

## Extracting Numbers from Food Safety Results Output

The first page of your output (below) is standard for most results sent by Organizational Development (OD). It contains a profile of your event built mostly with information from your cover sheet. OD adds the calculation of a response rate by comparing the number of surveys returned versus attendance. You may want to report those three pieces of information.

\*\*\*\*\* PROFILE OF YOUR EVENT \*\*\*\*\*

### Descriptive Statistics

	N	Sum
Total Number of Respondents	13	13
Valid N (listwise)	13	

### Event Profile

	1
First Name	Jane
Last Name	Agent
Primary County	Lone Star
Additional County	.
Additional County	.
Additional County	.
Additional County	.
Additional County	.
Additional County	.
Type of Plan	Outcome
State Goal	Goal 1 (Educate Texans for Improving Their Health, Safety, and Well-Being)
TEXAS Plan Number	977
TEXAS Task Number	.
Type of Event	Group educational event
Event Title	FOOD HANDLERS
Event Date	01-JAN-2015
Economic Benefit an Explicit Goal	No
CEUs Offered	CEUs not offered
Partial Cost Recovery Event	Yes
Zip Code Where the Event Occurred	71234
Scan Form ID	6123
Batch number assigned by OD	28584
Surveys Returned	13
Total Attendance	13
Survey Response Rate	100.0%

In this example, 13 survey forms were processed while attendance was listed as 13 on the cover sheet, for a response rate of 100%

NOTE: For a pre-post survey this like, the number of "Surveys Returned" will only include pre and post surveys matched by an ID. For example, if you list attendance as 15, and return 13 pre and post surveys with a matching ID, and 2 post surveys without their matching pre surveys, then the number of "Surveys Returned" would be 13, not 15. The response rate would be 86.7%, not 100%.

Next is the **Participant Characteristics Section**. Use the Valid Percent column to report percentages. For example, 2 of 13 participants (15.4%) were male; 11 of 13 participants were female (84.6%).

\*\*\*\*\* PARTICIPANT CHARACTERISTICS \*\*\*\*\*

**Your gender**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	2	15.4	15.4	15.4
Valid Female	11	84.6	84.6	100.0
Total	13	100.0	100.0	



**Your race/ethnicity**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Hispanic	2	15.4	15.4	15.4
Valid Caucasian	10	76.9	76.9	92.3
Valid Other	1	7.7	7.7	100.0
Total	13	100.0	100.0	

Also, notice that the Valid Percent column is highlighted in blue. The Valid Percent column excludes missing values. The Percent column includes missing values. When there are no missing values, as is the case here, the percentages in these two columns will be the same.

**Your age**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18 - 24	1	7.7	7.7	7.7
Valid 25 - 34	2	15.4	15.4	23.1
Valid 35 - 44	2	15.4	15.4	38.5
Valid 45 - 54	4	30.8	30.8	69.2
Valid 55 and over	4	30.8	30.8	100.0
Total	13	100.0	100.0	

Typically we use the Valid Percent column to report percentages.

**Your preferred language**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid English	13	100.0	100.0	100.0

**Your highest level of education completed**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid HS Grad or GED	1	7.7	7.7	7.7
Valid Some college	1	7.7	7.7	15.4
Valid College graduate	7	53.8	53.8	69.2
Valid Graduate degree	4	30.8	30.8	100.0
Total	13	100.0	100.0	

The next table shows the mean test score for the pre and post. In this example, the mean test score on the pre is 82.54; the mean tests score on the post is 97.92.



\*\*\*\*\* MEAN TEST SCORES \*\*\*\*\*

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre Test Score	82.54	13	21.372	5.928
	Post Test Score	97.92	13	4.192	1.163

Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 Pre Test Score & Post Test Score	13	-.197	.520

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Pre Test Score - Post Test Score	-15.385	22.574	6.261	-29.026	-1.743	-2.457	12	.030

Percent Change in Mean Scores

	Pct_Chg
a Percent Change is . . . . . 1	18.6

Percent Change = ((Post\_Mean - Pre\_Mean) / Pre\_Mean) \* 100



Percent change in the mean scores is calculated for you. In this case it was 18.6%.

You can report, "On the test of knowledge, there was an 18.6% increase in the mean post test score over the mean pre test score."


The number under the "Sig. (2-tailed)" tells you whether the difference between the means is statistically significant. If the number is 0.05 or less, as it is here, then the difference is statistically significant.



**IMPORTANT:** Discard any discussion of statistical significant if the N value (number of matched pre and post surveys) is less than 10.

The next table shows the **percent of respondents who answered each survey question correctly, pre and post.**

\*\*\*\*\* PCT ANSWERING CORRECTLY, PRE & POST \*\*\*\*\*



Question	% Correct Pre	% Correct Post
8. Which of the following is false?	92%	100%
9. Which of the following best describes proper hand and arm washing?	100%	100%
10. The removal of dirt, soil, food or grease is known as . . .	69%	92%
11. Which of the following statements about hand washing is true?	100%	100%
12. Which of the following is an example of a ready-to-eat (RTE) food?	92%	92%
13. Which of the following foods would NOT be considered potentially hazardous?	77%	100%
14. Cross contamination happens when safe food comes into contact with:	92%	92%
15. Which of the following statements best describes the Temperate* Danger Zone?	69%	100%
16. Which of the following is an example of cross contamination?	92%	100%
17. All of the following are acceptable tools for handling ready-to-eat foods EXCEPT:	77%	100%
18. When should a food thermometer be calibrated?	92%	100%
19. Which of the following is the best example of maintaining personal hygiene?	69%	92%
20. A person working with food should immediately tell his/her supervisor/boss if he/she has:	85%	100%
21. Generally speaking a foodborne outbreak involves how many people?	38%	100%
22. Food can be contaminated by . . .	92%	100%

The next table displays **client satisfaction information** including the mean score and standard deviation for each customer satisfaction question.



\*\*\*\*\* MEAN & STANDARD DEVIATION FOR SATISFACTION \*\*\*\*\*

Descriptive Statistics

	N	Mean	Std. Deviation
How satisfied were you with the Instructor's knowledge of the subject?	13	1.15	.376
How satisfied were you with the Instructor's presentation of the course material?	13	1.23	.439
How satisfied were you with the instructor's response to student questions?	13	1.08	.277
How satisfied were you with the instructor's involvement in discussion and questions regarding course material?	13	1.15	.376
Overall, how satisfied were you with the instructor's performance?	9	1.29	.687
Overall, how satisfied were you with the program?	9	1.29	.692
Valid N (listwise)	8		

That **concludes** the results that appears in the interpretation summary.

The remaining pages of your output contain **more detailed information**.

The first table is a listing of individual pre and post test scores with select demographic fields included – for informational purposes or if you’re interested in browsing for patterns or differences between groups.

\*\*\*\*\* START OF DETAILS SECTION \*\*\*\*\*

Listing of Individual Pre and Post Test Scores with Demographics

	Your gender	Your age	Your preferred language	Your highest level of education completed	Do you have a cottage food business?	How long have you a cottage food business?	Have you ever had any training in food safety?	Pre Test Score	Post Test Score
1	Male	25 - 34	English	HS Grad or GED	No	.	Yes	80	87
2	Female	35 - 44	English	Graduate degree	No	.	Yes	100	100
3	Male	18 - 24	English	College graduate	No	.	No	20	100
4	Female	55 and over	English	College graduate	No	.	No	80	100
5	Female	55 and over	English	Graduate degree	No	.	No	73	100
6	Female	45 - 54	English	College graduate	No	.	No	80	100
7	Female	45 - 54	English	College graduate	No	.	No	73	100
8	Female	45 - 54	English	College graduate	No	.	No	87	100
9	Female	55 and over	English	Some college	No	.	Yes	100	93
10	Female	45 - 54	English	Graduate degree	No	.	No	93	100
11	Female	55 and over	English	Graduate degree	No	.	No	87	100
12	Female	25 - 34	English	College graduate	No	.	Yes	100	100
13	Female	35 - 44	English	College graduate	No	.	Yes	100	93

These two frequency tables shows the distribution of pretest and posttest scores. In this case 4 of 13 respondents (30.8%) had on the pretest. That increased to 10 of 13 (76.9%) on the posttest.

Pre Test Score

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 100	4	30.8	30.8	30.8
93	1	7.7	7.7	38.5
87	2	15.4	15.4	53.8
80	3	23.1	23.1	76.9
73	2	15.4	15.4	92.3
20	1	7.7	7.7	100.0
Total	13	100.0	100.0	

Post Test Score

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 100	10	76.9	76.9	76.9
93	2	15.4	15.4	92.3
87	1	7.7	7.7	100.0
Total	13	100.0	100.0	

Next you have frequency tables for the satisfaction questions. Use the Valid Percent column to report individual percentages. For example, 11 of 13 participants (84.6%) were “Very Satisfied” with the instructor’s knowledge of the subject.

\*\*\*\*\* SATISFACTION WITH INSTRUCTOR \*\*\*\*\*

(POST) How satisfied were you with the Instructor's knowledge of the subject?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Very satisfied	11	84.6	84.6	84.6
Satisfied	2	15.4	15.4	100.0
Total	13	100.0	100.0	

You might also want to report the percentage of participants who were “Very Satisfied” or “Satisfied” (top two categories). Here, you can use the Cumulative Percent column and the percent listed on the “Satisfaction” row. It’s 100% in this case.

(POST) How satisfied were you with the Instructor's presentation of the course material?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Very satisfied	10	76.9	76.9	76.9
Satisfied	3	23.1	23.1	100.0
Total	13	100.0	100.0	

(POST) How satisfied were you with the instructor's response to student questions?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Very satisfied	12	92.3	92.3	92.3
Satisfied	1	7.7	7.7	100.0
Total	13	100.0	100.0	

(POST) How satisfied were you with the instructor's involvement in discussion and questions regarding course material?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Very satisfied	11	84.6	84.6	84.6
Satisfied	2	15.4	15.4	100.0
Total	13	100.0	100.0	

Now you'll see a series of pages with more detailed results for individual test questions. The example below is for questions 10.

The first table show how responses changed from the pre to the post in terms of correct vs. incorrect. Here, nine respondents got the answer correct on the pre and on the post. Three who answered incorrectly on the pre then answered correctly on the post. One respondent answered incorrectly on both test. Mainly FYI.

\*\*\*\*\* QUESTION 10 DETAILS \*\*\*\*\*

(Pre-Post Comparison) 10. The removal of dirt, soil, food or grease is known as . .

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Pre Correct - Post Correct *	9	69.2	69.2
	Pre Incorrect - Post Correct *	3	23.1	92.3
	Pre Incorrect - Post Incorrect	1	7.7	100.0
<b>Total</b>	<b>13</b>	<b>100.0</b>	<b>100.0</b>	

		Count	Column Valid N %
(PRE) 10. The removal of dirt, soil, food or grease is known as . .	[CORRECT] Cleaning	9	69.2%
	Sanitizing	1	7.7%
	Sterilizing	0	0.0%
	Rinsing	3	23.1%
	Blank	0	0.0%
(POST) 10. The removal of dirt, soil, food or grease is known as . .	[CORRECT] Cleaning	12	92.3%
	Sanitizing	1	7.7%
	Sterilizing	0	0.0%
	Rinsing	0	0.0%
	Blank	0	0.0%

The second table shows the distribution of all responses, first for the pre; then for the post, again FYI.

Here, 9 of 13 (69.2%) respondents selected the correct answer on the pre. That increased to 12 of 13 (92.3%) respondents on the post.

These tables repeat for every test question.