qualitative assessment of the Short-Form 36 Health Status Questionnaire. *Social Science & Medicine* 54 (1): 11–21.

Newman, E., and D. G. Kaloupek. 2004. The risks and benefits of participating in trauma-focused research studies. *Journal of Traumatic Stress* 17 (5): 383–94.

Ong, B. N., K. M. Dunn, and P. R. Croft. 2006. "Since you're asking …": Free text commentaries in an epidemiological study of low back pain consulters in primary care. *Quality & Quantity* 40 (4): 651–59.

Patton, M. Q. 2002. *Qualitative research & evaluation methods*. London: Sage.

Ryan, R. M., and E. L. Deci. 2000. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist* 55 (1): 68–78.

Sikkel, D., and A. Hoogendoorn. 2008. Panel surveys. In *International handbook of survey methodology*, edited by E. D. de Leeuw, J. J. Hox, D. A. Dillman, 479–99. New York: Taylor & Francis Group.

Singer, E., and R. M. Bossarte. 2006. Incentives for survey participation – when are they "coercive"? *American Journal of Preventive Medicine* 31 (5): 411–18.

Streiner, D. L., and G. R. Norman 2003. *Health measurement scales: a practical guide to their development and use*. Oxford: Oxford University Press.

Sudman, S., N. M. Bradburn, and N. Schwarz 1996. *Thinking about answers: the application of cognitive processes to survey methodology*. San Francisco: Jossey-Bass Publishers.

Surkan, P. J., G. Steineck, and U. Kreicbergs. 2008. Perceptions of a mental health questionnaire: the ethics of using population-based controls. *Journal of Medical Ethics* 34 (7): 545–47.

Willis, G. B. 2005. *Cognitive interviewing : a tool for improving questionnaire design*. Thousand Oaks, CA: Sage Publications.

Table 1 Description of the categories of respondent satisfaction and respondent burden

Categories of respondent satisfaction	**Categories of respondent burden**
Contribution *(importance, relevance and usefulness)*	Cognitive burden *(difficulties to understand, retrieve, estimate and give answers)*
Responsibility *(give correct and truthful information)*	Unnecessary work *(not applicable or repetitive questions)*
Being heard *(expression and being listened to)*	Distrust *(control, manipulation and misinterpretation)*
Reflection *(reflection, insight and confirmation)*	Offending questions *(offending or too personal questions)*
	Distress *(worry, anxiety or sadness caused by question)*

Table 2 Categories of respondent satisfaction and burden characteristic for respondents with three types of motivation to participate in surveys according to self-determination theory

Controlled extrinsic motivation (N=5) *Participate to get a reward, to be seen as helpful or to avoid feelings of guilt or shame.*	**Autonomous extrinsic motivation (N=17)** *Participate because it is important or valuable for society.*	**Intrinsic motivation (N=8)** *Participate because it is an interesting or fun experience.*
Reflection Offending questions Distress	Contribution Responsibility Cognitive burden	Being heard Reflection Distrust