

Confronting the Realities of Declining Cooperation in RDD Surveys

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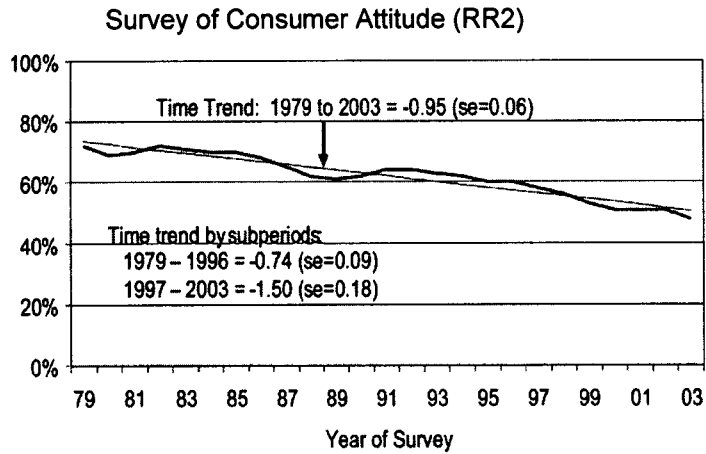
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Declining Response Rate in RDD Surveys

- Dramatic declines in response rates (RR) of RDD surveys in recent years.
 - Atrostic, Bates, Burt, and Silberstein (JOS, 2001)
 - Curtin, Presser, and Singer (POQ, 2005)
 - Brick, Montaquila, Hagedorn, Roth, Chapman (JOS, 2005)

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Declining Response Rate (cont.)

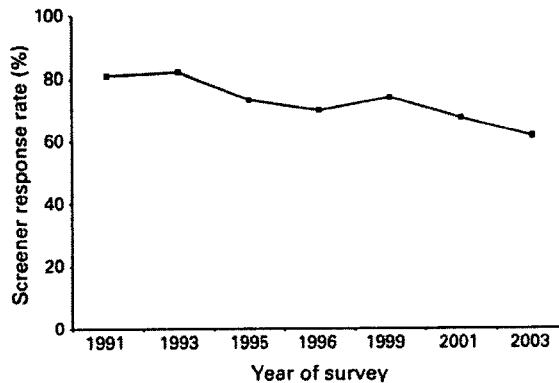


(Curtin et al., 2005, POQ, figure 1)

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Declining Response Rate (cont.)

National Household Education Surveys (RR4)



(Brick et al., 2005, JOS, figure 1)

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Response Rates (RR)

- Many definitions (e.g., Grove and Lyberg, 1988)
"(t)here are so many ways of calculating response rates that comparisons across surveys are fraught with misinterpretations."
- Common interpretation (AAPOR, 2004)
"the number of complete interviews with reporting units divided by the number of eligible reporting units in the sample."

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Response Rates (Cont.)

- Screener RR (RR4/CASRO)

$$RR_S = \frac{C + I}{C + I + NR + NM \times e_{NM} + NA \times e_{NA}}$$

C = comp. screeners w/ at least one eligible person,

I = comp. screeners w/o any eligible person (i.e., ineligible),

NR = nonresponding screeners,

NM (e_{NM}) = # (est. rate) classified as "answering machine,"

NA (e_{NA}) = # (est. rate) classified as "no answer"

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Response Rates (Cont.)

- Extended RR

$$RR_E = \frac{CE}{AE}$$

AE = weighted count of all persons in C.

CE = weighted count of all eligible persons in C completing extended interview,

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Response Rates (Cont.)


- Overall RR

$$RR_O = RR_S \times RR_E$$

RR_S = Screener response rate,

RR_E = Extended interview response rate.

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Health Information National Trends Survey (HINTS)

- Ongoing, cross-sectional survey of the U.S. civilian, non-institutional, adult population (18+).
- Sponsor: National Cancer Institute.
- Collects information on the ways American adults acquire health information (esp. cancers).
- Repeated cyclically to track trends since 2002.

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HINTS I / II RDD Survey Response Rate

- 1st HINTS used “telephone” survey on RDD frame.
- 2nd HINTS preserved the methodological integrity of the survey but tried “web” survey as an alternative mode of data collection.
- Increasing difficulty with response rates, coverage and expense of RDD surveys.

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HINTS I / II - RDD RR (cont.)

■ RDD Response Rates

Cycle (Year)	Screener (RR_S)	Extended (RR_E)	Overall (RR_O)
HINTS I (2003)	55%	60%	33%
HINTS II (2005)	34%	61%	21%

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HINTS II - Mode Choice Group

■ Sample sizes and completes for two interview modes

Telephone numbers	Telephone interview only	Telephone-Internet choice	Overall
Total sample	11,512	9,211	20,723
Screener completes	1,601	1,286	2,887
With telephone interview by default	1,601	793	2,394
With choosing telephone interview	.	266	266
With choosing Internet interview	.	227	227
Extended interview completes	1,057	766	1,823
By telephone	1,057	611	1,668
By telephone followup	.	60	60
By Internet	.	95	95

Source: HINTS II Final Report (Davis et al., 2005)

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HINTS II - Administration times

- Mean admin. time for extended interview:

Mode	Admin times (minutes)	No. Respondents*
Telephone	33.5	5,301
Web	62.7	93

* excluding partial completes.

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HINTS II – Average Calls per Case

Total screener level of effort

Call attempts	Completes/ ineligible		Non-response	
	N	Col %	N	Col %
0	0	0.0	16	0.3
1-5	7,194	81.8	2,475	49.0
6-10	1,304	14.8	1,294	25.6
11-15	231	2.8	372	7.4
16-20	55	0.6	560	11.1
21-25	9	0.0	266	5.3
26-30	1	0.0	68	1.4

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HINTS II – Average Calls per Case (cont.)

Total extended (CATI) level of effort

Call attempts	Completes/ ineligibles		Non-response	
	N	Col %	N	Col %
0	0	0.0	0	0
1-5	4,465	84.5	921	45.2
6-10	513	9.7	372	18.2
11-15	199	3.8	178	8.7
16-20	94	1.8	499	24.5
21-25	10	0.2	64	3.1
26-30	1	0.0	6	0.3

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Recent Research by Link et al.

- Encouraging RR results from the use of a mail survey with appropriate (telephone) follow-up.
- Mail survey (43%) vs. Web survey (15%).
- Mail survey with a telephone follow-up (60%) vs. RDD telephone survey (40%).
- The above experiment allowed anyone in the household to fill out the survey.

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Link et al. (cont.)

- BRFSS Mail survey favors “all adult” within household selection (in weighted gender dist'n).

Within Household Selection	Weighted % of Female
Population (by CPS)	51.4%
Any Adult (non-probability)	61.5%
Next Birthday	61.5%
All Adults	50.8%

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Changes in HINTS Design

- Toward dual-frame/dual-mode approach.

Cycle (year)	Modes (Frames)
HINTS I (2003)	Telephone only (RDD)
HINTS II (2005)	Telephone + Internet choice (RDD)
HINTS III (2007)	Telephone + Mail (RDD) (Address)

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HINTS III Survey Design

- Dual-frame / dual-mode approach.
- RDD sample
 - ▶ list-assisted method (Tucker et al., 1993)
 - ▶ 1+ working bank
 - ▶ two types of sub-sampling
 - non-mailable numbers
 - initial screener refusals and non-contacts
 - ▶ Rizzo-Brick-Park method (POQ, 2004)
for a "less intrusive" within-household selection.

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HINTS III Survey Design (cont.)

- Address sample
 - ▶ address frame
 - U.S. Postal Service (USPS)'s
Computerized Delivery Sequence (CDS) file.
 - Marketing Systems Group (MSG)
for random samples of addresses
 - ▶ Stratification by % Minority.
 - ▶ EPSEM of address from each stratum.
 - ▶ All adults in the HH to be interviewed.
 - ▶ Experiments on carriers*incentive.

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Maximizing RR – HINTS RDD

- Household advance letters with a \$2 incentive.
- Experienced, well-trained interviewers.
- Effective call scheduling.
- Subsampling refusals for conversion.
- Refusal Conversion letters with a \$5 incentive.

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Maximizing RR – HINTS Mail

- Household advance letters.
- Multiple follow-up for the mail surveys.
- Pilot testing of the mail surveys.
- Investigating the optimal length of the HINTS mail survey.

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HINTS III Sample Projection

	RDD	Mail
# telephone numbers/addresses	59,000	6,944
# residentials	19,422	-
# screener completes	5,833	-
# extended completes (persons)	3,500	3,957
Effective sample size (design effect)	2,692 (1.3)	2,473 (1.6)

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Discussion

- Telephone surveys in Korea
- Consensus of Response Rate
- Aggressive Advertisement on Surveys and their Uses
- Investment on Survey Infrastructure
- Developing Sampling Frame for HH Surveys

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Thanks for listing !

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