



- Title** **A Design and Use of Questionnaires: A Review of Best Practice
Applicable to Surveys of Health Service Staff and Patients**
- Agency** **NCCHTA, National Coordinating Centre for Health Technology Assessment**
Mailpoint 728, Boldrewood, University of Southampton, Southampton SO16 7PX, United Kingdom
tel: +44 2380 595586, fax: +44 2380 595639
- Reference** Health Technol Assess 2001;5(31). Dec 2001. www.ncchta.org/execsumm/summ531.htm

Aim

To identify current best practice with respect to the design and conduct of questionnaire surveys, including theories of respondent behavior, expert opinion, and high-quality evidence from experimental studies.

Conclusions and results

The two principal modes of administration are self-completion and interviewer administration. Evidence from identified studies provided no consistent picture of the superiority of any one mode in terms of the quantity or quality of the response, or the resources required. Evidence supported the notion that question wording and framing, including the choice and order of response categories, can have an important impact on the nature and quality of responses. Evidence from several primary studies supports the assertion that general questions should precede specific questions.

Potential respondents must have both the means and will to complete the questionnaire; the perceived costs of responding must not exceed the benefits. The apparent relevance, importance, and interest of the survey to the respondent have an important influence on response rates. The number of contacts made with sampled individuals is another powerful factor. Other factors shown to influence response rates include making a self-interest/utility appeal to the respondent and the use of incentives. Anonymity has not been demonstrated to have any consistent effects on the rate or quality of response.

There can be no universal recommendations on best practice in respect of questionnaire design and survey conduct. Researchers need to consider the aims of the particular study, the population under investigation, and the resources available. In choosing a mode of questionnaire administration, consideration needs to be given to the availability of an appropriate sampling frame, anticipated response rates, the potential for bias from sources other than non-response, acceptability to the target population, the time available, the financial budget, and the availability of other resources.

The "task analysis" model, the theory of social exchange, and theories of perception and cognition should inform decisions regarding the physical design of questionnaires and strategies for delivering and returning them. The aim should be to enhance the perceived and actual benefits of responding and to minimize the perceived and real costs. The effort required to interpret questions and provide responses should be made as easy as possible.

Recommendations

Through careful attention to the design and layout of questionnaires, the risk of errors in posing and interpreting questions and in recording and coding responses can be reduced, and potential inter-rater variability can be minimized. Questionnaire appearance can influence respondents' decisions at several stages, from arousal of interest in questionnaire completion, through task evaluation, to initiation and monitoring of the process of completion. There is a need for consistency in the presentation of visual information and an understanding and application of "graphic non-verbal language".



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Methods

The starting point for this review was expert opinion from key textbooks. High-grade evidence was then sought from experimental and quasi-experimental studies to support or refute the experts' recommendations. In addition, information was sought on the theoretical underpinnings of survey response. The PsycLIT electronic database was used in addition to MEDLINE, and the search was confined to articles published in the English language between 1975 and 1996. However, because of the heterogeneity of studies, no attempts at meta-analysis were made. Findings are presented as relative risks with associated 95% confidence intervals (for differences in percentages), or as differences in means with associated 95% confidence intervals (for continuous data).

Further research/reviews required

Both quantitative research (in the form of experimental manipulations of various aspects of questionnaire design and administration) and qualitative research (in the form of cognitive interviews addressing the processes by which respondents react to questionnaire stimuli) are required.