Primary Data Collection: Surveys

Goal: Design a population-based cross-sectional research study to investigates a research question.

To determine the relationship between risk factors and outcomes, we can collect data within a population and analyze associations between variables.

Pilot Testing:

Primary data collection for population-based studies can be done through surveys, asset mapping, interviews and focus groups, observational studies, and more. In this lesson, we will focus on creating a pilot test of a survey as a primary data collection tool.

Suggested requirements for the primary data collection pilot testing are:

1. Google Form survey
2. Data from 20 respondents
3. Analysis of all questions
4. Specific analysis for one or more relationships between RF-O variables using a 2x2 relative risk table
5. Calculation of final relative risk
    a. Purpose: demonstrate understanding of relative risk calculation--
    b. Important reminder: a small sample size makes it difficult to have statistically significant results!

Planning the Survey:

Your research question may involve 2 or more variables. It should be a form similar to:

How are _____ and _____ associated with _____ among _____?

Research Question:

Planning How to Measure the Variables:

To answer this question you will conduct primary data collection by creating a study design (cross-sectional survey) that would allow you to collect data of the risk factor and outcome at the same time.

	Measured by...
Risk Factor(s):	
Outcome(s):	
Population:	

Survey Question Writing:

Once you have determined all the variables you are interested in, you can create a survey to test whether people in your population possess the risk/protective factors and the outcomes. Typically surveys begin with questions related to the population variables and continue with risk factors and outcomes. On a separate sheet of paper, brainstorm and write one survey question for each variable in the table above. You want to avoid questions that are:

- Open-ended
- Double-barreled
- Leading
- Biased

You also want to make sure that for each question you can break the answer options into clear groupings. If you are able to place all respondents into either a group that HAS and DOES NOT HAVE the risk factor or outcome, you will be able to calculate a relative risk.

Variable	Question

Variable	Question

Issues to Consider:

There are a few issues that researchers must confront all of the time. Here are some common ones:

Over generalizing your results: It is impossible to make sweeping generalizations about groups of people based solely on a few interviews, observations, or surveys. You can find general patterns or trends, but should never assume that what you have found is what exists or what will always exist. In fact, it is hard to make concrete generalizations about any occurrence that relates to people because people themselves are dynamic and situations are always changing.

Biased methodology: If you create a biased survey or ask biased questions, you'll get biased results. Avoid questions that are worded in a way that shows opinion or preference. Keep it neutral!

Correlation does not imply causation: Remember that just because two results have a relationship between them does not necessarily mean that one causes another to occur. For example, although video games and violent behaviors are shown to have a link, it has not been proven that video games cause violent behavior (instead, it could be that individuals who are predisposed toward violent activity are drawn to violent video games).

Not considering other related factors: It is very difficult to be able to study all the factors that relate to a specific group of people, event, or occurrence. Even so, if you do not include these factors within your primary research, they should still be considered when you begin to analyze your data. For example, if you are studying the issue of parking on campus and look at the amount of cars being parked on campus vs. the student population, you are omitting other factors like the amount of commuter students, the number of faculty who drive, accessibility of public transportation and many others.

Being able to know what data is valid: Some participants in your research may not take it seriously and will provide silly, inaccurate answers or engage in purposely aberrant behaviors. This most likely occurs with surveys that individuals complete but occasionally can occur during interviews or even with observations. These answers can throw off your entire research project, so it is very important that you examine your surveys or interviews for this type of erroneous information. If you find information that is highly questionable, it is best to not include it in your analysis of results.

Reported behavior vs. actual behavior: What people report as their behavior might not actually how they behave. People will often report their own behavior in a more positive light than it may actually be. For example, if you are surveying college students about their study habits, they may report that they study for more hours than they actually do.

Source: Purdue OWL "Common Pitfalls of Primary Research" <https://owl.english.purdue.edu/owl/owlprint/559/>