

## **East Asia Training & Consultancy Pte Ltd**

Head Office: 3 Raffles Place, #07-01 Bharat Building, Singapore 048617  
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# **Meta Analysis Using STATA**

## **3-Day Professional Development Workshop**

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**East Asia Training & Consultancy Pte Ltd** invites you to attend a three-day professional development workshop reviewing statistical methods and applying meta analysis using Stata to analyse 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.

### **Who should Attend**

Researchers, physicians, clinicians, public health professionals, students and lecturers in biostatistics, epidemiology and biomedical sciences, from public and private institutions who wish to increase their familiarity with quantitative methods in the principles of epidemiology and biostatistics, or epidemiology 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.

### **Fee & Registration**

The fee includes extensive course materials, data-sets, lectures, lunches, morning and afternoon coffee/tea breaks, receptions and the opportunity to network with medical researchers, epidemiologists and biostatisticians across the various industries in Asia.

This is a “hands-on” workshop. Participants are required to bring their own laptops.

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**The number of participants is restricted.** Please register early to guarantee your place. Please complete the official registration form and fax to (65)-62506369 or email it to us at [stata@eastasiatc.com.sg](mailto: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

#### Day 1

##### **9:00 – 10:30**

Introduction to the course.

- Basic concepts involved in meta-analysis.
- Introduction to basic STATA commands for meta-analysis.

##### **10:30 – 11:00**

Morning coffee/tea break and snacks.

##### **11:00 – 12:30**

Methods for binary outcomes:

- inverse variance method,
- Mantel Haenszel method.

##### **12:30 – 13:30**

Lunch

##### **13:30 – 15:00**

Methods for binary outcomes:

- Peto's odds ratio method,
- DerSimonian & Laird method.

##### **15:00 – 15:30**

Afternoon coffee/tea break with snacks.

##### **15:30 – 17:00**

Methods for binary outcomes:

- confidence interval for pooled estimate,
- test for overall effect,
- test for heterogeneity.

#### Day 2

##### **9:00 – 10:30**

Methods for continuous outcomes:

- weighted mean difference,
- standardized mean difference.

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### **10:30 – 11:00**

Morning coffee/tea break and snacks

### **11:00 – 12:30**

Methods for continuous outcomes:

- Cohen's d statistic,
- Hedges' g statistic,
- Glass's delta.

### **12:30 – 13:30**

Lunch

### **13:30 – 15:00**

Identify publication bias:

- stratify forest plots,
- funnel plots,
- Begg's adjusted rank correlation test,
- Egger's regression asymmetry test.

### **15:00 – 15:30**

Afternoon coffee/tea break and snacks

### **15:30 – 17:00**

Adjust for publication bias:

- trim and fill method,
- sensitivity analysis,
- study exclusion.

## **Day 3**

### **9:00 – 10:30**

Adjust for publication bias and heterogeneity problem:

- identify potential source of heterogeneity,
- test for heterogeneity,
- I squared, meta-regression,
- Galbraith plots.

### **10:30 – 11:00**

Morning coffee/tea break and snacks

### **11:00 – 12:30**

Other Stata meta-analysis tools:

- L'Abbe plots,
- cumulative meta-analysis.

### **12:30 – 13:30**

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Lunch

### **13:30 – 15:00**

- Influential studies,
- Dialog boxes,
- number needed to be treat (NNT) and choice of outcomes.

### **15:00 – 15:30**

Afternoon coffee/tea break and snacks

### **15:30 – 17:00**

- Meta-analysis of p-values,
- other issues in data manipulation,
- overview and comparison of Stata functions for study designs.

### **General outcome for each Session**

- ~ 15 minute discussion of topic (eg 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