Letters to the Editor

Effect on response rates of stamps vs a pre-printed business reply envelope in a mailed follow-up survey among middle-aged Danish men

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A recent Cochrane review on the effect of 98 different strategies to increase the response rates in postal surveys1—commented in this journal2—have indicated that the use of stamped return envelope as opposed to pre-printed business reply envelope was among the eight most effective ways. This method increased response with a pooled odds ratio (OR) of 1.29 [95% confidence interval (CI): 1.18, 1.42]. However, a number of the studies in the Cochrane review were based upon surveys among health professionals and consequently we found it relevant to examine the effect of this method in a population-based cohort. Thus, we recently evaluated the effect on response rate of stamped vs business reply envelopes in a follow-up of middle-aged men and assessed whether any differences in response rates are associated with differences in the distribution of variables known to be related to non-response.

A cohort of 9216 men, born in 1953 in the Copenhagen Metropolitan area were mailed a postal questionnaire between September 2004 and November 2004. Each participant was assigned a random study number (1–9216) and for practical reasons the data collection was divided into three waves with an interval of 3 weeks. The first wave comprised cohort members with study number 1–3000, the second wave study number 3001–6000 and the third wave study number 6001–9216. During the second wave the last half (4500–6000) of the men were mailed a questionnaire with a stamped return envelope, while the rest of the men in this wave and the two other waves received a questionnaire with a pre-printed business reply envelope. Chi-square and t-test were used to examine differences in response and the distribution of selected covariates [cohabitation status, self-reported depression, self-rated health, current smoking and body mass index (BMI)] calculated on basis of self-reported height and weight] from the questionnaire between waves.

Table 1 shows that among the 7726 men who received a questionnaire with a pre-printed business reply envelope, the response rate was 65.1%, while it was 68.3% among the 1500 men who received a stamped return envelope. Thus, the OR of response was 1.15 (95% CI: 1.02, 1.30) comparing stamped vs pre-printed business reply envelopes. Mean BMI and prevalence of smoking, living alone and depression were the same in all waves, while poor self-reported health were more common among men who had received and used the stamped return envelope.

The present study among middle-aged Danish men confirms the findings from previous studies that the use of stamped return envelope instead of pre-printed business reply envelope increases response rates and shows that this strategy also works in a population-based survey. In a previous analysis of the non-response we found that the incidence of register-based adverse health outcomes were higher among non-responders,3 and concluded that a follow-up based on survey participants tends to underestimate the frequency of adverse health outcomes. The present study suggests that using stamped return envelopes instead of pre-printed business reply envelopes might reduce this problem due to a higher response rate. On the other hand, it is more expensive to use stamped return than business reply due to costs of the additional work with stamping envelopes and the unused return envelopes, which must be considered when deciding whether it is cost efficient to use stamped reply on all envelopes. In the present study this cost is estimated to ~1000 Euros corresponding to 30 Euros per added participant. We also used two other strategies to improve response rate: university as delivery source and providing a second copy of the questionnaire to non-responders at follow-up 2 weeks later, which have been shown to increase response rates with pooled OR of 1.32 (95% CI: 1.13–1.54) and 1.51 (95% CI: 1.13–2.00), respectively.1 The stamped return envelope used in the present study seems to be a less effective strategy and more expensive than the first of the two other strategies, while it was cheaper than the most expensive second strategy. Although this study was conducted in a population-based cohort the

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population was limited to middle-aged men. We cannot exclude the possibility of a smaller effect of the stamped reply envelope in a younger population with a less traditional view of the personal characteristics of the stamped return vs the pre-printed business reply envelope.

Conflict of interest: None declared.

References


Response to ‘Cancer incidence rates among South Asians in four geographic regions: India, Singapore, UK and US’

From GIRIDHARA R BABU

I strongly disagree with the statement ‘The low rates in India compared with US whites and SA in UK and US may be due partially to under diagnosis but may also be due to lifestyle and environmental factors.’ According to reasons elucidated below, the low rates in India are due to gross under-representation of the vast majority of the population, underreporting of cases and many missed cases due to survival bias. Almost all of the population-based registries from India contain data from mostly cancers reported from conurbations of the respective city. The reports produced by these registries cover a population of 48.5 million which amounts to <5% of the total population of the country. On the other hand in Singapore and UK, the registries provide national population-wide figures, and in the United States the registries comprise a greater number of cities than in India. Hence the comparison between Indian registries with the other registries is misleading.

India currently does not have successful population-wide mass screening programs for cancer detection even in the cities mentioned in the study. Hence the new cases of cancer detected by registries under-represent the total number of cases, and may over-represent the less severe cases or cases from upper socioeconomic strata who are able to afford health care.

In India, it can be assumed that severe cases either die at home before detection (more so in rural areas) or die at hospital before diagnosis. The cases that are represented in the registries are only those who survived long enough to get detected and hence there is a potential for severe survival bias in the Indian registry data.

Furthermore, the lifestyle and environmental factors in urban areas are probably much worse or certainly

Table 1 Response rate and distribution of selected health indicators in relation to delivery of postal questionnaire among 9216 middle-aged Danish men

<table>
<thead>
<tr>
<th></th>
<th>Pre-printed business reply envelope</th>
<th>Stamped reply envelope</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1 wave</td>
<td>2 wave</td>
</tr>
<tr>
<td>Number mailed to</td>
<td>3000</td>
<td>1500</td>
</tr>
<tr>
<td>Number returned</td>
<td>1968</td>
<td>996</td>
</tr>
<tr>
<td>Response rate (%)</td>
<td>65.6</td>
<td>66.4</td>
</tr>
<tr>
<td>Living single (%)</td>
<td>18.7</td>
<td>20.1</td>
</tr>
<tr>
<td>Self-reported depression (%)</td>
<td>12.6</td>
<td>12.2</td>
</tr>
<tr>
<td>Poor self-rated health (%)</td>
<td>10.5</td>
<td>10.3</td>
</tr>
<tr>
<td>Smoking (%)</td>
<td>42.8</td>
<td>43.1</td>
</tr>
<tr>
<td>Mean BMI</td>
<td>26.1</td>
<td>26.1</td>
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</tbody>
</table>

*All waves (pre-printed business reply) vs second wave (stamped).