Statistical Advising on Research Design and Analysis

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Outlines

- Aim
- Assumptions
- What the service provides?
- When to seek advice?
- How does it work?
- What to remember?
Aim

- To encourage RHD students to learn to deal with the statistical and data management aspects of their research effectively and efficiently.
Assumptions

- RHD students should have a basic understanding of statistical concepts and some familiarity with statistical software.

- RHD students will have to undertake the actual statistical analysis.

Want to do a quantitative project with no understanding of statistics or managing data??
Statistical Approaches in Research

Data collection

Research questions?

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What the service provides?

**Offers statistical advising on:**
- Design of research studies
- Data collection and data management
- Statistical analysis of quantitative data
- Interpretation of computing outputs
- Presentation of statistical results

**Presents workshops on:**
- Statistical methods for data analysis
- Stata, a software for statistical data analysis
Does NOT offer:

- Formulating research questions
- Running the analysis
- Writing up the results or reading the drafts
- Providing tuition support
- Monitor/evaluate work undertaken
- Software installation/access issues [it@health.uq.edu.au]

Extended services:

- Formal supervision of RHD students
- Collaboration on papers, research projects, grants
When to seek advising?

@ planning stage:

- To ensure that the proposed research project is designed to address the research objectives, using the most pragmatic study design
- To find the numbers required for the proposed study in order to ensure adequate power
- To find the best practices for data management prior to the commencement of data collection
@ data analysis stage:
- To select the most appropriate statistical methods that will address the study objectives
- To implement the analysis using statistical software
- To ensure reliable and evidence based conclusions drawn from the analysis

@ presentation stage:
- To ensure best practice presentation of results
How does the service work?

- Statistical advising is offered through face-to-face consultation (not by email or phone); supervisors are welcomed and encouraged to attend.
- Each session is usually for an hour but brief meetings can also be arranged.
- To organize a meeting after 21 May, please email Asad: a.khan2@uq.edu.au.
- Waiting time varies from one to three weeks.
- Statistical software: Stata, SPSS(?).
What to remember?

- The researcher needs to describe the study objectives and expected outcomes quite thoroughly to get the best advice from the advisor.
- The advisor needs to develop an adequate understanding of the background to the statistical problem for which advice is sought.
- Having a clear idea of the problem in advance will always help you to get more out of the service.
Thank you

Questions?