CPI Support Call Analyzing Quantitative Data Analysis
Discussion Question and Practice Exercise Worksheet

Below please find the interactive exercises and discussion questions that will be covered during the CPI Support Call on Analyzing CPI Quantitative Data. They have been taken directly from the PowerPoint presentation which can be found on the ETR-OFP website www.etr.org/ofp. In order to fully participate during the call please review the presentation and this worksheet prior to the call and be prepared to share your responses during the call. On the day of the call, please bring a calculator and pencil as well as any questions pertaining to your CPI data.

Discussion Question # 1: Checking and Cleaning CPI Data (Slides 12-14)

- In Slides 12-14, we provide several examples of common cleaning and data checking issues that you may encounter when preparing your CPI satisfaction or pretest/posttest survey data.
- What are some of the data or cleaning issues that you are addressing with your CPI survey data now? What have you had to address in the past?

Discussion Question # 2: Frequency Distribution (Slide 17)

- Slide 17 (below) shows several ways to create/display a frequency distribution.
  - How would you create a frequency distribution?
  - Would you be willing to share an example?

Survey Results
Sample Frequency Distribution Table (N=60)

	Frequency (N)	Percentage (%)
Males	23	38%
Females	37	62%
Totals	60	100%
Question #1. Should this program be offered to other students your age?		
Yes	38	63%
No	22	37%
Totals	60	100%

Practice Activity # 1: Reporting Percentages with Missing Data (Slide 20)

- In Slide 20, we illustrate how to handle missing data and the importance of reporting valid percentages and denominators.
- In 18A, there is no missing data; the denominator is 110.
  - Yes=30/110= 27%
  - No=80/110= 73%

    Total %= 100% (should add up to 100%)
- Now you try. Calculate the percentage in 18B for the 'no' responses. **Answer:** _____
- Now let's look at two more examples:
  - In 18C, less accurate way to report % with missing data.
  - In 18C.1, more accurate way to report %--taking out the missing data.
  - What is the difference between 18C and 18C.1?

18. In the last month, have you talked with your parents or other adults about any of the following things? Mark all that apply. (N=110)	Yes	No	Missing
A. Your questions about sex (n=110)	**27% (30)**	**73% (80)**	**0**
B. What the adult thinks about teenagers having sex. (n=108)	**37% (40)**	**___ (68)**	**2**
C. Sexually Transmitted Diseases or HIV (n=110) LESS ACCURATE way to report percentages with missing data	**13% (14)**	**65% (71)**	**23% (25)**
C.1 Sexually Transmitted Diseases or HIV (n=85) MORE ACCURATE way to report percentages with missing data	**16% (14)**	**84% (71)**	**25**

Practice Activity # 2: Reporting Knowledge Scores (Slide 22)

- Slide 22 provides an example of how to create a knowledge score.

Contraceptive Knowledge Questions (N=110)	# of contraceptive knowledge questions answered correctly	# of Respondents answering correctly	Score
•Is it safe to share birth control pills with a friend? •Is withdrawal an effective way to prevent pregnancy? •Should a condom be unrolled before it is placed on the penis? •Does using a water-based lubricant help make condoms more effective?	0	2	0 x 2 =
	1	12	
	2	32	
	3	47	
	4	17	
		Total knowledge score	Score sum /110

- Create a knowledge score by counting up the responses to the knowledge items covering a similar topic.
- The overall knowledge score is calculated by counting up all knowledge items answered correctly for each respondent and dividing by the total number of respondents.
- Let's practice together:
  - In the example above, there are a total of 4 knowledge items. The response options include 'Yes', 'No', 'Unsure'.
  - To get a score for each number of questions answered correctly, multiply the # of questions answered correctly by the number of respondents who answered that number of questions correctly.
  - What is the score for each number of questions answered correctly?

    1=_____ 2=_____ 3=_____ 4=_____
- What is the total knowledge score? Total the amounts in the left column and divide this number by the total number of respondents to calculate the collective knowledge score.

  Total Knowledge score: _____= _____
  110

Practice Activity # 3: Calculating Mean Scores (Slides 24-26)

- Slides 24 and 25 describe the mean score and provide examples of how to calculate a mean score.
- Create a mean score by assigning a number value to each response option in an item. Then multiply the number of responses in a given category by the rating value and divide it by the total number of responses (See slide 25)
- In slide 26 (below) we will practice creating mean scores using the following number values for the table below: Agree=1, I'm Not Sure=2, Disagree=3.
  - In the example below the mean score was calculated as follows:
    - 58*1= 58 38*2=76 14*3= 42
    - 58+76+42=176/110= 1.6 (mean score)
  - Now let's do the remaining two examples together.
    - Practice 1: 31*_____=_____ 57*_____=_____ 22*_____=_____
    - Mean Score: _____+_____+_____=_____ /110=_____
    - Practice 2: 13*_____=_____ 32*_____=_____ 65*_____=_____
    - Mean Score: _____+_____+_____=_____/110=_____
  - Create a sample sentence using the scores you calculated.

Do you agree or disagree with the statements below? (N=110)	Agree		I'm not Sure		Disagree	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
For people my age, not having sex is a better choice than having sex.	58	53%	38	34%	14	13%
Mean score[1]	1.6					
Having sex makes my friends look up to me more.	31	_____	57	_____	22	_____
Mean score[1]	_____					
Having sex with different partners is a sign of being grown up.	13	_____	32	_____	65	_____
Mean score[1]	_____					

Practice Activity #4: Pretest-Posttest Change (Slide 28 – 29)

- Slide 28 provides an example of *percentage point change* from pretest to posttest.
- Calculate the *percentage point change* by subtracting the pretest percentage from the posttest percentage.
  - Example 1: 71-32= +39.
  - Now you try. Calculate the percentage point change for the second item below. **Answer:_____**
  - What does this tell us? Create a sample sentence interpreting the percentage point change you calculated.

Sample Percentage Point Change **Knowledge of Puberty and Sexuality**			
Item	**Pre % Correct**	**Post % Correct**	**% point Change score**
Do you know the proper medical terms for your private parts?	32	71	**+39**
In a girl's body, do urine and menstrual blood leave from the same opening or hole?	13	39	_____

Practice Activity # 5: Calculate the *mean score* change.

- Slide 29 provides an example of *mean score change*.
- Calculate the *mean score change* by subtracting the pretest mean score from the posttest mean score.
  - Example 1: 4.77-4.56= +.21.
  - Now you try. Calculate the mean score change for the second item below. **Answer:_____**
  - What does this tell us? Create a sample sentence interpreting the mean score change you calculated.

Sample: Mean Score Change: **Attitudes about Puberty and Sexuality**			
Item	**Pre Mean Score**	**Post Mean Score**	**Change in Mean Score**
To make a good decision, it is important to think about what could happen (consequences).	4.56	4.77	Change **+ .21**
I think most teens my age are having sexual intercourse.	3.62	3.36	Change _____

Discussion Question #3: Presenting and Interpreting Survey Results (Slides 33-34)

- Slide 33 presents data from a middle school survey. Let's practice looking at the data and interpreting what the data are telling us. Look at items 3 and 4.
  - What are the data telling us? (e.g., More students (72%) indicated that they 'Agreed' or 'Strongly Agreed' that it is OK for people their own age NOT to have sex.)
  - How might you discuss this data in a report?
  - What does this mean? How might you interpret these findings? (e.g., Students appear to have mixed attitudes about students their age having sex.)
  - How else might you want to look at the data?

Middle School Survey Results N=110				
Grade: 7th 52%, 8th 48%		**Gender:** Male 55%, Female 45%		
About you..	Strongly Disagree	Disagree	Agree	Strongly Agree
3. I think it is OK for people my age to have sex.	17%	24%	29%	30%
4. I think it is OK for people my age NOT to have sex.	9%	19%	33%	39%

About the program…	None or Almost None	Less than half	About half	More than half	All or almost all
5. About how many people your age have had sex?	5%	19%	29%	23%	24%
6. Think about the people your age who have had sex. How many of them use a condom every time or almost every time with a steady partner?	7%	32%	27%	20%	14%

Discussion Question #4: Interpreting Mean Scores

- Slide 34 presents the mean score from one survey item.
  - What is the mean score telling us?
  - How might you discuss this data in a report?

I will be able to use the information I learned in the presentation. (N=50)

Strongly Disagree	Disagree	Agree	Strongly Agree	Mean Score
10% (5)	6% (3)	44% (22)	40% (20)	**3.14**

Scale: Strongly Disagree=1; Disagree=2; Agree=3; Strongly Agree=4.