What is a survey and why would you use one?

How do you construct an informative survey?

How do you measure useful responses?

Who do you sample and how do you sample?

How is the data collected?

Lab Activity: Let’s Construct a Survey!

Survey Research

What is a survey?

Webster’s Dictionary:
- A critical inspection of something.
- A short descriptive summary.
- The act of looking seeing or observing.

Dictionary.com: A sampling or partial collection of facts, figures, or opinions taken and used to approximate or indicate what a complete collection and analysis might reveal.

Survey Research is: The use of self-reports, collected via questionnaires or interviews, to obtain data about people's opinions, attitudes, preferences, and experiences. [The Science of Asking]

Surveys: The Science of Asking

Why Ask?

To get at issues that are difficult to address using direct observation or lab experiments.

To measure variables that are difficult to directly observe such as attitudes, opinions, feelings, & motives.

To examine sensitive issues (e.g., abortion; drug use; prejudice) that people are unlikely to state publicly.

To efficiently gather large amounts of data.
Problem: How do we get an accurate picture of a population using just a small sample of that population?

Bad surveys often do more harm than good.

- ~95% of those reporting heroin use also report using marijuana.
- Is marijuana a "gateway drug" leading to the use of heroin?

Who was asked?  How was the question worded?  Does a correlation show causation?

In most surveys, <10% of those reporting marijuana use also report using heroin.

In our class...

- 82% (18/22) reported marijuana use.
- 1 student (5%) reported using heroin at least once.
- Average amount spent on last haircut: $50.
  - Average spent by males: $28.
  - Average spent by females: $53.

What issue are you trying to investigate?
- What, Who, When, Where, and Why?

What does past research tell you?

What critical factors bear on the topic?

What terms need to be defined?
- Wording is critical on surveys as it determines how your questions will be interpreted.
Survey Construction: Getting Started

How your survey is designed will determine whether it is valid & reliable.

- **Internal Validity.**
  - Is your survey measuring what it was intended to measure?

- **Reliability.**
  - Does your survey give consistent (repeatable) measurements over questions, surveyors, & time.
    - Do questions getting at the same issue yield similar answers within an individual? [inter-item reliability]
    - Do surveys yield similar results across surveyors? [inter-rater reliability]
    - Do surveys yield similar results when given to the same person more than once? [test-retest reliability]

Designing Survey Items

Major distinction between Open and Closed Questions

- **Closed Questions...**
  - Limit the number of responses that can be made.
    - Have you ever smoked marijuana? Yes / No (circle one)
    - How often do you smoke marijuana? Never Daily Weekly Monthly Yearly (circle one)
  - Allow for easier descriptive & inferential analysis.

- **Open-Ended Questions...**
  - Allow for longer, unconstrained responses.
    - Describe in one sentence your feelings about marijuana?
  - Are more difficult to describe and analyze.

Types of Closed Questions

- **Two-Alternative Forced Choice (2AFC):** e.g., Yes/No.
- **Multiple-Alternative Forced Choice (3AFC, 4AFC, etc).**
- **Semantic Differential.**
  - What do you think about alcohol?
    - Positive — — — — — — Negative
    - Helpful — — — — — — — — — — — — Destructive
    - Etc.
- **Likert Scale.**
  - How much do you agree with the following statement?
    - PSY355 is one of the most useful courses at UNCW
    - Strongly Disagree Disagree Neutral Agree Strongly Agree
    - 1 2 3 4 5
    - -2 -1 0 +1 +2
Issues in Designing Survey Items
Two major factors affect the interpretation, and thus reliability, of survey items: Wording & Context.

_Question Wording._
- Is your question _ambiguous_? or ‘double-barreled’?
  - Do you think San Diego is a cool place?  Y / N
  - Do you enjoy sex and drugs?  Y / N
- Will all respondents _understand_ it?
  - Do you believe the ‘neo-cons’ in Bush’s administration had a big influence on his decision to go to war in Iraq?
- Does your question _lead_ the respondent?
  - Do you believe harmful drugs such as marijuana ruin student grades?
  - Better: Do you believe marijuana use leads to lower academic achievement?

Manifest vs. Latent Content
How a question is worded affects how a respondent interprets the purpose of a question.

_Manifest Content._
- The literal meaning of your question:
  - When I see something that I want but cannot afford I often have the urge to just take it?  Agree / Disagree
  - Do you have more same-sex or opposite-sex friends?
    __ Same-Sex ___ Opposite-Sex  (check one)

_Latent Content._
- The hidden meaning behind a question (what the respondent believes you are trying to measure):
  - Are you a thief?  Yes / No
  - Are you gay?  Yes / No

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_Context Effects._
- Effects of prior questions on the current question.
  1. Do you believe that the war in Iraq has increased anti-American sentiment around the world?
  2. Do you believe that George W. Bush did the right thing in going to war in Iraq?
- Effects of how a question is expressed (aka. framing effects).
  - Assuming a 70% chance of success, would you support going to war with Iran if they acquired nuclear weapons?
  - Assuming a 30% chance of failure, would you support going to war with Iran if they acquired nuclear weapons?
Open-Ended Questions

Although more difficult to analyze, open-ended questions offer some benefits over closed questions.

- Allow one to uncover info missed in a closed question.
  1. What activities bring you to downtown Wilmington...
      Shopping  Dining  Dancing  Entertainment  Theater
  2. What other activities bring you downtown?
- Allow respondent to clarify or expand upon answer given to a closed question.
  1. Has your experience at UNCW been positive or negative?
     2. Why?
- Useful when there are many possible answers.
  - Describe the primary activities that bring you downtown?

Measuring Responses: Closed Questions

Closed questions produce answers in different scales of measurement.

- Nominal Scale.
  - What is your political affiliation? Liberal  Moderate  Conservative
    48%  39%  13%
- Ordinal Scale.
  - How comfortable would feel if you found out a close same-sex friend was gay? Very Uncomfortable  Neutral  Very Comfortable
    1  2  3  4  5  6  7
    Males = 4.2  Females = 5.5
- Interval Scale.
  - What was your best official score on the Verbal-SAT? _____
- Ratio Scale.
  - How long in minutes does it take you to get ready in the morning?
    0-10  11-20  21-30  31-40  41-50  51-60  60+
    Males = 15  Females = 33

Measuring Responses: Open Questions

How open questions are used depends on their purpose.

- If used to clarify/elaborate closed questions, may just be scanned to assess validity/reliability of that question.
- If question was designed to elicit new information, Content Analysis may be employed.
- Content Analysis: Used to quantify responses by assigning them to categories based on rules.
  - What is your primary reason for not visiting the downtown area?
  - Categories: Parking, Safety, Cleanliness, Lack of Interest, Other.
- For Content Analysis to work, categories & rules must be clear and decided beforehand (‘a priori’); and multiple raters should be used to compute reliability.
Measuring Responses: Response Biases
Numerous factors bias survey responses.

- **Response Set**: The tendency to answer a question based on latent content, in order to create a specific impression.
  - cf. Self-presentation; Impression management; Social Desirability.
  - can be reduced by ensuring anonymity & confidentiality.

- **Response Style**: The tendency to answer a question in a specific way regardless of the question's content.
  - **Position Preference**: Always selecting a particular response position (e.g., the first answer listed; answer "c" on a multiple choice).
  - **Yea- or Nay-Saying**: Always agreeing ("yes") or disagreeing ("no") with a questions regardless of its content.
  - **Willingness to Answer**: Differences in the degree to which people are willing to respond to a question about which they are unsure; some will leave it blank, some will guess.

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Measuring Responses: Other Issues

- **People Lie!**
  - Can be examined via 'lie-detection' questions ("have you ever stolen anything"); and reduced by asking the same question in multiple ways and then creating a Composite Score (sum or mean of similar Q's).

- **Not Everyone Cares (and people get tired)!**
  - Usually expressed by answering quickly with the 'standard' answer, position preference, or yea-/nay-saying.
  - Can be detected/reduced using Reverse Scales & Reverse Scoring:
    - Heroin use is a major social problem: Agree / Disagree
    - There are many positive aspects to heroin use: Agree / Disagree

- **People are reluctant to give out sensitive information.**
  - Long and/or sensitive surveys should begin with closed questions that are interesting, relevant to main topic, & easy to answer by everyone; with the most sensitive questions asked last.

Who do you sample?
The population you sample from, and how your sample is acquired, will determine the external validity and sampling error of your survey.

- **External Validity**: Does the data collected from the sample generalize to the larger population?

- **Sampling Error**: Does your sampling method produce similar results across samples?

How do you sample?
There are two general methods for obtaining samples, each with multiple sub-categories.

- **Probability Sampling**: Sampling in a way that the odds of a person being chosen are known or can be calculated.

- **Non-Probability Sampling**: Subject not chosen at random (thus raising questions about representativeness).
Probability Sampling
An unbiased form of sampling in which every person in the population has an equal chance of being part of the sample.

- **Simple Random Sampling**: Choosing people in a completely random way (e.g., using a list of random numbers).
- **Systematic Random Sampling**: Listing all members of the population in an unbiased way (e.g., alphabetically) and then choosing every $N^{th}$ person (where $N = \frac{population}{sample \ size}$).
- **Stratified Random Sampling**: Randomly selecting people from important population subgroups (e.g., race) either (a) in equal numbers; or (b) in proportion to the subgroup’s representation in the population.
- **Cluster Sampling**: Randomly sampling from naturally occurring subgroups in the population (e.g., 5 states; 5 counties; 5 classes).

Non-Probability Sampling
A biased (non-random) form of sampling in which every person does not have an equal chance of being part of the sample.

- **Convenience Sampling**: Choosing whoever is most accessible (e.g., the first 20 people you encounter on the street).
- **Quota Sampling**: Choosing whoever is most accessible until specific quotas are met (e.g., 65 female and 35 male UNCW students).
- **Purposive Sampling**: Choosing whoever is most accessible and who meets a specific criterion (e.g., UNCW Psych majors).
- **Snowball Sampling**: Using one sampled person (who meets the sample criteria) to lead you to others who also meet the criteria. Most often used when the target population is small, unique, or difficult to access (e.g., gang members).

Examples of Sampling Procedures
- We want to poll residents of Virginia on who they will vote for president, so we choose 3 counties at random and poll every individual within those 3 counties.
  - **Population**: Residents of Virginia.
  - **Sampling Method**: Cluster (Probability).
- We want to know if males find UNCW basketball more interesting than UNCW females, so we go to a game and sample the first 50 males and 50 females we encounter.
  - **Population**: UNCW students who attend basketball games.
  - **Sampling Method**: Quota (Non-Probability).
- We want to know how UNCW students feel about on-campus dining, so we survey every 100th student on a current enrollment list.
  - **Population**: UNCW students.
  - **Sampling Method**: Systematic Random (Probability).
Data Collection Methods

- **Mail Surveys.**
  - Advantages: Inexpensive; Can reach large samples; Can cover large geographic areas.
  - Disadvantages: Need very clear, explicit instructions; High non-response rates; Privacy issues; Time consuming.

- **Computer & Internet Surveys.**
  - Advantages: Inexpensive; Data collection and coding is automated; Privacy.
  - Disadvantages: Lack of control over sample; May be hard/impossible to reach target sample (e.g., older adults).

- **Telephone Surveys.**
  - Advantages: Inexpensive; Can reach large samples over large geographic areas; Instructions & Clarification.
  - Disadvantages: Sampling bias; Interviewer bias; Privacy/Reactivity; Interviewer training.

- **Self-Administered (Written) Surveys.**
  - Advantages: Inexpensive; High response/Low drop-out rates; May offer best way to reach target sample.
  - Disadvantages: Need clear, explicit instructions; Privacy/Reactivity issues; Time consuming.

- **Interviews.**
  - Advantages: Detailed instructions & clarification; Detailed responses; High response/Low drop-out rates.
  - Disadvantages: Expensive; Time consuming; Interviewer bias; Interviewer training; Privacy/Reactivity.

- **Focus Groups.**
  - Advantages: Great for pre-testing surveys questions; Detailed instructions, clarification, & responses.
  - Disadvantages: Expensive; Group bias; Facilitator bias; Facilitator training; Privacy/Reactivity; Unstructured data.

Lab Activity: Creating a Survey

- Get in groups of 3-4 and create at least 3 closed-form questions designed to assess racism/prejudice—the degree to which people have (a) a bias against black people OR (b) a preference for white people.
- Make sure to consider:
  (a) The different kinds of questions available to you (e.g., 4AFC; Semantic Differential; Likert).
  (b) The different ways in which White=Good and/or Black=Bad may manifest itself; that is, what are the different factors involved?
- **Don't forget Assignment #7 (TV-Sex)**
- Start your lit review of papers on TV-Sex. Remember that your paper needs to have at least 2 references for papers that you’ve actually read.