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A prenotification letter increased initial response, whereas sender did not affect response rates

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Abstract

Objective: To find ways to improve response rates of medical and health surveys. We investigated whether a prenotification letter instead of a second reminder and varying senders of the questionnaires would affect response rates.

Study Design and Setting: We present the results of two studies. In the first study, four groups were compared that either received a prenotification letter (group 1 and 2) or a second reminder letter (group 3 and 4); received the questionnaire from either a research institute (group 1 and 3) or a health insurance company (HIC; group 2 and 4). In the second study, we compared two groups that received the questionnaire sent by either a HIC or a hospital. Response rates, response speed, respondent characteristics, item nonresponse, and mean scores on quality aspects and global ratings were compared.

Results: Response rates did not differ significantly between groups. Prenotification groups returned their questionnaires faster. No other significant differences were found for response speed, respondent characteristics, item nonresponse, or mean scores.

Conclusion: A prenotification letter does only increase initial response speed and does not increase total response rates. A prenotification letter should be considered when quick response is desirable. Varying senders had no effect on response rates.

Keywords: Response rates; Surveys; Health services research; Prenotification; Sender; Questionnaire

1. Introduction

Paper questionnaires are widely used to collect data for medical and health services researches [1−6]. However, much variation in response rates has been observed. A systematic review of American studies showed a mean response rate of 60% in paper questionnaires, with a standard deviation of 21% [1]. In the Netherlands, Zuidgeest et al. [7] found an average response rate of 55% (range: 20−79%) for studies using a patient experience questionnaire, the Consumer Quality Index. Nonresponse reduces the effective sample size and can introduce bias. Finding ways to increase or maintain response rates for paper questionnaires may, therefore, improve the quality of the research.

A lot of research has been done on factors that may influence response rates. For instance, a review by Edwards et al. [2], in which he investigated 481 trials on paper questionnaires, showed that response rates increase considerably when using monetary incentives, a teaser on the envelope or a more interesting questionnaire topic. Other factors that may increase response rates are using a prenotification, follow-up contact, shorter questionnaires, providing a second copy of the questionnaire at follow-up, mentioning an obligation to respond, university sponsorship, personalized questionnaires, and an assurance of confidentiality. Response rates reduce when the questionnaire includes questions of sensitive nature. A review and meta-analysis of Nakash et al. [8] also showed that intensive reminder systems, shorter questionnaires, and incentives may improve response rates.

An important method that describes procedures to increase response rates is the ‘‘total design method (TDM)’’ developed by Dillman [9,10]. The TDM is ‘‘the identification of each aspect of the survey process (even the minute ones) that may affect response quantity or quality and shaping them in a way that will encourage good response.’’ In other words, Dillman argues that each aspect of a questionnaire study may influence the willingness to respond on an invitation to fill out a questionnaire. Important features of the TDM are the design of the questionnaire, the cover letter, return envelope, mail out date, and follow-up mailings.

There are also studies that combined some of the abovementioned factors, to investigate whether it might result in

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What is new?

Key findings

- A prenotification letter does increase initial response speed.

What this adds to what was known?

- A combination of prenotification or a second reminder and varying sender of the cover letter in a patient survey had no additional effect on the response rates. Varying senders had no effect at all on response rates.

What is the implication and what should change now?

- A prenotification should be considered when quick response is desirable. More research is needed to investigate whether a more familiar sender might improve response rates.

higher response rates than using just one of these factors. However, results of such studies are inconclusive [11−16]. For instance, Slijkhuis et al. [16] showed that using a prenotification and follow-up contact increased response rates compared with using only follow-up contact, whereas Hammink et al. [13] combined prenotification and follow-up without any positive result. Slijkhuis et al. [16] also showed that sending a second paper questionnaire in combination with a prenotification did not influence response rates. Moreover, Hart et al. [14] showed that personalized prenotification with an e-mailed survey did not have a significant positive effect on response rates. Beebe et al. [11] investigated the impact of manipulating questionnaire length (two- vs. four page) and prenotification type (letter or postcard). Results showed that response rates did not vary according to questionnaire length or prenotification type. Kelly et al. [15] tested the following two factors, a money incentive (3 or 5$) and length of the questionnaire (short or long). Combining these factors did not result in higher response rates. Draisma and Smit [12] investigated whether a personalized introduction letter and a final reminder by telephone with the possibility for a telephonic interview had an effect on response. It turned out that the telephonic contact increased response substantially from 23% to 51%.

In the Netherlands, questionnaires are increasingly used to measure quality of care from a consumers' perspective. The Dutch standard (since 2006) to measure quality of care from a consumers' perspective is the Consumer Quality Index (CQI) [17−19]. One of the first developed CQI instruments is the CQI Health plan, which has been administered yearly from 2005 onward [17]. Response rates for the CQI Health plan are declining over the years, response rates of 45%, 39%, 34%, 31%, 32%, and 33% were found, respectively for 2005−2010 [20−25]. This trend is also seen for other CQI surveys. These trends are in line with other literature that shows that response rates in health services research have been declining over the past few decades [11]. To ensure a minimum number of respondents, the sample size for the CQI Health plan has been increased over the years. It is however not possible to continue increasing the sample size. Therefore we have decided to investigate factors that may increase response rates.

The CQI consists of a series of questionnaires and guidelines on how to collect consumers' experiences with health care. The standard CQI data collection method, based on the TDM [9,10], is first to send out a paper questionnaire with cover letter at week 0, followed by a thank you/reminder postcard at week 1, a reminder letter including a second paper questionnaire at week 4, and usually a third reminder letter at week 6. Mostly the cover letters are sent on behalf of the health insurance company (HIC) because databases of insurance companies are used to select participants.

We decided to investigate two factors that might affect the response rate as mentioned by Edwards et al. [2]. First, whether a prenotification letter instead of a second reminder improves response rates or response speed was investigated. Prenotification may work because it underscores the legitimacy of the survey, takes away suspicion, communicates the value of the survey, and evokes the principles of social exchange [26]. Second, whether the sender (hospital, HIC, or research institute [RI]) of a cover letter influence response rates was investigated. Research showed that consumers might be more willing to respond when senders are more familiar or when one feels affection for them [2]. The two factors were studied using the results of two CQI studies that were originally set up independent of each other. In a study on consumer experiences with their health plan (CQI health plan), we investigated whether prenotification and varying senders (either RI or HIC) had an effect on response rates and response speed (study 1). In a study on consumer experiences with a hospital admission (CQI Hospital admission), we again investigated whether the sender had an effect on response rates and response speed looking at another type of sender (either HIC or hospital; study 2). Varying sending scheme and type of sender might not only influence the response rate but it might also be that different groups of people respond or that some of the respondents fill in the questionnaires differently. Therefore, in both studies, we examined whether respondent characteristics, item nonresponse, and mean scores on quality aspects and global ratings differed between the research conditions.

2. Methods

For this article, we used the results of two separate CQI studies. A study on consumer experiences with their health