

TAPING IN DATA

- Each line represents a participant.
- In transversal studies, each column is a different variable.
- In longitudinal studies, each column is a condition of the independent variable.
- In “Data View” (tab in down left corner), only numbers can be included.
- In “Variable View” (tab in down left corner), each line is a variable. It is important to determine the measure of each variable (in last column, nominal, ordinal o scale).

CONVERSION FROM QUANTITATIVE TO QUALITATIVE OR ORDINAL VARIABLE

Transformar – recodificar en diferentes variables – introducir la variable a transformar – poner otro nombre – antiguos y nuevos valores – (you have the possibility of choosing ranges – ELEGIR-)

STANDARD SCORES

Analyze – Descriptive statistics – descriptive – click “save standardized values as variable”

In order to sum or subtract values of two variables in each participant:

Transformar – calcular variable

ASSUMPTIONS

1. **NORMALITY** (in the quantitative variable/s, test normal distribution):

Analyze – nonparametric tests – 1 sample K-S

When Kolmogorov Smirnov Z presents $\text{sig} \geq 0.05$, the distribution is normal

2. **HOMOSCEDASTICITY** (in the relationship between qualitative/ordinal – quantitative variables)

Analyze – Compare Means – One-Way ANOVA – Options – Homogeneity of variance test

When Levene statistic presents $\text{sig} \geq 0.05$, there is homoscedasticity

3. LINEARITY (in the relationship between ordinal/quantitative (with more than two groups – quantitative variables)

Analyze – Compare Means – Means – Options – Test for linearity

$\text{sig} < 0.05$ – There is linearity

4. INDEPENDENCE OF ERRORS (in the relationship between variables)

Analyze – Regression – Linear – Statistics – Durbin-Watson

$1.5 < d < 2.5$ – Errors are independent

Note in paired samples: you only need to take into account the sphericity (assumptions 1-4 have not to be checked).

GRAPHS

Relationship between two quantitative variables – Graphs - Legacy Dialogs - Scatter/Dot

Relationship between a qualitative and a quantitative variable – Graphs - Legacy Dialogs - Bar

STATISTICS

1. Compare values in the sample and the population of reference, parametric test.

Comparar medias – prueba T para una media.

In “valor para una media”, include the value of the population.

$\text{Sig} < 0.05$ – The sample comes from a different population.

2. Compare values in the sample and the population of reference, non-parametric test.

Analyze – non-parametric tests - Runs (Rachas) – cut point: Median – OK

$\text{Sig} > 0.05$ – The sample is representative of the population. It was chosen randomly.

3. CHI SQUARE TEST

Analyze – Descriptive statistics –crosstabs

Include one variable in ROWS and the other in COLUMNS

Statistics – click in Chi-square – OK

Sig < 0.05 – relationship between variables / differences across groups.

4. FISHER EXACT TEST

Analyze – Descriptive statistics –crosstabs

Include one variable in ROWS and the other in COLUMNS

Statistics – click in Chi-square – OK

Fisher's Exact Test Sig < 0.05 – relationship between variables / differences across groups.

5. MCNEMAR TEST

Analyze – Descriptive statistics –crosstabs

Include one variable in ROWS and the other in COLUMNS

Statistics – click in McNemar – OK

Sig < 0.05 – relationship between variables / differences across groups.

6. MANN WHITNEY U

Analyze – Nonparametric Tests – Two Independent Samples – Mann-Whitney U

Sig < 0.05 – relationship between variables / differences across groups.

7. KRUSKAL WALLIS H

Analyze – Nonparametric Tests – k Independent Samples – Kruskal-Wallis H

Sig < 0.05 – relationship between variables / differences across groups.

8. WILCOXON T TEST

Analyze – Nonparametric Tests – Two Related Samples - Wilcoxon

Sig < 0.05 – relationship between variables / differences across groups.

9. T (INDEPENDENT SAMPLES):

Analyze – Compare Means – Independent-Samples T test

Sig < 0.05 – relationship between variables / differences across groups.

10. T (PAIRED SAMPLES):

Analyze – Compare Means – Paired-Samples T test

Sig < 0.05 – relationship between variables / differences across groups.

11. F (TRANSVERSAL):

Analyze – compare means – one-way ANOVA –

Sig < 0.05 – relationship between variables / differences across groups.

11.1. POST_HOC CONTRASTS: post-hoc – Scheffé, Tukey

11.2. A PRIORI CONTRASTS: contrasts – coefficients – add

9.2.1. In tendency contrasts: + polynomial

12. F (LONGITUDINAL):

Analyze – general linear model – repeated measures

Greenhouse-Geisser Sig < 0.05 – relationship between variables / differences across groups.

13. F (MIXED DESIGNS):

Analizar – modelo lineal general – medidas repetidas.

The factor within groups (intrasujetos) is the longitudinal variable. Its number of levels is its number of measures.

The factor between groups (intersujetos) is the transversal variable.

Sig < 0.05: relationship between variables / differences across groups:

- sig of the between groups test (intersujetos) (the last table that appears) to see if there are differences in the conditions of the transversal variable
- In the within groups test (intrasujetos):

- Sig of factor 1 (esfericity) to see if there are differences in the longitudinal variable.
- The most interesting: sig of factor 1 * the transversal variable to see if there are differences in the interaction.

14. PEARSON CORRELATION:

Analyze - correlate - bivariate - Pearson
Sig < 0.05: relationship between variables

15. SPEARMAN CORRELATION:

Analyze - correlate - bivariate - Spearman
Sig < 0.05: relationship between variables

16. SIMPLE LINEAR REGRESSION:

Analyze – regression – linear
Sig < 0.05: relationship between variables