Survey Design Basics
for HIV Research

CFAR Socio-behavioral and Prevention Core &
Public Health-Seattle and King County
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Presented by

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Who we are & What we do

- Part of the Social Development Research Group.
  - Collect high quality data – web, phone, in-person, mail, etc.
  - Tailor data collection approaches.
  - Assist with survey flow and language.
  - Program computerized surveys.
  - Experienced with longitudinal research, including locating hard to find participants.
  - Navigate the Institutional Review Board (IRB) process.
  - Clean, document and secure your data.
Multi-mode designs and challenges
Who I am & How I fit in
What I’m going to talk about today

- Survey Basics
- Order and flow
- Writing good questions
- Methods for evaluating your survey
Survey Basics
Survey - Definition

A systematic method for gathering information from (a sample of) elements for the purpose of constructing quantitative descriptors of the larger population.
Survey Basics: A Successful Survey…

- Gets at the right information
- Solicits thoughtful answers from the respondent
- Minimizes measurement error
- Minimizes respondent burden
## Survey Basics - Modes

<table>
<thead>
<tr>
<th>MODE</th>
<th>ADMINISTRATION</th>
<th>OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-face</td>
<td>Interviewer</td>
<td>Paper &amp; pencil</td>
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<tr>
<td></td>
<td></td>
<td>Computer-assisted in-person interview</td>
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<td></td>
<td>Self</td>
<td>Self-administered questionnaires</td>
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<tr>
<td></td>
<td></td>
<td>Computer-assisted self-interview (text)</td>
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<td></td>
<td></td>
<td>Computer-assisted self-interview (audio)</td>
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<tr>
<td>Telephone</td>
<td>Interviewer</td>
<td>Paper &amp; pencil</td>
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<tr>
<td></td>
<td></td>
<td>Computer-assisted telephone interview</td>
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<tr>
<td></td>
<td>Self</td>
<td>Computer-assisted telephone interview</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Interactive voice or touch-tone data entry</em></td>
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<tr>
<td></td>
<td></td>
<td><em>Audio-computer assisted self-interview</em></td>
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<tr>
<td>Web/Mail</td>
<td>Self</td>
<td>Paper &amp; pencil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-mail questionnaires</td>
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<td></td>
<td></td>
<td>Web Surveys (<em>can also be audio-assisted</em>)</td>
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</tbody>
</table>
Example – Multi-mode variations

- In-Person
Now, I’m going to read some statements about the people you work with. Please look at Card 25 and tell me how well they describe your co-workers.

- Web
The next section is about the people you work with. Please indicate how well the following statements describe your co-workers.
Survey Basics - Length

Often a battle of the wills between the PI and DC staff

- There is so much researchers want to know!
- However, shorter is often better for the respondent.
- Need to strike a balance
- Other factors can off-set length
Survey Order & Flow
Survey Flow

Simple Non-sensitive

Start off with a warm-up

Complex Sensitive Personal

Simple Non-sensitive

Less important

Leave a good memory
Survey Order

- Natural sequence of time
- Group questions by topic
- Group with similar response options
- Most familiar to least familiar
- Ask general questions before moving to specific
- Avoid (or separate) items that look or sound alike
Start with the longest timeframe, moving to shorter or more recent timeframes

1. *In your lifetime, have you ever smoked cigarettes?*
2. *In the past year, how often have you smoked cigarettes?*
3. *In the past 30 days, how often have you smoked cigarettes?*
Survey Order - Continued

- If measuring both attitudes and behaviors on a topic → start with attitudes

1. Overall, how satisfied are you with your job?
2. I gain a sense of accomplishment from my job.
3. Most days I look forward to going to work.
4. People treat you in an unfriendly way at work.
5. You are frequently bored at work.
6. In the past year, have you received a promotion at work?
Mode, Length, Order, Flow

Questions?
Writing Good Questions
Cognitive Process

1. Comprehend
2. Retrieve Information
3. Judgment/Estimation
4. Report Answer
Good Questions:

- Provide clear instructions
- Are concise & concrete
- Use simple, clear language
- Are relevant to your population
- Have response categories that fit the question
- Response categories are mutually exclusive and exhaustive
Bad Questions:

- Use vague or biased words/phrases
- Contain jargon or technical terms
- Use abbreviations or slang
- Are double-barreled
- Have double-negatives
- Place important qualifying information at the end
Example Q #1

1. How many **Full Time Equivalent** employees does your business have? Use your business’ definition of Full-Time Equivalent (FTE). If your firm does not have a set definition, consider an FTE to be 40 hours per week. For example: if you define full-time as working 40 hours per week and have four employees who each work 20 hours per week, then you have 2 FTEs.

   - None (0)
   - 1 - 4
   - 5 - 19
   - 20 - 49
   - 50 - 99
   - 100 - 249
   - 250 or more

*Wordy*

*Uses Technical Terms*

*Places important information at the end*
Example Q #1 - Improved

1. How many employees does your business have?
   
   - None (0)
   - 1 - 4
   - 5 - 19
   - 20 - 49
   - 50 - 99
   - 100 - 249
   - 250 or more

   a) Number of employees who work full-time: ____________

   b) Number of employees who work part-time: ____________
Example Q #2 & #3

2. What is your sexual orientation?
   - Heterosexual
   - Gay or lesbian
   - Bisexual
   - Other (specify)

3. What needs do you have related to being non-heterosexual or transgender that are not currently being met?

   Jargon
   Not a relevant term
   Biased
   Confusing
Example Q #2 & #3 - Improved

2. What is your sexual orientation?
   - Heterosexual/Straight
   - Gay or lesbian
   - Bisexual
   - Other (specify)

3. What needs do you have related to being [INSERT SELECTED TERM] that are not currently being met?
Example Q #4

4. How many friends do you have who you can talk to about your problems?

Wrong response type

A lot
All
Most
A million
99999
4. How many friends do you have who you can talk to about your problems?
   - None
   - 1
   - 2
   - 3
   - 4
   - ... (ellipses)
   - 9
   - 10 or more

Closed-ended categorical response set
Example Q #5

5. I would be disrespected if I walked away from a fight (YES! yes no NO!)

Too vague

What kind of fight - Physical? Verbal?

A fight about what?

Disrespected by whom?
Example Q #5 – Improvement options

Change the wording – add clarifiers
5. I would be disrespected by my peers if I walked away from a physical fight.

Add an instruction
The next question refers to physical fighting. Please do not include verbal disputes
5. I would be disrespected if I walked away from a fight.

Provide standardized information for interviewers to use when respondents ask for clarification (QxQ)
Example Q #6

This is a two part question that asks for your opinion about what kind of influence the following organizations or groups have on public policy in general and also specifically on policies of concern to your organization. Please indicate how much influence they have on a scale of 1 to 7. (1 = very little influence, 7 = a lot of influence.)

Example: If you believe that Labor Unions do not have enough influence on public policy in general, but manage to have more influence on your organization’s specific concerns, you might mark a “1” under “In general” and a “4” under “Policies of concern to your organization”.

<table>
<thead>
<tr>
<th>Indicate the number that represents how much influence they have underneath each category.</th>
<th>In general</th>
<th>Policies of concern to your organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: labor unions</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>a. Agricultural groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Business/trade associations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Example Q #6 – Improvement options

- Pick one part: Only ask about “In general” or “Policies of concern to your organization”
- If both are needed, separate into two questions
- Give definitions for the response choices between 1 and 7
- If possible, shorten the list of categories
Example Q #7

7. About how many adults (over 21) have you known personally who in the past year have:

a) Used marijuana (pot, weed, grass) or other illegal drugs?

- None
- 1
- 2
- 3 or 4
- 5 or more
Example Q #7

How many pieces of information do you remember?

1. How many
2. Adults (over 21)
3. You know personally
4. In the past year
5. Have done XXX

Too much to remember
Too difficult/complex
Example Q #7 - Improved

Add a transition statement to frame the Q:

The next questions ask about the adults you know personally. Thinking about the past year...

7. About how many adults (over 21) have you known personally who in the past year have:
   a) Used marijuana (pot, weed, grass) or other illegal drugs?
Evaluating your Survey
Methods for Evaluating Questions

- Expert reviews
- Focus group discussions
- Cognitive interviews (Pre-test)
- Field Test (Pilot)
Questions??
Thank you!

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