UNIVERSITY
OF WARSAW
Faculty of Modern Languages
School for International Science

RM

Research Methodology

The Basics of Statistics in IBM SPSS

The Faculty of Modern Languages at the University of Warsaw invites employees to take part in an introductory course on the basics of statistics analysis using SPSS, a software freely available for university employees. The course will start with how to organize data, and by the end attendees should be familiar with most widely used statistical tests. No previous experience with statistics is needed!

The material used will be provided by the teacher and will be mostly adapted from previous research. The course will discuss why inferential statistics are necessary (as opposed to only using averages or percentages), will introduce different types of variables and how they should be organised, and will, after few workshops, become mostly practical. This means that you will be doing the analysis and interpreting the results together with the presenter.

This course on the ***Basics of Statistics using IBM SPSS*** may be suitable for those who fit one or more of the following criteria:

- You would like to be better able to understand the results described in most international JCR research papers.
- You would like to better understand how research design is influence by data analysis or vice versa.
- You would like to conduct more reliable research and publish papers with more impact.

Course participants should be PhD students at the University of Warsaw with English proficiency at B2 (upper-intermediate) or higher. The course lasts 30 hours (15 meetings) and will be conducted fully online.

THE **COURSE OBJECTIVES** ARE THE FOLLOWING:

- Understand the importance of a well-structured research design for data analysis.
- Understand how to visualise and run diagnostic data analysis to ensure the use of an appropriate statistical test.
- Learn how to deal with problems in the data.
- Become familiar with different types of tests and their suitability to different analyses.
- Understand how to clearly report results from statistical analysis.
- Become better able to search for and identify reliable sources of information on different statistical tests.

SOME **TRANSFERABLE SKILLS** INCLUDE THE FOLLOWING:

- Learn how to manage large datasets for future analysis.
- Understand common correlational and experimental research designs.
- Better understand third party research findings.
- Learn how to identify some pitfalls in research design.

TENTATIVE SYLLABUS (30h)

Module I:

Basics of Statistics using IBM SPSS

6 hours

CONTENT:

- The importance of statistics
- Variables and organizing data
- The SPSS interface
- Test assumptions and running data diagnostics
- Hand-on data analysis (assessment)

Module II:

Comparing means and medians: between and within-subject designs

10 hours

CONTENT:

- Comparing two means (tests and nonparametric alternatives)
- Comparing two or more means (ANOVAs and nonparametric alternatives)
- Extending ANOVAs: covariates and factorial designs
- Hands-on data analysis (assessment)

Module III:

Correlations and linear regression analyses

14 hours

CONTENT:

- Parametric and nonparametric correlations
- Simple linear regressions
- Multiple linear regressions
- Diagnosing residuals and spotting influential outliers
- Performing ANOVAs as regressions analyses
- Hands-on data analysis (assessment)

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