SPSS ASSIGNMENT #2   Frequency Distributions, Skew, Kurtosis, & Tests of Normality

Using the Digital Wellness survey dataset and the SPSS applications at the end of chapter 2, you will create bar graphs of frequencies and frequency histograms. You will calculate their skew and kurtosis values to understand their shape. Finally, you will use the statistic called Shapiro-Wilk to gauge whether the distributions are "more or less" normally distributed. Note that your answers must be just that – *your* answers. This is true for all remaining digital wellness assignments! Good luck!!

80 points
Always have a backup of your work!

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Part A: Bar graphs of frequencies and frequency histograms

Create a bar graph of frequencies for touch, PSS_total (total perceived social support), and ST_daily_ave (screen time daily average). Take a snippit or screen shot of each graph. Paste these into a single document (doc, docx, or pdf). You will upload this document into Canvas. PLEASE only take a snippit or screenshot of the graph and not everything else around it.
(30 points)

Create a frequency histogram with the normal curve for the same variables as above. Take a snippit or screen shot of each graph. Paste these into the same document as above. PLEASE only take a snippit or screenshot of the graph and not everything else around it.
(30 points)

Part B: Skew, Kurtosis and Tests of Normality

To calculate skewness, kurtosis and the test of normality, go to "Analyze" > "Descriptive Statistics" > "Explore". Details are provided at the end of chapter 2.

Don't remember how to round to
2 decimal places?

FYI: report all numbers to 2 decimal places – except for "sig values" - you report these to 3 decimal places.

Check out this video

The table below summarizes the statistics you will need to input into Canvas. These values are obtained from your SPSS output.
<mark>(18 points)</mark>

	Skew value	kurtosis value	kurtosis shape	Shapiro-wilk value	sig value	normally distributed? (Y/N)
Touch_score	?	?	?	?	?	?
PSS_total	?	?	?	?	?	?
ST_daily_ave	?	?	?	?	?	?

Typically, distributions with kurtosis values between +/- 3 are considered to be mesokurtic. A negative kurtosis value means the distribution is flatter than the mesokurtic distribution (i.e. platykurtic). A positive kurtosis value means the distribution is more peaked than the mesokurtic distribution (i.e. leptokurtic). Use this information to answer the question about kurtosis shape.

Even though we concluded whether each variable was (or was not) normally distributed, an important keyword is missing. That word is _____ **2 points**

BONUS POINTS 5 points

Copy and paste <u>SPSS tables</u> into a .doc, .docx, or .pdf. Only copy those tables that contain numbers you actually used in this assignment. In the table, hi-light the numbers you used and upload this document to "Digital Wellness Assignment 2 Bonus Points" in Canvas. If you do all this correctly – you will have 5 points added on to your score for this assignment!

Example from a previous year's data:

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
touch	.248	115	.000	.776	115	.000
PSS_TOTAL	.137	115	.000	.923	115	.000
ST_daily_ave	.123	115	.000	.815	115	.000

a. Lilliefors Significance Correction

Not shown here are the tables with the skew and kurtosis values. Make sure YOU include them ☺