



"Second Chance" Respondents to the National Survey on Drug Use and Health

A Natural Reinterview Reliability Analysis

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Are survey respondents telling the truth?

- A popular question among those in the survey research field. This topic is often called “reliability” or “measurement error”.
- Also a popular question among lay people. Maybe the most common question I get when I talk to people about what I do for a living, especially for surveys with sensitive questions.
- This is the main topic of this presentation.

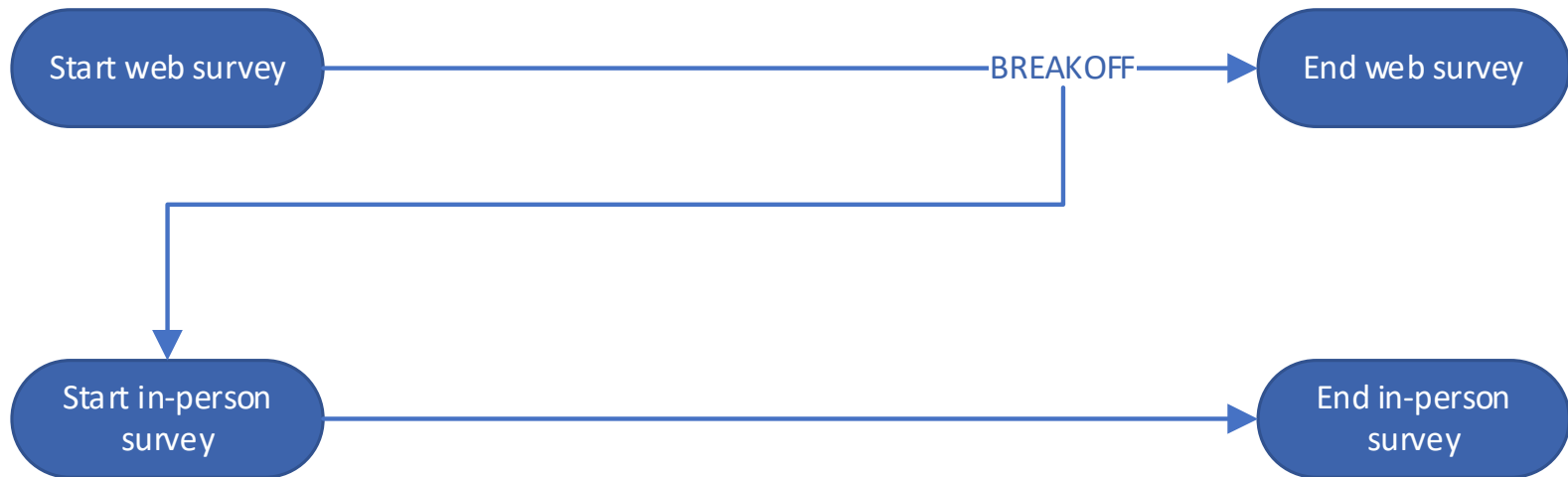
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- The views expressed in this presentation do not necessarily reflect the official position or policies of SAMHSA or the U.S. Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

Study Background

- The NSDUH provides national, state and substate data on substance use and mental health in the civilian, noninstitutionalized population age 12 and older.
- Data are collected on a quarterly basis each year.
- Approximately 67,500 interviews completed annually.
- Conducted by RTI under contract with SAMHSA.
- Face-to-face data collection only until the onset of the COVID-19 pandemic. Now, mixed mode: web and in-person. Web data collection began in Q4 of 2020.

“Second Chance” cases



- On NSDUH, web breakoffs are much more common than in-person breakoffs
- Many breakoffs occur early, but some don't
- Some of those breakoffs are recontacted in person, and restart the survey
- The gods of survey research have bestowed upon us a rare and precious gift.

Who are the Second Chance cases?

- Almost 600 in the 2021 NSDUH out of 69,850 usable cases
- About 350 got far enough to answer key questions in both modes
- There are some demographic differences between them and the other usable cases
 - The most glaring one: very few are aged 12-17.
 - Others: more female, more non-Hispanic Black, less urban

What should we do with our gift?

- Three obvious ideas:
 1. Use them to try to determine causes of breakoffs
 2. Use them to make back-end adjustments for web breakoffs that were not successfully recontacted
 3. Use them to try to examine consistency of responses
- We did a little on #1, and more than a little on #2, but this presentation is about #3.
 - How often are people responding inconsistently across modes?
 - What characteristics are associated with inconsistent response?

Past NSDUH studies on reliability/validity

- Validity Study (2000-2001)¹: compared self-reported drug use to drug use based on urine samples
 - Good agreement; focused on past month use; questions about quality of the tests, bias with respect to urine sample
- Reliability Study (2006)²: compared self-reported drug use between two in-person interviews
 - Very good agreement
 - Random sample of respondents
 - Same mode

¹Harrison, L. D., Martin, S. S., Enev, T., & Harrington, D. (2007). *Comparing drug testing and self-report of drug use among youths and young adults in the general population*. (DHHS Publication No. SMA 07-4249, Methodology Series M-7). Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies.

²Substance Abuse and Mental Health Services Administration. (2010). *Reliability of Key Measures in the National Survey on Drug Use and Health* (Office of Applied Studies, Methodology Series M-8, HHS Publication No. SMA 09-4425). Rockville, MD.

Reliability Study vs. Second Chance Study

% Inconsistent, Lifetime Use

	Validity Study (2000-2001) (past month use)	Reliability Study (2006)	Second Chance Study (2021)
Cigarettes	15.4	3.4	15.0
Alcohol	N/A	4.2	12.0
Marijuana	10.2	3.2	16.6

- Why such a difference between RS and SC?
 - SC cases are all web breakoffs; RS cases are a random sample
 - “Mode effect”
 - 2006 vs. 2021
- Let’s try some data analysis.

Second Chance Study: variables involved

- Dependent variables: consistency indicator for lifetime use of cigarettes, alcohol, marijuana, any of the three
- Independent variables: we tried to avoid data mining.
 - Primary sociodemographic variables (PSVs): household size, age category, gender, race/ethnicity, education level, employment status, region, urbanicity
 - Hypothesis variables (HVs): days between interviews, reluctance to respond, number of years since initiation, device used in web interview, past year psychological distress, data quality problems

Second Chance Study: results

Independent Variable	Statistical Significance		Evidence of Association
	χ^2	Models	
Days between interviews	None	None	None
Response propensity	None	None	None
Web modules completed	CG, AL, ANY	AL, ANY	Some, but direction is unclear
Years since initiation	AL	None	Very little
Device type	CG, AL, MJ, ANY	AL	Some: phone users seem to be more inconsistent
Serious psychological distress	None	None	None
Item nonresponse	AL, ANY	AL	Some
Roster age mismatch	Sparse data: no statistical testing		None
Time per question	None	None	None
All PSVs	Some evidence that those with low education level are more inconsistent		

AL = inconsistent response for lifetime alcohol; CG = inconsistent response for lifetime cigarettes; MJ = inconsistent response for lifetime marijuana; ANY = inconsistent response for any of the three substances.

Second Chance Study: conclusions / next steps

- Data analysis didn't turn up that much.
 - We'll keep accumulating Second Chance cases, though.
 - We can improve our data quality indicator and our measure of reluctance (number of contacts required in field, number of days between mailing and submission of broken-off web response).
- Recontacting people
 - We'd love to ask these folks directly about their responses, but that's a heavy lift, and it might not lead to much insight anyway.
 - More likely, we'll ask them more general questions about their experience with the web survey, beginning in 2024 or later.

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