

Hello. I am excited to see you here! As folks log in, please consider putting the following in the chat box:

- 1) Your Name
- 2) Your Title
- 3) Your Organization
- 4) Complete this sentence: "My favorite thing about the Fall is

I will start! Dr. Ashley Hall, Assistant Professor, Washington State University, "My favorite thing about the Fall is Halloween!"



Northwest (HHS Region 10)

TC Prevention Technology Transfer Center Network Funded by Substance Abuse and Mental Health Services Administration



Strategic Tools

Using Logic Models for Organizational Planning and Evaluation

Dr. Ashley Hall, Washington State University



The Northwest PTTC is a partnership led by the Social Development Research Group (SDRG) at University of Washington (UW) School of Social Work in collaboration with the Prevention Science Graduate Program at Washington State University (WSU), and the Center for the Application of Substance Abuse Technologies (CASAT) at the University of Nevada, Reno (UNR).

Northwest partnering institutes share a vision to expand the impact of communityactivated prevention by equipping the prevention workforce with the power of prevention science.









WASHINGTON STATE UNIVERSITY



Disclaimer

This webinar is supported by SAMHSA of the U.S. Department of Health and Human Services (HHS) through SAMHSA Cooperative Agreement # H79SP080995. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by SAMHSA/HHS, or the U.S. Government.

This webinar is being recorded and archived, and it will be available for viewing after the webinar. Please contact the webinar facilitator if you have any concerns or questions.

Overview For Today

- Review Theory of Change & Logic Models
- Data Deep Dive
 - Data types, uses, and management
 - Survey Data review and visualization
- Learning Exercises
 - Data Evaluation & Visualization Demonstration using Tableau
 - Interpret data visualization and identify needs
 - Practice using data to develop a logic model and write a strategic plan

History of Data and Data Management

	Zeroth Generation Tax/census data on clay tablets, parchment, and paper		Second Generation Rise of the computers – first used for calculations, magnetic tape and software followed			5 C	Fourth Generation Relational models, structured query language (SQL) and graphical user interfaces (GUIs)						
400	0BC	19	00	1	955	19	970	19	980	199	95		
			First G Auto infor proces punc	irst Generation Automated information processing via punch cards			Third Generation Smaller & affordable computers used in small business, stock trading moved online				Fifth Generation Technology that can store and process complex data objects, "big data" and rise of the web		

Gray (1987)

Types of Data

Qualitative

- Information that is descriptive
 - Hair or eye color
 - Opinions and comments
- Nominal or ordinal in nature
 - Nominal: Blue or brown eyes
 - Ordinal: High, medium, low
 - Note: Likert or scale questions on a survey quantify qualitative data
- Analysis Methods
 - Thematic analysis
 - Sentiment analysis

Quantitative

- Information that be quantified
 - Number of individuals served
 - Age of clients
 - Income metrics
 - Visits to websites
 - Assessment data (test scores)
- Analysis Methods
 - Statistical analysis
 - Time series analysis
 - Regression analysis
 - Simple descriptive statistics

Source: CareerFoundry.com

Data Management – In Brief

What is data management?

- For our purposes, data management refers to:
 - Various tasks involved in creating, collecting, storing, using, protecting, and sharing information.
- Downfalls of improperly managed data include:
 - Loss of opportunities
 - Inefficient use of staff time
 - Inaccurate or missing reports
 - Missed opportunities to meet client needs or improve programming
 - Missed opportunities for research and broader application of activities

Qualitative Data Creation

How is qualitative data generated?





rone know how to create a bar chart race in Flourish that can display times instead of numbers? I Q83 website timelines Are there any improvements to our website that you can suggest? nav be usefu INT: The best way that 4-H faculty and staff can support the community is by... se I was vas made FG: Being active at local community events. you can suggest? FG: Encouraging, supporting community events. FG: Being a participant in the community vample rticles FG: Having a presence at local community gatherings. FG: Building youth-mentor relationships within community. FG: Being aware of local happenings FG: Know the events in area and find a way to join/interact/ support them so that they can support 4H when needed.

What does qualitative data analysis look like?

- Let's try it!
 - Example 1: Thematic Analysis
 - Example 2: Sentiment Analysis









Earth children:

- Only play with round objects
- Play outside
- Use hands, feet, and mouths to play
- Don't play without an external object

Fulf	Fulfilled				
Frustrateu					
	Too much work	Time consuming			
Not enough informat	tion				
	Difficult	Worth it			
Satisfying					
	Stressful	Helping			
Beneficial					
	Change the wor	d			

Person-Centered Exhausted Frustrated

Difficult

Fulfilled Worth it Satisfying **Environment Centered** Time consuming Not enough information Stressful Too much work Beneficial Change the world Helping

Basic Descriptive Statistics

- Counts
- Min, max, and average age
- Educational attainment

Statistical Tests

- T-test (or nonparametric test)
- ANOVA
- Correlation
- Linear regression
- Etc.

Quantified Qualitative Data

Survey Data!

- If your survey you know what you want to know
- If not your survey, start with a list of the questions
- Develop a brief analysis plan
 - What questions might yield useful information?
 - Are there questions that could be useful for comparing response?
- Visualize the data
- Consider limitations
- Draw conclusions

Session 1 Survey

- Demographics:
 - Job title (nominal)
 - Educational attainment (ordinal)
- Training/Skills
 - Formal training in data, planning, and research
 - Experience with strategic planning
 - Comfort with defining logic model
- Current position
 - Organizational strategic plan description
 - Data management time to generate report

Session 1 Survey – Analysis Plan

- Does our population have formal training in data, data management, strategic planning, or research?
- Is our population comfortable with defining logic models?
- Does our population have experience creating strategic plans?
- Is our population currently using strategic plans in their work?
- Is our population able to generate reports efficiently?
- Do folks with various levels of strategic planning experience view the usefulness of data differently?
- Does formal training translate to more comfort with data and use of logic models?

Session 1 Survey – Data Prep

- How will you analyze and/or visualize the data?
- Prep data based on software requirements
- Keep it simple!
 - I prefer Excel for ALL of my data storage needs
 - Consider data security (HIPAA, FERPA, etc.)
- Practical Examples:
 - Tableau
 - SPSS

Quantitative Data – Session 1 Survey

Basic Descriptive Statistics

- Counts
- Educational attainment
- Job title

Job Title Woi	Job Title Tree Map				
Analyst	Coordinator 26 Specialist 22	Program Manag	jer	Director 13	
		Analyst/Tech Asst 3	Admin A 2 Research 2	ssistant n/Fellow	Student 2

Quantitative Data – Group Comparisons

How can we separate our survey respondents into groups?

- Descriptive Variables
 - Strategic Planning Experience
 - Degree earned
 - Feelings about data

Interpreting Results

What can we see from our survey?

- Direct experience with strategic planning could help boost perception of data importance
- Respondents who stated that they could confidently answer a logic model question on the stop all had a bachelors degree or higher.
 - However, only 6 respondents selected this choice, and the two doctoral respondents selected the least confidence, along with 14 others with higher degrees.
 - Six respondents with an associates, some college, or no college, were somewhat confident in their ability to define logic models on the spot.

Identify Needs

What needs can we identify from our survey?

- Data management was the least selected among formal training options, with data visualization second least
- A significant proportion (33%) of respondents were not confident in their ability to discus logic models
- A significant proportion (36%) of respondents have no experience or have only been a data provider for formal strategic planning
- 30% of respondents work in an organization that doesn't have a strategic plan, or that may have a plan, but they aren't sure. 33% work in an organization that has a strategic plan that is underutilized.

Plug and Play!

- Theory of Change
- Organizational Inputs
- Plug Needs into Needs Assessment
- Create goals and objectives
- Build a logic model!
- Solicit feedback from relevant stakeholders

Let's see it in practice!

Reviewing your Process

Throughout this process, an independent review of your data, analysis, visuals, conclusions, theory of change, goals, logic model, and final strategic plan should be done to ensure your:

- 1. conclusions aren't biased;
- 2. planned interventions are culturally appropriate;
- 3. plan is reviewed to ensure it is not negatively impacting marginalized communities,
- 4. plan is not ignoring and is instead improving marginalized communities.

Suggested reading: <u>https://www.atlanticcouncil.org/blogs/geotech-</u> cues/goodtechchoices-address-unjust-uses-of-data/

Quick Pause before Wrap-Up

• Do you have any questions?

Wrap Up

- Data visualization software:
 - Microsoft Power BI (discounted or free for nonprofits)
 - Tableau (free for nonprofits)
 - Qlick Sense
 - Klipfolio
 - Looker
 - Zoho Analytics (15% discount for nonprofits)
 - Domo
- Remember that free software may not be secure check with your IT department

Wrap Up - Continued

- Begin with your mission why are you here?
- Do your research
- Collect your own relevant data (consider taking a training on survey creation)
- Manage your data effectively
- Build your theory of change model
- Plug in your results to your worksheets and build your logic model
- Write it all up!
- Have it reviewed for DEI

References

- Gray, J. (1996). Data management: Past, present, and future. *IEEE Computer,* 29(10). <u>http://arxiv.org/abs/cs/0701156</u>
- Hernandez-Hall, A. (2021). Nonprofit data management: A stage model. [Doctoral dissertation, University of Nevada, Las Vegas]. <u>https://digitalscholarship.unlv.edu/cgi/viewcontent.cgi?article=5154&context=thesesdissertations</u>
- Raghuveera, N. & Koch, T. (2020). #GoodTechChoices: Addressing unjust uses of data against marginalized communities. Atlantic Council. <u>https://www.atlanticcouncil.org/blogs/geotech-cues/goodtechchoices-addressunjust-uses-of-data/</u>
- Stevens, E (2023). *Quantitative vs qualitative data: What's the difference?* CareerFoundry. <u>https://careerfoundry.com/en/blog/data-analytics/difference-between-quantitative-and-qualitative-data/</u>

Contact Information

Dr. Ashley Hall Cell: 425-521-0357 a.hernandez-hall@wsu.edu



Thank you!

