OCTRI Research Forum: Survey Design and Tools

OREGON CLINICAL & TRANSLATIONAL RESEARCH INSTITUTE

Introductions

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Learning Objectives:

- Choose the survey method that best fits your project
- Design your survey to get high-quality data
- Administer your survey to get the most responses
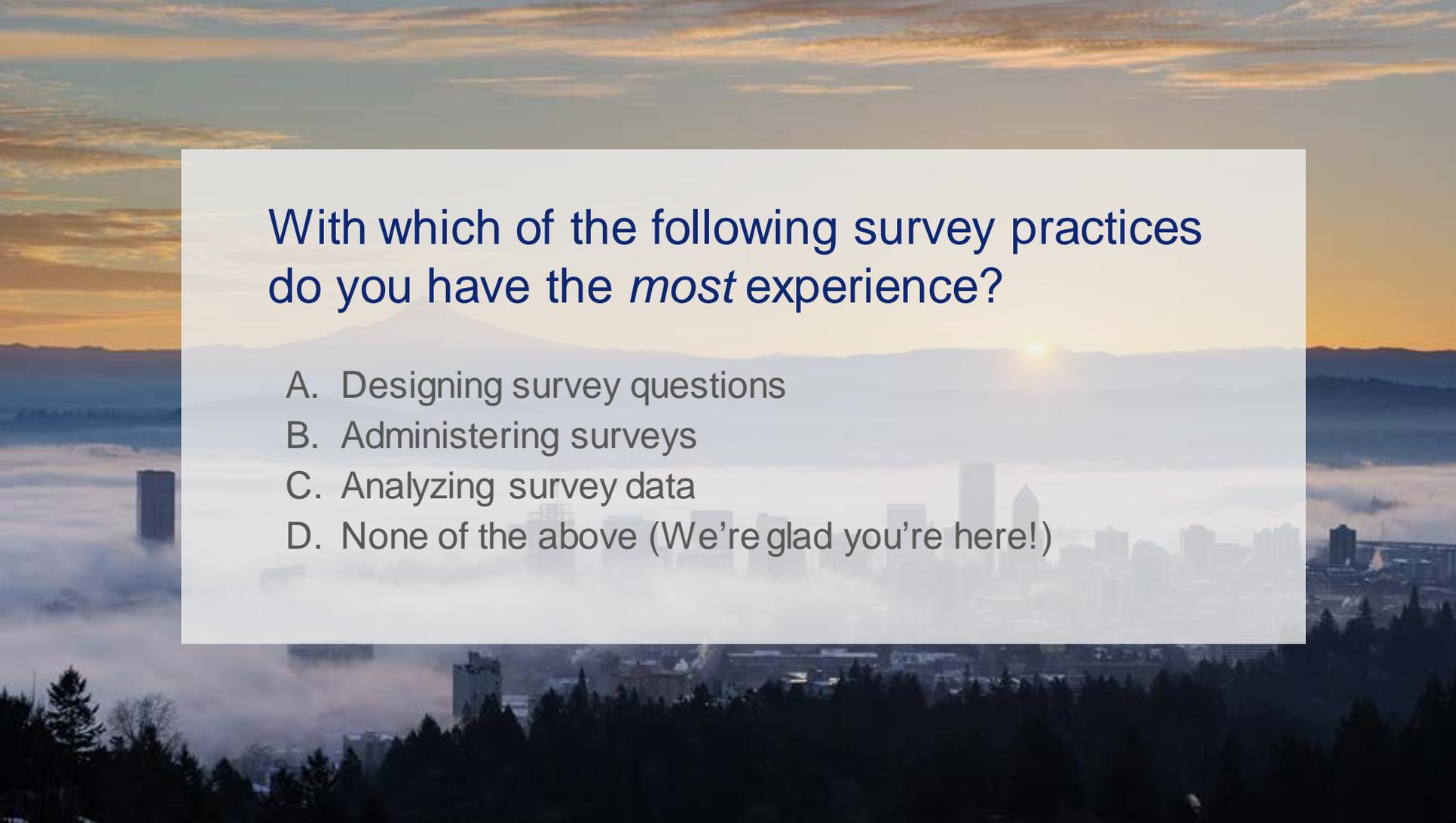
With which of the following survey practices do you have the *most* experience?

A. Designing survey questions
B. Administering surveys
C. Analyzing survey data
D. None of the above (We're glad you're here!)

Before you start designing your survey...

Do you *really* need to do a survey?

Is there some other way you can get the information you need? (Alternatives: existing data, informal conversations, qualitative data collection, data log...)

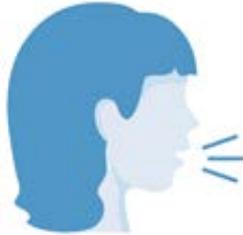This can save you a lot of time and money!

Common survey administration methods

Online (anonymous or known respondents)

Paper (in person or by mail)

Phone

Other newer methods (mobile apps, text, etc.)

Online surveys: Known respondents

Quick, cheap, allow for complex branching, low response bias due to sense of anonymity (low social desirability)

Low response rate, survey fatigue, not as good for open-ended questions

Example: Emailing self-administered surveys to participants who have enrolled in your study

Online surveys: Anonymous

Similar to known respondents plus even lower response bias

Similar to known respondents plus even lower response rate and the possibility that someone will respond more than once

Example: Posting a link to an anonymous survey in a Facebook group

Paper surveys: Administered in person

Still pretty quick and cheap with low response bias, can remain anonymous, can make it very convenient for people to respond

Not as good for complex surveys or open-ended questions, have to have an existing touch point

Example: Asking patients to fill out a 2-page paper survey while waiting for an appointment

Paper surveys: Mailed

Low response bias, ability to reach a wide geographical area without existing touch points

Low response rate, high respondent burden, high turnaround time for mailing and returning, need for participant addresses, costs related to printing and mailing surveys

Example: Mailing a survey to a random sample of addresses in order to infer population-level estimates
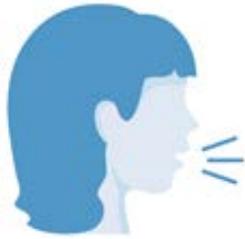
Phone surveys

Ability to incorporate survey logic and follow up on responses, better for open-ended questions, may be more accessible for certain populations, may have slightly higher response rate

Take a lot of time and are therefore costly, higher response bias due to social desirability

Example: Calling study participants and asking them questions with a rating scale of 1-5

New survey methods

Allows people to respond in a way that is more natural for them, leading to higher response rate

May be more costly and/or have a longer start-up phase

Examples: Mobile apps, Twilio (text message extension for REDCap)

Web surveys: Selecting survey software

REDCap
Research Electronic Data Capture

- Designed for research studies and operations
- Support and quality checks provided by OCTRI

qualtrics^{XM}

- Designed for collecting and analyzing data for single survey projects
- Self-directed

See full comparison between REDCap and Qualitrics here

Other software may be appropriate for projects where Protected Health Information (PHI) is not collected

REDCap - Why Use REDCap

- Multiple surveys in same project
- Distribute same survey(s) at different time points
- Append survey responses with staff entered data
- Collect survey responses from different participants in the same record
- E-Consent
- Training and support through OCTRI

REDCap - Notable Features

- Automated Survey Invitations
- Set conditions for grouping surveys together
- Download validated instruments from REDCap Shared Library
- Text survey invitations through integration with Twilio
- Automate alerts to users or participants based on responses

Budgeting for your survey

Things to think about:

- Survey tools - will you need features beyond the free version?
- Translation services
- Printing/mailing costs
- Tablet/other equipment for self-administered surveys
- Mobile app considerations (Twilio, OCTRI design fee)
- Survey incentives
- Paying someone to do analysis

Additional resources

Survey Modality Tipsheet

Comparing REDCap to Qualtrics for Research

REDCap Survey Class: Learn more at
https://octri.ohsu.edu/redcap/

OHSU Written Translations: translations@ohsu.edu

Designing your survey

Which aspect of survey design are you most interested in learning about?

A. Finding validated measures
B. Adapting validated measures
C. Designing my own research questions
D. Something else

Choosing previously validated scales/questions

A validated measure is one that has been administered to a particular <u>population</u> and shown to have <u>internal consistency</u>

- If administered to a population different than your own, it may no longer hold its validity
- If questions don't ask what you want to measure, it may not matter that they are consistent with each other

Choosing previously validated scales/questions

Saves time and energy, may add to the validity of your research (consider your audience)

May not measure exactly what you want to measure, may not be validated in your study population or for your method of administration

Even if you don't use the full validated measure, it can be helpful to create a question bank from existing measures (your future self will thank you!)

Existing measure question bank

Question	Response Options	Source	Construct
Example: *In the past month, please describe how often… I have someone who understands my problems.*	*Never, Rarely, Sometimes, Usually, Always*	*NIH Toolbox Emotional Support Fixed Form Age 18+ v2.0 (PROMIS)*	*Relationships/ Social Support*

Sources of validated measures

PROMIS (Patient-Reported Outcomes Measurement Information System) - a system of highly reliable, valid, flexible, precise, and responsive assessment tools that measure patient-reported health status
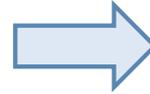
NCI Research Tools and Measures

REDCap Shared Library

Literature review

If you don't find what you're looking for and want to write your own survey questions...

Writing great survey questions

#1 Rule of Thumb: Make your questions easy to answer! This reduces participant burden and survey fatigue.

Happier respondents who understand what you're asking and don't have to work too hard to answer

Better data!

Use clear and simple language

Not great:

To what extent do you agree or disagree that evidence-based research provides the basis for sound clinical practice guidelines and recommendations?

Better:

Please tell us how much do you agree or disagree with the following statement: Clinical practices are based on research.

Ask one question at a time (avoid "double barreled" questions)

Not great:

How friendly and professional was the healthcare provider you saw during your most recent visit?

Better:

How friendly was the healthcare provider you saw during your most recent visit?

Provide response options that are both exhaustive and mutually exclusive

Not great:

How much time did you spend waiting in the waiting room during your most recent visit?

- ❏ *1-5 minutes*
- ❏ *5-10 minutes*
- ❏ *10 minutes or longer*

Provide response options that are both exhaustive and mutually exclusive

Better:

How much time did you spend waiting in the waiting room during your most recent visit?

❏ *Less than 5 minutes*
❏ *5-10 minutes*
❏ *Longer than 10 minutes*

Make sure your response options match your question stem

Not great:

How <u>satisfied</u> are you with your overall care during your most recent visit?

- ❏ *Excellent*
- ❏ *Good*
- ❏ *Fair*
- ❏ *Poor*

Make sure your response options match your question stem

Better:

How would you <u>rate</u> your overall care during your most recent visit?

❏ *Excellent*
❏ *Good*
❏ *Fair*
❏ *Poor*

Rating scales

Do your rating scales need a midpoint?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

Very dissatisfied	Dissatisfied	Satisfied	Very satisfied

It depends…

- What does your midpoint tell you?
- Do you need an "I don't know" or "N/A" option?

Rating scales

Do you need to label every point?

1 Poor	2	3	4	5 Excellent

It depends…

- How will your respondents interpret the different points?

Additional considerations

- Use open-ended questions sparingly
- Survey length - keep it as short as you can while collecting all the data you need
- Question order - think general to specific
- Consider placing personal or sensitive questions towards the end of your survey (however, keep in mind that some people may tire out before completing your survey, so if they're critical to your study then don't place them at the *very* end - it's a balance!)

Sources of bias

Bias in <u>who</u> responds

- Sampling error
- Non-response bias

Bias in <u>how</u> they respond

- Ordering effects
- Method effects
- Acquiescence/agreement bias

Designing your survey to facilitate analysis

Before conducting your survey:

- Check to see how your data exports
- Think about how you are going to use your data - some types of questions are harder to analyze (e.g., ranked choice)
- Decide whether you will require responses and how you will handle missing responses or incomplete surveys

Piloting your survey

Helps you make changes to your survey before administering to a large group of people (saves money and frustration!)

- Pilot your survey in a group of individuals similar to your target population
- Have them take your survey, but also try to understand their thought process (cognitive testing)
- Look at the data and practice how you will use it

Additional resources

Includes a great checklist for survey question design

(or you can create your own using these slides!)

Administering your survey

Maximizing response rates

#1 way to increase response rates:

Design a good survey!

Reminders and incentives may also help, but they will not make up for a survey that is poorly designed or administered.

Also: **Develop a recruitment and communications plan.**

This includes things like how you will reach out to participants, who will reach out to them, and how you might include them in dissemination of the results.

Maximizing response rates

Reminders

- First reminder is the most effective
- Give a reasonable amount of time before sending a reminder, and don't send too many
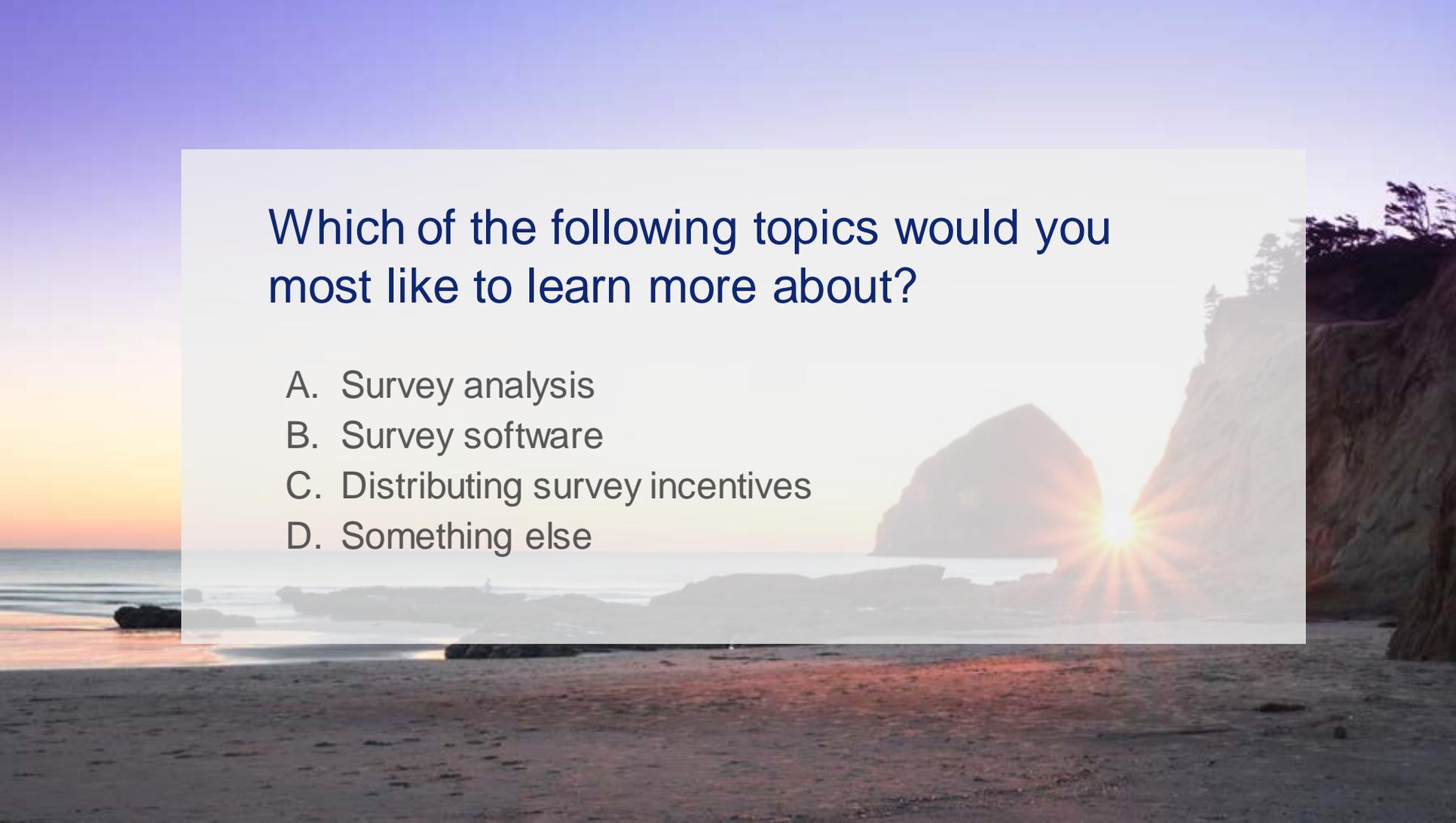
Incentives

- Think about population - what would motivate them (without being coercive)?

Additional considerations

Think of your survey as a social exchange

- Explain how participants are helping you
- Thank them for their time
- Let them know what to expect (how long the survey will take, what it will cover)
- Provide contact information if they have any questions

Which of the following topics would you most like to learn more about?

A. Survey analysis
B. Survey software
C. Distributing survey incentives
D. Something else

Thank You