

Avoiding Bias in the Research Interview

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What is a Research Interview?

- Interview aimed to collect specific information for scientific inquiries.
- Interview is conducted by an interviewer asking questions.
- Specific information = things that we cannot directly observe:
 - Feelings
 - Thoughts
 - Intentions
 - Opinions
 - Explanations
 - Unobservable behaviors
 - Behaviors that have occurred in the past
- Two parties: Interviewer and respondent/subject



Focus

- Interview itself:
 - The role of the interviewer
 - Introducing the respondent to the interview task
 - Conducting the interview
 - Record data
- Not addressed today:
 - Selecting characteristics subjects should have
 - Recruiting
 - Assume that we have the correct subjects and we have a representative group of them
 - Constructing the questionnaire/drafting the questions (in detail)



Different Types of Research Interview

- Standardized, fixed response interview
- Semi-structured interview
- Unstructured/informal conversational interview

- Different ways to conduct research interviews:
 - In-person
 - Phone



Unstructured/Informal Conversational Interview

- No predetermined set of questions
- There is an overall purpose and concepts but...
- Questions emerge from immediate context and are asked in the natural course of things
- Used when:
 - Each person can be interviewed on different occasions with questions specific to the context.
 - The researcher is part of the context.
- Each new interview builds on those already done through:
 - Expanding information previously provided
 - Explaining context
 - Identifying common themes in the interview



Unstructured/Informal Conversational Interview

- Strengths:
 - High salience and relevance of questions
 - Interview is matched to each respondent and its circumstances
 - Opportunity for flexibility and spontaneity
- Weaknesses:
 - Less systematic and comprehensive and comparable across respondents
 - Greater amount of time to collect necessary data
 - Data organization and analysis can be quite difficult
- Example: Ethnographic studies
Interacting with the respondents a lot through participation and observation.
 - Accompanying your families through procedures to “live” the experience and talk to them about it.
 - Repeated conversations with a family during the time their child receives care



Semi-Structured Interview

- Main questions are worded before the interviews and used as interview guide.
- Additional subquestions are prepared to be used if needed (probes).
- All respondents are asked the same basic questions in the same order.
- Questions are worded in a completely open-ended format.
- Responses are open-ended.



Semi-Structured Interview

- Strengths:
 - Increasing comparability of responses since the same questions are answered
 - Facilitates organization and analysis of the data.
- Weaknesses:
 - Little flexibility in relating the interview to particular individuals and circumstances
 - Standardized working of questions may constrain and limit naturalness and relevance of questions and answers
- Example:

Interview that gives the respondent the opportunity to use their terms when talking about the topic but still makes sure that you cover the main areas you would like to cover.



Standardized/Fixed-Response Interview

- Questions and answers are predetermined before the interview
- Responses are generally fixed – response choices to choose from.
- Respondents chooses from among these fixed responses
- Example: Interviewer-administered survey
 - National Health Interview Survey (NHIS)
 - Behavioral Risk Factor Surveillance Survey (BRFSS)



Standardized/Fixed-Response Interview

- Strengths:
 - Data analysis is simple
 - Responses can be directly compared and easily aggregated
 - Many questions can be asked in a short time.
- Weaknesses:
 - Respondents must fit their experiences and feelings into the answer categories
 - Interview may be perceived as impersonal and mechanistic
 - Can distort what respondents really mean or have experienced



What is Bias?

- Depends on the type of research interview
 - Generally: Difference between answer that respondent gives to interviewer and the truth
 - Specifically for standardized interviews:
 - Difference between answer and truth
- AND
- Inappropriateness of answer within a standardized interview:
 - Does not fit the response choices
 - Does not match the number of choices that can be checked (Check one versus check all that apply)
 - Etc.



Different Sources of Bias in the Research Interview

- Questions
- Respondent
- Interviewer
- Interview situation



Questions as a Source of Bias

- Questions can be a source of bias if they are “bad”:
 - Not all respondents understand them the same way.
 - Respondents do not understand them in the way the researcher intended.
 - Questions are complex.
 - One question asks more than 1 question.
 - Questions include a presupposition.
 - Question is not applicable to the respondent.
 - Context changes how question is interpreted.
 - Questions ask for information that the respondent cannot provide because he doesn’t know it.
 - Questions ask for information that the respondent cannot provide because it is very likely that he/she forgot it.
 - Questions are not balanced.
 - Response options do not match the question.



Avoiding Bias From Questions

- Good questions are the responsibility of the researcher
- Give feedback if you think that there could be a problem or if you can think of an improvement
- Allow enough time to carefully craft and test interview questions
- Use guidelines for good questions
- Conduct cognitive interviews
 - Ask respondent to “think aloud” when answering questions
 - Understand how respondents of different backgrounds understand questions, terms
 - Determine if response choices are missing
- Conduct pretests
 - Dry run of the whole survey process
- Debrief interviewers
 - What works, what doesn't?



Respondent as a Source of Bias

- Respondents do not always provide the “correct/true” answer either intentionally or unintentionally.
- Unintentionally:
 - They think it is the correct answer.
 - They don’t know it.
 - They can’t remember it.
- Intentionally:
 - They don’t want to take the effort and think about it.
 - They don’t want you to know the correct answer because it makes them feel vulnerable or uncomfortable and they refuse to answer or lie.
 - They give an answer that pleases the interviewer.



Avoiding Bias From Respondents

- Unintentional Bias: Difficult
- Intentional Bias:
 - They don't want to take the effort and think about it.
 - Get respondents motivated and keep them motivated during the interview.
 - Everything has to look professional.
 - Make sure the respondents know about the importance of the research and how important their participation is.
 - They don't want you to know the correct answer because it makes them feel vulnerable or uncomfortable and they refuse to answer or lie.
 - Ensure privacy.
 - Interviewer should be comfortable asking these questions.
 - Think about using CASI (Computer-Assisted Self Interviewing) for those sections.
 - They give an answer that pleases the interviewer.
 - Interviewer has to be well trained to make sure that respondent doesn't feel that their answer has to please the interviewer.



Interviewer as a Source of Bias

Generally...

- The more unstructured the interview the more the quality of information obtained during an interview is dependent on the interviewer and can be influenced by the interviewer's own views.
 - Interview is less scripted.
 - Flow of the interview is much more dependent on the interviewer.
 - Interviewer has to be more involved in the “conversation” since questions might have to be added based on the respondent's answers.
- Phone interviews can be less biased than in-person interviews.
 - Interviewers have only verbal communication with respondent in phone interviews.
 - There is a lot of non-verbal communication in an in-person interview between the interviewer and respondent that can have an impact on the interview.



Interviewer as a Source of Bias: Job-Specific Behavior and Performance

- Born to be an interviewer? How do you identify a good interviewer?
 - Personality tests
 - Performance monitoring
- From job ads for survey interviewers:
 - Are you upbeat, friendly and persuasive?
 - Do you have a good telephone presence?
 - Are you able to speak clearly?
 - Do you have a pleasant voice?
 - Are you not easily discouraged?
- Interviewers have usually a “natural” specialty:
 - Recruiting
 - Motivate people to do the interview
 - Refusal conversion



Interviewer as a Source of Bias: Job-Specific Behavior and Performance

- For less standardized interviews: Can interviewer elicit information from respondents?
- With regard to standardized interviewers, interviewers should:
 - Read questions as worded.
 - Record answers exactly the way the respondent said.
 - Behave professional and task-oriented.
 - Provide neutral explanations/clarifications if respondents have questions with regard to how to understand a question.
 - Probe nondirectively.
 - Give neutral feedback.



Behaving Professional and Task-Oriented

- For in-person interviews, dress professionally.
- Make sure that you have some identification of the organization you work for.
- Be friendly, polite and thankful.
- Accommodate the respondent if there are any time or location issues.
- Start out with a little informal chatting about neutral topics, such as the weather or pets.
- Be upbeat and show that you take your job serious.
- Refrain from expressing any views or opinions on the topics covered in the interview.
- Refrain from presenting any personal information that might provide a basis for inferring what your preferences or values might be that are relevant to the content of the interview.



Providing Neutral Explanations

- In standardized interviews, all explanations given to the respondents should be the same.
- Solution 1: No interviewer provides any explanations.
- Solution 2: The researcher provides explanations to certain terms, complex concepts etc. that then all interviewers can use.



Example

- Question: How would you rate your child's school – excellent, very good, good, fair, or poor?
- Answer: Well, it depends on what you mean: My child is in the second grade, I like her teacher but I really don't think they are doing very much with math and reading. On the other hand, she is happy, she likes recess and playing.
- Interviewer: That is a very legitimate point. The question does not suggest that you focus on any one thing. In this case, you should take into account whatever it is that you think the question implies and give me the answer that is closest to what you think.



Example

- Question: What do you think is the biggest problem our government faces?
- Answer: The state or the federal government?
- Interviewer: That is a good point. I don't think that this has been specified so please answer the question how you think is the best way.

- Question: Has your child been an inpatient at CHB in the past month?
- Answer: What do you mean by inpatient?
- Version 1: Interviewer: By inpatient we mean a patient that stayed at least one night at the hospital before going home.
- Version 2: Interviewer: Whatever it means to you.



Probing Nondirectively

- Probing is necessary when a respondent fails to answer a question completely and adequately.
- The words the interviewer uses to attempt to obtain an adequate answer are called “probes”.
- Interviewers have to probe in a way that does not affect which answer is chosen.
- Directive probe: Probe that increases the likelihood of some answers over other possible answers.



Probing Nondirectively

- Probing for closed-ended questions:
 - Repeat the question or the answer choices.
- Probing for questions that require a numerical answer:
Ask the respondent to answer in the appropriate terms, to be more exact in their answers, or to stay in the provided range.
- Probing for open-ended questions:
 - For completely inappropriate responses simply repeat the question.
 - For vague answers ask “Could you tell me more about that?”
 - For vague answers ask “What do you mean by X?”
 - For open-ended listings (also at the end for open-ended questions) ask “Anything else?” or “Are there any others?”
 - For answers that don’t seem very thoughtful say “It is very important for us to get a detailed answer. Please think a moment about it.”



Examples

- What do you think is the biggest problem facing the United States?
- Answer: I think there are a lot of problems that are important for the government to address.
- Nondirective probe:

- What do you think is the biggest problem facing the United States?
- Answer: The crime problem.
- Nondirective probe:



Examples

- How would you rate your health – excellent, very good, good, fair, or poor?
- Answer: It hasn't been very good lately.
- Nondirective probe:

- In the last 12 months, how many times have you been to the doctor's office for medical care for yourself?
- Answer: Several times.
- Nondirective probe:



Giving Neutral Feedback

- Reinforces good respondent behavior.

Use feedback phrases such:

- I see.
- Uhuh.
- Thanks.
- Thank you.
- Oh, that is important for our research.
- That's helpful.



Avoiding Bias From Interviewer Performance

- Interviewer training:
 - Instructions in:
 - Survey objectives
 - Question asking
 - Probing on inadequate responses
 - Recording of answers
 - Role plays
 - Mock interviews
 - Two or more days of supervised practiced interviewing
- Interviewer monitoring:
 - Ongoing recording or monitoring of interviews
 - Ongoing feedback to interviewer



Effects of Interviewer Training

Table 5.4 Effect of Length of Training on Interviewer Performance Measures^a

Interviewer Behavior	Length of Training Program			
	½ Day	2 Days	5 Days	10 Days
Reading questions as worded	30	83	72	84
Probing closed questions	48	67	72	80
Probing open questions	16	44	52	69
Recording answers to closed questions	88	88	89	93
Recording answers to open questions ^b	55	80	67	83
Nonbiasing interpersonal behavior	66	95	85	90

Source: Fowler and Mangione (1990), Table 7.4.

^a Entries are the percent of interviews rated as either excellent or satisfactory.

^b n.s., all others $p < 0.01$.



Interviewer as a Source of Bias: Interviewer Characteristics

- Gender (Kane and Macaulay, 1993)
- Age (Ehrlich and Riesman, 1961)
- Religion (Robinson and Rhode, 1946)
- Race (Schuman and Hatchett, 1976)
- Native language (Fellegi, 1964)
- Social class
- Education level
- Behavior
- Mannerisms
- Appearance
- Voice



Interviewer as a Source of Bias: Interviewer Characteristics

- Example:

Interview about observed health disparities due to racial differences

How could the answers of an interview be biased if the interviewer was White and the respondent African-American?

How could the answers of an interview be biased if the interviewer was African-American and the respondent White?

- Characteristics seem to have mostly an effect on personally related attitude and opinion questions, sensitive or emotional questions.



Avoiding Bias From Interviewer Characteristics

- Match unchangeable interviewer characteristics to respondent characteristics
- Train and control potentially changeable characteristics:
 - Behavior
 - Mannerisms
 - Appearance
 - Voice



Interviewer as a Source of Bias: Experience

- Example: Missing answers on income questions (Stevens and Bailar, 1976)
- Experienced interviewer have more missing answers on income questions from their interviews than unexperienced interviewers.
- Why?
- Experienced interviewer “know/have experienced more often” that respondents can react negatively to that question
- Therefore experienced interviewers have an expectation that respondents react negatively to such questions and either skip the question or settle too quickly for a refusal.



Avoiding Bias From Interviewer Experience

- Training
- Performance monitoring
- Motivate interviewers



Interviewers as a Source of Bias: Interview Setting

- Data collection methods for standardized interviews:
Interviewer administered interviews versus self-administered questionnaires
- Social desirable questions:
Question clearly has an answer that is socially more desirable/less embarrassing than another.
Example: Have you followed the exercise guidelines that we gave you during our last meeting?
- Location of the interview: Respondent's house versus hospital
Where are respondents more comfortable to talk about the topic?
- Potential interruptions, noise level, privacy



Avoiding Bias From Interview Setting

- Fit data collection method to content of interview and background of respondents – what is most appropriate?
 - Interviewer-administered survey if population is low-literacy.
 - Phone survey if people live far away from hospital.
 - If interview content is complex an in-person interview might help the respondent if there are any questions.
 - If interview is long an in-person interview might keep the respondent more motivated.
 - If interview topic is sensitive and the presence of an interviewer and the non-verbal communication might help to make the respondent more comfortable use an in-person interview, e.g. death of a child.
- For sensitive or socially desirable questions use data collection methods that enhance privacy and minimize interviewer involvement.
- Try to minimize interruptions, presence of other people during the interview, distractions. Emphasize this when making the appointment.



Summary

Key elements to minimize bias in the research interview:

- Good questionnaire
- Appropriate data collection method
- Interviewer training
- Interviewer matching if necessary
- Interviewer monitoring



Any questions?



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