

Multilevel modeling: Analysis of Clustered Data

Description

Real data are often clustered such as repeated measurements on the same subject or measurements in grouped subjects (e.g. family or school studies). Failure to allow for clustering results in too small standard errors and subsequently produces false-positive findings. The aim of the course is to provide participants with an understanding of the basic concepts and general techniques in the analysis of clustered data. Valid analysis methods appropriate for clustered data will be introduced. The course software will be Stata. Commands in other statistical packages (R, SAS, SPSS) will be described. Main concepts to be covered include: clustering, random intercept, random slope, linear and logistic random-effects models (multilevel models, mixed models, hierarchical models), robust standard errors, generalized estimating equations (GEE), modelling strategy, model diagnostics.

Objectives

By the end of the course participants will be able to define the appropriate analysis method for a clustered data set. Participants will be able to perform and evaluate own analyses of clustered data.

Dates

03.11.2010 - 05.11.2010

Eligibility

The course is aimed at clinicians, researchers, public health specialists and other health care professionals who want to perform analyses of data with clustered structures. This is an advanced statistical course. Participants should know the principals of linear and logistic regression modelling. A practical experience with linear regression analysis is required.

Course structure

This is a statistical methods course. We will follow a nonmathematical approach and focus on the practical application of the techniques on datasets from epidemiology and prevention research. The course consists of interactive lectures and computer practicals. The course room will be equipped with computers. It is also possible to bring the own laptop to the course (Stata 9 has to be installed.) We will conclude with a question and answer session and an exam.

Assessment

Exam

Credits

1 ECTS

Facilitator

Prof. Martin Rösli

Location

Basel

PhD Program Management:

Academic lead Prof. Charlotte Braun-Fahrlander
Program coordination Dr. Sina Henrichs
Administration: Nicole Bosshard

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Course fee

PhD in Public Health candidates registered with SSPH+ register free of charge
Other PhD students: CHF 300.-
Academics: CHF 850.--
Others: CHF 1250.—

Registration

Online at www.ispm-unibasel.ch/ssphplus

DEADLINE

27. August 2010

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