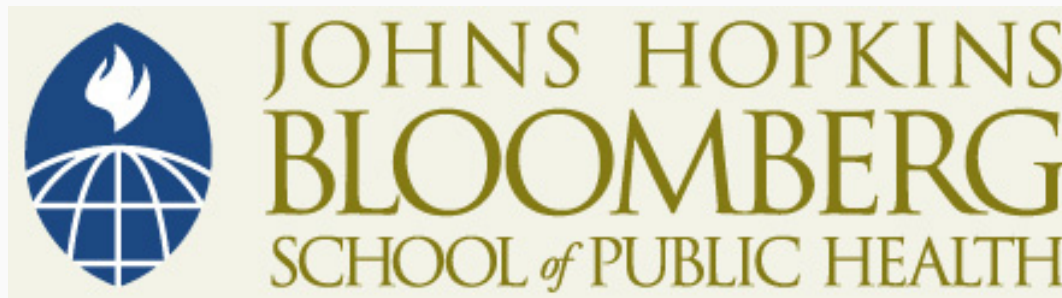


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Survey Research: Designing an Instrument

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Section A

Choice of Method

Characteristics of a Survey

- It applies systematic methodology
- It involves obtaining information directly from individuals
- It involves selecting a subgroup from a larger group
- It is done for the purpose of ...
 - Description
 - Exploration
 - Explanation

Sampling Issues

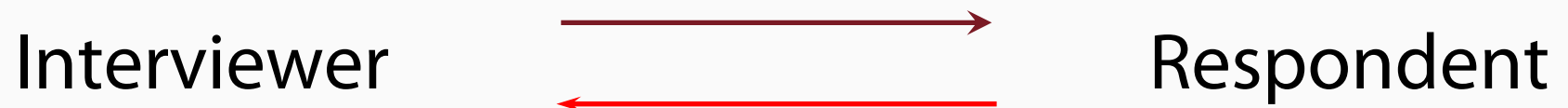
- Whether to use probability sampling
 - The sampling frame
 - Size of the sample
 - Sampling design/strategy
 - Expected response rate

Sampling Issues

- Question design issues
 - Reliability and validity of items
 - Pre-testing or pilot work
- Interviewing issues
 - Selection of interviewers
 - Supervision

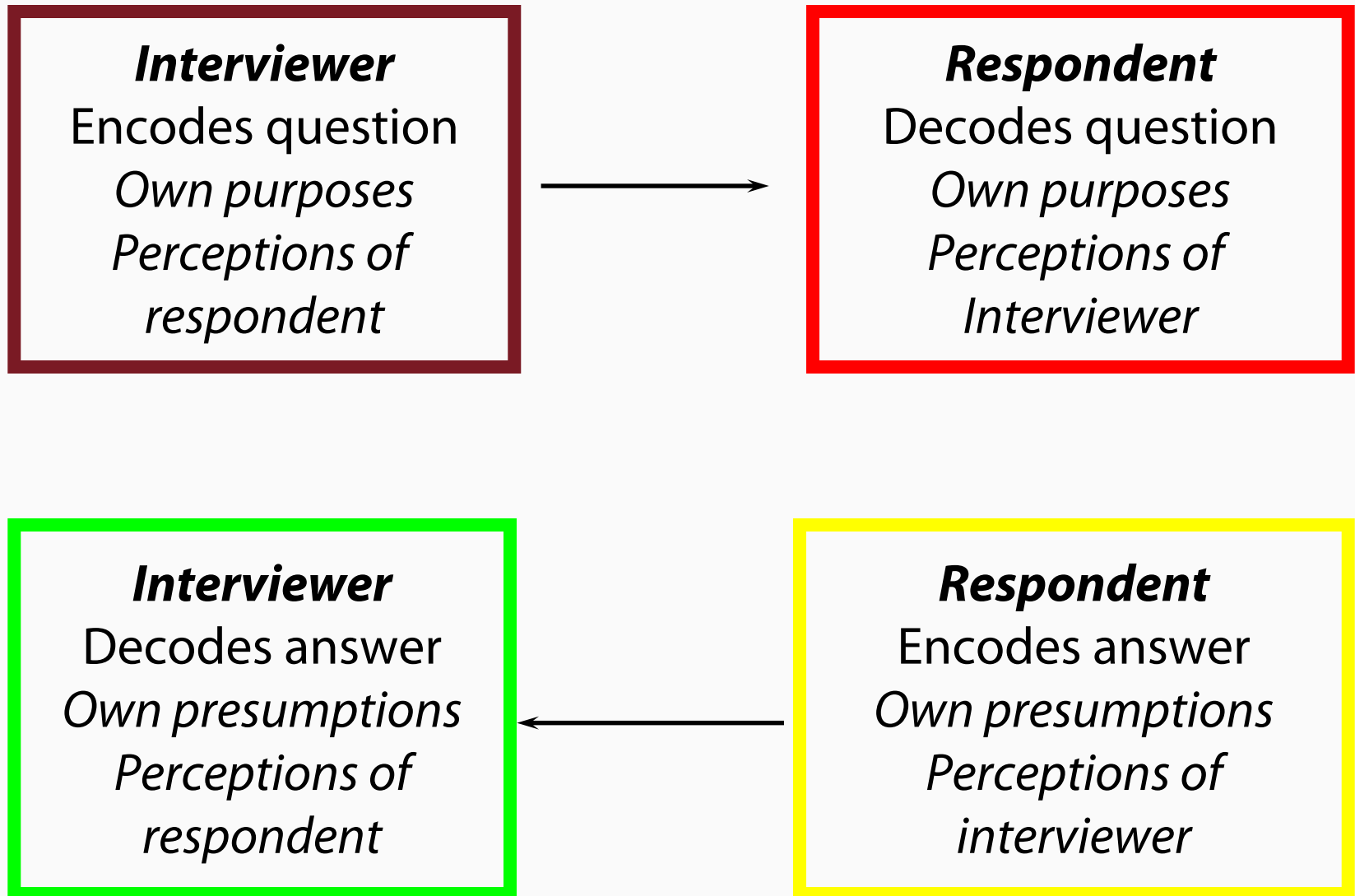
- Quantitative surveys in health services research

A carefully standardized
physical stimulus (i.e., question)



A *response* (i.e., answer)
expressed in terms of a standardized
format provided by the researcher

Symbolic Interactionist View



Methods of Data Collection

- Self-administered
 - Individually
 - By mail
 - In groups
 - Internet or email
- Interviewer-administered
 - By telephone
 - In person

Combinations

- Self-administered with interviewer instructions
- Mail with telephone follow-up
- Interviewer-administered with embedded self-administered section

Factors in Choice of Method

- Characteristics of study population
 - Literacy
 - Physical and mental abilities
 - Motivation

Factors in Choice of Method

- Access to sample
 - Location
 - Time available for data collection
 - Infrastructure available (telephones, mail service, internet access)

Factors in Choice of Method

- Availability of information about study population
 - Telephone numbers
 - Completeness of addresses
 - Tracing information

Factors in Choice of Method

- Survey objectives
 - Complexity of questioning
 - Difficulty of reporting task
 - Topic sensitivity

Factors in Choice of Method

- Question forms to be used
 - Open-ended
 - ▶ Fill in a number
 - ▶ Write in text
 - Closed-ended
 - ▶ Multiple choice
 - ▶ Scalar (likert-type)
 - ▶ Dichotomous (yes/no)

Factors in Choice of Method

- Expected response rates
- Example (assume a group with interest):
 - Mail survey with no follow-up—30%
 - Mail survey with mail follow-up—50%
 - Mail survey with telephone follow-up—60% to 80%



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Section B

Guidelines for Writing Questions

Guidelines for Writing Questions

- Restrain the impulse to write specific questions until you have thought through your research questions
- Write down your research questions and keep them handy when you are working on the questionnaire
- Every time you write a question, ask yourself . . .
 - “Why do I want to know this?”
 - “How will it help answer a research question?”

Open-Ended or Closed-Ended Questions?

- Type of information sought
 - Facts
 - Opinions or attitudes
 - Exploratory
- Complexity of the information or difficulty of the reporting task

Open-Ended or Closed-Ended Questions?

- Feasibility
 - Range of possible answers
 - Coding capabilities
 - Sample size
 - Data collection method

Advantages of Open-Ended Items

- Can get unanticipated answers
- May describe the respondent's real views better
- Respondents can answer in their own words
- Appropriate when the range of possible answers is long

Advantages of Closed-Ended Items

- Task of answering is easier
- Interpretation of the answer is easier
- Avoids rare answers

Scales, Indices, and Questionnaires

- Seek out appropriate scales, indices, questionnaires that have been used and tested by others
- Examples
 - Health status scales
 - Quality of life
 - Mental health status
 - Health services utilization
 - Satisfaction ratings

Scales, Indices, and Questionnaires

- Can combine several in one questionnaire
- Be careful about copyrighted instruments

Writing Questions

- Fully scripted, so that as written, the question prepares the respondent to answer
- The question means the same thing to every respondent
- The respondent understands what an appropriate answer should be

Fuzzy Wording

- Vague and general questions produce vague and general answers
- Bad—What do you like best about this neighborhood? We're interested in anything, like houses, the people, the parks, or whatever

Poor Question Organization

Bad

- “I would like you to rate different **features of your neighborhood as very good, good, fair, or poor**. Please **think carefully** about each item as I read it. **Public schools. Parks. Other.**”

Poor Question Organization

Better

- “I am going to ask you to rate different **features of your neighborhood**. I want you to **think carefully** about your answers. How would you rate the public schools—would you say **very good, good, fair, or poor**?
How would you rate the parks, would you say **very good, good, fair or poor**?”

Difficult Words

- Risk miscommunication with respondent
- Example:
 - “Do you think TV programs are **impartial** about politics?”

Of 56 Respondents . . .

- 26—interpreted “impartial” correctly
- 10—overlooked the word altogether
- 9—thought it meant “tending to spend too much time on politics”
- 5—thought it meant unfair or biased
- 2—thought it meant giving too little time to politics
- 7—had no idea

Negatives and Sneaky Double Negatives

Bad

- “What is your view about the statement that conservationists should not be so uncooperative with the government?”

Negatives and Sneaky Double Negatives

Better

- “What is your view about the statement that conservationists should be cooperative with the government?”

Asking Two or More Questions at Once

Bad

- “When riding in the back seat of a car, do you wear a seat belt all of the time, most of the time, some of the time, once in a while, or never?”

Backseat Belt Question

All of the time	30%
Most of the time	17%
Some of the time	13%
Once in a while	8%
Never	24%
Don't ride in back seat	8%
Total	100% (n=77)

Asking Two or More Questions at Once

Better

- “In the past year, have you ridden in the back seat of a car?”
- “When you are riding in the back seat of a car, do you wear a seat belt all of the time, most of the time, some of the time, once in a while, or not at all?”

Backseat Belt Question

	Original	Alternative
All of the time	30%	42%
Most of the time	17%	16%
Some of the time	13%	8%
Once in a while	8%	10%
Never	24%	4%
Don't ride in back seat	8%	20%
Total	100%	100%
$\chi^2 = 19.23, p \leq .002$	(n=77)	(n=79)



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Section C

Questionnaire Construction and Critique

Item Order

- Self-administration—capture respondent's interest
- Interviewer—allow for practice with question/response format (information interviewer needs to know)

Putting the Questionnaire Together

Ideal Length

- Self-administration—15–20 minutes
- Interviewer—20–30 minutes

Testing

- Read it aloud to yourself
- Read it aloud to co-workers, friends
- Ask two to three others to fill it out themselves

Systematic Pilot Testing

- Small sample (10–15)
- Similar to study population
- Use all study procedures
- Discussion of problem questions

Standard 10-Step Critique

- Use simple unambiguous language that can be understood in the same way by all respondents
- Avoid long and complex sentences
- Avoid hypothetical questions
- Avoid “double-barreled” questions (asking two questions at once and questions that include assumptions)

Standard 10-Step Critique

- Do not ask questions that ask respondents for information they do not have
- Avoid questions that ask about causality
- The time frame referred to in the question should be unambiguous and explicit

Standard 10-Step Critique

- For fixed response questions, response categories must be exhaustive and mutually exclusive
- Make sure the context of the question does not inappropriately affect its meaning
- Define terms as needed (complex definitions and instructions should be given in a preamble or introduction, not in the question itself)