

Survey Methods & Design

An Introduction

Cristina Mogro-Wilson, PhD, MSW
Professor, University of Connecticut, School of Social Work
Editor-in-Chief, Families in Society, SAGE publishing
Associate Editor, Journal of Social Work Education
38 Prospect Street, Office 320, Hartford, CT 06103
Cristina.wilson@uconn.edu
<https://ssw.uconn.edu/person/cristina-wilson-phd/>
[@cmogrowilson1](#)
[@FISOnline](#)

SOCIAL JUSTICE RESEARCH

“contributes to (1) the examination and (2) the reduction or elimination of obstacles to economic, emotional, social, and physical well-being” (Cornelius & Harrington, 2014, pp. 7-8)

As a social work researcher my focus is on eliminating injustice – striving for health equity, for social justice for marginalized populations.

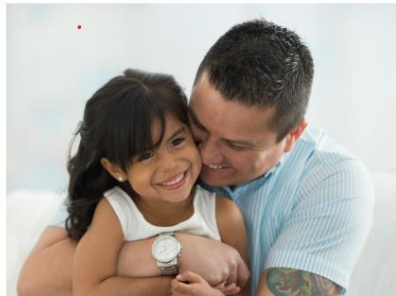


MY RESEARCH



The Powerful Role of Family in Hispanic Culture

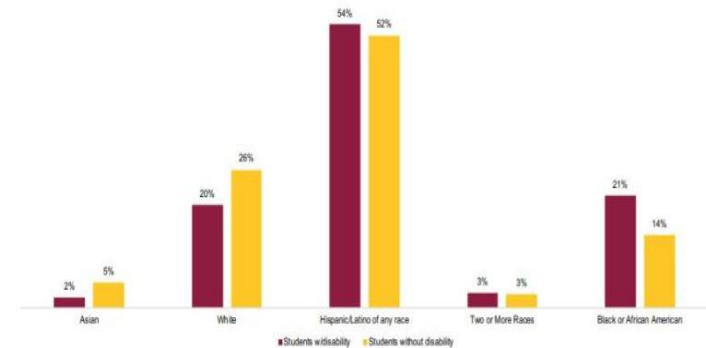
Latino Fathers in the U.S.



Students with Disabilities

Demographics

Percentage of Students With/Without a Disability by Ethnicity and Race



AGENDA

- What is survey research
- Concept mapping and theory
- Types of surveys
- Sample size
- Measurement
- Question Writing
- Data Collection
- Panels for survey response
- Secondary Data Sets

WHAT IS A SURVEY?

- A system for collecting information to describe, compare, or explain knowledge, attitudes, or behavior
- designed to collect information from large numbers of people in standardized form
- Used when population is too big or disperse to view collectively
- Common to explore questions
- Surveys can be used in both cross-sectional studies, where you collect data just once, and in longitudinal studies, where you survey the same sample several times over an extended period.
- Two of the most common types of questions are the simply yes/no and the scaled questions, where respondents are asked to either strongly agree, agree, disagree, or strongly disagree with a particular statement. This later form of scaling is known as a 'Likert Scale' (basically a strength of feeling scale).



SURVEY RESEARCH

Survey research is probably the best method available to describe a population that is too large to observe directly.

Respondent: a person who provides data for analysis by responding to a survey questionnaire.

Self Administered Questionnaires:

- Mail distribution vs. other methods of delivery
- Importance of the cover letter
- Follow-up mailings increase response rates
- Acceptable response rates:
 - 70% or higher



EVALUATION OF SURVEY RESEARCH

STRENGTHS

Usually the least expensive alternative

Often timeline can be FAST

Able to describe large populations with accuracy

Generalizability of data

Ability to analyze multiple variables simultaneously

High reliability



WEAKNESSES

Limited ability to show causality

Can not measure social action / real behavior – relies on self-report

Can seldom deal with the context of social life

Superficial coverage of complex issues

Questionable validity

USE OF SURVEYS IN NEEDS ASSESSMENTS



Needs Assessment: process of researching the needs of target population.

Research techniques for collecting data for program planning purposes:

- Key Informants Approach
- Community Forum Approach
- Rates Under Treatment Approach
- Social Indicators Approach
- Surveys of Communities or Target Groups

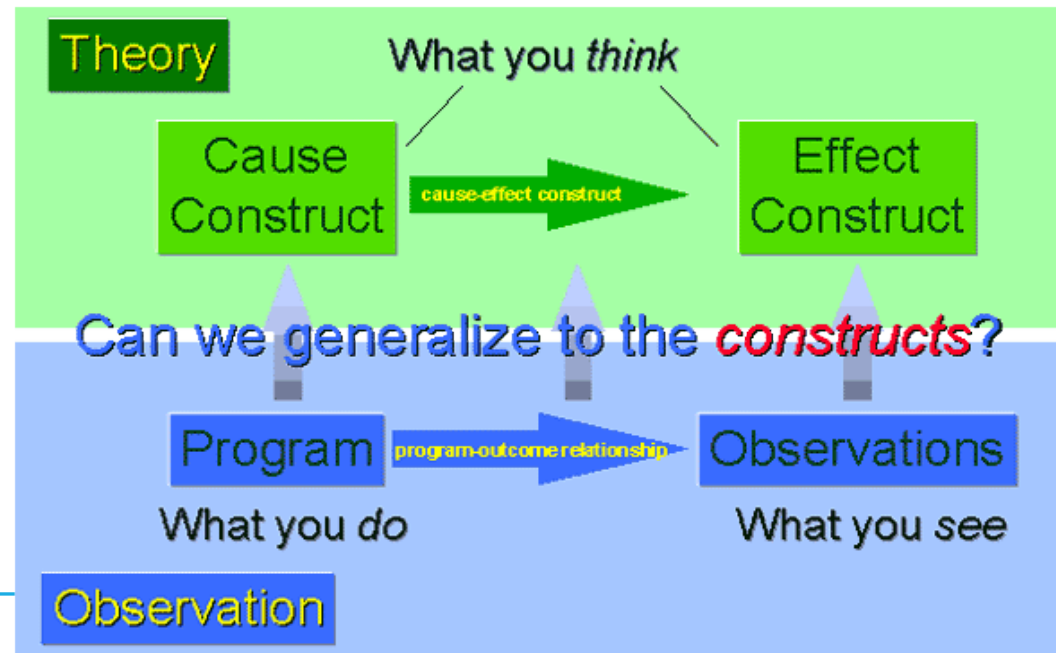
WHAT TO SURVEY? (CONSTRUCTS, QUESTIONS)

What are the constructs you are interested in learning about?

How are these constructs related?

What measures or instruments capture these constructs?

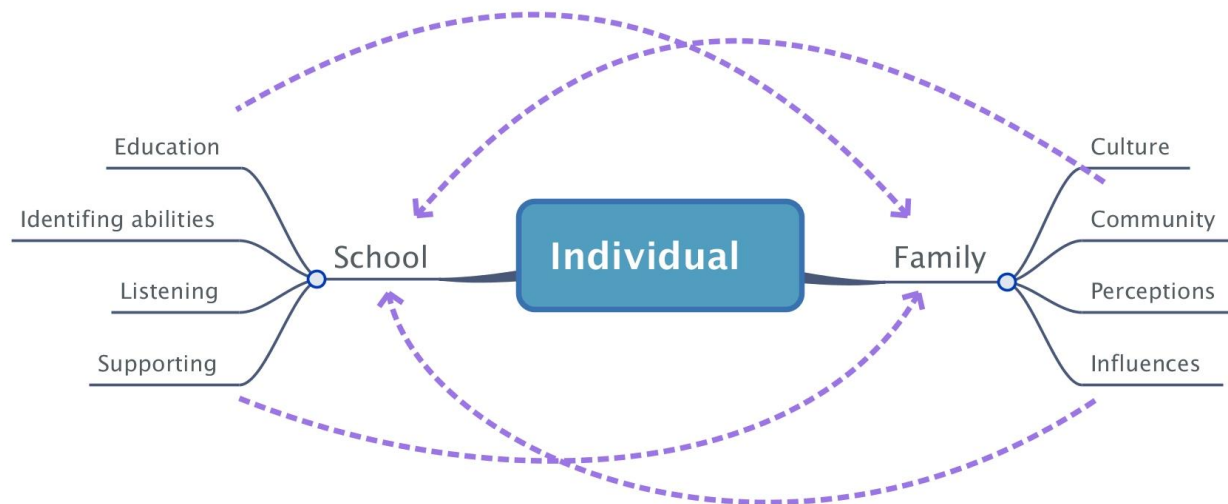
What other covariates are important to understand how these constructs may vary?



CONCEPT MAPPING

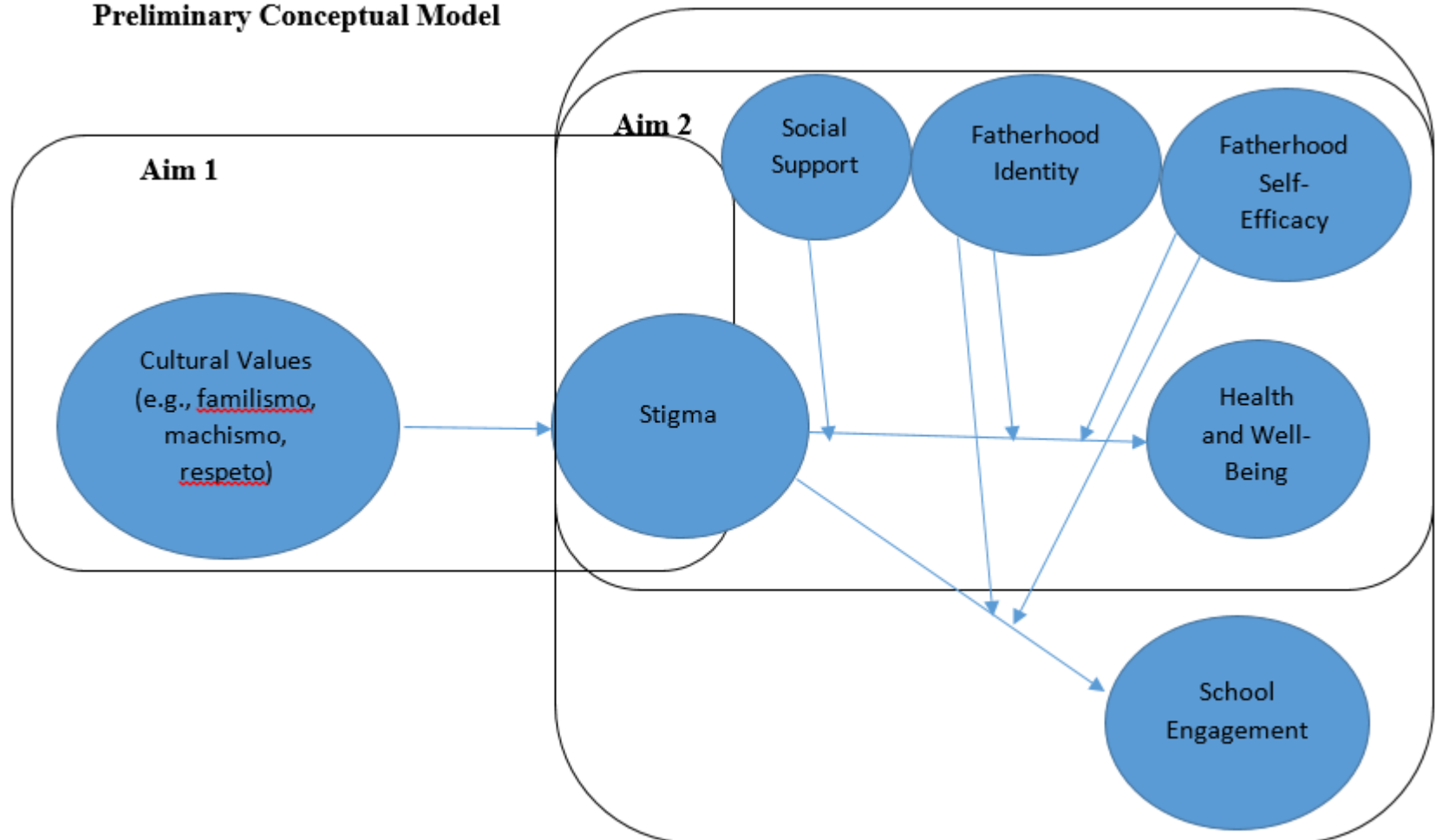
Jaccard, J. and Jacoby, J. (2020). *Theory construction and model building skills: A practical guide for social scientists*. New York: Guilford (First edition in 2010).

A concept map is a tool that visualizes relationships between concepts.



EXAMPLE

Preliminary Conceptual Model



SHAPING TOPICS INTO QUANT. STUDY

Possibly to look a correlational relationships

Or possibly to compare levels of y between those who do and do not have a certain attitudes, behaviors, awareness (knowledge), conditions

So you need to think about variables that we can measure at the person-level

Should be focusing on broader concepts but not too broad

THEORETICAL/CONCEPTUAL FRAMEWORK

Informed by one or more theories

- Concepts defined

Provide logical connections across concepts

Relate these concepts to the outcome being examined

Take Home Point: Often is a reflection of the work that the researcher has engaged in to apply the theory in a given study or population.

TIPS ON FORMULATING A QUESTION

What do you find interesting?

What is the “so what” re social justice & public health?

What does the literature indicate about this?

Are there any gaps in understanding?

- What are they?

How is your question advancing the science?

What are the clinical implications/applications?

What are the policy implications/applications?

What is the public impact?

FROM MY PREVIOUS EXAMPLE....

THEORY

Minority Stress Theory was initially developed by Meyer (2003) to provide an explanation for the unique stressors that sexual minorities experience. The theory suggests that there are multiple social and psychological conflicts that minorities face in response to dominant, normative, cultural values. It has since been applied to Latino immigrant experiences (Valentin-Cortes et al 2020).

social/ethnic minorities have unique experiences and environments that may cause stress which ultimately affects their physical and mental health outcomes.

Meyer, I.H. (2003). Prejudice, social stress, and mental health in lesbian, gay and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin*, 129, 674-697. doi:10.1037/0033-2909.129.5.674

Valentín-Cortés, M., Benavides, Q., Bryce, R., Rabinowitz, E., Rion, R., Lopez, W. D., & Fleming, P. J. (2020). Application of the minority stress theory: Understanding the mental health of undocumented Latinx immigrants. *American journal of community psychology*, 66(3-4), 325-336.

It's your turn **to speak**



THINK ABOUT YOUR OWN RESEARCH

If you are planning to use a survey for your research:

- Why do you think this is the most appropriate way to gather data?
- Begin thinking about how you will access your population. What are some barriers you might experience to administering a survey?

If you are not planning to use a survey:

- What made you decide not to use a survey? This is not to say you should use one!
- Are there related research questions to the one you chose that you could use a survey to answer?

TYPES OF SURVEYS

Self-Administered

- Mail
- Email
- Group

In-person

- Telephone Interview
- Face-to-face Interview



COVERAGES AND ACCESS CONSIDERATIONS BY SURVEY MODE

The coverage of each survey mode depends on who has access to the mode, and what lists or sampling frames are available for sampling members of the target population

Phone: nearly 98% of U.S. households have a phone

- Use of cell phones has complicated coverage

Internet: 85% of U.S. adults use the Internet at least occasionally; 70% have broadband access at home

- Differences between those with access and those without

Mail and in-person surveys are less dependent upon technological considerations, but are affected by language fluency and literacy rates

FACE TO FACE OR TELEPHONE INTERVIEWS

General Guidelines for Survey Interviewing:

- Familiarity with questionnaire
- Following wording exactly – including probes
- Record responses exactly
- Explanatory & clarifying specifications

Benefits of Interview Format:

- Higher completion rates
- Decreases “don’t know” or “no answer” responses
- Interviewer can clarify responses

IN GROUPS.....

Which type of survey (i.e., in-person, telephone, web-based, by mail) do you think would most effectively reach your population of interest? Why?

Are there elements of your population you could miss by choosing one of these ways to administer your survey? How might this affect your results?

WHO TO SURVEY? (SAMPLE)

Sampling: This is just the idea about how you select people for your study

Who can inform our research questions?

How many participants are needed to answer the research questions?



Sample

['sam-pəl]

A representative subset
of a population.

SAMPLE SIZE

The greater the variation in the parameter, the larger the sample size needed

Among large populations there is virtually no difference in the sample sizes needed to obtain estimates within similar levels of precision

When the population is small, you have to sample a relatively larger proportion of subjects to obtain estimates within a given level of precision

PRACTICAL STRATEGIES FOR SAMPLE SIZE DETERMINATION

Look at what was done in the past

Use a “magic number”

Anticipating subgroup analyses (statistical analysis driven)

Accounting for resource/budget limitations***

***Most Common Strategy

SAMPLE SIZE: MOST PRACTICAL WAY

Sample Size: problem that with small samples you obtain a result that does not generalize.. Stevens (1996, p.72) recommends 'for social science research about 15 participants per predictor are needed for a reliable equation' T&F(2007, p123) give equation: $N > 50 + 8(\text{number of IVs})$

- So if you have 5 IVs you will need 90 cases.. more cases are need if the DV is skewed.
- For more info T&F Ch.5
- Tabachnick, B.G. & Fidell, L.S. (2013). Using Multivariate Statistics (6th ed.). Pearson. ISBN-13: 978-0-205-84957-4

CONSIDERATIONS WHEN SELECTING A MEASURE

Permission

Items

Response
Options

Administration

Time to
Complete

Populations

Reliability

Validity

RELIABILITY & VALIDITY

You want your measures to be reliable and valid.

MOST important part is VALIDITY– are you getting at the construct of interest

Is it measuring what it is supposed to be measuring?

Face validity- does it look like it is measuring the construct?

Content validity- reviewed by experts; theory driven

Construct validity: scores reflect the desired construct rather than some other construct

- Exploratory Factor Analysis

Convergent validity: should be high correlations between instruments that measure the same construct

Linguistic validity: beyond translation; linguistic equivalence for meaning and construct value

MEASURES SELECTED

Construct	Selected Scale	# items	Approx Time

I often start by building a table of constructs and measures

Is anything missing? Conceptual model can help

Start thinking of single items needed

Demographics needed

NON SCALE ITEMS

What do we want to capture that will not be measured by standardized scale items?

How should you ask about

- Age
- Race
- Ethnicity
- Gender identity
- Education
- Income
- Employment
- Other demographic characteristics of interest

RESOURCES

Gender & APA

<https://apastyle.apa.org/style-grammar-guidelines/bias-free-language/gender>

Rethinking & Updating Demographic Questions

https://cdn.ymaws.com/sites/www.psichi.org/resource/resmgr/journal_2016/21_3Fall16JN-Hughes.pdf

National Latino and Asian American Study (NLAAS)

<https://www.massgeneral.org/mongan-institute/centers/dru/research/past/nlaas>



Developing your own measure --
DON'T! (Unless it's absolutely
unavoidable.)

What are some ways measures with poor reliability or validity can affect the results of your study or evaluation?

WRITE YOUR OWN QUESTIONS::::

Question writing is hard even though it seems very easy.

Typically questions fall in 3 broad categories: Knowledge, attitudes, and behaviors...

We also talked about “threatening questions” –

- Mostly behaviors
- Mostly behaviors where we think there is a “right or wrong” answer
- In other words, our responses are influenced by what we think people expect of us
 - “Social Desirability”
- Examples:
 - Drug Use
 - Heavy alcohol use
 - Book reading
 - Voting
 - Defensive driving

[Methods 101: Question Wording - YouTube](#)

RULES FOR QUESTION WRITERS

Use clear instructions

Make items clear & simple

Consider respondents' competence

Avoid double-barreled questions

Consider relevance

Short is better

Avoid biased terms

Avoid complex (or negative) syntax

Consider item order

Consider visual appeal

Exhaustive & Mutually Exclusive

Pre-test

IN GROUPS.....SOME QUESTIONS I WROTE.....

I feel welcomed by teachers and other staff at the center

- Strongly agree
- Agree
- Disagree
- Strongly disagree


What is wrong with it?

ANOTHER EXAMPLE...

Working with young children with disabilities is hard. Do teacher trainings help you feel prepared for working with young children with disabilities?

- Much more prepared
- Somewhat more prepared
- Slightly more prepared
- Not more prepared

What is wrong with it?



People grow up in all different types of families. What type of family did you grow up in?

_____ Mom as single parent

_____ Dad as a single parent

_____ Both Mom and Dad

What is wrong with it?

RESPONSE RATES

ALWAYS NEED TO REPORT THEM FOR SURVEYS

IF YOU DON'T REPORT THEM, YOU CAN NEVER PUBLISH YOUR FINDING

IMPORTANT TO KEEP TRACK OF YOUR CONTACTS, THE ACTUAL NUMBER AND PEOPLE OR IDENTITIES OR LOCATIONS OR ADDRESSES APPROACHED – EVEN IN AN INTERNET OR WEB BASED SURVEY

$I/(I+R+O)$

I= number of interviews or observations

R= number of refusals

O = number of cases not obtained for other reasons such as language

Note that noncontacts and refusals must be differentiated to get a cooperation rate; Blair and Blair (2015)

NON RESPONSE IMPACT

It depends

Keeter et al. (2000) compared

- Survey with a 36% response rate to a
- Survey with a 60% response rate

Found few differences in the two surveys on political and social attitudes

Kohut et al. (2012) high effort vs. low effort

- Similar subject characteristics across both samples
- Respondents more politically and socially active than average than the rest of the population

HOW TO REDUCE NON RESPONSE

Multiple strategic contacts

- If doing phone or f-f it matters when
- If doing mail – the Dillman methods (five touches)
- If doing internet – try another mode when people don't respond
- Multimode
- Keep trying no matter what the mode (often 11 calls are made in a phone survey)
- Advanced incentives

Interesting fact: Between 25% and 33% of people who initially refuse will agree to be interviewed when asked at a later time

DATA COLLECTION TECHNOLOGIES

CATI: Computer-assisted telephone interviewing

CAPI: Computer-assisted personal interviewing (lap tops)

CASI: Computer-assisted self-interviewing

CSAQ: Computerized self-administered questionnaire (transferred data file)

TDE: Touchtone data entry

VR: Voice recognition

On-line/Internet-Based Surveys



INCENTIVES FOR SURVEYS



SURVEY SOFTWARE



USE OF PANELS FOR RESPONDENTS

There are companies who have a panel of potential respondents, you pay the company to send out your survey given the eligibility of your sample.

MANY different companies who provide survey polling responses. Here are a few:

Qualtrics

Centiment

Pollfish

Survey monkey

Dynata

Iposo Mori

SSRS

Prolific



SOME EXAMPLES OF PANELS FOR SURVEY RESEARCH

EXAMPLE 1:: Study on US immigrants (born in a country other than the US) affects of stress, acculturation, trauma, religion on behavioral health outcomes

- n=151 who are parents of children ages 0-18
- n=151 are not necessarily parents
- TOTAL N=302
- \$2,492 Centiment, take about a week to collect data

EXAMPLE 2:: Hispanic cultural characteristics influence levels of stigma experienced by fathers who have a child with a disability, and how we can mitigate the effects of stigma on health and well-being

- N=170 \$2,092, took about a week to collect data
- Working on 4 papers from this data

EXAMPLE 3: Latino males, one or more child

- N=300, \$2,100 data collected in 3 days
- published 2 articles from this data

PLEASE PRETEST YOUR SURVEY!

Goals:

Assess survey functionality: navigation? Skip pattern? Items per page?

Assess survey flow: does order of items make sense?

Assess survey instructions: is it clear how participants should answer each item and move through survey?

Identify any typos/writing issues;

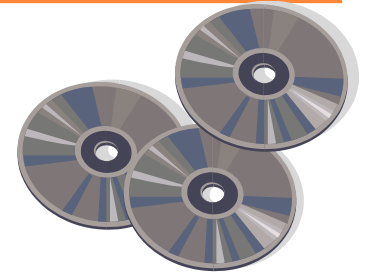
Double-check that response options and items match original or as intended;



Finding a Secondary Data Set

- Panel Study of Income Dynamics
 - Child Development Supplement
- Add Health
- National Longitudinal Transition Study-2 (NLTS2)
- National Early Intervention Longitudinal Study (NEILS)
- National Survey of Adoptive Parents of Children with Special Health Care Needs

Web sites to help you Find a Data Set



- Inter-University Consortium for Political and Social Science Research (ICPSR) at the University of Michigan

[ICPSR \(umich.edu\)](http://www.icpsr.umich.edu)

- Sociometrics

<https://www.socio.com/products/data>

- The Department of Education <https://nces.ed.gov/datalab/>

- The CDC <http://www.cdc.gov/datastatistics/>

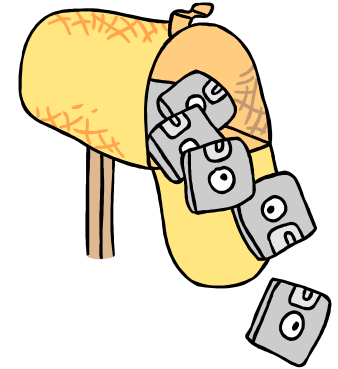
- National Library of Medicine

<http://www.nlm.nih.gov/hsrinfo/datasites.html>

Some data sets in ICPSR

- Language Development of Non-verbal Children Age 3 Years through 7 Years, 2007 to 2012 [Kansas City Metro Area]
(umich.edu)
- Children at Risk in the Child Welfare System: Collaborations to Promote School Readiness
(umich.edu)

Obtaining the Data



- Public release vs. restricted release
- IRB
- Data security plan
- Cost

Working with the data: SIZE

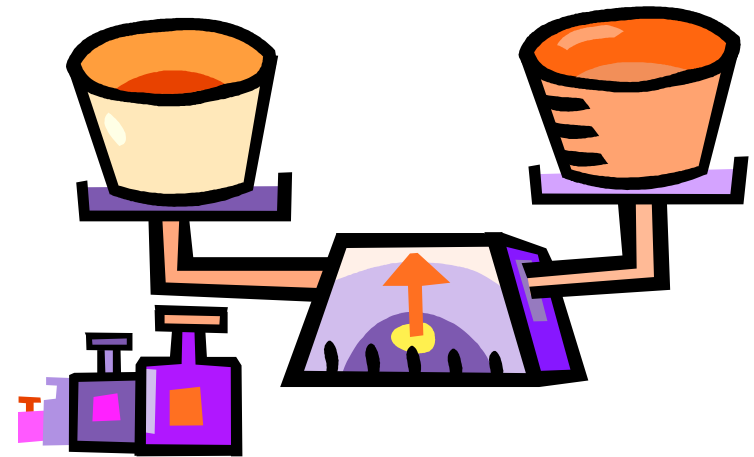
Understand the data collection

- Go through the codebook
- Questionnaire & Locations of interest
- Find variables of interest make a chart of variables, name in data set, variable label, the actual question and response options
- **Narrow it down**



Working with the data: Measurement of key variables

- Not always “best” way
- Make do with what you have
- Check other questions to see if getting at construct



IF YOU HAD SOME \$ BUDGET, DESCRIBE YOUR CUTTING-EDGE STUDY.

Social justice & public health relevance:

- So what? Explain why this is important in one sentence.

Innovative: How does this study advance the literature? Has this been studied before?

Sample: ID sample

- How will you recruit your sample?

Feasibility: Can this project be easily and realistically implemented?

THE TEXTBOOK ON SURVEYS

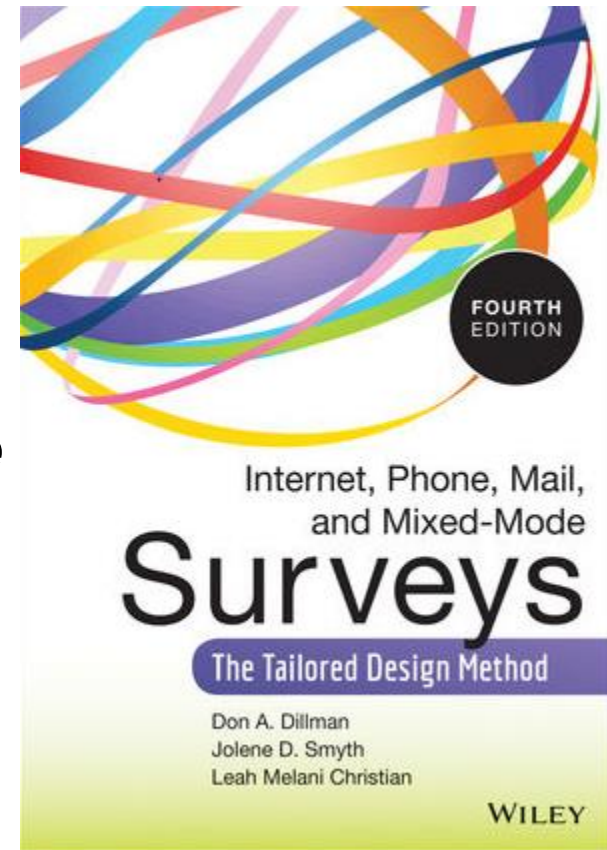
Dillman, D., Smyth, J. & Christian, L. (2013). *Internet, mail, and mixed-mode surveys: The tailored design method (4th ed.)*. New York: Wiley.

Burns, S., Wang, X., & Henning, A. (2011). NCES handbook of survey methods (NCES No. 2011–609). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, from <http://nces.ed.gov/pubs2011/2011609.pdf>

Fowler, Jr., F. J. (2009). Survey research methods. In L. Brickman & D. J. Rog (Eds.), *Applied social research methods series: Vol. 1*. (pp. 19–45). Newbury Park, CA: SAGE.

Groves, R. M. (2006). Nonresponse rates and nonresponse bias in household surveys. *Public Opinion Quarterly*, 70(5), 646–675.

Jabine, T. B., Straf, M. L., Tanur, J. M., & Tourangeau, R. (eds.). (1984). *Cognitive aspects of survey methodology: Building a bridge between disciplines*. Washington, DC: National Academy Press.



QUESTIONS?

Cristina Mogro-Wilson, PhD, MSW

Professor, University of Connecticut, School of Social Work

Editor-in-Chief, Families in Society, SAGE publishing

Associate Editor, Journal of Social Work Education

38 Prospect Street, Office 320, Hartford, CT 06103

Cristina.wilson@uconn.edu

<https://ssw.uconn.edu/person/cristina-wilson-phd/>

[@cmogrowilson1](#)

[@FISOnline](#)