Mix and Match: Question Structure and Self-Proxy Agreement Across Household Type

Angie O'Brien, Dave Tuttle, and Jonathan Katz, U.S. Census Bureau

Literature

- Does a single informant know enough to be able to accurately report on the characteristics of the entire sampled unit?
- Literature = mixed
  - (Briggs 1992; Fulton et al., 2020; Tourangeau & Yan; Zuckerbraun, et al. 2020)
- How much effort should survey researchers expend to obtain data from each person from a sampled unit? (Moore, 1990)

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Public Participation in the Arts (PPA)

- Supplement of the Current Population Survey (CPS)
- Purpose = to measure adult participation in various arts and cultural activities
  - CATI/CAPI
  - Approx. 56,000 households (2017)
  - Approx. every five years
- Allows for self and within household proxy responses
  - 2017 → 2 respondents
  - 2022 → 1 respondent

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Exploratory Research Questions

1. Is there evidence that certain question structures are more conducive to reliable proxy reporting than others?
   - Yes/No
   - Scale
   - Open-Ended Numeric
   - Select-All
2. Does the type of relationship between the proxy and the target respondent affect proxy reliability?
   - Related
   - Unrelated

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Methods

- 18 pairs of 36 participants
  - Household members
    - Related (16)
    - Unrelated (10)
- Winter/spring 2021
- National sample
- Proxy questions
  - E.g., During the last 24 months, did _____ visit an art museum or gallery?
    - → Target respondent

Sample Demographic Characteristics

		Final
Ethnicity	Hispanic	2
	Non-Hispanic	34
Race	White	26
	Black or African American	10
Sex	Male	17
	Female	19
Education	Completed High School	3
	Some College, no degree	5
	Associates Degree	4
	Bachelor's Degree	16
	Post-Bachelor's Degree	8
Age	18-24	7
	25-34	8
	35-44	10
	45-54	3
	55-64	2
	65+	6
Relationship	Related	26
	Unrelated	10

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Proxy Match Rates by Question Structure

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Exact Match

- When both the proxy and the target respondent provide the same answer to a question (Fulton, et al. 2020)
- How many times did you do this ____ visit an art museum or gallery during the last 24 months?
  - Proxy: 2 times
  - Target: 2 times

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Near Match

- When proxy and target respondent do not choose the same response, but are only one response category apart from each other (Fulton, et al., 2020)
- How many times did you do this ____ visit an art museum or gallery during the last 24 months?
  - Proxy: 2 times
  - Target: 3 times

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Question Structure Details

Question structure	Number of questions	Average # of response options
Yes/no	90	2
Scale	10	4.4
Open-ended numeric	3	—
Select-all	1	6

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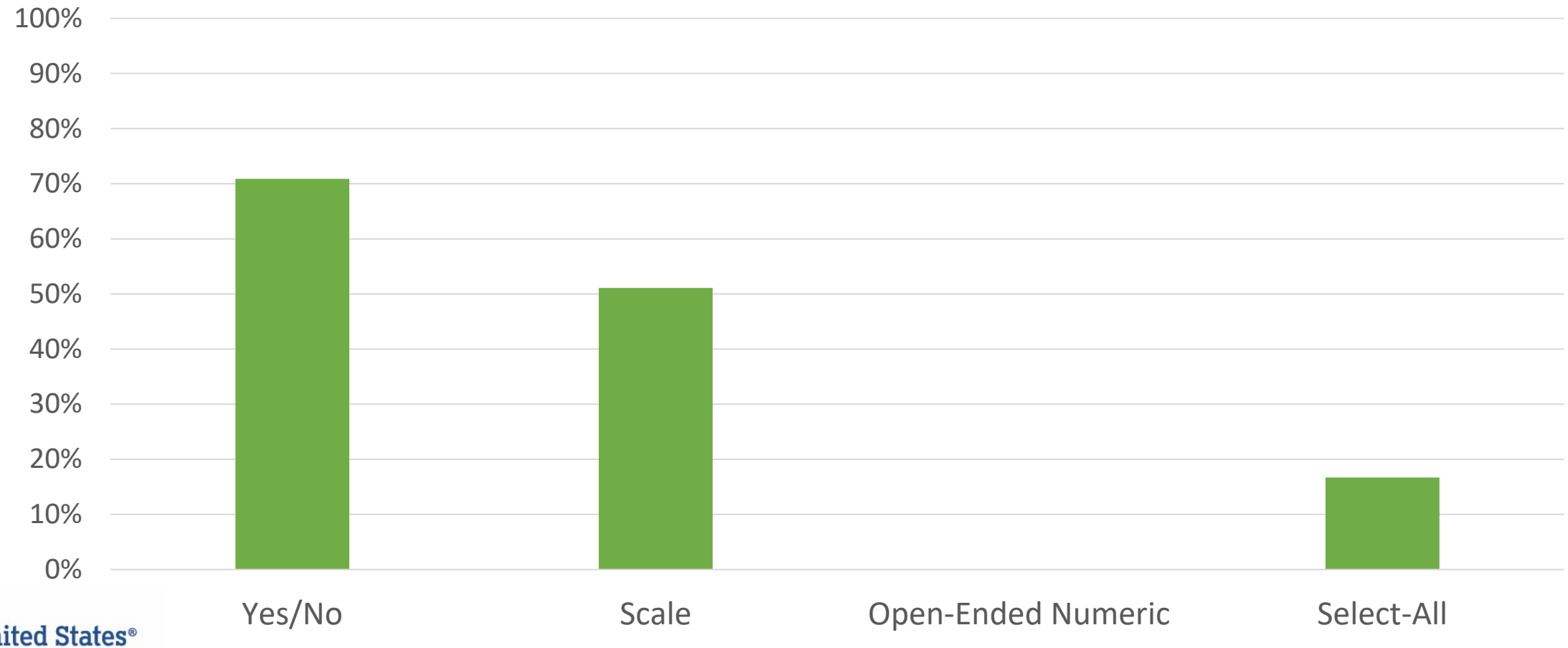
Exact Proxy Match Rates by Question Structure



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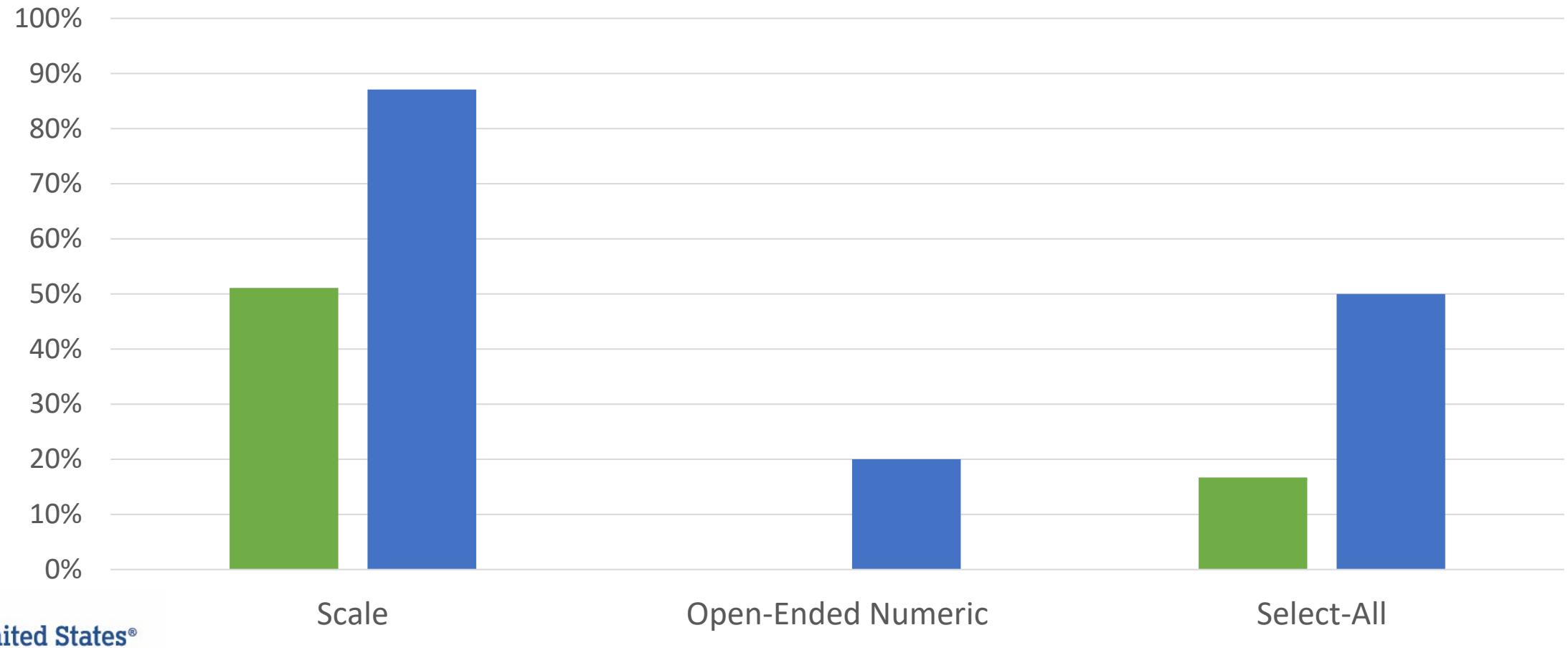
Near Proxy Match Rates by Question Structure



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Relationship Type

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Relationship type

- Related
  - Spouses
  - Unmarried partners
  - Parent/child
  - Siblings
- Unrelated
  - Housemates
- Social distance
  - (Bickart et al., 1990; Katz et al., 2022)

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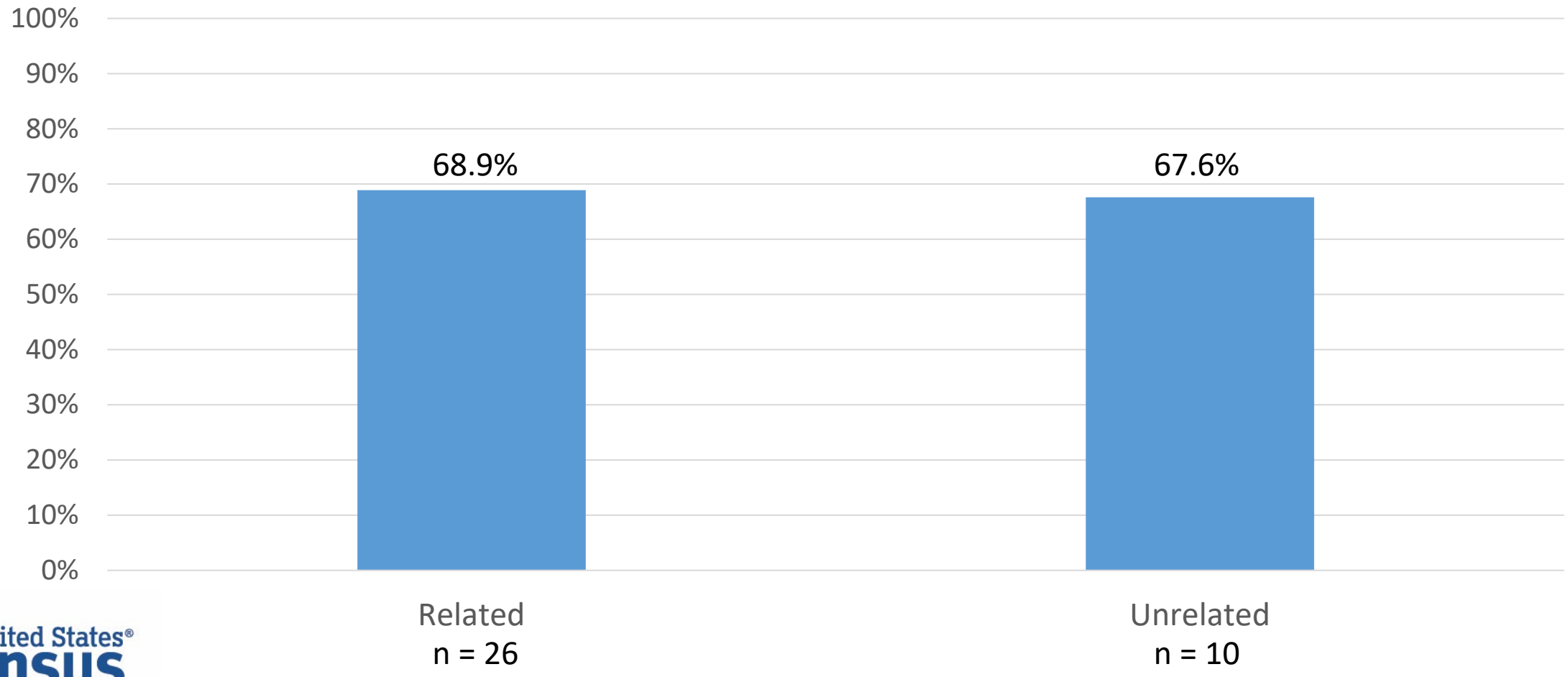
Yes/No Average Exact Match Rate by Relationship Type



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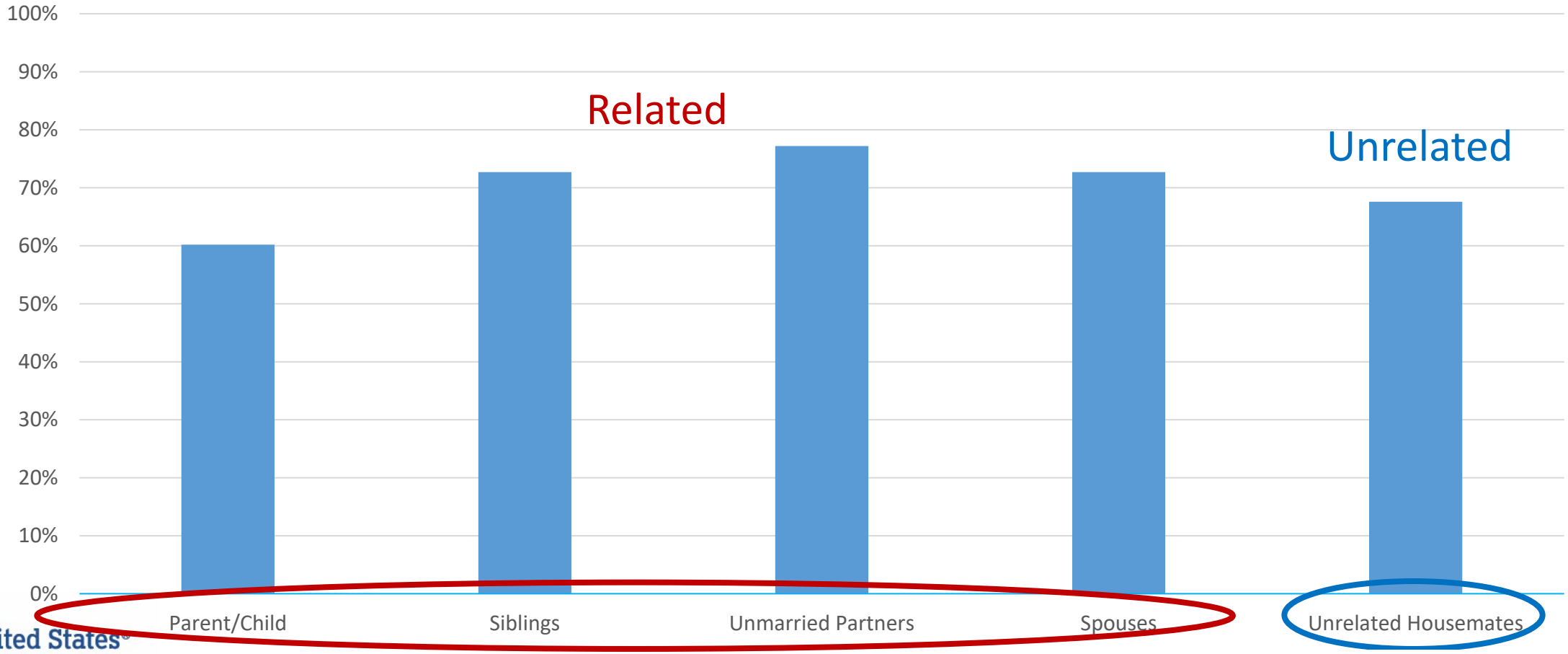
Yes/No Average Exact Match Rate by Relationship Type



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Conclusions

- In proxy reporting, the number of response options matters
- Proxy/target respondent agreement may be more nuanced than exact match rates suggest
- Relationship type = not the best predictor of proxy reliability
  - Social distance matters

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Future Research

- Statistical design
- Additional testing on related vs unrelated proxies
  - E.g., spouses vs. parent/child
- Different ways to do complex questions
  - E.g., select-all → yes/no
- Aggregate
  - Compare target and proxy data quality in the aggregate (e.g., item missingness and variance, etc.)

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Thank you ☺

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