



For ASSESS York 2018 meeting

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AN INTRODUCTION TO IBM SPSS STATISTICS FOR COMPLETE BEGINNERS

(9-30am to (approx) 11-30am, 2-10pm to 4-30pm includes coffee breaks and buffet lunch)

Keith Bentley

University of Salford

Target Audience

Members of any company who are interested in using data, possibly from a variety of sources, to develop corporate and business strategies to identify goals, set and monitor targets and improve the effectiveness of their employees.

The course tutor, Keith Bentley, is a former senior police officer currently lecturing at the University of Salford. He has given talks (identifying crime hotspots) and courses (Introducing IBM SPSS Statistics syntax using the British Crime Survey) for ASSESS at past meetings. He is a regular user of the statistical software, IBM SPSS Statistics, and specializes in the Field of police intelligence systems. Keith is also engaged as an intelligence expert with the European Union TAIEX organization.

Pre-requisites

This workshop is suitable for users who have no prior experience using SPSS.

Aim

The forthcoming training session will be making use of a very large data set, a copy of a BCS survey with over 46,000 cases and 3000 variables. This one-day course is aimed at complete beginners to IBM SPSS Statistics. It introduces basic concepts and structures and uses these to read in and prepare data ready for analysis and perform data manipulations using core commands. The teaching material references contemporary Level 6 university input. Although the emphasis is on crime data this course is also suitable for anyone from any company or organisation in that it provides a general framework for data analysis which can be used to guide policy decisions.

Learning Outcomes

By the end of the course, you will be able to:

- Use the IBM SPSS menu interface
- Open and save Data Files
- Enter and define data
- Produce simple descriptive statistics and one and two-way tables
- Use commands for calculations and selection
- Plot simple graphs
- Use basic syntax

CORRELATION & REGRESSION IN IBM SPSS

(9-30am to (approx.) 11-30am)

Maria Pampaka

University of Manchester

Target Audience

Doctors, dentists, nurses, allied health professionals, researchers, academics, service staff, and students, who want to understand concepts and techniques of correlation and linear multiple regressions and also intend to use IBM SPSS software to analyse their research data.

Pre-requisites

This is a follow-up course to the Introduction to IBM SPSS course. It assumes a basic working knowledge of IBM SPSS.

Aim

This course will provide you with a thorough and practical understanding of Correlation, Simple Linear and Multiple Regression. You will be guided on choice and usage of different correlation coefficients and regressions to look at relationships between sets of variables. You will gain knowledge and competence that will enable you to screen your data for linear relationships before generating correlation coefficients and then how this can be built upon by answering more complex questions with regression analysis. Health and medical examples are used to enhance understanding of the concepts of correlation and regression.

Learning Outcomes

By the end of the course, you will be able to use:

Correlation

- Measure relationship between two variables using correlation coefficient.
- Graph the relationship using scatter plots - simply, overlay and matrix plots.
- Understand parametric and non-parametric correlation – Pearson, Spearman, Kendall's tau.
- Examine partial correlation and semi-partial correlation.

Regression

- Understand the concept of linear regression
- Perform Simple Regression
- Perform Multiple Regression
- Assess the goodness of fit of regression model
- Interpret regression model

AN INTRODUCTION TO MULTILEVEL MODELLING IN IBM SPSS

(2-10pm to (approx.) 4-30pm including a coffee break)

Laszlo Horvath & Raluca Popp

University of Exeter

Target audience:

This course assumes no previous experience using multilevel models and is a practical introduction to the use of a rapidly expanding area of statistics in many fields including social, medical and ecological studies. Knowledge of using regression models is an advantage. A knowledge of using SPSS syntax would also be helpful.

Laszlo and Raluca are associate lecturers in quantitative politics members at the University of Exeter and teach statistics courses as part of the Q-Step data analysis workshop series.

Aim

Multilevel data structures arise in longitudinal studies where an individual's responses over time are correlated with each other and, have an advantage over repeated measures ANOVA, in incorporating data from incomplete cases. This session will present our own research using gaze data from an eye-tracking experiment and give guidance as to how to analyse such data in IBM SPSS, understand the output and present results.

Learning Outcomes

- Getting started with multilevel procedures in IBM SPSS and data
- Exploring and summarising multilevel data and key elements of statistical modelling
- Two-level random intercepts models and examples
- Models for random intercepts and slopes