

Does reducing Nonresponse rates impact the results*

Findings from a National Telephone Survey

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1 Introduction

Contemporary opinion polls face widespread skepticism regarding their representativeness, with concerns ranging from declining response rates to potential biases related to socio-political factors. Scholars and practitioners express dismay over these issues, while liberals fear the underrepresentation of the marginalized. Moreover, conservatives are suggested to be more reluctant in responding to polls, particularly those perceived as biased. From a methodological standpoint, the pressure for timely results makes achieving high response rates difficult, and is also responsible for the nonrandom selection methods from households, for example choosing respondents from amongst those at home when the interviewer calls. Despite expectations that low response rates and nonrandom methods may result in unrepresentative respondent pools, scientific evidence on these issues remains limited. Nonresponse error, known to be a function of both response rates and differences between respondents and nonrespondents, underscores the need for a nuanced understanding of the potential biases introduced in these time-constrained polling scenarios.

To discuss this phenomena in conjunction with the the non-response rate aspect of the editorial “Special Virtual Issue on Nonresponse Rates and Nonresponse Adjustments” (Academic, n.d.) with the “Consequences of reducing Nonresponse in a National Telephone Survey” [cite], the statistical programming language R (R Core Team 2023) with libraries `tidyverse` (Wickham et al. 2019), `dplyr` (Wickham et al. 2022), `knitr` (Xie 2014), and `ggplot2` (Wickham 2016) have been utilised.

*Code and data are available at: <https://github.com/MjChen120/INF312Tutorial8.git>

2 The National Telephone Survey

To assess the impact of low response rates and nonrandom within-household selection methods, Keeter et Al. undertook an experiment in which identical questionnaires were administered by the same survey firm in two different studies: one using “Rigorous” procedures; the other “Standard” procedures.

The Standard survey was conducted over 5 days with 1000 interviews, every number being called a minimum of 5 times, with one follow up call. The response rate at the end was recorded to be 36%.

The Rigorous Study began at the same time but took 8 days, employing a more exhaustive effort to locate and interview individuals difficult to reach in a short time frame, and those reluctant to participate. Households were sent an advance letter with a \$2 bill, and the response rate was 60.6%.

The questionnaire included a wide range of topics often found on opinion polls of the U.S. public. A special effort was made to include items on which we might expect to find differences between amenable and reluctant respondents and between the easy to reach and those who are more difficult to contact (DeMaio 1980; Goudy 1976; Goyder 1987; Stinchcombe, Jones, and Sheatsley 1981).

These topics included

- 34 Political and social opinion items
- 5 Electoral behavior measures
- 8 Media use items
- 3 Knowledge items
- 11 Social integration measures (seven objective and four subjective);
- 4 Crime-related items
- 4 Items about polling
- 23 Demographic characteristics
- 4 Interviewer ratings of the respondent.

3 Results of the Survey

The results of the survey showed that there was no significant difference amongst the results of the Standard and Rigorous Surveys. Out of the 91 questions asked, only 14 were significantly different, with a p value of less than 0.05 between the two. The following graph reflects the absolute value in differences in percentage points between the two surveys. As is reflected, they differ on average by 3.01 points(weighted mean), which is quite small.

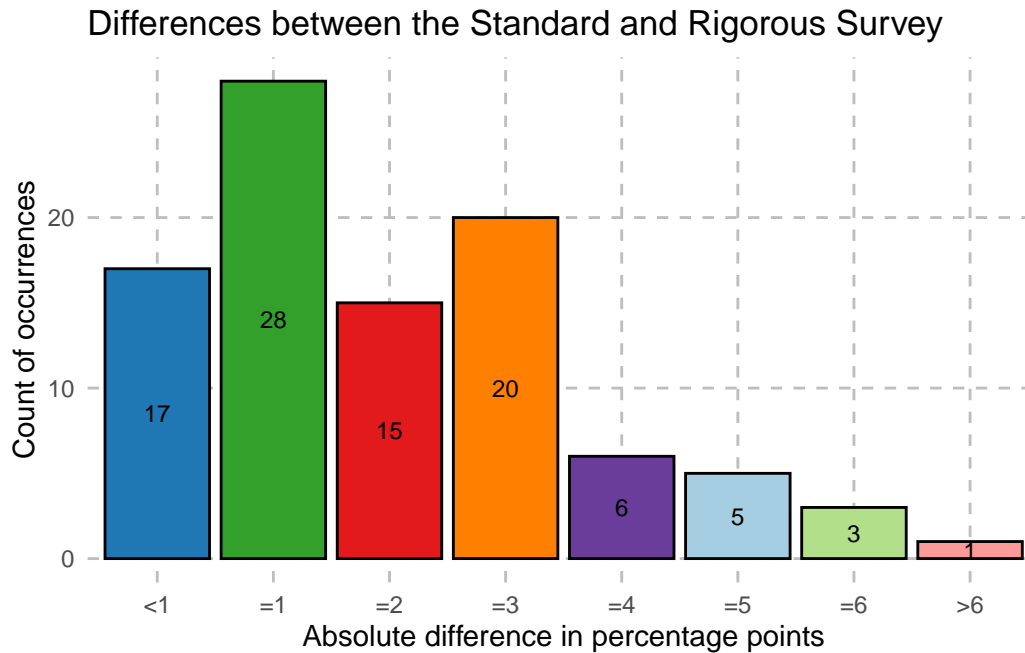


Figure 1: Differences in percentage points between Standard and Rigorous Surveys

4 Conclusion

In conclusion, I have connected the trend of declining survey response rates observed in Feldman et al.'s paper (Feldman, Farh, and Wong 2018) to the issues of low non-response rates and nonresponse bias discussed in the editorial “Special Virtual Issue on Nonresponse Rates and Nonresponse Adjustments” (Academic, n.d.). This editorial sheds light on aspects that could potentially explain the trend observed when analyzing the responses collected by Feldman and their colleagues (Feldman, Farh, and Wong 2018) during two time waves. This connection establishes a basis for future research endeavors aimed at exploring the systematic differences between respondents and non-respondents to determine if such distinctions could influence job satisfaction.

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