*Overview*

Attached is the data you will need.

Please use the “Answer Sheet” attached to record your responses to each question.

Also, be sure to submit your Excel data sheet, and answer sheet.

* Please remember the difference between a table (numbers) and a figure (this is the picture summarizing numbers like a graph).
* Please remember the two-decimal rule – when creating new scale scores be sure variables are formatted with two decimals. ONE EXCEPTION: keep the GPA variable that you’ll come across later at 3 decimal places because that is how it was formatted on the actual survey participants responded to.
* There are several locations below where you will have to perform variable transformations. Read through the set of instructions first and see where you need to calculate new values and do that work first.

For your answers, if you determine a variable is categorical please be sure to specify also if nominal or ordinal.

***Dispositional Positive Emotions Scale (DPESawe).*** Participants were asked six awe-related questions of the DPES (Shiota et al., 2006) and instructed to rate their level of the agreement with the statements they read. Response options were on a 7-point scale (1=strongly disagree; 7= strongly agree). These six items were combined to calculate a mean DPESawe score for each person (α = 0.78). Example items include: “I often feel awe” and “I often feel wonder every day”.

**Question 1.**

What scale of measurement is the DPESawe variable being measured on?

**Question 2.**

What measure of central tendency would you say is the most appropriate to calculate to summarize information about the DPESawe for an entire sample? Remember, you don’t have data for this in the data set you downloaded, so just identify which measure of central tendency you would pick.

***Beck Depression Inventory (BDI).*** The Beck Depression Inventory (BDI) is a 21-item, self-report rating inventory that measures characteristic attitudes and symptoms of depression (Beck, et al., 1961). The BDI has been developed in different forms. The BDI takes approximately 10 minutes to complete, although clients require a fifth – sixth grade reading level to adequately understand the questions (Groth-Marnat, 1990).

Internal consistency for the BDI ranges from .73 to .92 with a mean alpha of .86. In each question individuals are asked to identify a statement that best characterizes them. For example,

Question 1.

0 – I do not feel sad

1 – I feel sad

2 – I am so sad all the time and I can’t snap out of it’

3 – I am so sad and unhappy that I can’t stand it

Each question has 4 response options, from 0 to 3. Statements associated with a 0 represent the least emotional disturbance, while statements associated with a 3 represent the greatest level of emotional disturbance. For example, one question states, “0 – I don’t feel disappointed in myself” while the response option for 3 is “3 – I hate myself”.

To calculate a personal score from the questionnaire, add up the score for each of the twenty-one

questions. The highest possible total for the whole test would be sixty-three. This would mean you circled number three on all twenty-one questions. Since the lowest possible score for each question is zero, the lowest possible score for the test would be zero. This would mean you circled zero on each question.

Total Score\_\_\_\_\_\_\_\_\_\_\_\_\_\_Levels of Depression

Individuals can interpret their depression score with guidelines in the Table below.

1-10\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_These ups and downs are considered normal

11-16\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Mild mood disturbance

17-20\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Borderline clinical depression

21-30\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Moderate depression

31-40\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Severe depression

over 40\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Extreme depression

**Question 3.**

What scale of measurement is the BDI being measured on?

**Question 4.**

What measure of central tendency would you say is the most appropriate to calculate to summarize information about the BDI for an entire sample?

*Variable Preparation / Transformations*

Before calculating descriptive statistics, some information in our data set needs to be prepared. Please follow the instructions below for variable preparation.

*PREPARATION of variable Chronological Age* (ageyrs):

In the data set is each person’s reported year of birth (variable: brthyr). What I would like you to do is use the reported birth year to create a new variable that identifies people’s chronological age (how old they will be this year…NOT this month – just what age they will be turning this year). Please name the new variable: “ageyrs” and give it the label in the variable information sheet: “Participant’s chronological age in survey year”. For example, if you are 22 right now or will be 22 sometime this year, the new variable “ageyrs” should indicate “22” for your “ageyrs”.

Please use a formula in Excel to calculate the “ageyrs” variable for each participant. Do not try to calculate it by hand. You will answer questions about this variable later on in the exam.

Please update the variable information sheet accordingly.

*PREPARATION of variables Peer Support (*Peerspavg) *and Parental Support (*Parspavg):

You will need to create an average scale score for both the Peer Support and the Parental Support items. So, you will create two new variables (average for each). To do this you will need the variables in the table below. Please read all instructions listed in the bullet points below **BEFORE** you do any work to calculate your scale score:

General Notes and Pre-transformation

* BE careful, the variable names are very similar to one another for these scales.
* The variables “Persuprt\_prb”, “Parsuprt\_prb”, and “Parsuprt\_frd” are negative keyed items (they need to be reverse coded…see Table 1 below).
* There was a response of 8=refuse for the questions in the Peer and Parental Support scales. Any value of 8 for any of the items needs to be changed to “*missing*”. Use the Find and Replace feature in Excel to identify all the responses of “8” and change them to a “.” (just a decimal). DO NOT change the 8’s for other variables in the data set, **ONLY** for the individual items of the Peer and Parental Support questions listed in Table 1 below. Other variables in this data set have a valid response =8, so be careful.
  1. To do this, you will need to highlight ONLY the columns of the Peer Support items
  2. Then, with the 8 columns and all the numbers below in just those columns highlighted, select Edit – Find – Replace
  3. Find what? Enter an 8
  4. Replace with what? Enter a “.”
  + Repeat these 4 steps for the Parental Support items

Reverse Coding Items

* Add new columns for the reverse coded variables and type the new variable names. For the new items, you will simply keep the original name, but add “rc” for “recoded” at the end. Example: Persuprt\_prb will become “Persuprt\_prbrc”.
* Update the variable info sheet accordingly. For instance, you need to copy the variable label in the info sheet, but add “reverse coded” at the end for your new variable.
* Watch out for the “#VALUE!” result when working on these transformations. You’ll need to make sure these become “.” (a period) too.

Calculating the Scale Score

* After you have followed the instructions and reverse coded the appropriate items, please calculate the scale scores - please call the new mean scale score variable “Peerspavg” (for the Peer Support mean) and “Parspavg” (for the Parental Support mean) with a label “Peer support average score” and “Parental support average score” in the variable info sheet.
* Remember to set all new scales to a “Number” and to have two decimal places.
* Please update the variable information sheet accordingly.

Table 1. *Items of the Peer Support and Parental Support Scales, Respectively.*

|  |  |  |  |
| --- | --- | --- | --- |
| Peer Support Item (Variable Name) | Note | Parental Support Item (Variable Name) | Notes |
| Persuprt\_prb | **Negative Keyed** | Parsuprt\_prb | **Negative Keyed** |
| Persuprt\_bst |  | Parsuprt\_bst |  |
| Persuprt\_ind |  | Parsuprt\_ind |  |
| Persuprt\_exp |  | Parsuprt\_exp |  |
| Persuprt\_grd |  | Parsuprt\_grd |  |
| Persuprt\_knw |  | Parsuprt\_frd | **Negative Keyed** |
| Persuprt\_tim |  | Parsuprt\_tim |  |
| Persuprt\_fun |  | Parsuprt\_fun |  |

*Note:* See also the variable information sheet.

*Data Summaries*

For the questions below I am asking you to either create a figure (which is a graph), a table (numbers put in table), to report values in writing using proper sentences, or a combination of these. Please be sure to pay attention to when I ask for a figure, or when I ask for a table, or when I ask for a sentence, or something else.

**Question 5**

Please report on the total sample size for this survey using a full sentence.

**Question 6**

Please calculate a SINGLE table that displays the most appropriate measures of central tendency for the following variables:

* Peerspavg
* Parspavg
* biosex
* marysts
* ethnicity
* ageyrs
* Edgpa

Copy that table below here and demonstrate you know which measure of central tendency is correct for each variable by highlighting the correct values on the table you copied below.

**Question** 7

Please report in writing, using proper sentences, on the most appropriate measure of central tendency for the Peerspavg variable.

**Question 8**

Please report in writing on the most appropriate measure of central tendency for the marysts variable.

**Question 9**

Please create a table that displays the frequencies of participants’ race (variable= race) by their ethnicity (variable= ethncty) and copy that table in your answer sheet.

**Question 10**

What can you tell me about the responses students provide to the “race\_TEXT” variable (this is where they describe their response of “other” to the “race” variable). Basically, I want you to look at the responses in this variable and summarize what you are reviewing – briefly).

**Question 11**

I would like you to check some of your previous preparation work by generating a “frequency” table for both the old variable (brthyr) and the new variable (ageyrs) and copy both tables in your answer sheet (JASP – Descriptives – Check “frequency table”). HINT – you are in charge, not the computer. You may have to override the computer on something.

**Question 12**

I would like to know how far along in school students in this sample are. How would you use the variable “EDcrcmp” to help answer this question? I would like a report summarizing information about the “EDcrcmp” variable including:

* A snapshot of the entire sample for how far a long they are in school with a
  + A figure
  + And a written description
    - Include a type written discussion/summary from what you calculated above that focuses on some type of descriptive statistic. You will need to generate a descriptive statistic to answer this question (e.g. is there a most appropriate measure of central tendency to calculate?) Talk about central tendency, but also provide additional summary about the scores on this variable. Please summarize your comments about this information from the picture and the values you report (summary, explanation, anything you gain from this information) in writing. Be specific about how far along in school students in this sample are.
* Please be brief in your explanation. I don’t want an entire page. A solid paragraph, at most two, should suffice.

**Question 13**

Please calculate the values for and provide a written summary of the reliability analysis for the “Peerspavg” scale.

**Question 14**

Please create the Q-Q plot graph for this scale and copy it in your answer sheet.

**Question 15**

Please calculate and report on the most appropriate measure of central tendency for the “Parspavg” scale in sentence form.

**Question 16**

Please generate the Q-Q plot graph for this scale and copy it in your answer sheet

*Data Displays*

**Question 17**

Please create a single figure to display a summary of appropriate information for the marital status of participants in this sample and copy it in your answer sheet. Variable “marysts”.

**Question 18**

Please create a single figure to display students’ gpa (Edgpa) by the “**Parental** support average score” and copy it below. Variables “Edgpa” by “Parspavg”. Remember the two-decimal rule for new scale items and remember to keep the Edgpa values at three decimal places.

**Question 19**

Please create a single figure to display students’ GPA by their race (variables: “EDgpa” by “race”).

**Question 20**

A researcher is interested in whether men or women report feeling more depressed in a week. The researcher has data on these two variables and needs you to please create a single figure to display how frequently in the past week students felt depressed by their biological sex (variables: “HSfeel\_1” by “biosex”). What would you tell the researcher?

**Question 21**

Please create a single table AND a single graph to display how frequently in the past week students felt lonely (HSfeel\_3) by their marital status (marysts). Copy both in the answer sheet with this question.

What would you say about those students who have been “separated”?

**Question 22**

Please create a single figure to display students’ self-reported overall health (“HSovrhlth”) by their Chronological Age (“ageyrs”).

What would you say about the results of this picture?