

SURVEY RESPONSE RATE REPORTING IN THE PROFESSIONAL LITERATURE

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“Men whose research is based on shared paradigms are committed to the same rules and standards for scientific practice.”

-Thomas S. Kuhn, *The Structure of Scientific Revolution*. 1962

1. INTRODUCTION

Full disclosure of research methods and procedures is one of the basic tenets of scientific research. It is only via this mechanism that knowledge can be accumulated as research findings are replicated and verified. Indeed, the professional codes of conduct of many academic disciplines make explicit statements regarding this topic. The American Political Science Association's (2003) *Guide to Professional Ethics, Rights, and Freedoms*, for example, states that “scholars have an ethical obligation to make a full and complete disclosure of all non-confidential sources involved in their research so that their work can be tested or replicated.” AAPOR's (1986) *Code of Professional Ethics and Practices* states that “we shall describe our methods and findings accurately and in appropriate detail in all research reports, adhering to the standards for minimal disclosure.” A more recent AAPOR document, *Best Practices for Survey and Public Opinion Research and Survey Practices that AAPOR Condemns* (AAPOR, 1997), contrasted minimal disclosure with ‘exemplary practice.’ It observed that “excellence in survey practice requires that survey methods be fully disclosed and reported in sufficient detail to permit replication by another researcher...” and acknowledged that “exemplary practice in survey research goes beyond” minimal disclosure standards by describing research in adequate detail to permit replication.

In this paper, we explore an important disclosure topic central to the practice of survey research: the reporting of survey response rates in the professional literature. Response rates are generally considered to be the most widely compared statistic for judging the quality of surveys (Biemer and Lyberg, 2003). Ironically, they are also one of the most controversial

features of an otherwise established methodology.

Many features of general survey methodology became well grounded decades before serious attention was focused on the development of standards for estimation of response rates. One of the earliest attempts to establish response rate estimation standards was reported by Kviz (1977), who developed his recommendations in response to an absence of consensus among colleagues at the University of Illinois Survey Research Laboratory regarding appropriate definitions and formulas for response rate calculations (Kviz, 2003). In 1982, a formal set of definitions and formulas was established by the Council of American Survey Research Organizations (CASRO, 1982). More recent attempts to refine response rate definitions have been contributed by Groves (1989) and Lessler and Kalsbeck (1992). Yet, a 1992 survey of response rate calculation procedures among 38 academic survey organizations revealed little consistency in response rate estimation methods (Spaeth, 1992). Perhaps in recognition of this problem, AAPOR (1998) first published a set of standard definitions for survey dispositions and outcome formulas, including response, cooperation, refusal, and contact rates, in the late 1990s (a revised version was released in 2000; AAPOR, 2000). At approximately the same time, AAPOR recognized response rates as but one indicator of survey quality by identifying the *disclosure* of response rate calculations as one of the reporting elements necessary for the exemplary practice of survey research (AAPOR, 1997).

It is now understood that response rates have been declining, both in the United States and in most of the industrialized world, for at least several decades (de Leeuw and de Heer, 2002). These declining rates have led to concerns that nonresponse error may render survey estimates irretrievably biased. Increasing nonresponse has also encouraged some critics of survey research to challenge its very legitimacy as a valid research methodology (Huffington, 1998). Of course, the potential effects of increasing nonresponse on survey estimates is well-recognized within the profession and considerable effort has been invested in assessing this problem. In 1999, the International

Conference on Survey Nonresponse, sponsored by the American Statistical Association, AAPOR, and other professional organizations, was held to focus worldwide attention on this issue. Several recent books have investigated both causes and consequences (Groves and Couper, 1998; Groves, Dillman, Eltinge, and Little, 2002), and a growing literature is investigating the effects of low response rates on survey quality (Keeter, Miller, Kohut, Groves, and Presser, 2000). Many would argue that the issue of declining response rates is a growing crisis for the profession, one that will likely command the attention of increasing numbers of researchers in the future.

This crisis is in large measure a consequence of external factors over which survey researchers have little control. Concerns with privacy, confidentiality, the exploitation of personal information, general cynicism, and declining civic participation (see also Groves and Couper, 1998) are pervasive social trends that each contribute to decreasing survey participation. Ironically enough, these broad trends are documented primarily via the social surveys they undermine (cf., Chanley, Rudolph, and Rahn, 2000).

Some factors internal to the profession, however, must also be considered. Although a general solution to the survey nonresponse problem remains to be discovered, it seems clear that the widespread acceptance and routine disclosure of common response rate definitions and formulas would be a necessary condition. The discipline's failure to both develop and enforce practice standards could be interpreted as evidence that survey research is more art than science. A casual examination of the professional academic literature at a broader level suggests that the reporting of information regarding survey response rates is inconsistent and often incomplete. A recent audit of response rate reporting in eight social science journals found that only 11.5% of the 571 articles using survey data that were published between 1998–2001 provided a response rate and at least a partial definition; 2.5% reported an AAPOR response rate (Smith, 2002a). The research presented here was conducted to further explore this issue by assessing recent practices regarding the estimation and disclosure of survey response rates in the academic literature.

2. METHODS

There were two elements to this study: (1) a survey of journal editors designed to obtain information regarding current editorial policies relevant to the disclosure of survey response rate information, and (2) an audit of recently-published articles that reported findings from primary survey data collection activities in order to directly evaluate current response rate reporting practices. This study was reviewed and approved by the University of Illinois at Chicago Institutional Review Board.

2.1. Editor Survey

A purposive sample of 18 journals were selected for review and the chief editors were contacted. Journals were selected based on several criteria, including our judgment that each (1) regularly publishes empirical studies that employ survey research data, (2) is widely distributed and cited, and (3) is prominent in its respective field. The journals selected were also roughly stratified into two groups: (1) those primarily concerned with the social sciences; and (2) those primarily concerned with the health sciences.

The nine social science journals selected include the following: the *American Journal of Community Psychology*, the *American Journal of Political Science*, the *American Political Science Review*, the *International Journal of Public Opinion Research*, the *Journal of Community Psychology*, the *Journal of Health and Social Behavior*, the *Public Administration Review*, *Public Opinion Quarterly*, and *Social Forces*. The nine health science journals selected included the *American Journal of Psychiatry*, the *American Journal of Preventive Medicine*, the *American Journal of Public Health*, the *Annals of Epidemiology*, *Journal of the American Medical Association*, the *Journal of Studies on Alcohol, Medical Care, Preventive Medicine*, and *Substance Use and Misuse*.

The editor of each journal was sent a letter briefly describing the study and asking two questions:

1. Does your journal have any policies regarding standards for how survey response rates are calculated and/or are reported in the papers you publish? If so, could you provide any details that may have been established regarding these policies?
2. Does your journal have a formal policy regarding minimally acceptable response rates

that are required before a paper can be considered for publication? If so, could you please provide any details that may have been established regarding this policy?

Letters were mailed to fifteen journal editors on April 16, 2003. Based on journal preferences, two editors were contacted via e-mail rather than letter. Also, one journal (the *International Journal of Public Opinion Research*) was not contacted because its policy regarding the reporting of response rates had been published in a recent issue. As of May 12, 2003, responses were obtained regarding all or some of the relevant policies of interest here from 10 of the 18 journals (55.6%). An editorial assistant for one additional journal responded on behalf of the editors, indicating that the “busy nature of our business” in all likelihood precluded them from responding to the request.

2.2. Journal Article Audit

Each of the 18 journals identified above was reviewed to identify recent papers that reported empirical findings from original survey research. Eligibility criteria for the papers selected included the following: (1) that the papers were recently published, with the earliest acceptable publication date being January 2000 (note: the most recent publication date was March 2003); (2) the survey must be of individuals (i.e., not organizations); (3) the population surveyed must be noninstitutional (i.e., not school-based, hospital-based, jail-based, etc.); and (4) the paper must be reporting primary survey data, not the secondary analysis of a pre-existing data set. There were no inclusion criteria related to mode of survey data collection or type of respondents (i.e., special populations such as members of specific occupational groups were acceptable). A total of 95 articles were identified that met each of these criteria.

Each article was examined for any details regarding response rates, response rate formulas and/or sample disposition information. In a few cases, this information was available from other sources. The authors of all papers for which sufficient information was unavailable with which to estimate AAPOR response rates ($n=70$) were contacted via e-mail and this information was requested. Most authors were initially contacted via e-mail during the week of March 22, 2003. E-mail addresses for a small number of authors could not be located and these individuals were thus contacted via mail. As of May 12, 2003, responses were received from 44

authors (62.9%). Of these, 21 authors sent some or all of the requested information or made referrals to others who subsequently provided the information. Nine others promised to forward the information but have not yet done so. Six made referrals to coauthors or those responsible for the collection of the data and no information has yet been obtained, and eight either directly or indirectly declined to provide additional information. In this paper, additional sample disposition information collected for some of these surveys is employed to illustrate various types of survey disclosure practices. These additional data, because they are only available for a subset of the articles we examine, are not systematically analyzed in this paper.

3. RESULTS

3.1. Findings of Editor Survey

Three of the journals, the *American Political Science Review*, the *International Journal of Public Opinion Research*, and the *American Political Science Review*, have standards regarding the reporting of response rates in published papers. The *American Political Science Review* states that authors “...should calculate response rates according to one of the standard formulas given by the American Association for Public Opinion Research, Standard Definitions...” In 2002, the editors of the *International Journal of Public Opinion Research* announced that, beginning in 2003, the journal would also adopt the AAPOR standard response rate definitions (Editors, 2002). The authors of several other journals indicated they were either moving towards the development of standards for reporting survey response rates or were considering doing so. Among those with no set policy, some indicated they saw no need for one. “I don’t equate standardization with rigor,” commented one editor. Another observed that calculating response rates was very straightforward and was unwilling to accept the possibility that they could be estimated in different ways.

None of the journals reported having an established minimal response rate standard. One editor, however, did report that despite the absence of a formal policy, the journal did expect “at least a 60% response rate with rare exceptions.” Several editors noted that they make such judgments on a case-by-case basis. For example, in noting that there is no minimum threshold in place, one editor indicated that

“reviewers will note response rate as one of the evaluative criteria and it will contribute to a decision on publication.” The editor of another journal agreed, adding that “in most instances, 20% is too low, and 80% is a de facto standard, but there is a considerable gray area. Part of the decision rests on how well the investigators characterize the nonresponders, and to what extent nonresponse is linked to the information sought in the survey. The old test of looking at whether the response pattern of the nonresponders would alter the outcome is also useful. I would have trouble with an across-the-board standard that did not take specific circumstances into account.”

Finally, one editor volunteered that, “I personally...think a lot of the precise rules governing such things are silly.” It was unclear, though, if the editor was referring to the issue of standards for calculating response rates or minimally acceptable survey response rates.

3.2. Findings from the Journal Article Audit

Based on our audit, the papers examined can be classified into a five-group disclosure typology of those in which: (1) no information was reported regarding response rates; (2) some information was reported, but not a response rate; (3) a response rate was reported, but not defined; (4) a response rate using an AAPOR formula was reported; and (5) sufficient sample disposition information was reported so that response rates could be re-estimated using alternative response rate formulas. This typology is not mutually exclusive in a strict sense. For example, a paper could satisfy the requirements of (4) and (5). In cases such as this, we classified each paper into what we viewed as the most rigorous applicable category. In the example above, papers reporting an AAPOR response rate *and* providing a complete set of sample dispositions were classified into category (5), the category which provides the most information regarding survey nonresponse. The distribution of papers reviewed across this typology is summarized in Table 1. Below, we provide illustrative examples of cases within each of these categories.

3.2.1. Reporting no information

Of the articles reviewed, 5.3% provided no information regarding response rates whatsoever and we were unsuccessful in obtaining any information from the corresponding author. One author who had published a paper based on

findings from an RDD phone survey, for example, provided no details regarding response rates or sample disposition (e.g., starting sample size, eligibility rates, etc...). When contacted, the author replied that he/she no longer had copies of the disposition of sample. A case-control study in one of the health sciences journals examined reported that controls had been recruited at random from the same neighborhood in which each case lived. Although sample sizes of the number of controls successfully matched to cases were reported, no information was available regarding how many households had to be randomly contacted to accrue these controls.

3.2.2. Reporting some information, but not a response rate

About one in six of the papers examined (23.2%) provided some information regarding survey quality, but not a response rate. Two other papers made reference to other publications where details were promised to be available regarding the general methodology used in the study being reported. However, references cited had been published prior to the year in which the survey field work had been conducted, making the availability of response rate information impossible. Perhaps most commonly, however, papers classified in this category merely presented cooperation rates rather than response rates. The authors of one of these papers, when contacted for additional information, responded that “we did a cursory search of publications on adult telephone interview surveys, and found little consistency and certainly no ‘gold standard’ for presenting response rates.”

3.2.3. Reporting an undefined response rate

A total of 26.3% of the articles reviewed provided a response rate but failed to define it. Of course, when a ‘response rate’ is given with no definition, it can mean anything, particularly in the absence of any additional information regarding sample disposition.

3.2.4. Reporting an AAPOR response rate

About a quarter of the articles reviewed (24.2%) reported a response rate that was consistent with AAPOR standard formulas. It should be noted, though, that less than half of these and only 11.6% of the total papers reviewed specifically volunteered that they were providing an AAPOR response rate in their paper. Interestingly, papers published in health

sciences journals were as likely (11.5%) as those published in the social sciences (11.6%) to volunteer that they were basing their calculations on an AAPOR response rate.

Some of the papers reporting an AAPOR response rate were correct and some were not. One author responded to our request with a detailed summary of sample disposition information, which we were able to use to verify his/her response rate calculations. Another author, who did not respond to our request for additional information, also reported having based response rate calculations on a specific AAPOR formula. However, the partial information that was provided in the published paper was adequate to indicate that the response rate had been incorrectly calculated.

3.2.5. Reporting full sample dispositions

About one in five of the papers examined (21.1%) provided a complete accounting of sample dispositions. In one paper, the author reported a complete set of sample dispositions sufficient to allow the reader to track the sample from starting sample size to completed interviews. In this paper, a final AAPOR response rate of 20% was reported (with a footnote referencing the AAPOR Web site) and confirmed in our calculations. This is an

excellent example of a survey being published in a high-quality professional journal despite a low, and thoroughly documented, response rate (Masset et al., 2003).

3.2.6. Differences by mode and type of journal

Table 1 breaks down this information by two potentially relevant variables: the mode of data collection for the survey being reported, and the type of journal in which the paper was published (social vs. health sciences). No differences were found by type of journal. There was a trend towards a greater proportion of papers in health sciences journals providing full documentation of sample dispositions (26.9%), in comparison to social science journals (14.0%). Social science journals, in contrast, were more likely to report response rates that were consistent with AAPOR formulas (32.6% vs. 17.3% of papers sampled from health sciences journals).

Significant differences were detected by mode of survey administration. Mail surveys were by far most likely to report response rates consistent with AAPOR standards (52.0%) and with full sets of sample dispositions (36.0%). In contrast, both telephone and face-to-face surveys were most likely to report undefined response rates (42.9% and 31.3%, respectively). Whereas

Table 1. Response Rate Information Provided in Audited Journal Articles (n = 95).

	(n)	No Information	Some Information	Undefined Response Rate	AAPOR Response Rate	Full Sample Dispositions
Total Sample	(95)	5.3%	23.2	26.3	24.2	21.1
Survey Mode***						
Telephone	(48)	6.3	37.5	31.3	12.5	12.5
Face-to-Face	(7)	14.3	28.6	42.9	14.3	0.0
Mail	(25)	0.0	0.0	12.0	52.0	36.0
Other/Mixed	(15)	6.7	13.3	26.7	20.0	33.3
Journal Type						
Health Sciences	(52)	1.9	26.9	26.9	17.3	26.9
Social	(43)	9.3	18.6	25.6	32.6	14.0

*** $p < .001$

all mail surveys reported some clear response rate information, 43.8% of the papers based on telephone interviews and 42.9% of the papers based on face-to-face surveys provided no response rate information (i.e., no information or only information other than response rates). Other and mixed mode surveys most closely resembled the disclosure patterns of mail surveys.

4. DISCUSSION

We conclude that, with a few notable exceptions, many of the prominent journals that routinely publish survey research do not have explicit policies regarding the full disclosure of response rate information. Most appear to rely on the expertise of peer reviewers to determine when this information is necessary. Of course, along with full disclosure, peer review is also an important element of the social sciences. Nonetheless, we believe that peer review alone is not sufficient to insure that full disclosure is enforced, given our finding that, of the sample of recent papers we examined, response rates and their calculations are not fully documented.

If standards of professional practice for reporting key survey quality indicators are ever to be accepted by the profession, journal editors must participate. If journals and other professional outlets do not have guidelines for reporting, we can hardly expect authors to readily accept AAPOR standards, especially when the resulting response rates will be much lower than what can be estimated using less rigorous procedures. A similar concern regarding the absence of editorial policies has been previously expressed by Smith (2002b: 36): “The omission of and misreporting of nonresponse rates in journals largely comes from the absence of editorial policies dealing with such matters.” Our findings provide new evidence in support of Smith’s observation.

In reviewing materials for this paper, we have seen several times the argument in published journal articles that ‘no definitive formula for response rate estimates exists’ used to justify choice of response rate formula. Although we have not systematically validated all reported response rates against sample disposition obtained from authors, we have yet to encounter any case in which a response rate has been *underestimated* (vis-à-vis AAPOR standard formulas). As described above, however, we have identified a number of cases in which response rates have been overestimated. We cannot say whether any researchers are deliberately calculating inflated response rates. However, we recognize that there are powerful incentives to presenting one’s work in the most favorable light possible. One of the incentives is to survive the peer review process. While a relatively

high survey response rate alone may not be sufficient to guarantee a paper’s acceptance for publication, a relatively low rate may be enough to guarantee rejection. Consequently, the current lack of standards on the part of many journals, along with a general recognition that high survey nonresponse may be a barrier to publication, establishes an environment in which full disclosure is not encouraged. No journal wants a reputation for publishing ‘inferior’ research, and response rates are one key indicator of quality, right or wrong. This may be particularly true for those modes of survey data collection that are currently experiencing the greatest decreases in response rates, telephone interviews in particular. The data presented in Table 1 support this interpretation, as disclosure of information regarding survey nonresponse for telephone (and in-person) surveys appears to be considerably lower than for mail surveys.

The editorial environment that is perhaps most likely to discourage full disclosure is that in which a journal has no clear standards for reporting response rate information, yet otherwise has a reputation for rigorous methodological standards. In such an environment, although we do not condone it, failure to mention poor quality indicators such as response rates might be viewed as a rational action by some. Although none of the journals contacted for this study reported formal policies regarding minimally acceptable response rates, one did indicate that only in ‘rare’ instances did a study with a response rate of less than 60% get accepted for publication. Unfortunately, we have identified several papers published in that same journal in recent years that reported implausibly high response rates, and several that failed to report response rates altogether.

We thus recommend that AAPOR more aggressively work to educate journal editors regarding the importance of full disclosure standards for reporting survey nonresponse. Wherever possible, authors should know that they will be expected to report a specific AAPOR response rate *and* provide a complete set of summary sample dispositions. At a minimum, the total sample size, with breakdowns by number interviewed, number eligible but not interviewed, number ineligible, and number with undetermined eligibility, should be expected to be reported as a part of all professional research submitted for peer review. As described above, merely reporting that a response rate was calculated according to AAPOR standards is not always a sufficient guarantee, as we have identified papers that claimed to have used the AAPOR standards that in fact did not. Only by revealing sample dispositions can full disclosure of survey response rates and survey nonresponse be attained.

We wish to remind readers that the journals examined and the individual articles audited in this study represent convenience rather than random samples of the professional literature. We nonetheless believe that our findings approximate current standards as they are practiced in many of the higher quality, peer-reviewed journals in the social and health sciences that publish survey research on a regular basis.

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A literature survey or a literature review in a project report is that section which shows the various analyses and research made in the field of your interest and the results already published, taking into account the various parameters of the pr... Literature survey guides or helps the researcher to define/find out/identify a problem. It is something when you look at a literature (publications) in a surface level, or an Ariel view. It includes the survey of place people and publications in context of Research. It is a phase where the researcher tries to know of what are all the literature related to one area of interest. And the relevant literature are short-listed. Whereas a literature review is going into the depth of the literature surveyed. Survey response rates in the 5% to 30% range are far more typical. Businesses with little person-to-person contact with customers can expect response rates at the low end of this scale. Surveys distributed from unknown senders tend to receive the lowest levels of responses. Factors Affecting Survey Response Rates. There are many factors that influence survey response rates, with varying levels of impact: Distribution Method: Web-intercept surveys which use non-intrusive pop-ups to optimally present the survey when a potential respondent is engaged in brand-interaction (e.g. on a business website) Closed ended rating scale data is easy to summarize and hard to interpret. Ideally you can compare the responses to an industry benchmark, a competitor or even a similar survey question from a prior survey. In most cases this data doesn't exist, it's too expensive or too difficult to obtain. For example, a recent survey I worked on asked a question about what users thought of the visual appeal of the software. Users were given a five point rating scale (from strongly disagree to strongly agree). Here are the responses from 18 users. While you won't necessarily report them, you'll need them for some of the subsequent steps. There were 18 responses and the mean was a 4.167 and the standard deviation a 1.21. Here are five ways of making the raw responses more interpretable.