SURVEY DESIGN FUNDAMENTALS

JULIE IRISH, PHD



OVERVIEW

- Goals of survey research
- Does and Don'ts of survey design and implementation
 - Questions
 - Response scales
 - Administration
- Q & A

DO YOU NEED TO DO A SURVEY?

Surveys	Focus Groups	One-on-one Interviews
Explore relationships between and among variables	Dig deeper into an issue, exploration of an idea	Can get at the "what" and the "how"
Need to consider sampling issues, summarizing a population	May need multiple focus groups to achieve diversity	Can be highly structured or very unstructured
Development takes longer, easier to recruit	More resources, harder to recruit	Fewer resources, but can be hard to recruit
Analysis is generally quick	Takes longer to analyze the data	Data analysis depends on the interview format

TIP #1

Think carefully about what you need to know

BEFORE YOU THINK ABOUT THE SURVEY:

- What do you want to measure and why?
- Define your research objective and goal
- If not, you will not be able to create meaningful questions
- Review the literature

IDENTIFY RESEARCH GOALS

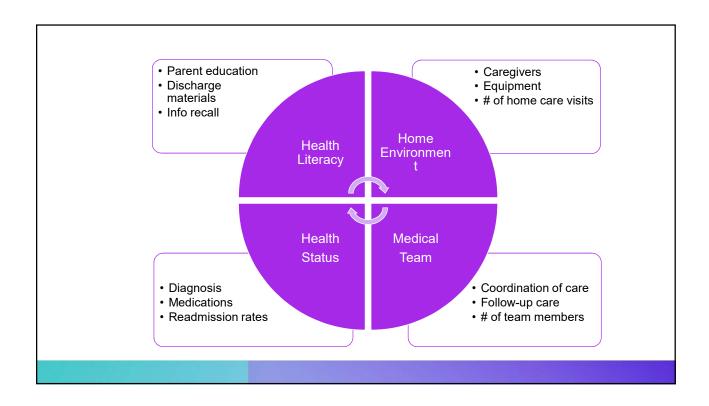
- How are you going to use the data?
- Are you looking to change a policy or process?
- Are you looking for a "temperature reading" or reactions?
- Who is interested in the data? Consider the stakeholders.
- Think about an analysis plan.

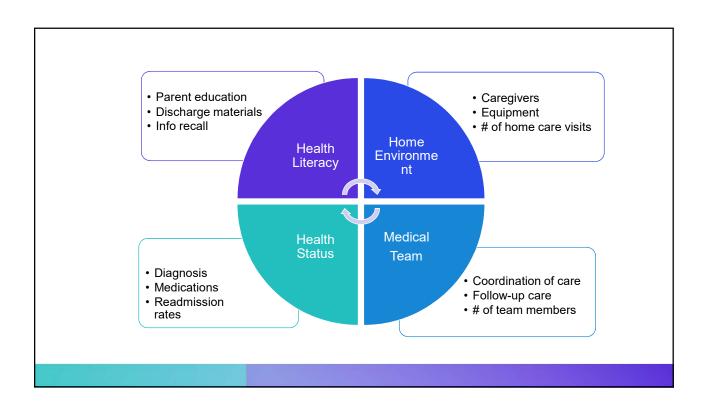
Think about how you would report the results

EXAMPLE:

CURRICULUM TO IMPROVE THE DISCHARGE PROCESS

- Want to evaluate curriculum Why? Who? What?
- Need to operationalize "improvement"
- Need to define "discharge process"
- Which variables are you most interested in?





RESEARCH OBJECTIVES

What do you want to know or assess?

- Affective emotions, satisfaction, perceptions, reactions
- Behavioral recall of events, how many times something happened
- Cognitive attitudes, knowledge about a topic
- Combination

TIP #3

Generate lots of questions but be willing to drop any of them

Consider <u>must know</u> vs. <u>useful to know</u> vs. <u>nice to know</u>
Drop 'nice to know'

WHAT MAKES A GOOD SURVEY QUESTION?

- Easily understood
- Same understanding and interpretation across all respondents
- Low cognitive effort
- No double-barreled questions
- Unbiased questions

LANGUAGE MATTERS

- No ambiguous or vague words
- No words or phrases with multiple meanings
- Watch for similar spellings or pronunciations of key words

EXAMPLES OF UNCLEAR QUESTIONS

How afraid are you to tell your friends or family about problems in your life?	double-barreled, vague
How difficult is it for you to keep friends?	assumption
How honest are you able to be about your behaviors?	honest with who? vague
How much are you able to communicate with your friends and family?	poorly written, mismatch double barreled
How much do you trust your family?	assumption
How much do you worry that your family will abandon you?	unclear, charged
How much do your friends support healthy behaviors?	vague
How much is your family embarrassed by your behaviors?	vague, hard to answer

Compared to other people, how sensitive to pain are you?	How would R know how other people experience pain?
How good do you feel about your health insurance plan?	Need Screener: Do you have a health insurance plan now?
How much older do you look than you actually are?	What is being assessed? Self-perception of appearance
How much money do you receive from the government	Need Screener: "Do you have a physical disability?" Otherwise 'None' could mean they don't receive money
for a physical disability?	because they don't have a physical disability OR that the have a physical disability but don't receive money.
How much access do you have to medical care?	Would need to define "medical care" Is this urgent care, ambulatory care, off hours, or emergency room care?
How much do you work at staying healthy?	Staying healthy" implies that R is currently healthy.

AVOID BIAS IN QUESTIONS

- The way the question is worded or the way the response options are offered.
- People like to please. Be wary of acquiescence.
- Power of suggestion include assumptions. Avoid adjectives and adverbs.

"What do you like about your chief resident?"

"What did you think of"

"Given the large increase in child obesity in recent years, how likely do you think Type II diabetes will increase in the next 5 years?"

Remember that the <u>response scale</u> is just as important as the question.

Make sure it 'matches' the question.

QUESTION OBJECTIVE GUIDES RESPONSE SCALES

- Affect satisfaction, confidence, liking Rating Scales (1-10)
- Behavior report frequency (never --- always)
- Cognitive attitudes, Likert scale (agree disagree)

RESPONSE SETS

Measuring **Frequency** (behavior)

- Problem: Assumes people do things a regular basis, but people are irregular.
- Solution: ask for times in a specific time frame, provide meaningful range (0, 1-2, 3-4, 5 or more)

"In the past 14 (30 days), how many different times have you called your child's pediatrician?"

MORE ABOUT FREQUENCY

"In the past year, how often were you offered leadership opportunities?"

Problem: Is past year academic or calendar, too long of a timeframe?

"Since January 1, 2021, how many times..."

What is a <u>leadership opportunity</u>? Need to operationalize leadership and opportunity. Run a code? Present at rounds? Organize brown bag talk?

MEASURING QUANTITY

The idea of "how much"

"How much of a problem is it to complete your documentation before ending your shift?"

- No problem at all little bit of a problem somewhat of a problem – significant problem. Only 4 categories.
- 0-10 scale provides more range (0 is no problem and 10 is a major problem) What number would you assign to the size of the problem?

RESPONSE SCALES

The 3 most common questions:

- Should you have a middle/neutral option?
- Should it be a unipolar or bipolar scale?
- Should there be an even or odd number of options?

THE FAMOUS LIKERT SCALE

- Agree Disagree scale used to evaluate the level of agreement or disagreement towards a statement.
- Simple to design
- Require a lot of cognitive effort from respondents
- Acquiescence bias propensity to agree
- Use sparingly only when interested in opinion/attitude not reaction

SCALE POLARITY

Every concept has theoretical range of polarity

Bipolarity: positive to negative, with neutral midpoint

Very Satisfied ----- Very Dissatisfied (neutrality, direction, intensity)

Unipolarity: zero to maximum number – no neutral midpoint

Important ----- Not important at all (one-sided, only intensity)

Pretest!

Be sure to have others review the items before administering the survey

TIP #7

Observe a couple people completing your survey

Ask them to explain their responses while thinking aloud

The survey format matters

Make it appealing, interesting and concise

HOW TO ENCOURAGE PARTICIPATION

- Send notification prior to survey. Tell them when it's coming; why it's important, how long it take to complete - and how the data will be used.
- Actual survey Need to tell respondents why their responses matter and how the data will be used
- Limited or no scrolling; 1 question per click

HOW TO ENCOURAGE PARTICIPATION

- Length matters, but not as much as you think.
- Tell respondents how long it will take to complete
- Make survey look inviting ample white space
- Neutral image or icon on initial communication.
 "Next Tuesday be on the lookout for our survey. When you see this icon the subject line, you'll know it's from us!"

CONCLUSIONS

- Survey development takes time
- Resist the urge to jump to writing the questions
- Continually ask yourself, "Will this help me achieve my objective?"
- Let research goals guide the survey development
- Keep questions concise and clear
- Pretest survey for interpretation of questions and responses

