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EDG 500 Educational Research and Statistics

Professor Bennett Schephens

February 12, 2023

Exercise Chapter 7

Means

Notes

Output Created		12-FEB-2023 07:55:25
Comments		
Input	Data	C:\Users\lahoz\OneDrive\Documents\SES and Savings account.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	12
Missing Value Handling	Definition of Missing	For each dependent variable in a table, user-defined missing values for the dependent and all grouping variables are treated as missing.
	Cases Used	Cases used for each table have no missing values in any independent variable, and not all dependent variables have missing values.

Syntax		MEANS TABLES=Savings BY SES /CELLS=MEAN COUNT STDDEV.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

[DataSet1] C:\Users\lahoz\OneDrive\Documents\SES and Savings account.sav

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Dollars in Savings Account * Socioeconomic Level	12	100.0%	0	0.0%	12	100.0%

Report

Dollars in Savings Account

Socioeconomic Level	Mean	N	Std. Deviation
High	3500.0000	4	2380.47614
Medium	13250.0000	4	4716.99057
Low	14750.0000	4	10812.80106
Total	10500.0000	12	8163.10992

Exercise Chapter 8

```
DESCRIPTIVES VARIABLES=Esteem Optimism
  /SAVE
  /STATISTICS=MEAN STDDEV MIN MAX.
```

Descriptives

Notes

Output Created		12-FEB-2023 08:14:49
Comments		
Input	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	9
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	All non-missing data are used.
Syntax		DESCRIPTIVES VARIABLES=Esteem Optimism /SAVE /STATISTICS=MEAN STDDEV MIN MAX.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.21
Variables Created or Modified	ZEsteem	Zscore(Esteem)
	ZOptimism	Zscore(Optimism)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Esteem	9	15.00	30.00	20.6667	5.59017
Optimism	9	10.00	19.00	14.0000	3.00000
Valid N (listwise)	9				

Participants	Esteem	Optimism	Z-Esteem	Z-Optimism
1	30.00	17.00	1.66960	1.00000
2	27.00	19.00	1.13294	1.66667
3	25.00	15.00	.77517	.33333
4	22.00	14.00	.23851	.00000
5	19.00	16.00	-.29814	.66667
6	17.00	10.00	-.65591	-1.33333
7	16.00	12.00	-.83480	-.66667
8	15.00	11.00	-1.01368	-1.00000
9	15.00	12.00	-1.01368	-.66667

In the original data, it apparently appears that Participant 4 has better Self-esteem than being very Optimistic. But in the z-scores you can see Participants 4 have a z-score of zero in Optimism. The z-score indicates these participants are on average at the mean on Self-esteem variable for this sample of 9 participants. Participant 3 has a z-score for Self-esteem of .77517, and it is close to .80. This shows that this participant is about half a standard deviation above the mean of the group of 9 participants. Participant 9 has a z-score for Self-esteem of -1.01368, it is close to -1. This indicates participant 9 is about one and a half standard deviations below the mean of the group. In a normal distribution, 70% lies between 0.00 and -1.00 which can be interpreted as “low average.

1. What is the z-score on Optimism for Participant 3?

.33333

2. Which participant is exactly at the mean (i.e exactly average) on Optimism? What is the z-score for this participant?

   Participant 4

3. How many participants have negative z-scores on Self-Estem?

   5 participants

4. On Self-Steem, which participant is furthest from the mean?

   Participant 4

5. What is his or her z-score?

   .23851