

# Ditching the Discomfort with Data Series

## *Part Four: Analyzing Data*

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South Southwest Prevention  
Technology Transfer Center



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At the time of this publication, Miriam E. Delphin-Rittmon, Ph.D, served as Assistant Secretary for Mental Health and Substance Use in the U.S. Department of Health and Human Services and the Administrator of the Substance Abuse and Mental Health Services Administration.

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# Ditching the Discomfort: A Data Literacy Journey



# Part Four Learning Objectives

- Describe two techniques for analyzing qualitative and quantitative data.
- Apply methods for analyzing data to a case study.
- List two tips for determining appropriate analysis methods based on the available data.



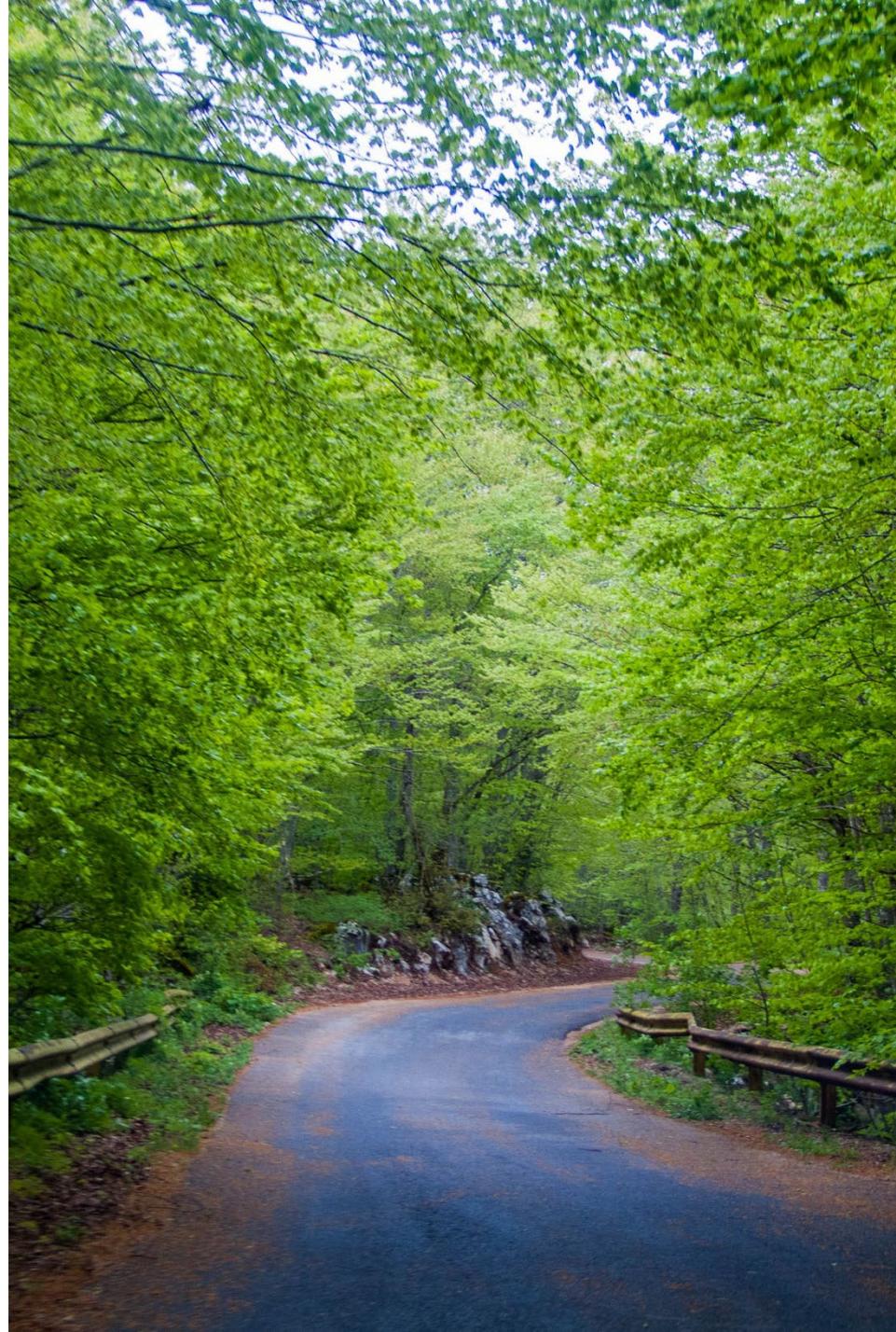
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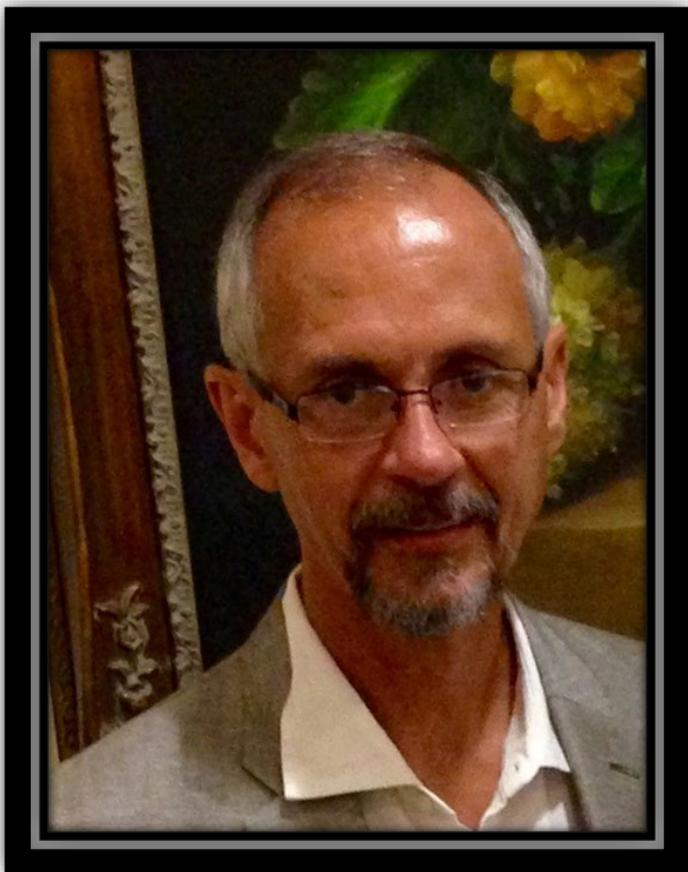
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# Our Roadmap Today

- Introductions
- Analyzing Data- What It Means
- Tips for Analyzing Data
- Group Work
- Debrief
- Evaluation





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# Data Literacy Defined



“Data literacy describes the ability to read, work with, ***analyze***, and argue with data.”

–Raul Bhargava and Catherine D'ignazio from MIT and Emerson College



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# Let's Hear from You!

What do you think of when you hear we are going to “analyze” the data?



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# Analyzing Data

“Analyzing data involves filtering, sorting, aggregating, comparing, and performing other analytic operations on it” (D’Ignazio & Bhargava, 2016).



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# Strategic Prevention Framework and Data Analysis



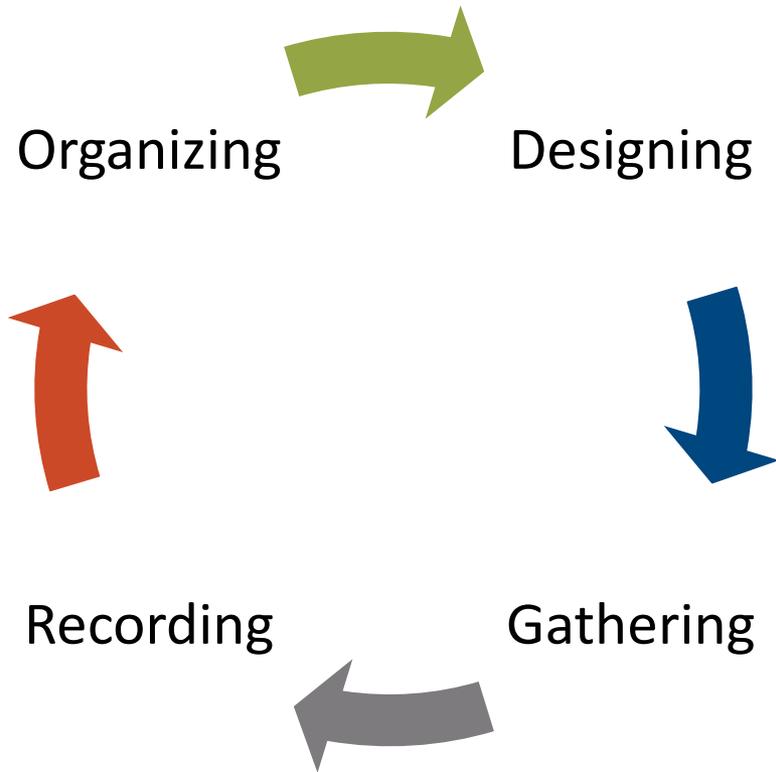
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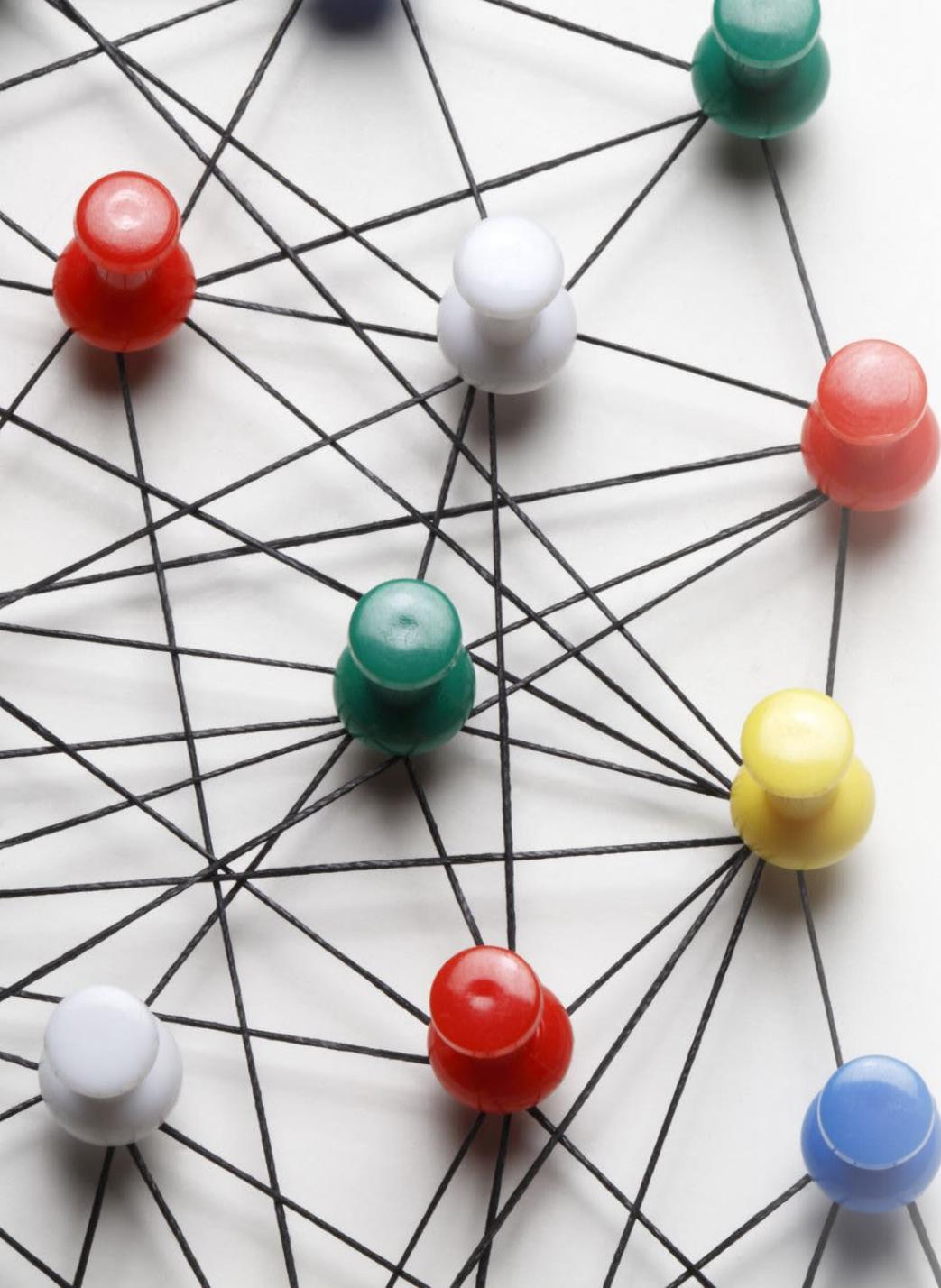
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# Collecting Data



A network graph visualization where nodes are represented by colorful pushpins (red, white, green, yellow, blue) and edges are represented by black lines connecting them. The graph is dense and interconnected, illustrating relationships between data points.

# Data Analysis is all about the relationships!

- Examining the data to see relationships, patterns, trends
- Displaying graphs and statistics to show significance of relationships
- Using logical steps and processes

# Data Analysis involves both quantitative and qualitative data.



Qualitative data can sometimes be turned into quantitative data



A combination of quantitative and qualitative data often yields the best overall picture



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# Why analyze?

- Is there a significant change in the dependent variable(s) you hoped to influence?
- Are there connections between or among various factors that may have an effect on the results of your evaluation?
- Was your work effective or ineffective?



# Benefits of Analysis

- Provides credible evidence to show funders and the community.
- Shows that you are serious about evaluation and about improving your work.
- Paves the way for others to use similar methods and approaches as best practices.



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# Steps for Analyzing Data

1. Implement the observational system you've planned
2. Organize the data you've collected
3. Conduct data graphing, visual inspection, statistical analysis, or other operations on the data as appropriate
4. Take note of any significant or interesting results
5. Interpret the results



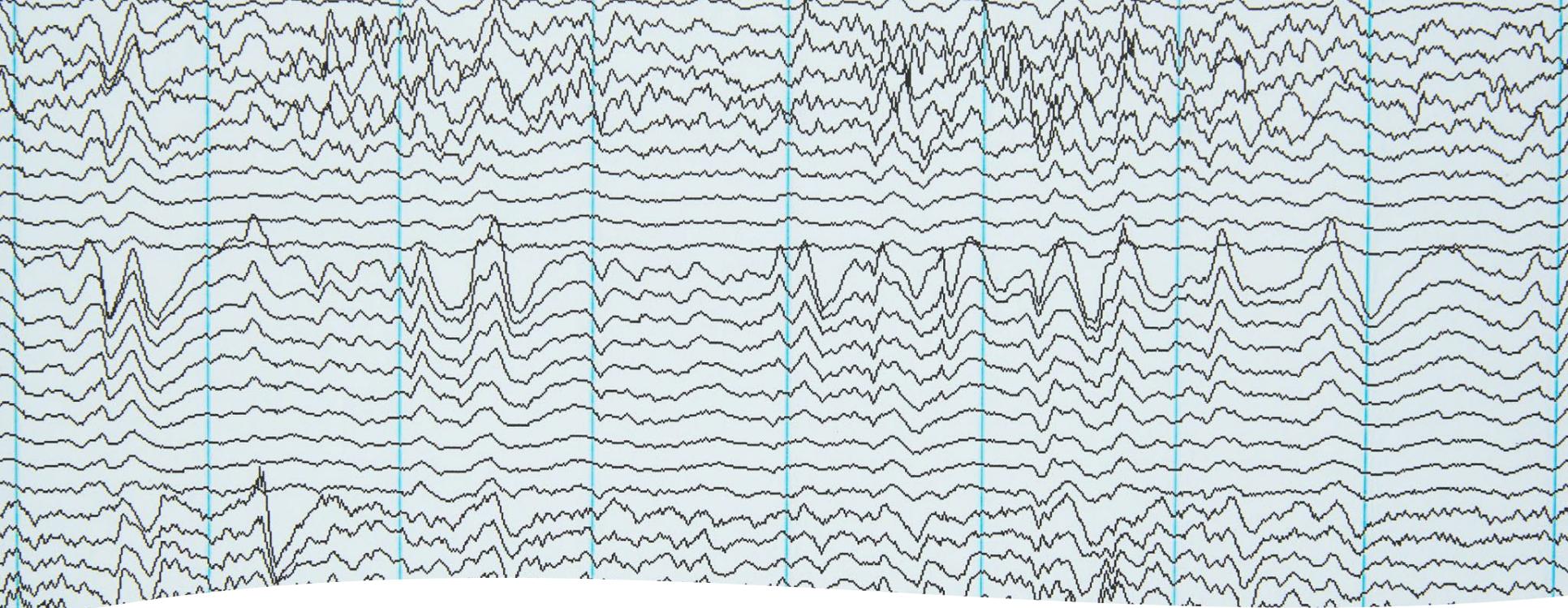
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**Data  
Analysis  
Methods**  
*Triangulation*





# Quantitative Analysis

- Crosstabs
- Descriptives
- Frequencies



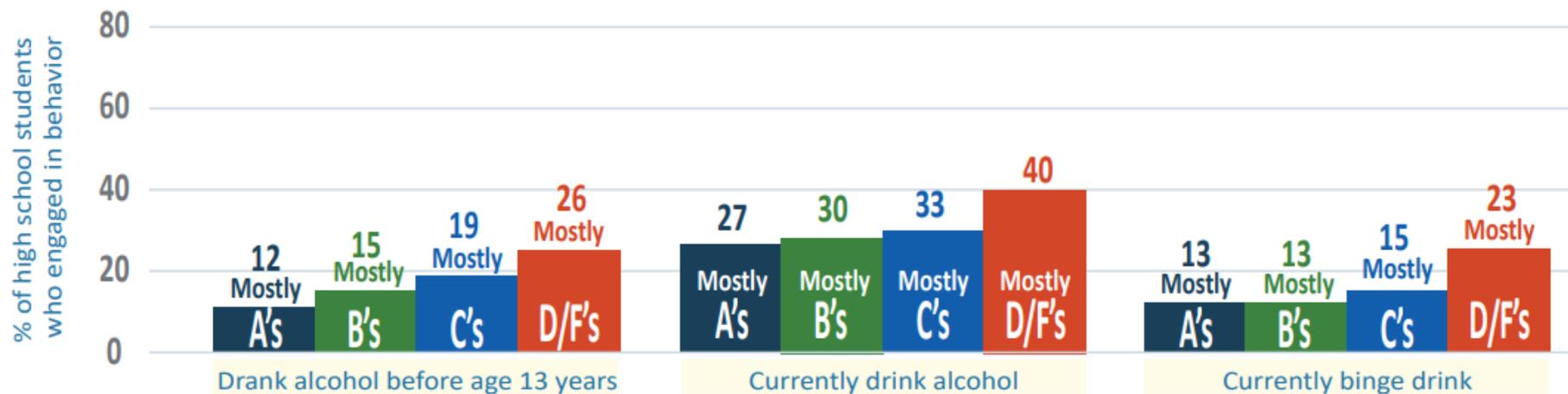
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# FIGURE 1

## Alcohol Behaviors, by Type of Academic Grades Earned - United States, Youth Risk Behavior Survey, 2019



### SUMMARY



**12%** of US high school students with mostly A's had their first drink of alcohol (other than a few sips) before age 13 years, compared to **26%** of students with mostly D/F's.

**27%** of US high school students with mostly A's reported current alcohol use (at least one drink of alcohol on at least 1 day during the 30 days before the survey), compared to **40%** of students with D/F's.

**13%** of US high school students with mostly A's reported current binge drinking (had four or more drinks of alcohol in a row for females or five or more drinks of alcohol in a row for males, within a couple of hours, on at least 1 day during the 30 days before the survey), compared to **23%** of students with mostly D/F's.

# Qualitative Analysis

- What is the value added?
- Methods-keep it simple!



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# Example Coding for Analysis

ALL CODES FOR SPSS

Home Insert Page Layout Formulas Data Review View

Calibri 11 A A Wrap Text Merge & Center General \$ % .0 .00 .0 Conditional Formatting Format as Table Cell Styles

Q446 X ✓ fx

	A	B	C	D	E	F	G	H
	Statement ID	Text to be coded (Bullet points from FG report)	FG number	Question number				Code for SPSS
1								
2	1821	Get medical professionals to give information- may be taken more seriously	4	R-1 Do you have any recommendations	Medical	Have doctors		38
3	1822	Force people to get info and do testing	4	R-1 Do you have any recommendations	School	Require testing		11
4	1823	Cant be nice, they won't listen	4	R-1 Do you have any recommendations	How message	Realistic		60
5	1824	Need a hard dose of reality	4	R-1 Do you have any recommendations	How message	Realistic		60
6	1825	Inform elders/trusted people in community of right info so they can give the right info (can	4	R-1 Do you have any recommendations	Community	Trusted people		28
7	1826	Could be a cycle of misinformation	4	R-1 Do you have any recommendations	How message	Accurate information		54
8	1827	Need to take culture into consideration	4	R-1 Do you have any recommendations	How message	Special population		58
9	1828	Educate all adults in the lives of young people	4	R-1 Do you have any recommendations	Parents	Educated		33
10	1829	They need to do it because they care	4	R-1 Do you have any recommendations	Personal	Statement		62
11	1830	Don't wait until people are asking-workers should do more outreach	4	R-1 Do you have any recommendations	Programs	Outreach		50
12	1831	Bigger signs	4	R-1 Do you have any recommendations	Media	Posters		15
13	1832	Should be education requirements for high school graduations and anyone who works with	4	R-1 Do you have any recommendations	School	Require sex-ed		10
14	1833	Be respectful	4	R-1 Do you have any recommendations	How message	Respectful		59
15	1834	Billboards	4	R-1 Do you have any recommendations	Media	Posters		15
16	1835	Make resources more available and noticeable	4	R-1 Do you have any recommendations	How message	Easy access		55
17	1836	Parents need info too	4	R-1 Do you have any recommendations	Parents	Educated		33
18	1837	Physically take someone someplace	4	R-1 Do you have any recommendations	Programs	Incentives		47
19	1838	Outreach-individual to individual; friend to friend;	4	R-2a Best ways to provide education	Peers	Tips		22
20	1839	Outreach at church: provide info	4	R-2a Best ways to provide education	Community	Collaborative		29
21	1840	More groups in schools – it's something you need to learn, school is a place to learn – start	5	R-1 Do you have any recommendations	School	Intensity/Duration		2

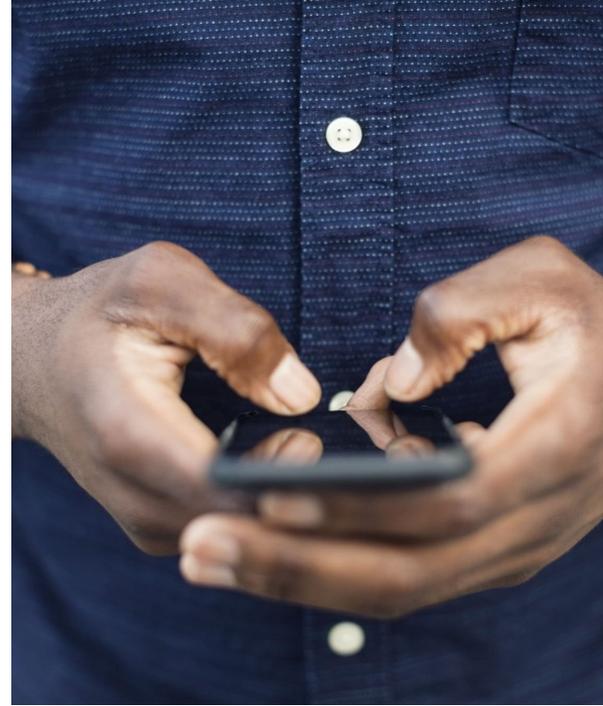


# Focus Group Analysis

- What patterns emerge?
- What are the common themes?
- What new questions arise?
- What conclusions seem true?



# Putting it all together





Community X coalition has been meeting for about a year. They are now working on developing a data analysis plan for the data they have collected on local problems, risk factors, and protective factors.



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# Case Example Continued

They decide to analyze data from 3 different sources.

1. A survey of all the 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders in the school system.
2. Focus groups with parents to get their views on the issues in the community.
3. Key informant interviews with law enforcement and school personnel.



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# 2019 Monitoring the Future Survey

## Key Findings: Percent Reporting Use of Selected Substances

	8 <sup>th</sup> Grade	10 <sup>th</sup> Grade	12 <sup>th</sup> Grade		8 <sup>th</sup> Grade	10 <sup>th</sup> Grade	12 <sup>th</sup> Grade
<b>Vaping, Any</b>				<b>Tobacco w/Hookah</b>			
Past Year	20.1	35.7	40.6	Past Year			5.6
Past Month	12.2	25.0	30.9	Past Month	1.3	2.4	4.0
<b>Vaping, Nicotine</b>				<b>Flavored Little Cigars</b>			
Past Year	16.5	30.7	35.3	Past Month	2.2	3.7	7.7
Past Month	9.6	19.9	25.5	<b>Narcotics Other than Heroin</b>			
<b>Vaping, Marijuana</b>				Past Year			2.7
Past Year	7.0	19.4	20.8	Past Month			1.0
Past Month	3.9	12.6	14.0	<b>Marijuana</b>			
<b>Vaping, Just Flavoring</b>				Past Year	11.8	28.8	35.7
Past Year	14.7	20.8	20.3	Past Month	6.6	18.4	22.3
Past Month	7.7	10.5	10.7	Daily	1.3	4.8	6.4
<b>Cigarettes</b>				<b>Alcohol</b>			
Past Month	2.3	3.4	5.7	Past Month	7.9	18.4	29.3
Daily	0.8	1.3	2.4	Daily	0.2	0.6	1.7
½ Pack +/Day	0.2	0.5	0.9	Binge	3.8	8.5	14.4

Change from 2018 to 2019

■ Significant Increase

■ Significant Decrease

# Breakout Part 1: Survey

Review the cross-tabulation data provided in the handout.

What relationships or patterns do you see?

What conclusions can you draw from the cross-tabulation data?

# Breakout Part 2: Focus Groups

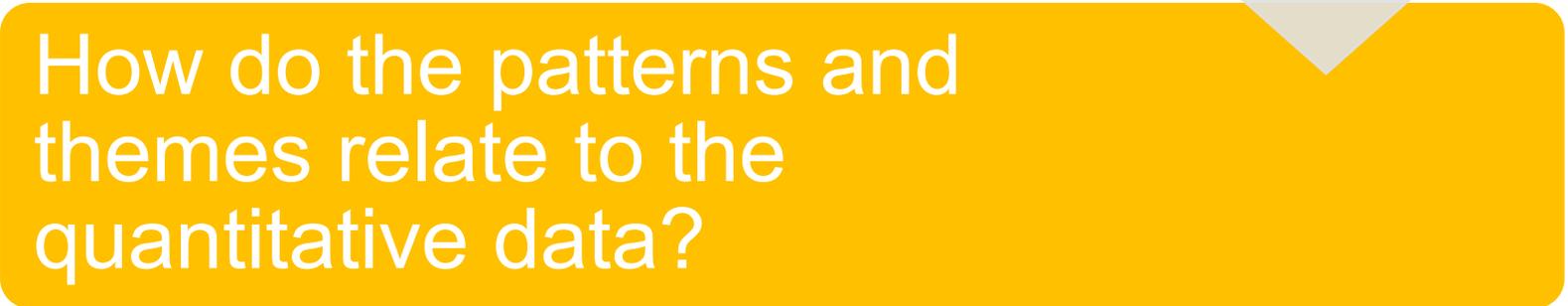
Review the focus group data in the handout provided.



What are some common themes and patterns?



How do the patterns and themes relate to the quantitative data?



# Small Group Breakout

- Note your group number (top left in Zoom)
- Introductions (name, location, where you work)
- Designate a facilitator and recorder
- Look at the data report
- Answer breakout questions for parts 1 and 2
- Record responses



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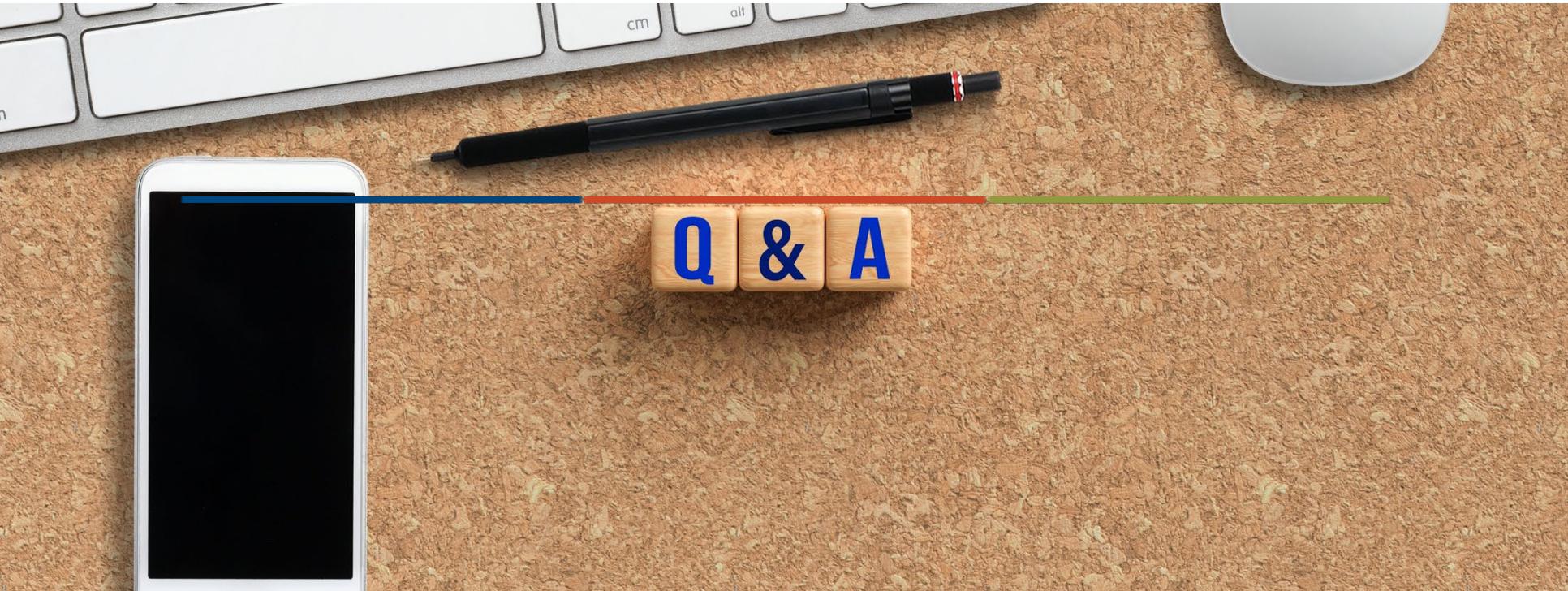
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# Let's Hear From You: Group Reports



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# Questions?





Wrapping up

# Ditching the Discomfort: A Data Literacy Journey



# Registration Open!

## Ditching the Discomfort with Data

### Part 5, Communicating Data

November 17, 2022

9:30 a.m. MT / 10:30 a.m. CT / 11:30 a.m. ET



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# For further questions, contact:

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# References

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# Resources

Analyzing and Evaluating Your Data

<https://nnlm.gov/nec/evalmaterials/bookletThree508#toc-step-three-summarize-and-analyze-your-data-4>

Community Toolbox, Section 5: Collecting and Analyzing Data

<https://ctb.ku.edu/en/table-of-contents/evaluate/evaluate-community-interventions/collect-analyze-data/main>

Cross-tabulation: A Researcher's Guide

<https://www.qualtrics.com/experience-management/research/cross-tabulation/>

How to Collect and Analyze Focus Group Data

<https://www.youtube.com/watch?v=w1H8Lg9kbrM>

How to Construct a Cross Tabulation in Excel in under 5 minutes!

<https://www.youtube.com/watch?v=saS7N8HzTuU>



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