

Applied Research Design and Analysis (ARDA)

Lecture One: Module Overview

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Module Structure

- ▶ Two hours to view pre-recorded weekly lectures on Moodle (2-4pm or prior)
- ▶ Two hour Interactive Online Workshop on Microsoft Teams 4-6pm
- ▶ One hour clinic on Microsoft Teams 6pm-7pm
- ▶ We will take breaks throughout the online sessions as appropriate.
 - ▶ Timings will need to be flexible to fit around content being covered each week.

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Moodle

- ▶ VERY IMPORTANT!!!
- ▶ Must check Moodle regularly for....
 - ▶ Weekly Planner
 - ▶ Module Handbook
 - ▶ Information on core texts & links to readings
 - ▶ Lecture slides and Recordings
 - ▶ Workshop materials
 - ▶ Assessment information and proformas
 - ▶ TurnItIn submission portals
- ▶ All session materials and datasets we will be working on during the workshops will be within the weekly tiles on the module Moodle page.
- ▶ The module Moodle page will also contain all the materials you need for completing the assessments on this module.

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Module Aims

- ▶ To develop critical knowledge of applied research design and associated analytical techniques (both qualitative and quantitative).
- ▶ To enhance students' understanding of good practice in data management and reporting in applied research in Psychology

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Learning Outcomes

- ▶ Upon the successful completion of this module, the student should be able to:
 - ▶ Be familiar with an advanced range of quantitative designs and statistical analytical techniques in Applied Psychology.
 - ▶ Demonstrate strong quantitative data inputting and data screening skills using appropriate software.
 - ▶ Identify appropriate qualitative approaches and their associated methodological considerations in Applied Psychology.
 - ▶ Recognise and identify appropriate qualitative and quantitative analyses and interpret and report data appropriately.
 - ▶ Present their work appropriately, within APA reporting frameworks, and with an understanding of requirements of data management frameworks and research governance.

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Module Content

- ▶ Basics of Applied Research methods and Statistics
 - ▶ Becoming familiar with large datasets
- ▶ Cleaning, Screening, and dataset preparation procedures
- ▶ Questionnaires, Scales, and Psychometrics
 - ▶ Managing scale data
- ▶ Sample size, Power, Effect sizes, Confidence Intervals
 - ▶ The difference between statistical and clinical significance
- ▶ Complex analyses
 - ▶ Multi-factor ANOVAs
 - ▶ Multiple Regression
- ▶ Conducting multiple analyses with the same dataset
- ▶ Qualitative applied research
 - ▶ Thematic analysis and IPA with applied data

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Module Assessments

- ▶ Component One: Practical Skills 1 (10%)
- ▶ Component Two: Quantitative Results Report Write-up (30%)
- ▶ Component Three: Qualitative Results Report Write-up (30%)
- ▶ Component Four: Practical Skills 2 (30%)
- ▶ See Moodle for further guidance and relevant materials
- ▶ Assessments will not be submitted in this order.
 - ▶ Please check the assessment proformas for specific submission deadlines.

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Practical Skills 1

- ▶ 60-minutes (1 hour)
- ▶ Work through an SPSS dataset on Moodle to:
 - ▶ Recode relevant scale scores
 - ▶ Reverse score relevant scale scores
 - ▶ Compute totals
 - ▶ Of full scale and sub-scales
 - ▶ Conduct Internal Reliability Analysis
 - ▶ Provide statements on the reliability of scales

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Quantitative Results Report Write-up

- ▶ A hypothetical SPSS dataset will be provided on Moodle
- ▶ You are expected to analyse the appropriate parts of the data within the dataset, as relevant, in order to answer the research question posed by a hypothetical study.
 - ▶ ANOVA (and follow-up analyses)
- ▶ You must then write-up the findings from the analyses (along with information on treatment of the data and key demographics of participants), as you would see in the results section of an applied research study report.

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Qualitative Results Report Write-up

- ▶ You will be provided with a transcript on Moodle.
- ▶ You should use Interpretative Phenomenological analysis (IPA) to carry out an in-depth analysis of the transcript.
- ▶ You must then write-up the outcomes from your analysis as you would see in the results section of an applied research study report.

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Practical Skills 2

- ▶ 120-minutes (2-hours)
- ▶ You will be provided with information about a hypothetical applied research study and two SPSS datasets on Moodle.
- ▶ Using the information about the study you will be required to answer a series of questions relating to the required Sample Size and Power of the study.
- ▶ Using the SPSS "Screening datasheet" you will be required to:
 - ▶ Screen the categorical and continuous variables within the dataset
 - ▶ Run descriptives on the categorical and continuous variables
 - ▶ Assess the normality of the data and interpret the output
 - ▶ Check for outliers
- ▶ Using the SPSS "Analysis datasheet" you will be required to:
 - ▶ Identify and run the appropriate descriptive and inferential analysis to establish differences between the two groups of participants in the study
 - ▶ Calculate the appropriate effect size statistic from the output
 - ▶ State and explain whether the findings meet *clinical* significance

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