East Asia Training & Consultancy Pte Ltd
Head Office: 3 Raffles Place, #07-01 Bharat Building, Singapore 048617
Regional Offices: Malaysia, Indonesia, Thailand, Philippines, Vietnam, Hong Kong
Fax : (65)-62506369 Tel: (65)-62199062
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Regression Models for Categorical Dependent Variables using Stata

3-Day Professional Development Workshop

East Asia Training & Consultancy Pte Ltd invites you to attend a three-day professional development workshop reviewing statistical methods used in Biostatistics and Public Health and using Stata to analyze the course databases. Stata is the well-known statistics and econometrics software package developed by StataCorp (USA). Stata is a statistical software package that offers a broad range of statistics to professional researchers in many disciplines. Stata is particular useful to professionals working in areas of biostatistics, epidemiology, medical research and economic research.

Course Programme

The aim of this workshop deals with the analysis of data that typically arise in biostatistics. The emphasis is practical so that participants should understand both the principles of analysis and how to carry them out. Participants should, by the end of the workshop, be able to use Stata for carrying out their own analyses for the most common types of problem encountered in biostatistics and public health analysis. Readings and data sets from the medical and public health literature will be used as case studies and in practical exercises wherever possible, using the Stata® statistical package. Participants are encouraged to bring their own datasets if they wish.

Who should Attend

Researchers, physicians, clinicians, public health professionals, students and lecturers in biostatistics, statistics and biomedical sciences, from public and private institutions who wish to increase their familiarity with quantitative methods in the principles of biostatistics, or statistics applied to health care planning and evaluation, so they can more effectively address problems in health research and use computational tools to solve practical problems.

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Fee and Registration

The fee for this three-day specialized and professional workshop includes extensive course materials, data-sets, lectures, lunches, morning and afternoon coffee/tea breaks, receptions and the opportunity to network with medical researchers, health care practitioners and biostatisticians across the various industries in Asia. This is a "hands-on" workshop. Participants are required to bring their own laptops.

The number of participants is restricted. Please register early to guarantee your place. Please complete the official registration form and fax to (65)-62506269 or email it to us at stata@eastasiatc.com.sg to reserve your place. Confirmation will only be made upon receiving full payment. Further instructions will be sent to confirmed participants.

Course Outline

General outcome for each Session
~ 15 minute discussion of topic (e.g. method used for comparison of means, etc)
~ 15 minute discussion of the Stata commands
~ 60 minutes hands on practice using commands on example data sets

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	Day 1 **Data Management and Analysis of Contingency tables**	**Day 2** **Nonparametric methods and logistic regression model**	**Day 3** **Loglinear models and repeated measurements data**
9.00-10.30	**Introduction** • Students, background, student objectives for the course; • Outline of course, • Introduction to Stata Windows, help, etc, • Introduction to datasets used for course, inputting and outputting data.	**Nonparametric Methods** • Wilcoxon-Mann-Whitney Test; • Kruskal-Wallis test; • Friedman's Chi-square test; • Aligned ranks test for randomized complete block; • Durbin's test for balanced incomplete blocks; • Rank analysis of covariance.	**Loglinear models** • For two way tables • For three way tables • Mutual, joint, marginal and conditional independence • Goodness of fit • Higher dimension loglinear models • Connection to logistic model
10.30-11.00	**Morning Tea**		

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11.00-12.30	**Two way Contingency Tables** • Probability structure; • comparing proportions in 2 by 2 tables; • the Odds Ratio; • Chi-squared tests of independence; • exact inference of small sample	**Logistic regression: Dichotomous response** • analysis commands • use of continuous and categorical variables • interpretation of coefficients	**Categorized Time-to-Event data** • Life table • Mantel-Cox test, log rank test. • Poisson regression • Proportion hazards model.
12.30-1.30	**Lunch**		
1.30-3.00	**Two way Contingency Tables** • Sensitivity and Specificity; McNemar's test **Sets of 2 by 2 Tables** • Mantel Haenszel test; measures of association (homogeneity of odds ratios) **Sets of 2 by r and s by 2 Tables**	**Logistic regression continued** • tests for significance of variables • confidence intervals • regression diagnostics	**Building and Applying Logit and Loglinear models** • Association graphs and collapsibility; • modeling ordinal associations; • tests of conditional independence; • effects of sparse data; • models for matched pairs.

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3.00-3.30	**Afternoon Tea**		
3.30-5.00	**Three way Contingency Tables** • Partial association; • Cochran-Mantel-Haenszel Methods; • Exact inference about conditional associations; • measures of association (ordinal measures and nominal measures); • observer agreement.	**Logistic regression: Polytomous response** • Ordinal response: Proportional odds model; • Nominal response: Generalized logits model. • Sample size and power for logistic regression. • Exact inference for logistic regression. (conditional logistic regression)	**Modeling repeated measurements data** • analysis of means and proportions with weighted least square. • Marginal model (population average model). • Mixed effects model (subject specific model). • Generalized estimating equation (GEE) method.