

Case study: The effect of text message reminder on survey nonresponse

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Abstract

In 2017 the National Institute for Health and Welfare Finland started the National FinSote Survey which enables monitoring the changes occurring in the population's well-being and health by different population groups and regions. It is a mail and online survey where we also tested some new ways of approach respondents in order to achieve a better response rate and to find methods for applying adaptive data collection methods in the future data collection rounds. This paper is a small case study of how sending text message reminders affected the response rate in the test group of 20 to 54 year old respondents. The study shows that sending a text message reminder was effective among some age groups but it was not a very cost-effective procedure considering the whole age group.

Keywords: BNU2018, nonresponse, response rate, approaching respondents, adaptive data collection

1 Introduction

The National FinSote Survey is a study of health, well-being and service use among Finnish adult population. It enables monitoring the changes occurring in the population's well-being and health by different population groups and regions. The study also produces follow-up and evaluation data on how well the service needs of the population are met as well as the views of the population on the social and health care service system, and the availability, quality and use of services.

The FinSote Survey was conducted for the first time in the fall of 2017 and the data collection period ended in April 2018. The sample size was 59 400 of adults 20 years old and upwards. The final response rate was 46% with big differences between different age groups; 20-to-54-year-olds 28%, 55-to-74-year-olds 58% and 75 years and older 57% (Pentala-Nikulainen *et al.*, 2018).

Information was collected by mail and online questionnaire. The questionnaire form was available in Finnish, Swedish, Russian and English. The participants were contacted in total 4 times by sending them a paper form or a reminder letter. With every contact there were also instructions on how to respond online.

The FinSote Survey also works as one of institute's the pilot surveys in testing new methods for reaching participants in population surveys. In the future we are interested in applying adaptive data collection methods in survey settings and are currently experimenting different ways of activating especially young participants to take part in mail-based questionnaire surveys. This case study is part of that experiment. Reminding people about the importance of their participation in a survey can increase response rates, minimise bias in the data, and reduce the need to approach an excessive number of business (Dillman, 2007).

2 Methods

During the data collection we tested sending a reminder via text message to a test group of 7991 20-to-54-year old nonrespondents. The text reminder was an extra contact between the second and the third contact time approximately 4 months after the first contact. We will later on refer to this group as a test group. The control group consisted of 9585 20-to-54-year old nonrespondents for whom it was not possible to obtain an up-to-date mobile phone number. The reasons for the phone number not being available were usually the use of pre-paid subscriptions or having a mobile phone subscription under a new address or different name. The test group and the control group differed very little age and gender wise; in the test group there were slightly more older nonrespondents than in the control group.

The text message consisted of two parts. The first part was

"Hi! You received an invitation to take part in FinSote Survey earlier by mail. Please respond at www.thl.fi/finsote/answer. Your respondent code is xxxx. You will receive the password in a separate message."

and the second part was

"Your password concerning FinSote Survey is xxxx. Thank You in advance! More information at www.finsote.fi or p. 0800 97730. Please do not respond to this text."

The text messages were sent by programmed interface and we had a confirmation of each text which was sent to the participants. All the 15892 text were successfully delivered to the participants.

3 Results

The text messages did not result in higher number of contacts or refusals. There was only one reported case where the person who informed us of his refusal mentioned the text message as a reason so we assume that it was a suitable way to contact the test group.

When comparing the test and control groups' overall actualised response rates, it seems that the test group had a little higher response rate than the control group (12.7% vs 10.7%). However the effect was statistically significant only in some age groups, 25-to-29-year-olds and 45-to-49-year olds (figure 1 and table 1). There was also a difference between genders; the effect of text reminder was significant only among men (table 1).

Figure 1: Actualised response rates of the control and test groups by age

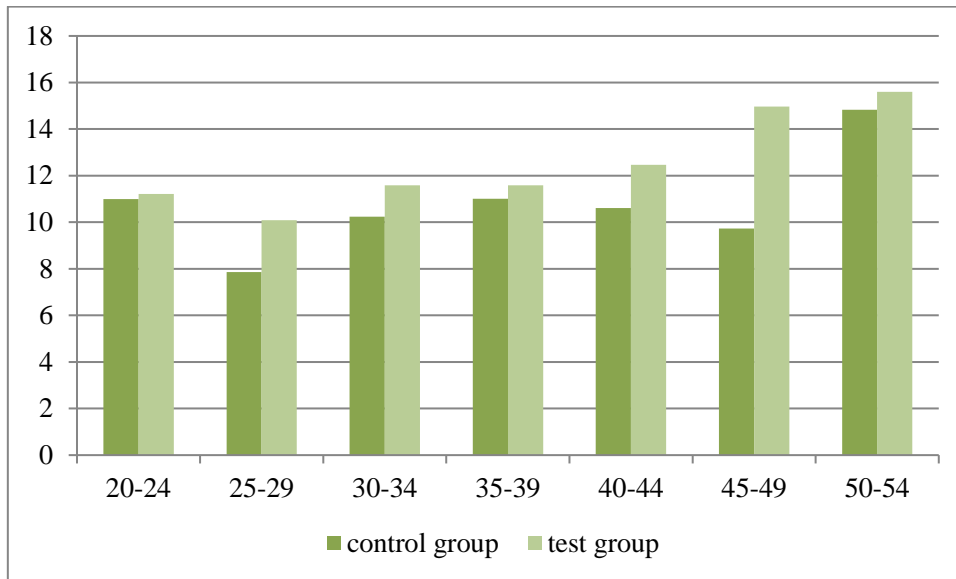


Table 1: Actualised response rates of the control and test groups by gender and age and p value for the difference between control and test group

Group	Response rate	P value
Men		
control	8.1	
test	11.2	<0.0001
Women		
control	13.5	
test	14.6	0.14
age group 20-24		
control	11.0	
test	11.2	0.87
age group 25-29		
control	7.9	
test	10.1	0.05
age group 30-34		
control	10.2	
test	11.6	0.027
age group 35-39		
control	11.0	
test	11.6	0.65
age group 40-44		
control	10.6	
test	12.5	0.16
age group 45-49		
control	9.7	
test	15.0	0.0001
age group 50-54		
control	14.8	
test	15.6	0.6

4 Discussion and conclusions

The text message reminder had a positive effect on response rates especially among men and 25-to-29-year olds and 45-to-49-year olds. Some of the effect in the older age group can be explained by the slight differences in the age distributions between the test and control groups.

Although the positive effect of text message reminder was significant in the test group the overall response rate still remained very low on both groups (table 1). This means that the text reminder might not have been effective enough for this age group and more action should be taken in activating these participants.

Sending a text reminder was an easy way and did not require a lot of work or time resources since the text sending application and interface had already been deployed in our institute. Most of the monetary resources went into requiring the mobile phone numbers for the nonrespondents from the phone company.

Sending a text reminder to a large group was not very cost-effective; at the end we calculated that the text reminder brought us about 170 participants who would have otherwise been nonrespondents. That is not a big group but in this era of t nonresponse large every participant counts. The future studies should include testing whether sending the text at an earlier point or even twice during the data collection period would increase the positive effect.

References

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