SOURCEBOOK

CREATE Articles

Data Analysis

Abstract: This chapter provides step-by-step written instructions and screenshots for obtaining basic statistical output using CREATE. Simple examples for most undergraduate-level between-subjects and within-subjects research designs are provided.

Keywords: CREATE, screenshots, directions for use

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This document is part of an online statistics Sourcebook.

A browser-friendly viewing platform for this Sourcebook is available:
https://cwendorf.github.io/Sourcebook

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Frequencies and Descriptives

Entering the Data

1. From the available tabs, select "Frequencies".

2. On the left side, you will be able to enter the data in the shaded cells.

3. Enter the data in the individual cells of the column for the variable. Note that each cell should contain a single score for an individual person. There will be as many rows as people.

One Sample Data

Case	Outcome
1	0
2	0
3	3
4	5
5	4
6	7
7	4
8	9
9	
10	
11	
12	
13	
14	
15	

Obtaining Descriptive and Inferential Statistics

4. Output will automatically appear on the right side of the tab.

5. If you wish to alter the confidence intervals for the means, enter the preferred confidence level in the shaded cell after "CI %".

Frequencies and Descriptive Statistics

Group Statistics CI % : 95

Variable	N	M	SD	SE	CI for M	
Total	8	4.000	3.117	1.102	1.394	6.606

Group Statistics

Variable	N	Min	Max	25 %tile	50 %tile	75 %tile
Total	8	0.000	9.000	0.750	4.000	6.500

Frequency Distribution

Value	f	%	Cum f	Cum %	z	PR
0.000	2	25.000	2	25.000	-1.283	0.100
3.000	1	12.500	3	37.500	-0.321	0.374
4.000	2	25.000	5	62.500	0.000	0.500

Correlations

Entering the Data

1. From the available tabs, select "Correlations".

2. On the left side, you will be able to enter the data in the shaded cells.

3. Enter the data in the individual cells of the column for the variable. Note that each cell should contain a single score for an individual person. There will be as many rows as people.

4. Notice that each individual (i.e., the rows) has a value for each instance of the within-subjects variable (i.e., the columns).

Paired Samples Data

Case	Time 1	Time 2	Diff
1	0	4	-4.000
2	0	7	-7.000
3	3	4	-1.000
4	5	9	-4.000
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Obtaining Descriptive and Inferential Statistics

5. Output will automatically appear on the right side of the tab.

6. If you wish to alter the confidence intervals for the means, enter the preferred confidence level in the shaded cell after "CI %".

Correlations

Paired Samples Statistics CI % : 95

Group	N	M	SD	SE	CI for M	
Time 1	4	2.000	2.449	1.225	-1.898	5.898
Time 2	4	6.000	2.449	1.225	2.102	9.898

Correlations

		Time 1	Time 2
Time 1	r	1.000	0.500
	SCP	18.000	9.000
	COV	6.000	3.000
Time 2	r	0.500	1.000
	SCP	9.000	18.000
	COV	3.000	6.000

Regression

Entering the Data

1. From the available tabs, select "Correlations".

2. On the left side, you will be able to enter the data in the shaded cells.

3. Enter the data in the individual cells of the column for the variable. Note that each cell should contain a single score for an individual person. There will be as many rows as people.

4. Notice that each individual (i.e., the rows) has a value for each instance of the within-subjects variable (i.e., the columns).

Paired Samples Data

Case	Time 1	Time 2	Diff
1	0	4	-4.000
2	0	7	-7.000
3	3	4	-1.000
4	5	9	-4.000
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Obtaining Descriptive and Inferential Statistics

5. Output will automatically appear on the right side of the tab.

6. If you wish to alter the confidence intervals for the means, enter the preferred confidence level in the shaded cell after "CI %".

Regression

Model Statistics

	Unstand	SE	Standard	t	p
Intercept	5.000				
Time 1	0.500	0.612	0.500	0.816	0.500

Model Summary

	R	R2	Adj R2	F	p
Model	0.500	0.250	-0.125	0.667	0.500

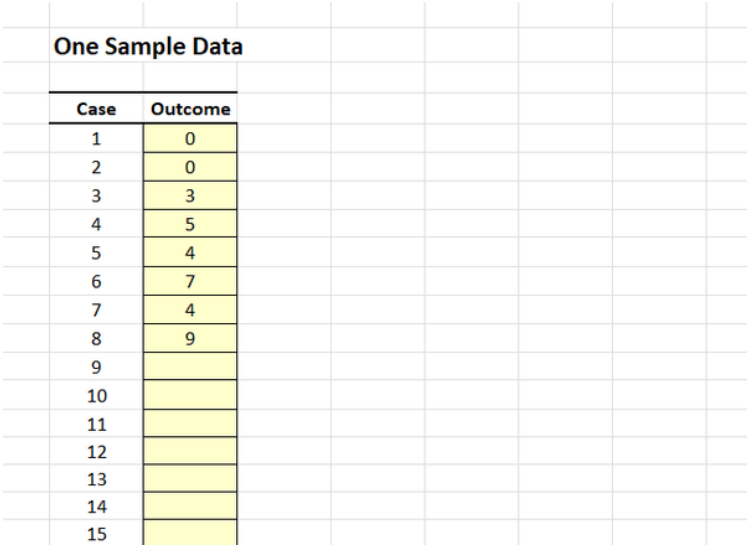
Confidence Interval for a Mean

Entering the Data

1. From the available tabs, select "OneSample".

2. On the left side, you will be able to enter the data in the shaded cells.

3. Enter the data in the individual cells of the column for the variable. Note that each cell should contain a single score for an individual person. There will be as many rows as people.



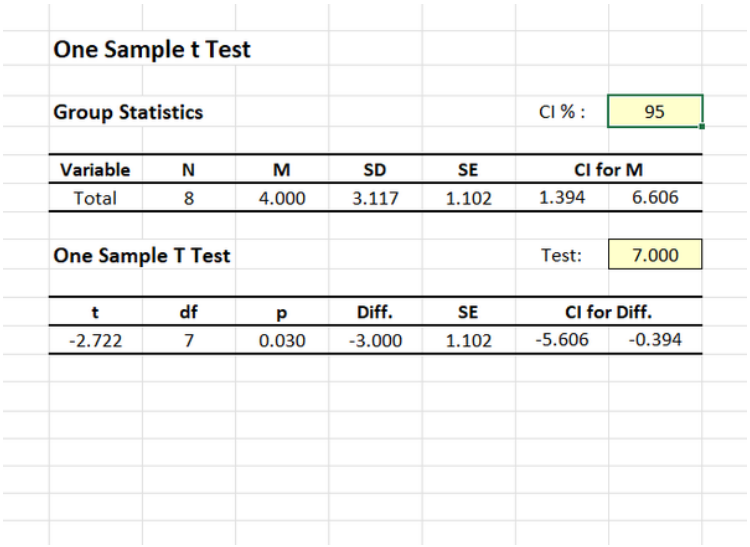
One Sample Data

Case	Outcome
1	0
2	0
3	3
4	5
5	4
6	7
7	4
8	9
9	
10	
11	
12	
13	
14	
15	

Obtaining Descriptive and Inferential Statistics

4. Output will automatically appear on the right side of the tab.

5. If you wish to alter the confidence interval for the mean, enter the preferred confidence level in the shaded cell after "CI %".



One Sample t Test

Group Statistics — CI % : 95

Variable	N	M	SD	SE	CI for M	
Total	8	4.000	3.117	1.102	1.394	6.606

One Sample T Test — Test: 7.000

t	df	p	Diff.	SE	CI for Diff.	
-2.722	7	0.030	-3.000	1.102	-5.606	-0.394

One Sample t Test

Entering the Data

1. From the available tabs, select "OneSample".

2. On the left side, you will be able to enter the data in the shaded cells.

3. Enter the data in the individual cells of the column for the variable. Note that each cell should contain a single score for an individual person. There will be as many rows as people.

One Sample Data

Case	Outcome
1	0
2	0
3	3
4	5
5	4
6	7
7	4
8	9
9	
10	
11	
12	
13	
14	
15	

Obtaining Descriptive and Inferential Statistics

4. Output will automatically appear on the right side of the tab.

5. If you wish to alter the confidence intervals for the means, enter the preferred confidence level in the shaded cell after "CI %".

6. To alter the test value for the t statistic, enter the value in the shaded cell after "Test".

One Sample t Test

Group Statistics CI % : 95

Variable	N	M	SD	SE	CI for M	
Total	8	4.000	3.117	1.102	1.394	6.606

One Sample T Test Test: 7.000

t	df	p	Diff.	SE	CI for Diff.	
-2.722	7	0.030	-3.000	1.102	-5.606	-0.394

Paired Samples t Test

Entering the Data

1. From the available tabs, select "Paired".

2. On the left side, you will be able to enter the data in the shaded cells.

3. Enter the data in the individual cells of the column for the variable. Note that each cell should contain a single score for an individual person. There will be as many rows as people.

4. Notice that each individual (i.e., the rows) has a value for each instance of the within-subjects variable (i.e., the columns).

Paired Samples Data

Case	Time 1	Time 2	Diff
1	0	4	-4.000
2	0	7	-7.000
3	3	4	-1.000
4	5	9	-4.000
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Obtaining Descriptive and Inferential Statistics

5. Output will automatically appear on the right side of the tab.

6. If you wish to alter the confidence intervals for the means, enter the preferred confidence level in the shaded cell after "CI %".

Paired Samples t Test

Paired Samples Statistics

CI % : 95

Group	N	M	SD	SE	CI for M	
Time 1	4	2.000	2.449	1.225	-1.898	5.898
Time 2	4	6.000	2.449	1.225	2.102	9.898

Paired Samples Correlations

Var	N	r	t	df	p
Diff	4	0.500	0.816	2.000	0.500

Paired Samples T Test

t	df	p	Diff.	SE	CI for Diff.	
-3.266	3	0.047	-4.000	1.225	-7.898	-0.102

Independent Samples t Test

Entering the Data

1. From the available tabs, select "Independent".

2. On the left side, you will be able to enter the data in the shaded cells.

3. Enter the data for all the participants. Notice that each participant has a score on both the Group and Outcome Variables. There will be as many rows as people.

4. On the categorical Group variable, you will use numbers to represent the two categories (or “levels”) of the variable.

Independent Samples Data

Case	Group	Outcome
1	1	0
2	1	0
3	1	3
4	1	5
5	2	4
6	2	7
7	2	4
8	2	9
9		
10		
11		
12		
13		
14		
15		

Obtaining Descriptive and Inferential Statistics

5. Output will automatically appear on the right side of the tab.

6. If you wish to alter the confidence intervals for the means, enter the preferred confidence level in the shaded cell after "CI %".

Independent Samples t Test

Group Statistics CI % : 95

Group	N	M	SD	SE	CI for M	
1	4	2.000	2.449	1.225	-1.898	5.898
2	4	6.000	2.449	1.225	2.102	9.898
Total	8	4.000	3.117	1.102	1.394	6.606

Independent Samples T Test

t	df	p	Diff.	SE	CI for Diff.	
-2.309	6	0.060	-4.000	1.732	-8.238	0.238

OneWay ANOVA

Entering the Data

1. From the available tabs, select "OneWay".

2. On the left side, you will be able to enter the data in the shaded cells.

3. Enter the data for all the participants. Notice that each participant has a score on both the Group and Outcome Variables. There will be as many rows as people.

4. On the categorical Group variable, you will use numbers to represent the multiple categories (or “levels”) of the variable.

One Way Data

Case	Group	Outcome
1	1	0
2	1	0
3	1	3
4	1	5
5	2	4
6	2	7
7	2	4
8	2	9
9	3	9
10	3	6
11	3	4
12	3	9
13		
14		
15		

Obtaining Descriptive and Inferential Statistics

5. Output will automatically appear on the right side of the tab.

6. If you wish to alter the confidence intervals for the means, enter the preferred confidence level in the shaded cell after "CI %".

One Way ANOVA

Descriptives CI % : 95

Group	N	M	SD	SE	CI for M	
1	4	2.000	2.449	1.225	-1.898	5.898
2	4	6.000	2.449	1.225	2.102	9.898
3	4	7.000	2.449	1.225	3.102	10.898
4						
Total	12	5.000	3.162	0.913	2.991	7.009

Tests of Between Subjects Effects

Source	SS	df	MS	F	p	Eta-Sq
Between	56.000	2	28.000	4.667	0.041	0.509
Within	54.000	9	6.000			
Total	110.000	11				

Post Hoc Comparisons

Entering the Data

1. From the available tabs, select "OneWay".

2. On the left side, you will be able to enter the data in the shaded cells.

3. Enter the data for all the participants. Notice that each participant has a score on both the Group and Outcome Variables. There will be as many rows as people.

4. On the categorical Group variable, you will use numbers to represent the multiple categories (or “levels”) of the variable.

One Way Data

Case	Group	Outcome
1	1	0
2	1	0
3	1	3
4	1	5
5	2	4
6	2	7
7	2	4
8	2	9
9	3	9
10	3	6
11	3	4
12	3	9
13		
14		
15		

Obtaining Descriptive and Inferential Statistics

5. Output will automatically appear on the right side of the tab.

6. If you wish to alter the confidence intervals for the means, enter the preferred confidence level in the shaded cell after "CI %".

Multiple Comparisons (HSD)

(I) IV	(J) IV	Diff.	SE	p	CI for Diff.	
1	2	-4.000	1.732	0.106	-8.836	0.836
	3	-5.000	1.732	0.044	-9.836	-0.164
	4					
2	1	4.000	1.732	0.106	-0.836	8.836
	3	-1.000	1.732	0.836	-5.836	3.836
	4					
3	1	5.000	1.732	0.044	0.164	9.836
	2	1.000	1.732	0.836	-3.836	5.836
	4					
4	1					
	2					
	3					

Repeated Measures ANOVA

Entering the Data

1. From the available tabs, select "Repeated".

2. On the left side, you will be able to enter the data in the shaded cells.

3. Enter the data in the individual cells of the column for the variable. Note that each cell should contain a single score for an individual person. There will be as many rows as people.

4. Notice that each individual (i.e., the rows) has a value for each instance of the within-subjects variable (i.e., the columns).

Repeated Measures Data

Case	Level 1	Level 2	Level 3	Level 4	k	M
1	0	4			2.000	2.000
2	0	7			2.000	3.500
3	3	4			2.000	3.500
4	5	9			2.000	7.000
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

Obtaining Descriptive and Inferential Statistics

5. Output will automatically appear on the right side of the tab.

6. If you wish to alter the confidence intervals for the means, enter the preferred confidence level in the shaded cell after "CI %".

Repeated Measures ANOVA

Descriptives

CI %: 95

Level	N	M	SD	SE	CI for M	
1	4	2.000	2.449	1.225	-1.898	5.898
2	4	6.000	2.449	1.225	2.102	9.898
3						
4						
Total	8	4.000	3.117	1.102	1.394	6.606

Tests of Within Subjects Effects

Source	SS	df	MS	F	p	Eta-Sq
Factor	32.000	1	32.000	10.667	0.047	0.780
Error	9.000	3	3.000			

Factorial ANOVA

Entering the Data

1. From the available tabs, select "Factorial".

2. On the left side, you will be able to enter the data in the shaded cells.

3. Enter the data for all the participants. Notice that each participant has a score on the Factor A, Factor B, and Outcome Variables. There will be as many rows as people.

4. On the categorical Factors, you will use numbers to represent the multiple categories (or “levels”) of the factors.

Factorial Data

Case	Factor A	Factor B	Outcome
1	1	1	0
2	1	1	0
3	1	1	3
4	1	1	5
5	2	1	4
6	2	1	7
7	2	1	4
8	2	1	9
9	1	2	9
10	1	2	6
11	1	2	4
12	1	2	9
13	2	2	3
14	2	2	6
15	2	2	8
16	2	2	3

Obtaining Descriptive and Inferential Statistics

5. Output will automatically appear on the right side of the tab.

6. If you wish to alter the confidence intervals for the means, enter the preferred confidence level in the shaded cell after "CI %".

Factorial ANOVA

Cell Descriptive Statistics (Factor A * B) CI % : 95

Factor A	Factor B	N	M	SD	CI for M	
1	1	4	2.000	2.449	-0.668	4.668
	2	4	7.000	2.449	4.332	9.668
	3					
2	1	4	6.000	2.449	3.332	8.668
	2	4	5.000	2.449	2.332	7.668
	3					
3	1					
	2					
	3					

Marginal Descriptive Statistics (Factor A)

A	B	N	M	SD	CI for M	
1	Total	8	4.500	3.505	2.613	6.387