

Quantitative Research Methods and Data Analysis

Module Code:	PSY5011-B
Academic Year:	2018-19
Credit Rating:	20
School:	School of Social Sciences
Subject Area:	Psychology
FHEQ Level:	FHEQ Level 5
Module Leader:	Dr Eleanor Bryant

Additional Tutors:

Pre-requisites: Introduction to Research Methods in Psychology 2017-18

Co-requisites:

Contact Hours

Type	Hours
Lectures	22
Laboratory	10
Directed Study	168

Availability Periods

Occurrence	Location/Period
BDA	University of Bradford / Semester 1 (Sep - Jan)

Module Aims

To expand on skills acquired in PSY4006-B and learn more advanced techniques for analysing data collected from experiments. In particular: experimental designs using two or more independent variables; designs with multiple levels of independent variables (factorial designs); analysis techniques for examining data from such experiments (Analysis of Variance - ANOVA, and the non-parametric equivalents). Also questionnaire design, carrying out analyses to examine reliability/validity; perform simple regression and multiple regression.

Outline Syllabus

- Regression and multiple regression.
- Types of experiments, factorial, within subjects, between subjects, mixed designs.
- Analysis of variance (ANOVA); univariate and multivariate. Non-parametric equivalents for ANOVA.
- Questionnaire design.
- Issues in psychometrics, response format issues; open ended and closed response formats.
- Reliability and validity analyses.
- Critical issues in statistics.

Module Learning Outcomes

On successful completion of this module, students will be able to...

- 1 be knowledgeable about a number of specialised quantitative analyses;
- 10 reason statistically and demonstrate competence in a range of statistical methods;
- 11 demonstrate ethical competence in psychological theory and research.
- 12 communicate ideas/research findings by effectively using written and visual means;
- 13 interpret and use numerical / statistical forms of data;
- 14 be computer literate to further your own learning in the analysis / presentation of ideas and research findings; approach problem solving in a systematic way;
- 15 undertake self-directed study;
- 17 recognise the need to assess your own skills and to harness them for future learning;
- 18 recognise the value of knowledge and its ability to be transformative;
- 19 recognise the value/application of ethical principles in a broader social context.
- 2 be knowledgeable about software to analyse data statistically;
- 3 be knowledgeable and demonstrate a critical understanding of quantitative research methods;
- 4 demonstrate knowledge of a range of quantitative research paradigms, research methods and measurement techniques;
- 5 demonstrate knowledge and application of ethical issues in quantitative research.
- 6 reason scientifically and demonstrate the relationship between theory and evidence;
- 7 detect meaningful patterns in behaviour and experience statistically
- 8 pose and operationalise research questions;
- 9 demonstrate competence in research skills through practical activities;

Learning, Teaching and Assessment Strategy

Lectures will be used to present factual information about advanced experimental design and statistical techniques (LO1-5). Practical sessions will be used to teach you selective computer analysis packages and provide experience with handling large data sets (LO6-11). These practical sessions are also used to consolidate the theory learnt in the lectures (LO6-19). The exam and research article will assess all Learning Outcomes.

Mode of Assessment

Type	Method	Description	Length	Weighting	Final Assess'
Summative	Examination - closed book	MCQ short answer and output interpretation unseen exam at the end of semester	1.5 hours	50%	Yes
Summative	Coursework	Research article based on a data set produced in the practical sessions.	-2000 words	50%	No

Legacy Code (if applicable)

SY-5012L

Reading List

To view Reading List, please go to [rebus:list](#).