Nonresponse and fieldwork problems
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"Even after decades of research on nonresponse we remain woefully ignorant of the causes of nonresponse at a profound level (Brick, 2013)."

- Efforts to enhance response rates usually have limited effects: a few percentage points increase due to better training of interviewers, more calls, or higher incentives is often the most you can expect.
- It is known that some groups are easier to contact (basically people who are more often at home, or who belong to a larger household where more often someone is at home), and that some people are more willing to participate (socially integrated people, people interested in the topic or identifying with the sponsor). This will have an effect on the outcomes of some surveys (time use surveys, electoral surveys).
- It is also known, however, that response rates correlate poorly with nonresponse bias.

One reason for the lack of clear-cut results could be that major disruptions in fieldwork overrule minor individual effects. Some of these major disruptions will be discussed below. These mainly occur in face-to-face surveys

Ineligibility

To properly organise fieldwork prior estimations of eligibility are required. In the European Social Survey, a survey among the inhabitants of European countries aged 15 years and older, the ineligibility rate in a number of countries was much higher than expected. This was mainly due to the sampling frame being outdated or comprising many errors. In this case interviewers will have to spend a lot of time visiting addresses and assessing their eligibility. If they are paid for completed interviews only, this is a highly unrewarding task. The result may be unmotivated interviewers, interviewer drop-out, long fieldwork periods and also a lower response rate than could be realised. A high ineligibility rate may reduce the final effective sample size and endanger the precision of the outcomes. As long as sample units are not equally affected by fieldwork problems, this issue may reduce the relationship between response rates and nonresponse bias.

The opposite is also possible. If, in the next round of the survey, a high rate of ineligibles is expected but does not materialise, because the sampling frame is now up-to-date, the number of eligible sample units is too large. This will either result in exceeding the budget and taking more time for fieldwork, or (most likely) in unprocessed cases or incomplete recruitment efforts for the final sample units (too few calls, no refusal conversion) in an effort to remain within the budget. If sample units in particular areas (regional units, big cities) are not followed up, or if little efforts are paid to the most difficult units (living far away, rarely at home) nonresponse bias will most likely be larger than necessary.

Interviewers

Interviewers are the key agents in obtaining response in face-to-face surveys, and it is well-known that response rates vary across interviewers. Their remuneration differs across countries, organisations and surveys. In the European Social Survey some survey agencies hire interviewers as regular employees. Those will be paid by the hour. Other agencies pay interviewers for completed interviews only, possibly with a little extra for travel or completing Contact Forms. Occasionally interviewer bonuses are paid, based on the personal or general response rate. When interviewers

are paid per interview, the ineligibility rate, the contactability of sample units and their likelihood of response are important determinants of the interviewer earnings. If the ineligibility rate is high, or people are rarely to be found at home or not immediately likely to cooperate, interviewers may drop out of a survey as has happened in the ESS. This is more likely when they are not used to probability sampling, and thus are not allowed to select the most willing household member or substitute nonrespondents by their more willing neighbours. Close monitoring can bring these problems to light, and new interviewers may be deployed (hopefully at better payment conditions).

The fact remains that interviewers can have an effect on response rates and nonresponse bias. This is especially the case when interviewers only work in particular areas, and when particular areas are only covered by one interviewer, as is the case in some countries in the European Social Survey.

Response expectations

In the preparation of a survey an educated guess is made with regard to the expected response rate. The size of the gross sample is based on this estimate. Of course it does happen that this estimate is spot on. It is also possible, however, that the expected response rate was too optimistic, and that the number of completed interviews after a particular period is much lower than expected. Ideally fieldwork efforts could have been intensified before this, but this is not always possible. If fieldwork progress is slow and the end of fieldwork date is given priority, the response rate will be lower than expected. Difficult cases will not be followed up. This could mean that nonresponse bias will be larger than necessary or possible (given an extension of fieldwork).

It can also happen that the response rate expectation was too pessimistic. This will mean that the number of completed cases will have reached its target when a lot of cases are still in the field. Of course it will be possible (and should be done) to follow up on all sample units with equal efforts. If the main target in the contract was the number of completed interviews, and a major part of the budget will already have been spent on conducting the actual interviews – leaving not much money left for additional interviews – fieldwork may be stopped prematurely. Of course this depends on the targets in the contract (# of interviews, response rate, targets for subgroups). In this case the response rate will be as expected, but could have been higher. Depending on the type of units that have not been fielded at all, or not completely, and their regional distribution, nonresponse bias in this situation may be larger than necessary.

A variant of this situation can occur in mixed mode surveys, where sample units are first asked to answer a web survey, and nonrespondents are subsequently approached face-to-face. In a recent Dutch survey among members of minority ethnic groups the participation in the first web phase was much larger than expected. This meant that the target number of interviews had almost been reached after the first phase, and that much less efforts were spent on the second face-to-face phase. This again meant that the response rate had been reached (but could have been higher), but that the group less likely to participate in a web survey was most likely underrepresented, again possibly resulting in a larger nonresponse bias than necessary.

Limited fieldwork period

Surveys are expected to deliver a minimum of respondents, achieve a minimum response rate and finish at a given moment. As mentioned above, stopping at a particular date when a number of cases are not or incompletely processed, will reduce the response rate and may increase nonresponse bias if the open cases are not a random sample.

Situations like this also occur in permanent surveys, i.e. the Dutch Labour Force Survey, where interviewers have a limited time slot to interview their sample units. After the deadline units still in the field (or not yet in the field) are nonresponse.

Competition other surveys

In surveys there is a trade-off between accuracy and timeliness. Fieldwork may be stopped to deliver data on time. Another reason to stop fieldwork is that priority is given to another survey, and interviewers (and their laptops) are rescheduled.

Related to this is the possibility that interviewers work for several surveys at once (through the same or different survey agencies). This means that interviewers will have too little time to meet their targets, and that the response expectations will be too high. A variant is that interviewers get higher pay for one survey (e.g. a panel study) and will be less motivated to spent time on the less well paid survey. Competition from other surveys, concurrent or sequential, can result in incomplete fielding of a sample, a lower response rate than possible, and increased nonresponse bias if the reduced efforts are unequally spread.

Conclusion

One reason why the relationship between response rate and socio-demographic and psychological variables is often weak is that many factors interfere. Interviewers have varying success rates, independent of regional effects, organisational factors can be disruptive, and interviewers adapt their calling patterns and persuasive strategies to sample units. Explaining response rates may be hindered by these factors.

The link between response rates and nonresponse bias is even more problematic. One might or could expect a negative relationship between response rates and nonresponse bias if the major determinants of survey response were located at the individual level, i.e. if the socially isolated are less and the politically interested more likely to participate, and if the “additional” respondents that distinguish a low response survey from a high response survey are a clear-cut group with low response propensities. As shown above, systemic or organisational factors may have a substantial effect on response rates and nonresponse bias, possibly confounding the relationships between these factors. Nonresponse analyses should take these factors into account.

These confounding factors might be less disruptive in telephone surveys, and even less in self-completion surveys, where interviewer factors don’t interfere and the costs per interview are lower. On the other hand, face-to-face surveys usually can provide a lot more information on the fieldwork process, the interaction between interviewer and sample unit, and characteristics of these sample units. Fieldwork might be more difficult to standardise, but auxiliary information might be richer. In studying nonresponse it would be good to acknowledge mode effects in all phases.

Brick, J.M. (2013). Unit Nonresponse and Weighting Adjustments: A Critical Review. *Journal of Official Statistics*, 29(3), 329-353.