- **(1) "Non-experimental or correlational" research methods in psychology include the following:**
  a) Survey methodology, observational methodology and qualitative methodology.
  b) Survey methodology, quasi-experimental methodology, and experimental methodology.
  c) Survey methodology, qualitative methodology, and quasi-experimental methodology.

- **(2) Which of the following references follows APA norms?**
  a) ESTELLÉS, Laura, et al. Effective and clinically useful treatments in dementia. *Journal of the Valencian Society of Psychology*, 2016, vol. 17, no 1, p. 135-158.
  b) Estellés, L., Tomás, T., Planagumà, N. and Torrea, I. (2016). Effective and clinically useful treatments in dementias. *Journal of the Valencian Society of Psychology*,*17*(1), 135-158.
  (c) Estellés, Laura, et al. "Effective and clinically useful treatments in dementias." *Journal of the Valencian Society of Psychology* 17.1 (2016): 135-158.

- **(3) In which section of a research report are the tables and figures showing the results obtained in the research included?**
  a) Introduction.
  b) Method.
  c) Results.

- **(4) In which case(s) should we <u>always</u> choose the Mode as the central tendency statistic?**
  a) If the variable is nominal
  b) If the variable is ordinal
  c) If the variable is ordinal or a discrete quantitative variable

- **(5) (Case 1) In the research in CASE 1, if the psychologist only seeks to examine the relationships between the three variables, without differentiating groups, this research is:**
  a) Experimental, because one independent variable is manipulated and participants are randomly assigned to the two conditions.
  b) Non-experimental, since only questionnaires are passed, and the reseachers examine relationships between them.
  c) Quasi-experimental because a dependent variable is manipulated, but the two groups are not randomized.

CASE 1: A psychologist decides to study the relationships between **Anxiety**, **Stress,** and **Psychological well-being** in a group of elderly people who regularly attend an Integral Center for the Elderly. For this purpose, she takes into account different sociodemographic data such as **age, time spent exercising, time spent exercising, marital status and place of residence**. We have the scores in **Psychological Well-being, Stress** and **Anxiety**, and also the correlations between these three variables (see output below):

OUTPUT CASE 1

Statistics

		Psychological Well-Being	Stress	Anxiety
N	Valid	120	120	120
	Missing	0	0	0
Mean		43.66	15.49	12.31
Median		45.00	13.50	12.00
Mode		60	12	12
Standard deviation		15.129	8.775	7.593
Variance		228.899	77.008	57.660
Skewness		.081	.818	.524
Standard error of skewness		.221	.221	.221
Kurtosis		1.795	.107	-.371

Standard error of kurtosis		.438	.438	.438
Range		102	38	29
Minimum		1	2	1
Maximum		103	40	30
Percentiles	25	33.00	9.00	6.00
	50	45.00	13.50	12.00
	75	55.75	21.00	17.00

Correlations

		Psychological Well-Being	Stress	Anxiety
Psychological Well-Being	Pearson correlation	1	-.780**	-.767**
	Sig. (bilateral)		.000	.000
	N	120	120	120
Stress	Pearson correlation		1	.951**
	Sig. (bilateral)			.000
	N			120
Anxiety	Pearson correlation			1
	Sig. (bilateral)			
	N			120

**. Correlation was significant at the 0.01 level (bilateral).

- **(6) (Case 1) What type of variable is "Psychological Well-Being"?**

a) Qualitative
b) Quantitative
c) Ordinal

- **(7) (Case 1) Please indicate the correct statement:**

a) The results indicate an inverse relationship between Anxiety and Stress in the sample.
b) The results indicate an inverse relationship between Psychological well-being and Stress in the sample.
c) The results indicate that people who have high Psychological Well-being also have high Anxiety.

- **(8) (Case 1) The distribution of the variable "Anxiety" is:**

a) Leptokurtic and negative asymmetry.
b) Platykurtic and positive asymmetry.
c) Leptokurtic and positive asymmetry.

Continuing with Case 1, the psychologist who conducted the research decided to check whether the variables anxiety and Stress can predict the variable Psychological Well-Being, so she made the following calculations:

Summary of the model

Model	R	R square	Adjusted R-squared	Standard error of the estimate
1	.784[a]	.615	.609	9.464

a. Predictors: (Constant), Anxiety, Stress.

Coefficients

Model		Unstandardized coefficients		Standardized coefficients		
		B	Typical Error	Beta	t	Sig.
1	(Constant)	64.260	1.766		36.387	.000
	Stress	-.910	.320	-.528	-2.843	.005
	Anxiety	1.329	.370	.265	-1.430	.155

a. Dependent variable: Psychological well-being.

- **(9) (Case 1) From the result of the regression model of the variable "Psychological Well-Being" as a function of the variables "Stress" and "Anxiety", we can say that:**

a) The multiple correlation index is 0.615.
b) The model explains 78.4% of the variance of Psychological Well-Being.
c) The model explains 60.9% of the variance of Psychological Well-Being.

- **(10) (Case 1) indicate the correct statement regarding the prediction of the variables in the model:**

a) The variable Anxiety is the best predictor of the model because it has a higher (more positive) score.
b) With the above table, this question cannot be answered because there is a dissociation in which is the best predictor looking at the unstandardized and standardized coefficients.
c) The Stress variable is the best predictor of the model because it has a higher absolute value in the appropriate prediction indicator.

- **(11) (Case 1) If *stepwise* regression were done in this case, and only one of the variables entered the equation, which would it be? :**

a) Stress
b) Anxiety
c) The program randomly selects one of them.

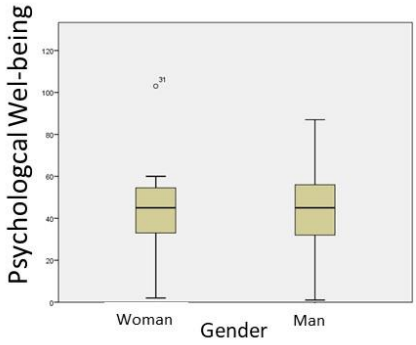
- **(12) (Case 1) In the regression model, what value would you predict in Psychological well-being to someone with 0 in Stress and 0 in Anxiety?**

a) 9.469
b) 36.387
c) 64.260

- **(13) (Case 1) Could there have been collinearity problems in the regression model?**

a) Very likely, yes, based on the information from the correlation matrix, but this information was not given in the model.
b) No, these problems only occur with more than two predictors.
c) Yes because collinearity always occurs when the coefficient of one variable is positive and the other is negative.

Continuing with Case 1, the psychologist who conducted the research studied the variable **Psychological Well-Being** according to **gender**, resulting in the following plot (women on the left and men on the right):



- **(14) (Case 1) Based on the box plot, we can indicate that:**

a) Both distributions appear to be approximately symmetrical, especially in their central part (box).
b) Women show greater variability than men.
c) The central tendency is greater for men than for women.

CASE 2. A team of psychologists investigates whether a given psychological treatment is efficient. They recruited a total of 72 individuals. They formed two groups by assigning the participants, randomly, to the treatment group or the

placebo group. An anxiety questionnaire and a cognitive functioning questionnaire were used before and after treatment. This way, they could test the differences before and after the treatment in the two variables. In addition, they analyzed whether there are also differences between gender.

- **(15) (Case 2) Once we have entered the data for this research in JASP (or SPSS), how many rows and columns will our database have?**

a) 36 rows and 3 columns.
b) 72 rows and 6 columns.
c) 72 rows and 2 columns.

- **(16) (Case 2) What research methodology used the psychologists?**

a) Quasi-experimental methodology.
b) Experimental methodology.
c) Correlational methodology.

- **(17) If we have the probability density function f(x)=h defined between X=0 and X=5. What value corresponds to F(3)?**

a) 0.3
b) 0.2
c) 0.6

- **(18) Maria takes a Machiavellianism test and is told that she is in the 96th percentile. Peter takes the same test. However, instead of being told a percentile, they said he had a z-score of 4. If we assume that Machiavellianism follows a normal distribution, which of the two would be "more Machiavelian"?**

a) Mary
b) Peter
c) They would have very similar scores in the test

- **(19) Fisher's F distribution is characterized:**

a) By its positive asymmetry that does not vary regardless of the degrees of freedom.
b) By its positive asymmetry and for having degrees of freedom in the denominator.
c) By typically being used for goodness-of-fit tests and for having degrees of freedom in the denominator.

- **(20) Student's t-distribution is characterized:**

a) By its symmetry and for having a mean of 0.
b) By its symmetry and for having degrees of freedom in the denominator.
c) By resembling a normal distribution with mean 1 and standard deviation 1.