Week 6 Lecture - Surveys & Observational Design

Undergraduate Research Methods in Psychology

Quinton Quagliano, M.S., C.S.P

Department of Psychology

Table of Contents

1 Chapter Overview

- Observational design is when we don't attempt to _____ or manipulate any variables, we just take measurements of individuals in their natural disposition, i.e., just lots of **measured variables**, no **manipulated variables**
- Often, we use these _____ for more macro-level studies that look for big trends across people, and they tend to be most effective in assessing _____ claims (though can be appropriate for association and causal claims as well)
- Polls and observational designs are everywhere:
  - _____ polls (technically even the election itself, is effectively a survey)
  - Public _____ polls on certain topics
  - Interest in a certain commercial product

2 Construct Validity in Survey Designs and Self-reports

2.1 Overview

- **Surveys, Polls, and observational designs** mean the same thing, and describe a _____ by which data is gathered from a certain sample via a self-report
- This design has plenty of _____, such as being done via the mail, email, phone, advertisements, etc. - which change the construct validity of the measurements done

2.2 Question Formats

- Question types range from _____ to most restrictive, with different types having varying _____ to use.
- **Open-ended** questions are those that allow respondents to reply in _____ and paragraphs not necessarily bound to one format. While capturing the "most" _____, these questions are difficult to transform into quantitative findings - in fact, some researchers would say they should not be transformed at all
  - This is the most common type of _____ in *qualitative research*, where the goal is to often capture the full, anecdotal experience of participants.

  - Note: In this class, we will be almost entirely focused on *quantitative research*, which is that which uses _____ analysis and operationalized experiences to numbers.

- **Forced-choice** questions are those that _____ respondents to only responding to a question or prompt is a specified number of ways.
  - For example, any _____-choice or true-false assessment is forced choice.
  - Think about how forced-choice naturally _____ participants in sharing the full breadth of their experience.

- **Likert scale** is ordinal scale question that asks a participant to respond to a statement or questions with 5 _____ answers:
  - Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly Disagree

- A question that is similar in structure but has _____ or less options than those 5 should be referred to as a **Likert-type scale**

- **Semantic Differential** is a format that asks a respondent to respond to a prompt with a "rating" between two _____ or adjectives. Ex. This could be a "star" system for rating satisfaction.

- Question formats do not inherently _____ or add to construct validity, *however* they will have an impact on the type of analysis one can use. Likert, Likert-type, and Semantic _____ will all produce ordinal data. Forced choice is likely to be _____. And open-ended is a whole other thing entirely…
  - Be mindful of how you will perform analysis *before making a survey or self report tool!*

2.3 "Good" Questions

- Question writing can have a large impact on the _____ and construct validity of a question - writing good questions is often time-consuming and intense!

- While there are many ways for a question to go "wrong", There are a few pitfalls that are especially _____ and dangerous…

2.3.1 Leading Questions

- _____ questions are when a question is worded or designed in such a way that is likely to _____ respondents towards a certain answer or outcome. This can be accidental, or intentional.
- In general, avoid using terms that are _____ in nature - like “awful”, “bad”, “dangerous”, etc. If your questions is likely to play up the emotion of your participant, it is possibly a leading question.

2.3.2 Double-barreled Questions

- This occurs when a question is actually two questions _____ into one. The problem is that this might cause confusion in capturing the real opinions or feelings of an individual.
- A good way to _____ this mistake is if you see an “and” anywhere in the question - tread cautiously

2.3.3 Negative Wording

- Negative wording is when a question is worded in such a manner that confounds the _____ of a question.
  - Ex. “Do you *not* agree with…”
- Not only can this be difficult to properly analyze in a study, it can also be generally very _____ to participants and produce inaccurate responses.
- Wherever possible, avoid “not”, “nor”, “neither” and other negative words in surveys. Sometimes, these sorts of issues can be rectified by _____ a question up, similar to procedures for double-barreled questions.
- If a question is split up to be both a negative and positive version, one can use a correlation _____ and Cronbach’s α to ensure that same-direction questions correlate well with one another (and if they don’t - we have a problem)

2.3.4 Question Order

- This is a complicated issue and can be hard to fully prevent problems with. Identifying this issue is sometimes best investigated through a **pilot study**, which occurs _____ the primary study, and is usually meant to ensure that a measure is sound before rolling out to the “real sample”.

- To catch a question _____ effect, you may use two different versions of the measure, with a different order of questions, and give those versions to two different groups. Then _____ the answers of the groups to see if they are similar or not. If they differ, there is something in the order affecting the scores.
- "Solving" this issue often involves a good, _____ understanding of the literature and some _____ as to why participants may react a certain way to delicate questions.

2.4 Getting Accurate Responses

- Surveys are, effectively, always a _____-report - they require an introspection on the part of the respondent. In a lot of research, we must trust and place _____ in the ability of a person to report on their internal experiences.
- However, for a variety of reasons, we must be cautious of certain **response sets**, which are when a participant follows a _____ of responses which may not be particularly informative. In the worst case, a response set represents _____ responding by the participant, which confounds results.
- Response sets generally occur more _____ in Likert or Likert-type scales

2.4.1 Acquiescence / Yea-saying

- This occurs when a participant carelessly selects the most positive _____ (e.g., Strongly Agree) or yes throughout a measure
- When a respondent is yea-saying, it makes it incredibly difficult to discern whether that _____ represents their opinions/disposition.
- We may try to use **reverse-coded** questions to detect this - Ex:
  - "I feel happy most of the time"
  - "I feel sad most of the time"

2.4.2 Fence Sitting

- This is when a person keeps choosing the _____ or neutral option

- This can be resolved by _____ the middle option, but this also limits the inclusiveness of the question. We may also choose to use a forced-choice self-report to force choosing between categories.

2.4.3 Socially Desirable Responding / Faking Good

- This is when one takes a certain response trend where they intentionally try to respond in a way that seems _____ to most people, maybe due to embarrassment or shame
  - Ex., On a personality scale I answer in an overly-altruistic manner
- We may also be concerned with **faking bad/malingering**, which is especially true in _____ or neuropsychological settings
- We can help limit these sets by including special _____ questions that would be absurd for *anyone* to be *that* good or bad. We can also ensure participants know results are _____. Finally, we may also get converging evidence from collateral reports as well.

2.5 Other Confounds in Surveys

- We may often run into other unexpected problems with our self reports and surveys in general related to people's ability to _____ accurately
- One issue is that people sometimes may choose options intuitively, and may not know *why* they made a choice. There may be a number of underlying cognitive reasons for _____ a certain way, even if people don't know it!
- Accuracy of _____, especially, can be a tricky subject and when we ask for people to report on more distant memories, we may get responses that may not be quite accurate. Just because someone reports _____ in their memory, also does not necessarily mean that it is accurate. The best way we can navigate this issue is try to get additional information or sources.

3 Construct Validity in Behavioral Observations

3.1 Overview

- Observational measures are _____ to frequency, association, and causal claims. Observational measures also give a sense of "objectiveness", as they

are not _____ on the ability of a person to accurately introspect and report feelings.

- Think about the historical movement away from _____ and psychodynamicism to behaviorism - just like those early behaviorists, some see observational data as the “superior” type of measure.
- However, just like with self-reports, we must be _____ of the construct validity of these observations.

3.2 Claims on Observational Data

- Observational data is all about behaviors and what we can tangibly sense with our _____ about what a participant is doing. Most of the time, we are looking at what a person is doing.
- For some cases, it might be more *face* _____ to just measure a behavior to tie back to a construct

3.3 Reliability and Validity in Observation Data

- Construct validity in observational data can be confounded by 3 types of biases: _____ bias, observer effects, and reactivity.

3.3.1 Observer Bias

- Depending on the circumstances, observers may be biased to “see” a certain _____ in participants due to some preconceived notions or beliefs
- This is why it is important to have observers _____ to the study they may be observing and to have rigorous training that helps ensure a smooth and consistent process (double-checked with reliability analysis! - but what type…)
  - It is common to use **codebooks** to clearly highlight how a variable or behavior is to be _____ for a particular study.
- Blinded studies may also be called _____ studies.

3.3.2 Observer Effects

- Observer effects are when participants act un-natural in response to the _____ or perspectives of the researchers. Participants may readily

act a certain way to appear "good" or they may be _____ careful or stiff or modify actions as they watch how experiments react.

- Participants may also be *unintentionally* reacting to the behaviors of the observers as well!
- The same solutions can help, especially blinding the _____, because they won't be unconsciously swayed by their knowledge.

3.3.3 Reactivity

- Reactivity is somewhat similar to Observer effects, but hinges on the mere _____ of the observer causing behavior changes in the participant.
- Three solutions to minimize reactive behaviors
  - Find some way to be "unobtrusive" in observation, whether viewing from afar or outside the _____ of the subject
  - Allow a subject to _____ to having you there and let any initial reactivity die out
  - Measure _____ results of the behavior once the subject themself is gone - but this is still observational

3.3.4 Ethics in Observation

- Like any procedures planned for research, observation techniques and tools need to be approached in an ethical and sensible manner, with informed consent/_____ telling participants how and why their data is used
- Some deception, such as watching through a one-way mirror may be _____ (if allowed by the IRB), as long as it has good, scientific rationale.