Building Evaluation Capacity
Session 4

Surveys (e-Surveys), Record Reviews and Quantitative Analysis

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E-Surveys – Primary Uses

- Collecting survey data
  - Alternative administration
    - independently – to respondent's email
    - group-administered for example in a lab setting
    - multiple-user terminal.
  - Increases ease of access for some (must have email address, no "blocks")
- Generating hard copy surveys
- Entering, transferring and analyzing data

Mobile and Tablet Survey Apps

Make it possible to collect data in the field on your own device(s) (e.g., at a kiosk), offers flexibility & convenience for respondents (on their smartphones while in line at the grocery store), and can be useful in reaching certain populations more likely to use mobile technologies.

* Survey Monkey
* Quick Tap
* Loop
* SurveyToGo

Things to consider when comparing apps:

- Security features
- Browser-based vs. App-based
- Offline functionality (without an internet connection)
- Pricing and plans
- Customization of question types, appearance, logos
- Compatibility issues (iPad &/or Android tablets, etc)
- Whether or not & how data is exported for analysis (CSV file? PDF? Internal display report only?)
- Max number of questions/respondents
- Number of devices allowed

Things to Think about Before Administering an E-Survey

- Target group: who, where, sampling?
- Respondent assistance, A/P consent
- Anonymity vs. Confidentiality
- Specific fielding strategies, incentives?
- Time needed for response
- Trial administration/notification (check for bounces and un-subscribed respondents)
- Tracking administration & response, follow-up decisions
- Data analysis plans
- Storing and maintaining confidentiality

E-Surveys – Key Decisions

- Why use an e-survey rather than a hard-copy survey/ intercept survey/ alternative survey or other data collection strategy?

- What Question types do you need?
  - How will they be displayed?
  - Do you need an "other" field?
  - Should they be "required?"

Multiple Choice (only 1 answer)
Forced Choice Item (MO)

Do you like ice cream?

- ○ Yes
- ○ No
- ○ I'm not sure

Directions read: Mark One – unless it is so obvious that is the expectation.

Multiple Choice (multiple answers)
Multiple Response Item (MATA)

What flavors of ice cream do you like? Please choose all that apply.

- ☐ Vanilla
- ☐ Chocolate
- ☐ Strawberry
- ☐ Raspberry
- ☐ Lemon
- ☐ Mango
- ☐ Pistachio
- ☐ Almond
- ☐ Hazelnut
- ☐ Other (please specify)

Multiple response items often create analysis challenges. Use sparingly.

Comment/Essay Box/Open-ended

Please describe your first experience with ice cream.

Matrix of Choices
(1 answer/row vs. multi answers/row)

How often do you eat the following types of ice cream?

	Daily	Weekly	Monthly	Yearly	Never (N/A)
Traditional ice cream	○	○	○	○	○
Gelato	○	○	○	○	○
Sorbet	○	○	○	○	○

My family likes the following flavors of ice cream:

	Vanilla	Chocolate	Fruit or berry flavors	Nut flavors
Me	☐	☐	☐	☐
My Spouse	☐	☐	☐	☐
My Children	☐	☐	☐	☐

Likert/Rating Scale

	Not at all important	Slightly important	Somewhat important	Moderately important	Extremely important
Quality of ingredients	○	○	○	○	○
Flavor	○	○	○	○	○
Texture	○	○	○	○	○
Brand	○	○	○	○	○

A true Likert scale has 5 answer choices, and by the way it is pronounced Lick -ert not Like -ert. (The strategy was named for Rensis Likert who invented or popularized them.)

Single Vs. Multiple Textboxes

What is the first word that comes to mind when you think about ice cream?

Please list your top three favorite brands of ice cream.

One

Two

Three

You must have an analysis plan for using these data.

Numerical Textboxes

How many times per year do you buy the following flavors of ice cream?

Vanilla	
Chocolate	
Strawberry	
Pistachio	

You must have an analysis plan for using these data. Consider hard codes (e.g., 1/month, at least 6 times per year, etc.

Pre/Post Surveys: A Closer Look

Pre Survey → **INTERVENTION** → Post Survey

Post Survey – Pre Survey = RESULT

Pre-Post Surveys
Effective Use

1. Unique identification system for matching (preferably user generated)
2. Brief, well-constructed survey (with items connected to intervention)
3. Careful mix of items

   ** Knowledge, Attitudes **Behaviors
4. Set targets (Pre, Post, Change, Match)
5. Successful pre-administration to all/sample of participants

Pre-Post Surveys
Challenges

1. Respondent unfamiliar with terminology (pre-test)
2. Respondent answers falsely(social desirability)
3. Pre-measures show existing knowledge, or desired attitudes or behaviors
4. Substantial data loss (pre without post, post without pre)
5. Pre-post change is small or varied
6. Change is large enough and in desired direction but alternative explanations exist

Pre-Post Surveys
Alternatives

1. Post Only (compare results to targets)

2. Retrospective Survey

   2 Questions for each item:

   Post First: Ask about behavior after

   Then Pre: Ask about behavior before

Record Reviews:

- Accessing existing internal information, or information collected for other purposes.

- Can be focused on
  - own records
  - records of other orgs
  - adding questions to existing docs

- Instruments are called – protocols

USE REC REVIEW TO:
Collect some behavioral reports
Conduct tests, collect test results
Verify self-reported data
Determine changes over time

Collecting Record Review Data

- Review existing data collection forms (suggest modifications or use of new forms if possible).
- **Develop a code book or at least a data element list keyed to data collection forms.**
- Develop a "database" for record review data.
- **Develop an analysis plan with mock tables for record review data.**

Record Review Analysis Example

	CDR	EF	MHA	MS	CENTRAL	TOTAL
Number of Participants						
AGE at INTAKE (Convert to %s)						
17 and Younger						
18 – 21						
22 – 34						
35 – 49						
50 – 64						
65 and Older						
PRIMARY DISABILITY (%s)						
Neurological						
Developmental/Cognitive						
Physical						
Chronic Disease/Illness						
Psychiatric						
Sensory						
Other						

Record Review Example: Descriptive

	CDR	EF	MHA	MS	CENTRAL	TOTAL
Number of Participants	32	45	33	43	157	**310**
AGE at INTAKE						
17 and Younger	3%	4%	0	0	10%	**7%**
18 – 21	0	13%	0	0	47%	**20%**
22 – 34	13%	29%	19%	7%	18%	**17%**
35 – 49	39%	27%	34%	40%	28%	**30%**
50 – 64	36%	22%	38%	47%	19%	**23%**
65 and Older	10%	4%	9%	7%	0	**4%**
PRIMARY DISABILITY						
Neurological	22%	60%	3%	98%	0	**27%**
Developmental/Cognitive	19%	31%	0	0	78%	**43%**
Physical	6%	0	0	0	2%	**2%**
Chronic Disease/Illness	3%	0	0	0	1%	**1%**
Psychiatric	19%	4%	97%	0	11%	**19%**
Sensory	9%	2%	0	0	1%	**1%**
Other	22%	2%	0	2%	7%	**6%**

Record Review Example: Evaluative

Comparison of Birth Outcome Results for Eligible Young Women in the Program and Not in the Program

	In Program		On Waiting List, Not in Program	
	Number	**%**	**Number**	**%**
Babies Born	18		22	
Born Healthy*	13	72%	14	61%
Not Born Healthy*	5	28%	8	39%

*The indicator of a healthy baby is birthweight above 5.5 pounds, AND Apgar score 7 Or Above.

Sources of Record Review Data

Available Administrative Data	Other Extant Data
Intake Forms Attendance Rosters Program Logs (e.g., daily activity descriptions) Evaluation Forms (e.g., customer satisfaction surveys, session assessments) Case Files or Case Management Data (these may include both internal data – such as progress toward internally established goals; and external data – such as reports about a participant's living arrangements, employment or childbearing status). Exit or Follow-up Data Assessments (these may also include both internal data – such as culminating knowledge measurements at the end of a cycle; and external data such as test scores, report card grades; scale scores on a behavioral scale; medical or substance use test results).	Census Data -- available on the internet, in libraries or by demand from marketing firms. Vital Statistics -- also available on the internet, in libraries and from local health departments Topical Outcome Data -- e.g., crime statistics, birth outcomes, juvenile arrest data KIDS COUNT child well-being indicators National survey data -- e.g., NELS, NLS, YRBS Community Profile Data UI (unemployment insurance) data

What Happens After Data are Collected?

1. Data are analyzed, results are summarized.
2. Findings must be converted into a format that can be shared with others.
3. Action steps should be developed from findings

Step 3 moves evaluation from perfunctory compliance into the realm of usefulness.

"*Now that we know _____ we will do _____.*"

Important Data-Related Terms

- Data can exist in a variety of forms
  - Records: Numbers or text on pieces of paper
  - Digital/computer: Bits and bytes stored electronically
  - Memory: Perceptions, observations or facts stored in a person's mind

- Qualitative, Quantitative
- Primary v. Secondary Data
- Variables (Items)
- Unit of Analysis
- Duplicated v. Unduplicated
- Unit Record (Client-level) v. Aggregated

Analyzing Quantitative Data: A Few Important Terms*

- **Case**: individual record (e.g., 1 participant, 1 day, 1 activity)
- **Demographics**: descriptive characteristics (e.g., gender)
- **Disaggregate**: to separate or group information (e.g., to look at data for males separately from females) – conducting crosstabs is a strategy for disaggregating data.
- **Partition**(v): another term that means disaggregate.
- **Unit of Analysis**: the major entity of the analysis – i.e., the what or the whom is being studied (e.g., participants, groups, activities)
- **Variable**: something that changes (e.g., number of hours of attendance)

***common usage**

Plan your Analysis in Advance!

- What procedures will be conducted with each set of data and who will do them?
- How will data be coded and recoded?
- How will data be disaggregated (i.e. "broken out for example by participant characteristics, or time).
- How will missing data be handled.
- What analytical strategies or calculations will be performed (e.g., frequencies, cross-tabs).
- How comparisons will be made.
- Whether/which statistical testing is needed.

Q Data Analysis: Basic Steps

1. Organize and arrange data (number cases as needed).
2. Scan data visually.
3. Code data per analysis plan.

4. Enter and verify data.
5. Determine basic descriptive statistics.
6. Recode data as needed (including missing data).
7. Develop created variables.
8. Re-calculate basic descriptive statistics.
9. Conduct other analyses per plan

Coding and Data Entry

1. Create codebook(s) as needed (identify codes and affix them to instrument copies).
2. Create electronic database when possible (use Excel, Survey Monkey, SPSS, SAS, others).
3. ID/create unique identifiers for cases and affix or enter as needed.
4. Enter or extract data as needed (do not recode as data are entered).
5. Make (electronic or paper) copies of your data.

Strategies for Analyzing Quantitative Data

Important Things to Look at or Summarize

Frequencies: How often a response or status occurs.

Total and Valid Percentages: Frequency/total *100

Measures of Central Tendency: Mean, Median, (Modes)

Distribution: Minimum, Maximum, Groups (*iles)

Cross-Tabulations: Relationship between two or more variables (also called contingency analyses, can include significance tests such as chi-square analyses)

Useful, 2nd Level Procedures

Means testing (ANOVA, t-Tests)
Correlations
Regression Analyses