

Nonresponse in the American Time Use Survey: Who is Missing from the Data and How Much Does It Matter

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Philosophy

- **A sensible approach to nonresponse**
 - **Response rates alone are not meaningful.**
 - **Bias is a function of the correlation between study variables and response propensity.**
 - **Mechanisms of nonresponse are essential to understanding nonresponse bias.**
 - **Each estimate has its own nonresponse bias.**

Disposition Classification

- Authors' revised scheme consistent with AAPOR guidelines and appropriate inferentially
- Nonresponse from the CPS also counts (response rate is less than 50%).
- Does it matter? YES

Accessibility and Amenability

- Disposition codes must be accurate (1) to evaluate relationships between the variables and the types of nonresponse and (2) to guide weight adjustments.
 - ‘Busyness’ and ‘social isolation’ hypotheses result in lower contact and cooperation rates.
 - In other situations, accessibility and amenability have different effects (e.g., adult education participation).

Amenability or Cooperation

- **Small differences in refusal rates across variables imply that these subgroups have similar levels of amenability.**
 - **The implication is that nonresponse bias due to amenability may not be important.**
 - **Since there is so much data available for this evaluation from the CPS, this is a very positive outcome.**

Accessibility

- **Large differences in contact rates by variable, with very low contact rates for no spouse, renters, not related adult, under 30, Hispanic, and black.**
 - **These are all related to mobility (the low rates are for type 1/2 noncontact).**
- **Key issue—Are important time use variables related to mobility? If so, this nonresponse bias may be a problem.**

Additional Analyses

- The response rate distribution analysis and the logistic analysis are primarily an examination of “main effects.”
- Different relationships might be uncovered by categorical search algorithms that look for interactions.
 - Would the “mobility” hypothesis be supported?
 - Is this exploratory approach consistent with the ones that are hypothesis driven?

Telephone Status

- In both the response rate and the logistic analysis, telephone status is highly related to both contact and refusal (odds of noncontact = 1.8; refusal = 1.7)
 - Suspect that CPS nontelephone is mixture of those without phones (social isolation) and those that do not wish to be contacted for subsequent interviews (amenability).
 - Telephone status also casually linked since ATUS was done by telephone.
 - Is it correlated to time use outcome variables?

The Longitudinal Effect

- **The loss of the initial base (the CPS nonrespondents) may be an important source of nonresponse bias.**
 - **This analysis reveals that, given CPS response, the loss of about 50% in this survey is not likely to result in large nonresponse biases.**
 - **The high response rate for the CPS does not mean estimates are immune to nonresponse bias.**

Weighting Adjustments

- **The authors suggest additional control variables that make a great deal of sense:**
 - Exclusion of variables like tenure and urbanicity are troubling since they are correlated with response rates.
 - In surveys with extensive auxiliary data, especially those with lower response rates, efforts should be made to examine and use these data.
- **Would further weighting adjustments make a difference?**
 - Perhaps not much difference for overall estimates, but more likely for domains and comparisons

Direct Use of Response Propensities

- **The authors use logistic model estimated response propensities directly without controlling for variance.**
 - This is probably best considered for nonresponse bias analysis. It may not be appropriate for general use due to the possibility of unstable estimates.
- **If the nonresponse analysis found important differences, then other approaches such as raking could make use of the data in a manner more appropriate for public use files.**

Nonresponse in the American Time Use Survey

- **This paper should be read by everyone considering using or critiquing the survey.**
 - **Findings should strengthen use of the data.**
 - **Designers should re-consider some of their approaches, especially their handling of disposition codes and their weighting adjustments.**