



Assessment of the Quality of Interviewer Observations

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Overview

- 5 studies
- 3 types of interviewer observations
 - Area characteristics
 - Housing Unit characteristics
 - Respondent characteristics
- Observations taken on both R & NR



Analysis Questions

- Level of measurement error?
- Patterns or causes of error?
- How the error affects the way the observations can be used?

Closer Look at the Observations

- 3 types of interviewer observations
 - Area observations
 - Physical characteristics of areas (LA FANs)
 - Condition of the area (Longview)
 - Housing unit
 - Existence of HU (US Census)
 - Type, barriers to entry, condition (Longview)
 - Presence of children (NSFG)
 - Respondent characteristics
 - Gender (Marist Poll)
 - Sexually active (NSFG)

Closer Look at the Observations

Study	Type of Observation		
	Area	Housing Unit	Respondent
LA Fans	Physical Char		
Census		Existence	
Longview	Condition	Type Barriers Condition	
NSFG		Children	Sexually Active
Marist			Gender



Results

Area Observations:

- Physical characteristics
- Condition of area

Area: Measurement Error

Agreement for different Area obs

- Kappa Statistic

- Physical Disorder (.12-.62)
- Social Disorder (.00-.17)
- Residential Security (.42-.61)
- Residential Decay (.30-.56)

- Percent Agreement

- Condition of the area - 63%

Area: Predicting Error & Patterns

Factors that led to agreement

- Condition of the area
 - Same interviewer
 - Agreement on other observations
 - Condition of dwelling unit
 - Type of dwelling unit ($p=.06$)
 - Census vars

Area: Predicting Error & Patterns

Factors that led to more reports of:

- Physical Disorder, Residential Decay, Residential Security
 - Interviewer: 5 items (n.s.)
 - Occasion: 4 items (n.s.)
 - Area: Immigrant Conc. (+), Conc. Disadvantage (+), Conc. Affluence (-), Pop. Density (n.s.)

Area: Error Effects on Application

- Area observations vs Census data
 - Estimates of the weighted mean for 8 LA FANS survey outcomes
 - Weights based only on area obs had
 - Smaller standard errors but
 - Same point estimate than those based only on Census variables
- Condition of the area
 - Not useful in NR adjustment



Results

Housing Unit Observations:

- Existence
- Type
- Barriers to entry
- Relative condition of the HU
- Children present

Housing Unit: Measurement Error

Agreement for different HU obs

- Existence - 80%
- Type of HU - 81%
- Barriers to entry - 91%
- Relative condition of HU - 80%
- Children present - 73%
 - False negatives

Difficulty with seemingly very objective observations

HU: Predicting Error & Patterns

Factors that led to error

- Existence
 - Dependent listing method
 - “Confirmation bias”
 - Multi-unit buildings, trailers
 - Areas with high crime
- Type of HU
 - Different interviewers & those who didn't remember the case

HU: Predicting Error & Patterns

Factors that led to error

- Barriers to entry & condition of HU
 - Different home areas of the interviewers
 - Capturing same/different interviewer
 - Less safe areas
 - True change to the area
 - No data on interviewer behaviours
- Children present
 - No clear pattern but qualitative data gathered

HU: Error Effects on Application

- Existence of HU
 - Sample frame
 - Under- or overcoverage in frame but not in estimates
- Type of HU, Barriers, Condition
 - NR adjustment
 - ME not a problem
- Children
 - NR adjustment + daily prop models



Results

Respondent Observations:

- Gender
- Sexually active

Respondent: Measurement Error

Agreement for different R observations

- Gender - 92%
 - Error more likely for female Rs
 - 87% females vs. 97% males
- Sexually active - 78%
 - Females 79% vs. Males 76%
 - False positives

R: Predicting Error & Patterns

Factors that led to error

- Gender
 - Women
 - African Americans
 - Older
- Sexually active
 - Accuracy varied by interviewer

R: Error Effects on Application

Bad News

- Gender
 - Routing affected
- Sexually active
 - NR adjustment + daily prop models
 - Significant predictor
 - ME introducing more bias and variance

Conclusions: ME across Obs

	ME
Area obs	
Neighbourhood Condition	-- 37%
Housing Unit	
Existence	20%
Type	19%
Barrier	9%
Condition	20%
Children	27%
Respondent	
Gender	8%
Sexually Active	22%

- Error large
- Causes vary by type of obs
- Impact +/- but even positive conclusions made with caution

Further Work by Authors on Obs

- Sinibaldi, Natsal
 - HH: Smoking, Children
 - R: Age, Partnered
- West, NSFG and PASS
 - Analysis of interviewer justifications of obs
 - R & interviewer-level predictors of accuracy
 - Simulations of impact of ME on NR
 - Improve accuracy by providing intvwrs with auxiliary information (PASS, Germany)



Discussion
