Approaches to Using Online Samples to Confirm, Inform, and Augment Lab Studies

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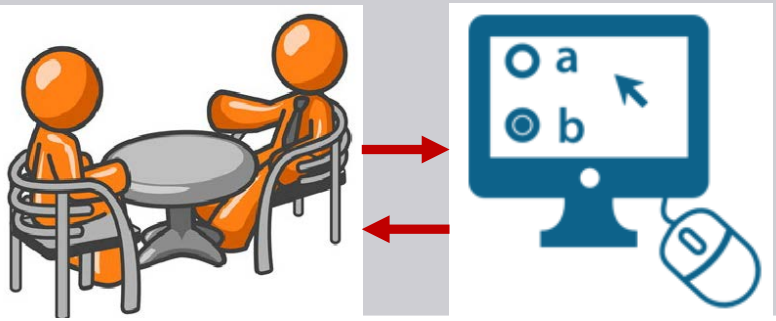
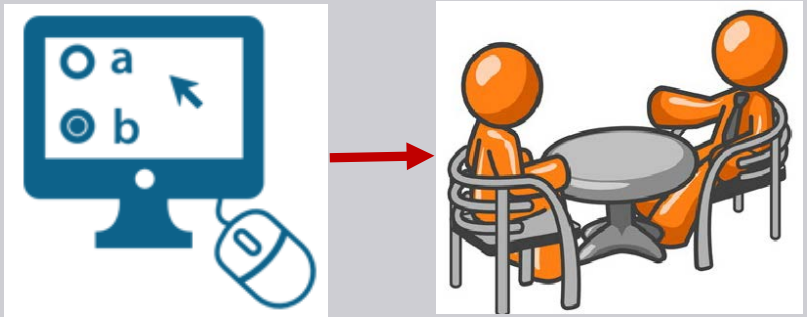
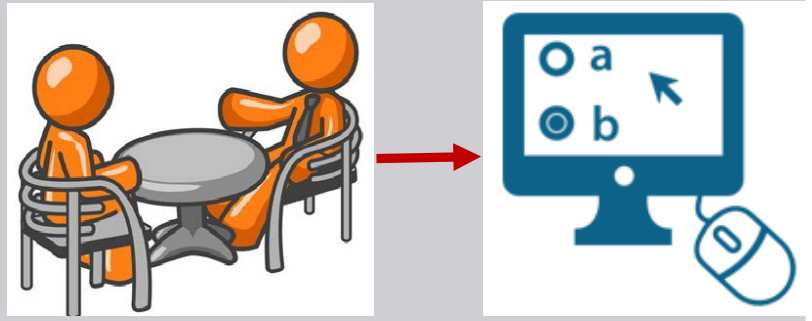
Using Online Testing in Conjunction with Lab Testing

Example 1: Lab and Online Concurrently	Example 2: Online before Lab	Example 3: Online after Lab
Augment ongoing lab research where a quick turnaround was needed	Inform research questions and protocol for a future in-lab study	Confirm findings from qualitative lab study using a quantitative online sample







Example 1:
Augmenting in-lab Research with Online Research
(lab and online testing concurrently)

Federal 2015 Cybersecurity Enhancement Act

Big law, lots of fine print, complicated IT specifications

Requires the installation of the Department of Homeland Security's EINSTEIN cybersecurity protection system on all Federal civilian information technology systems.

Updating Pledge Language

Informed Consent

Alarming Respondents

Research Questions

- Lab
  - Learn about respondents' reactions to and comprehension of the old and revised confidentiality pledge language
- Online
  - Learn about reactions to and comprehension of the old and revised language
  - Analyze paradata on completion rates, item non-response, time spent per page

Sample & Design

- **Lab Sample:**
  - 23 telephone interviews
  - Prior BLS respondents from three establishment surveys
  - Varied by establishment size and industry

- **Online Mturk Sample:**
  - N =1,128 participants (proxy for Household respondents)
  - Average age = 36
  - College degree or higher = 63%
  - Employed full time = 57%

Protocols

- **Lab Study:**
  - Asked about previous experience with BLS surveys/pledge
  - Read old & revised pledges
  - Answered questions about comprehension & reactions to pledges
- **Online Study:**
  - Randomly assigned to read old or revised pledge
  - Demographic questions [filler]
  - Free recall & recognition task for pledge language
  - Comprehension questions

Lab Results

- Most said they were generally comfortable with the BLS and how their information would be handled
- “The interviewer said something about privacy”

Old Pledge

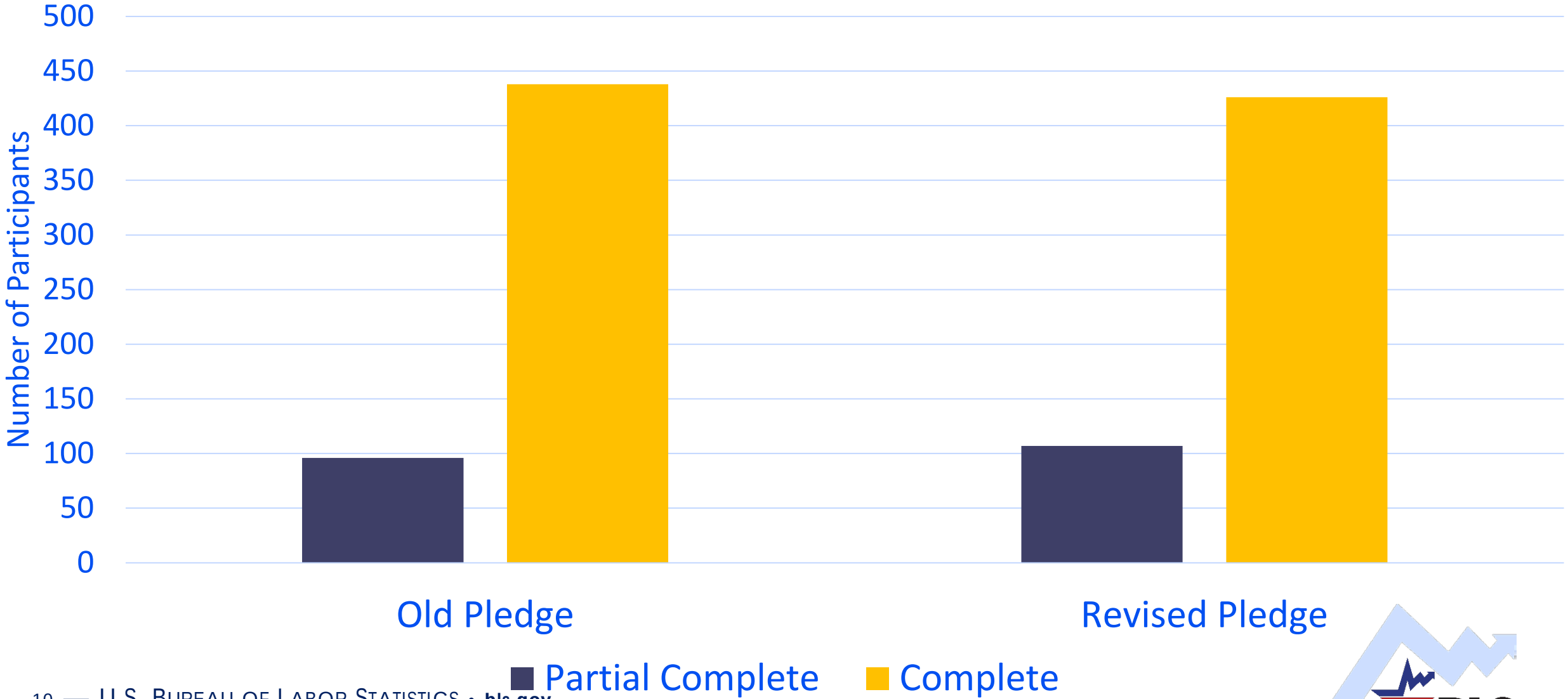
- Boilerplate stuff
- “It’s fine”
- Wouldn’t impact response decision either way

Revised Pledge

- Looks like standard ‘fine print’
- Assumed data already screened, a good thing
- Wouldn’t impact response decision

Online Results: Completion Rates

No difference in partial or full completion rates by pledge type (*ps* > .05)



Item Non-Response to Demographics

No differences by pledge type (all *p*s > .05)

Item	Old pledge	Revised pledge
Ethnicity	1.3%	1.5%
Race	1.1%	1.3%
Age	1.7%	0.9%
Income	1.3%	0.4%
Household income	1.3%	0.6%
Reported Hispanic	1.3%	1.4%
Education	1.1%	0.2%
Employment status	1.1%	1.0%
Household size	1.1%	1.5%
Zip code	1.1%	1.7%
Occupation	0.6%	0.6%
Job title	0.0%	0.6%

Paradata, Memory, and Comprehension

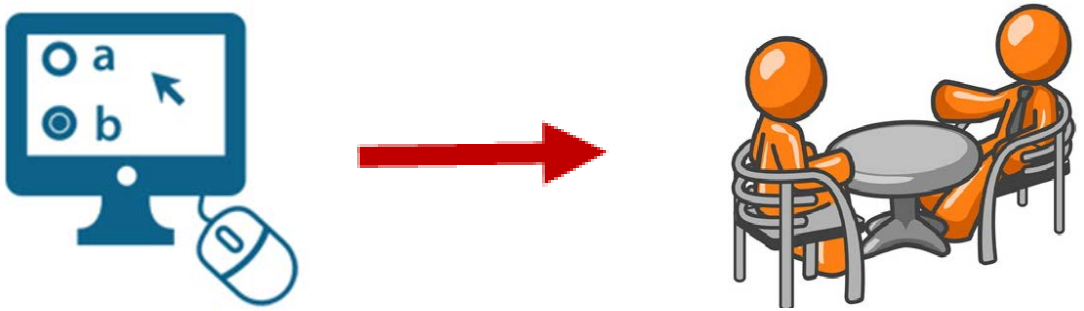
No differences by pledge type (all *p*s > .05)

Metric	Mean
Time spent on old pledge page Time spent on revised pledge page	25.5 seconds 33.5 seconds
Time spent on memory task	109.0 seconds
Time spent on total survey	15 minutes
Number of words recalled from pledge	5.8 words
Percentage of words correctly recognized from pledge	61.0%

Summary

- Both in-lab testing and online testing revealed similar findings about reactions to and comprehension of the confidentiality pledges
- Online sample allowed us to:
  - Assess paradata with a large enough sample to draw some conclusion on the impact of the pledge language
  - Get quick feedback when on a tight deadline from a more diverse pool of participants

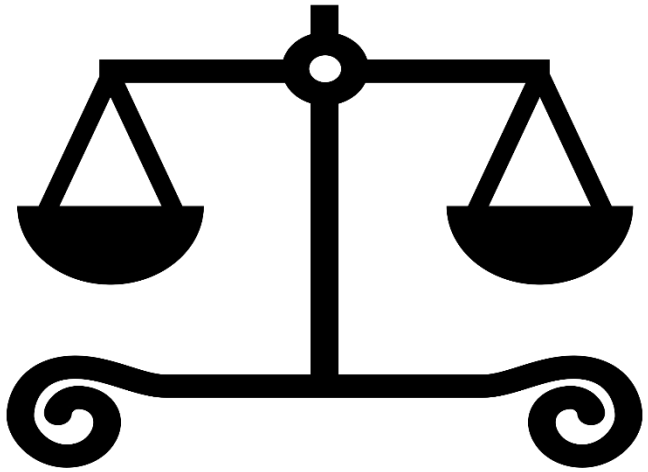
Example 2: Inform in-lab research (online then lab testing)



Interviewer Behaviors

Standardized Approach:

Accuracy
Data quality
Less response bias
Decrease interviewer effects



Conversational Approach:

Rapport
Conversational norms
Higher response rates
Increase cohesion

Research Questions

- Online:
  - Pre-test survey vignettes and conversational interviewing techniques we could use for a future in-lab protocol with actual survey interviewers
- Lab:
  - Gain insight into interviewers' cognitive processes using materials pretested in online study

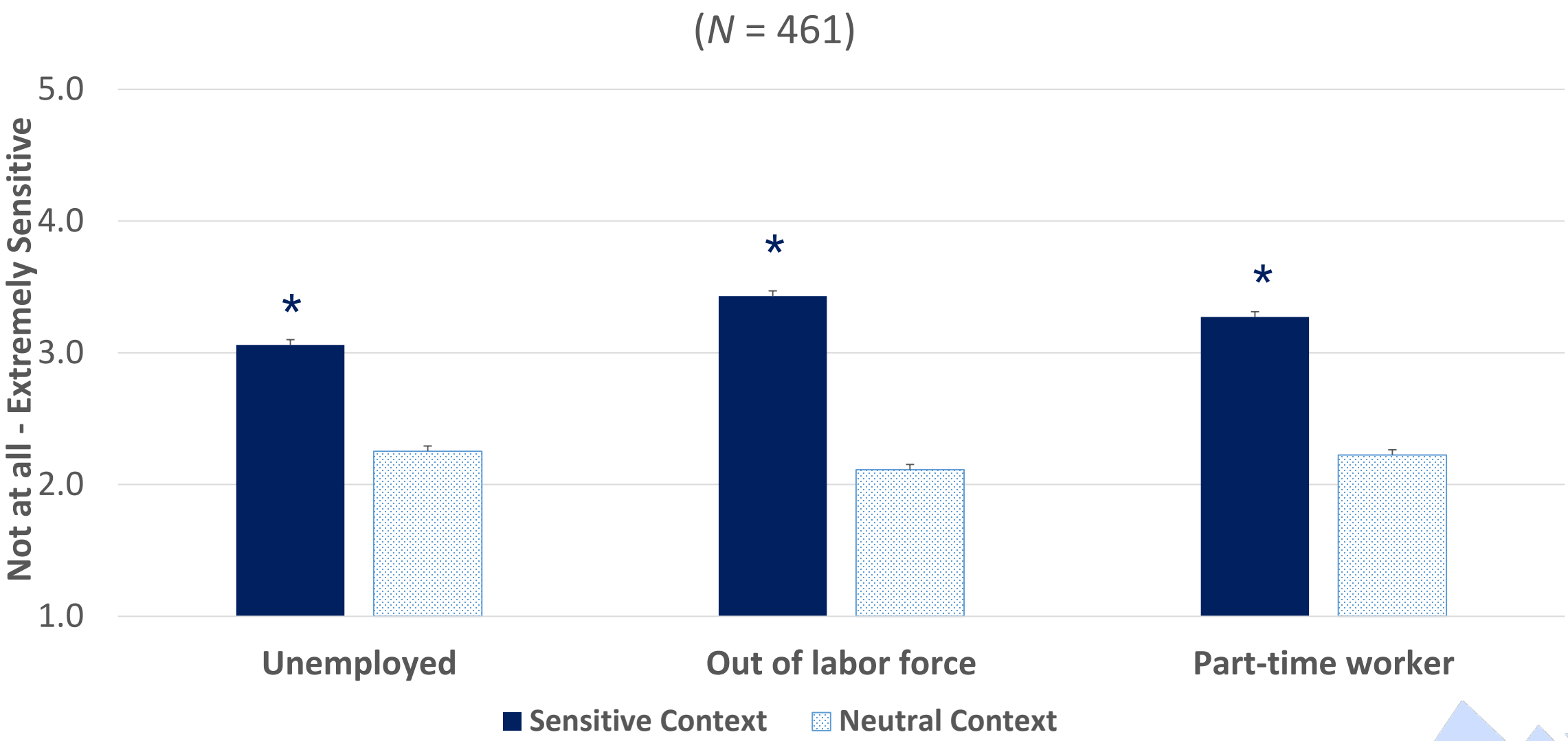
Participants and Design

- Online Sample (Mturk)
  - *N* = 461; 54.4% Female
  - Mean age = 37.17, *SD* = 0.56
  - Median education level = Associate's/Bachelor's
- Design
  - Read hypothetical vignettes about survey respondents completing employment survey
  - 2 Survey Contexts
    - Sensitive vs. Neutral
  - Dependent variable:
    - Selection of question wording lead-in (direct vs. apologizing, forgiving, distancing)

Examples of Lead-ins

- Direct question: Are you doing any work for pay?
  - Apologizing: I'm sorry to ask this, but…
  - Forgiving: Some people may not work because of the economy, they are waiting for the right job offer, or other personal reasons…
  - Distancing: The first question I'm supposed to ask you is about employment, we have to ask everyone the same questions…

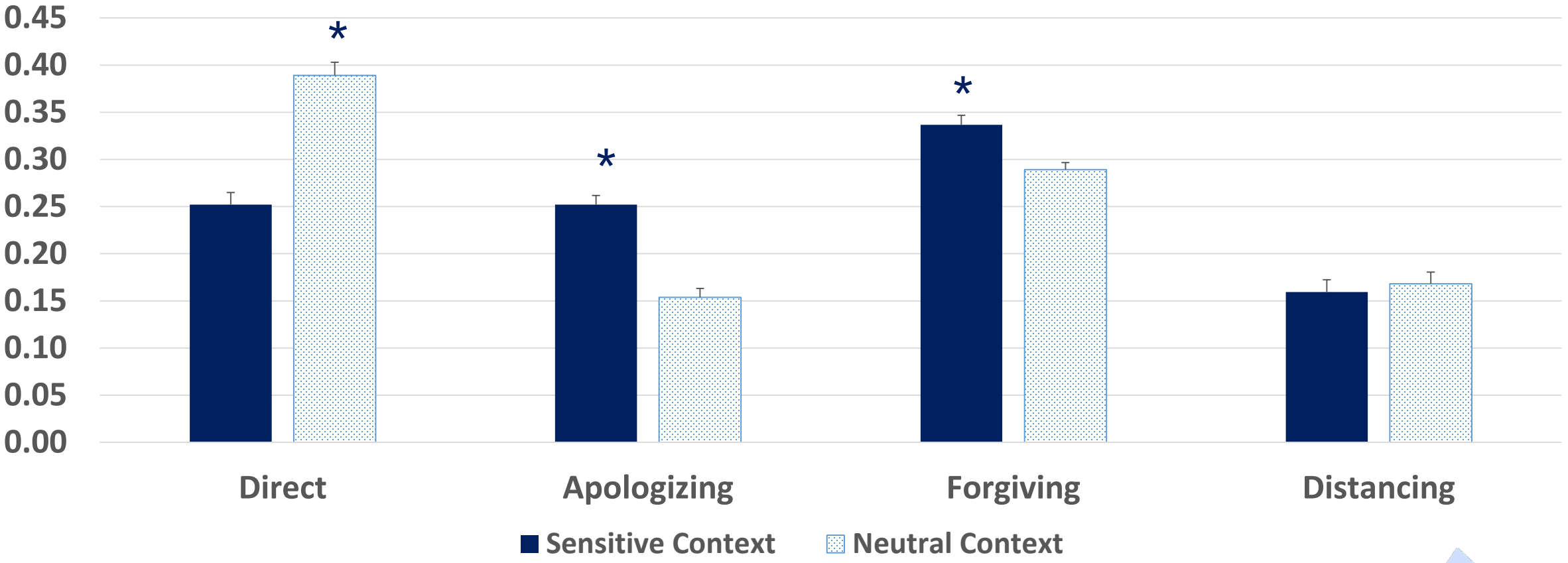
Results: Vignette Sensitivity Ratings



* p s < .001

Results: Wording Type Selection

Mean Proportion of Times Each Wording Type Was Selected by Context Type (*N* = 461)



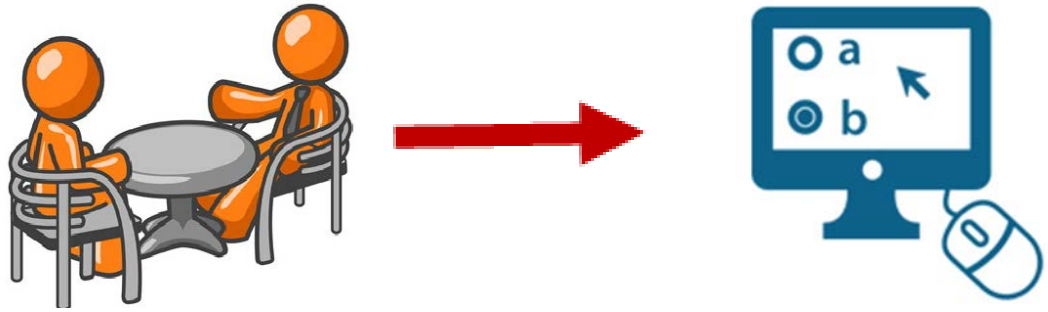
* *p* s < .001

Summary

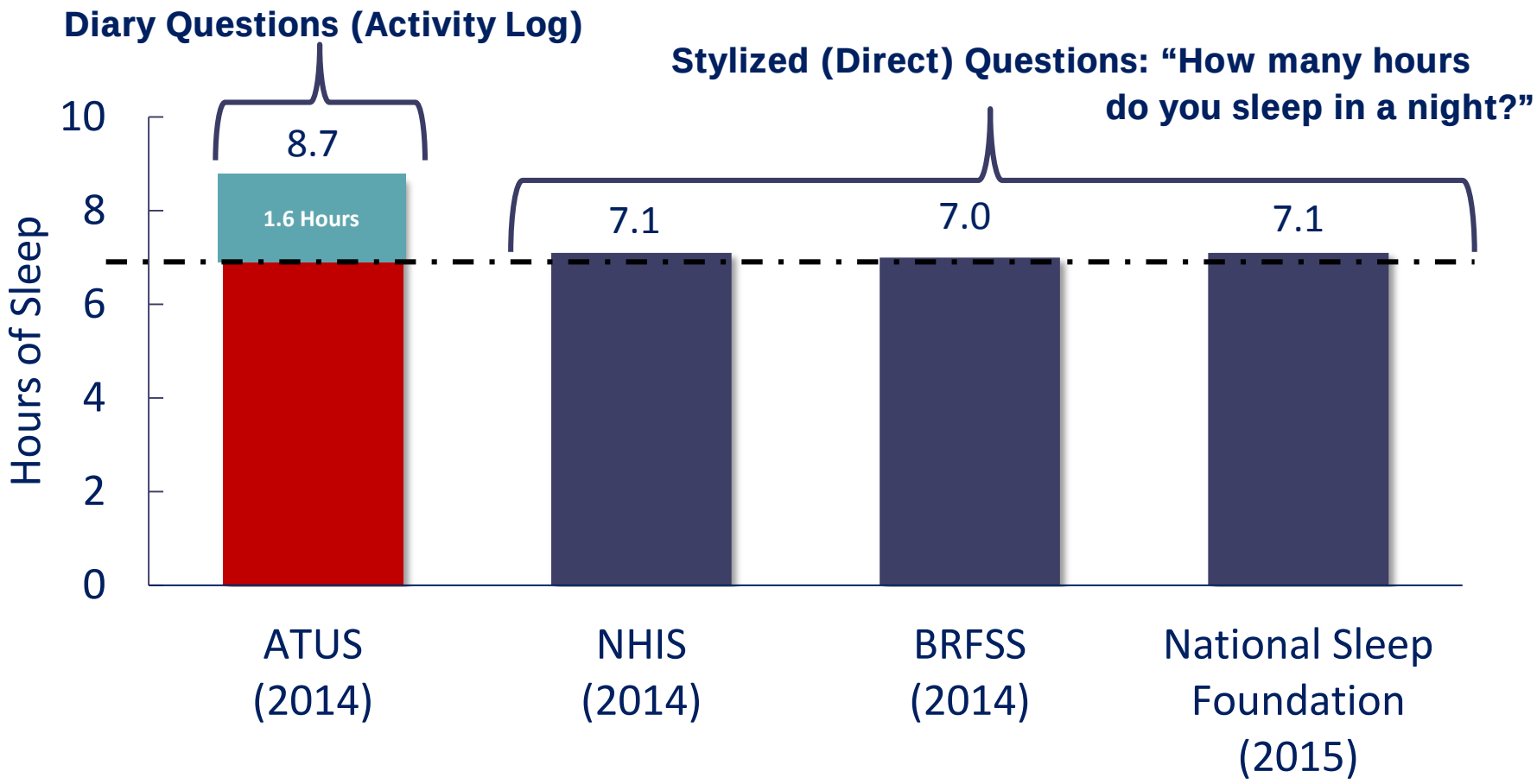
- Online study allowed us to pre-test vignettes & different types of conversational interviewing techniques before conducting in-lab research
- Researchers can use online testing to pre-test materials for future in-lab studies
  - Useful tool when your population of interest is hard-to-reach (e.g., survey interviewers)

Example 3:

Using Online Testing to Confirm in-lab Qualitative Findings (post-lab testing)



Sleep Duration in Other Surveys



Research Questions

- Lab Study:
  - Conduct qualitative cognitive interviews to better understand the response process surrounding questions about sleep
  - Identify potential sources of measurement error
- Online Study:
  - Test hypotheses generated from the lab study using quantitative data

Samples

Study 1 (Lab Study in DC):

- *N* = 29
  - 11 male; 18 female
  - Mean age = 46 (*SD* = 14)
  - Age range = 21 to 69
  - Cognitive interviews; probed on comprehension of diary and stylized sleep questions (qualitative data)

Study 2 (Online MTurk):

- *N* = 1233
  - 46% male; 54% female
  - Mean age = 36 (*SD* = 11)
  - Age range = 19 – 77
  - Online version of in-lab cognitive interviews with fewer open-ends (mostly quantitative data)

Lab Study Results

- What does "sleep" mean to you?

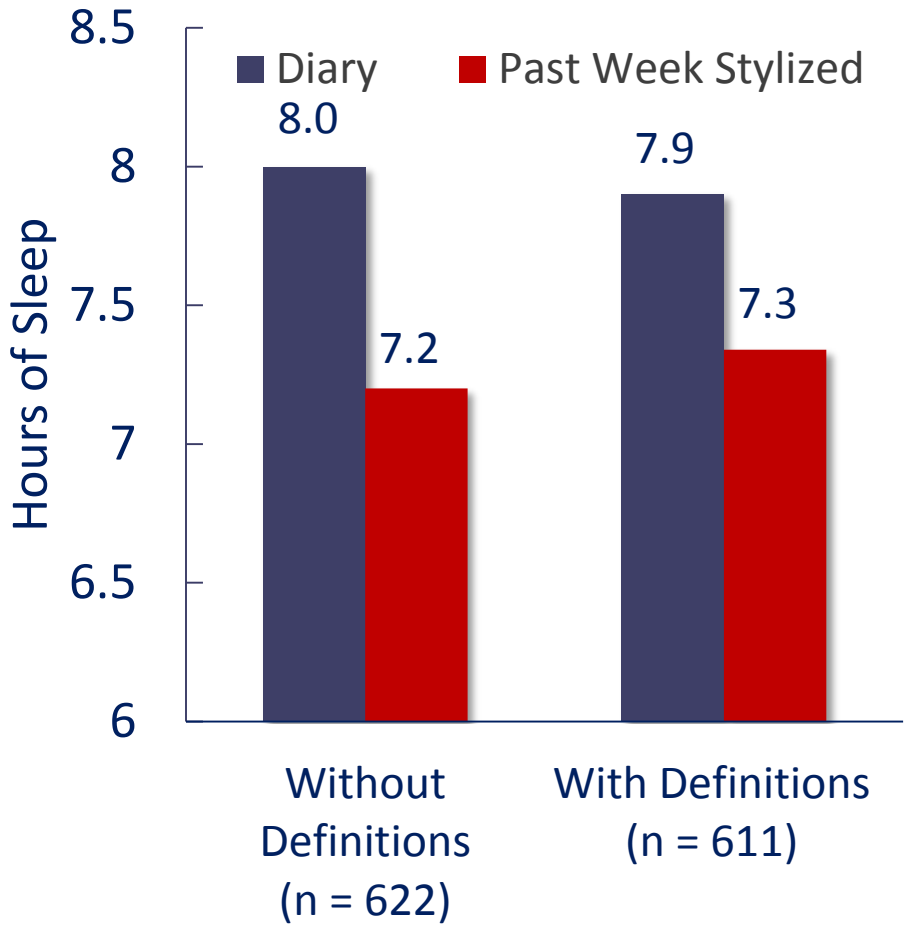
	Diary mean hours of sleep	Stylized mean hours of sleep
Narrow sleep definition (n=15)	7.25	5.93
Broad sleep definition (n=13)	8.18	6.93

Online Study Design

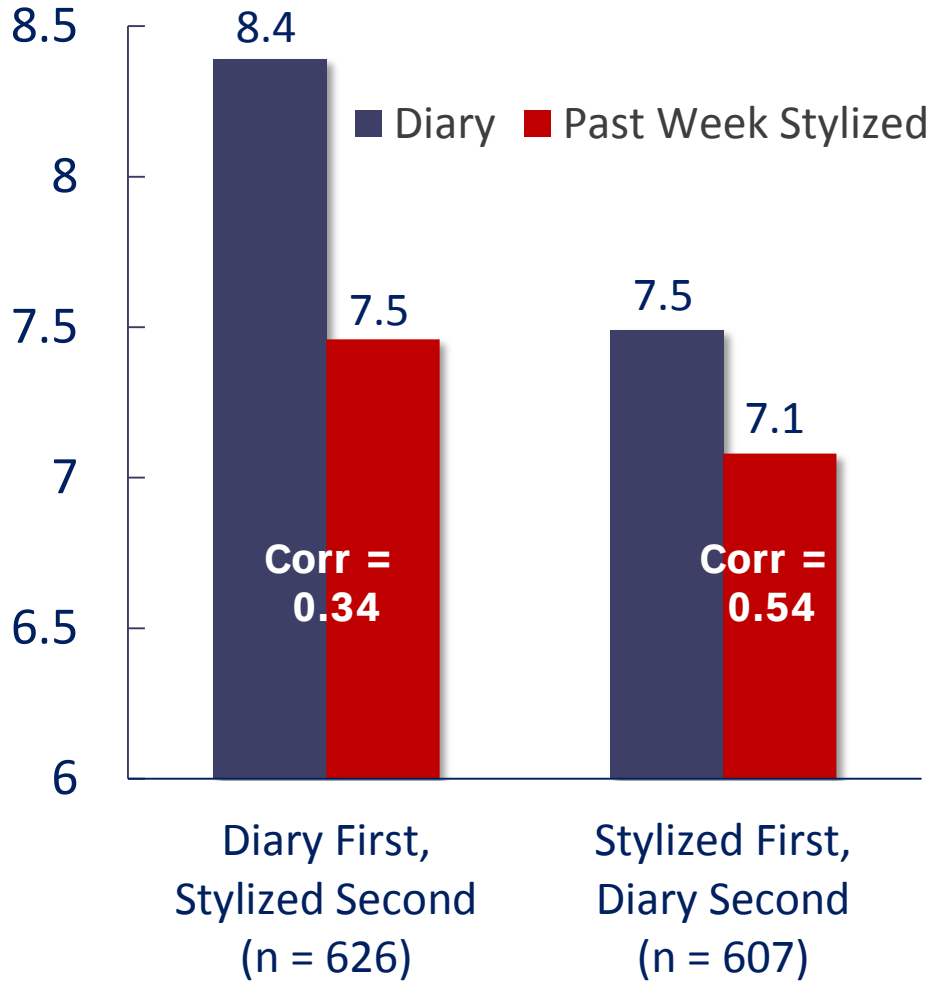
- 2 Definition Conditions
  - With definition (exclude non-sleep activities, such as resting or reading)
  - Without definition
- 2 Question Order Conditions
  - Diary first
  - Stylized first

Results

Question Type X Definition



Question Type X Order



Summary

- Lab study uncovered information about the response process surrounding sleep questions and potential sources of measurement error
- Online study:
  - Helped confirm evidence that comprehension may play a role in how respondents report on sleep with quantitative data
  - Uncovered previously unknown order effect
- Researchers can use online, quantitative studies to test hypotheses generated from qualitative, in-lab studies

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