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An advance letter did not increase the response rates in a telephone survey: a randomized trial

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Abstract

Objective: To test the impact of an advance letter on response and cooperation rates in a nationwide telephone survey, given previous inconsistent results.

Study Design and Setting: Within the context of a larger telephone survey, 1,000 Australian households were randomly selected to take part in this trial. Half were randomly allocated to receive an advance letter, whereas the remainder did not receive any advance communication. Response and cooperation rates were compared between the two groups.

Results: A total of 244 interviews were completed, 134 of which were with households that had been sent an advance letter. Intention-to-treat analysis revealed no significant difference in response between those who had received a letter and those who had not (26.8% vs. 22.0%, respectively). In addition, there was no significant difference between the groups in terms of either cooperation (78.4% vs. 79.7%) or response rate (56.3% vs. 57.9%), and no clear differences emerged in terms of the demographic characteristics of the two groups.

Conclusion: An advance letter was not seen to be effective in increasing response or cooperation rates in a nationwide telephone survey. Researchers should consider alternative methods of increasing participation in telephone surveys. © 2013 Elsevier Inc. All rights reserved.

Keywords: Advance notification; Cooperation rate; Randomized trial; Research methods; Response rate; Telephone survey

1. Introduction

Telephone surveys are commonly used in epidemiological and public health research, partly owing to their comparatively low cost and ability to cover a wide range of the population, both geographically and demographically [1]. However, in line with epidemiological studies in general [2], decreasing response rates have been observed, particularly in recent years [3,4]. The rise of unsolicited calls and telemarketing has meant that people are less likely to take calls from people they do not know [5], whereas the increased use of answering machines and caller identification may also have impacted negatively on telephone survey response rates [6,7]. The identification of practical and effective strategies to improve response rates has therefore become increasingly important [8].

One strategy for improving telephone survey response rates is the use of an advance letter, which is sent to potential respondents before the first telephone contact [9]. These letters aim to convey the study's importance and allay any concern on the part of the respondent [4], and commonly evoke the principles of social utility and reciprocity in an attempt to increase the probability that a respondent will cooperate. Other techniques that may be used include personalization; the offer of a reward; and appeals to authority through, for example, the use of an official letterhead [10].

Past research has generally demonstrated an overall positive effect of these letters on response rates in both mail and telephone surveys [11,12], with a meta-analysis showing that the odds of cooperating were 1.6 times greater among those who were sent an advance letter compared with those who were not [4]. However, some studies have found no significant difference between groups with regard

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What is new?

Key findings

- An advance letter did not increase the response or cooperation rates in a nationwide telephone survey, with similar response rates obtained among households that received an advance letter (56%) and those that did not (58%). Intention-to-treat analysis revealed similar results (27% vs. 22%, respectively).
- This lack of effect was not explained by differences in demographic characteristics and is likely to be applicable to studies of the Australian working population.

What this adds to what was known?

- Declining response rates in telephone surveys have been observed in recent years, with attempts to improve these rates including sending an advance information letter. The results of this study suggest that such a letter may not necessarily be an effective method of increasing response rates.

What is the implication and what should change now?

- Alternative methods of increasing response rates in telephone surveys should be investigated, including the use of incentives, mass media advance notification, and answering machine messages.

to response rate [1,13], and the literature shows that the response rates of particular subgroups, including younger populations, may actually be decreased by an advance letter, leading to differential noncooperation [3,14]. This can be partially explained by the negative effect that advance letters may have on reluctant respondents by informing them of exclusion criteria and thus allowing them to prepare their refusal to participate in advance [3].

In light of these inconsistent results, the decision was made to conduct a randomized trial to determine whether sending an advance letter would impact on the cooperation and response rates in a telephone survey. This study was conducted as part of a larger nationwide survey investigating the prevalence of occupational exposure to carcinogens in Australia.

2. Methods

The Australian Work Exposures Study was a nationwide telephone survey of Australian workers aged between 18 and 65 years. The sample was obtained from a survey-sampling firm, and consisted of a list of household telephone numbers and address details sourced from various directories and public domain data sources, including but not limited to White Pages telephone directories. This study received ethical approval from the University of Western Australia's Human Research Ethics Committee.

A simple sample size calculation revealed a minimum required sample of 357, with the confidence level set at 95% and margin of error at 5%. The decision was made to round this up to 500 per group. Therefore, the sample for the present study comprised a subset of 1,000 households randomly selected from the main study sample using computerized random number generation. A parallel design was used in which half of these households were randomly assigned (using the same method) to receive an advance letter, whereas the remaining households did not receive any advance communication and served as the control group. All letters were sent in university-identified envelopes addressed to an individual within the household (e.g., ''J Smith''), and clearly displayed the name and university affiliation of the project. The letter described the overall purpose of the study and informed potential participants that telephone contact may be made within the coming weeks. The importance of the study was emphasized, and a Web site and contact details were provided to enable further information to be obtained if desired. The letter was signed by the study's chief investigator, identified as a university professor.

Letters were sent in October 2011, approximately 1−2 weeks before the first attempt at telephone contact. Up to 10 attempts to contact each household by telephone were made before the household was designated as unreachable. Once contact was made, eligibility to participate in the study was determined by asking whether there was a currently employed adult (aged 18−65 years) in the household. In addition, an attempt was made to recruit respondents in the gender ratio of two males to every female using a modified interview request. One person in each household who was of the specified gender and the next to have a birthday was selected for interview. All interviews were conducted by trained interviewers, who gave a brief description of the study and obtained oral informed consent from the respondent. In addition, for those households that were sent a letter, the interviewer asked whether the respondent recalled receiving the letter.

Interviews were recorded as complete when the interviewer was able to administer a complete questionnaire over the telephone. Refusals were recorded where contact was made with an eligible household but an interview was not completed. Households with an unconnected number, nonresidential numbers, non-English speaking respondents, and respondents who were too ill or did not fit study criteria (i.e., not aged between 18 and 65 years and/or not in current employment) were excluded as ineligible. All households from which no answer was received were recorded as being of unknown eligibility for the purposes of the response calculations.

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