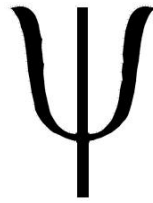




Academic Discipline: Psychology and Counselling



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BSc (Hons) Psychology and Counselling

Module ECPS4003

Research Methods I

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Module Handbook

2019-20

Module ECPS4003 Research Methods I

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This handbook has been designed to provide you with the necessary information required for your progression throughout the module. It is very important that you keep this in a safe place as it is your essential guide to module content and the learning outcomes required to complete the module.

Good luck with your studies. If you have any queries regarding this module, please contact the module leader.

Table of Contents

Module ECPS4003 Research Methods I	2
ECPS4003 Research Methods I: Module Requirements.....	5
Module Core Text and Wider Reading.....	6
Lectures and Seminars	7
Readings.....	7
A message about Research Methods I from the Module Leader.....	8
Assessment Criteria at Level 4.....	10
Module Series Information and Assessment Plans	11
Lecture One: Differences between samples	14
Workshop One: Data collection / Chi-square.....	14
Lecture Two: Organising data.....	15
Workshop Two: Frequencies / Chi-square.....	15
Lecture Three: Significance testing.....	16
Workshop Three: Introduction to SPSS.....	16
Lecture Four: Experimental and non-experimental designs	17
Workshop Four: Variables and operational definitions.....	17
Lecture Five: Correlation.....	18
Workshop Five: Correlation analysis	18
Lecture Six: T-test.....	19
Workshop Six: T-test analysis	19
Lecture Seven: Introduction to qualitative research	20
Workshop Seven: Qualitative skills practical	20
Lecture Eight: Qualitative methods and analysis	21
Workshop Eight: Qualitative analysis	21
Lecture Nine: Validity and reliability in psychological research	22
Workshop Nine: Psychological tests and measurement scales	22
Lecture Ten: Revision session.....	23
Workshop Ten: Independent revision time	23

ECPS4003 Research Methods I: Module Information

This is a Level 4 module and therefore is designed to provide you with the foundational skills which will be critical for future years of your degree programme. Through the Research Methods module you will develop your understanding of the concepts and principles of research design, ethics and statistical analysis. The skills you will learn in this module are absolutely essential in underpinning your progression throughout your degree.

Lectures for this module will introduce different types of research in psychology, as well as research design and ethics. Workshops will be more practically based and will allow you to practice techniques, use statistical packages to analyse data, and allow you to engage in peer discussions about the topics introduced within lectures.

It is essential that you do not miss any lectures or workshops for this module and that you have prepared adequately when it is required.

ECPS4003 Research Methods I: Module Requirements

Module Code: ECPS4003
Title: Research Methods I
Module Leader: Stacey Coleman
Level: 5
Semester: 2
Credits: 20

AIM(S)

The aim of this module is to:

- Introduce students to quantitative and qualitative research design and analyses and their appropriate application, taking into consideration ethical principles of research.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

- Demonstrate an awareness of a number of qualitative and quantitative research methods and their applications
- Understand the principles of ethical research
- Recognise and use appropriate methods of collecting, describing and analysing research data

Allocations of teaching to deliver the module are:

Activity type	Hours	Percentage
Scheduled Learning: • Lectures = 10 hours • Workshops = 20 hours	30	15%
Independent Learning	170	85%
Total	200	100%

This module will be assessed through four assessment components, each worth a specific percentage of your overall module mark.

1. A 1,500 word quantitative study report. You will be required to calculate and report a simple non-parametric analysis. (30%)
2. A second 1,500 word quantitative study report. This report will be focused on a parametric analysis using a simple experimental design, and you will be analysing provided data. (30%)
3. A one hour open book exam will enable students to demonstrate an awareness of quantitative research design issues and associated ethical considerations, and to demonstrate the ability to carry out basis analyses that describe simple research data. (30%)
4. A 500 word reflective log that demonstrates your awareness of the research topics and studies you have taken part in over the course of the first semester, including reference to their related ethical and design issues. (10%)

Please see the individual Assessment Proformas on the Research Methods II Moodle page for specific information regarding the assessment questions, requirements, and submission deadlines.

For this module you must submit all four pieces of work for assessment and record a mark for each of the three elements of greater than zero, but to pass the module you require a combined mark of 40% or higher. Please note that this module is a core module and, therefore, you must pass this module in order to progress with your degree.

Module Core Text and Wider Reading

Classification	Reading List Entry	Electronic*
Essential	Brace, N., Kemp, R., & Snelgar, R. (2016). <i>SPSS for psychologists</i> . (6th ed.). Hants: Palgrave Macmillan	☐
Essential	Coolican, H. (2014). <i>Research methods and statistics in psychology</i> . (6th ed.). London: Hodder & Stoughton.	☒
Further	Smyth, T.R. (2004). <i>The principles of writing in psychology</i> . Basingstoke: Palgrave Macmillan.	☐
Further	Harris, P. (2008). <i>Designing and reporting experiments in psychology</i> . (3rd ed.). Milton Keynes: Open University Press.	☒
Further	Beins, B.C., & Beins, A. M. (2012). <i>Effective writing in psychology: Papers, posters and presentations</i> . (2nd ed.). Oxford: Blackwell.	☐

Lectures and Seminars

This is a Level 4 module and is intended to provide you with the foundational knowledge and skills that will be critical for future years of your degree programme.

This handbook clearly sets out the requirements for your individual learning and it is expected that students will engage in all readings set out for lecture and seminar preparation.

Readings

Readings and preparation for this module are set out in the Module Information section of this handbook and are **essential**. There are two essential textbooks for this module that each have their own place in regards to the topics that will be covered throughout this module. There are multiple copies available in the library of each book, and the *research methods and statistics* textbook is also available online via the University library system. Some weeks will require you to engage with a chapter, or a number of chapters, from these books; please ensure you are aware of what is being covered each week and prepare accordingly.

Readings beyond the core texts for this module can be found through the University library system. When a reading is not widely available (e.g., a book chapter) it will be made available to you on the module Moodle site. However, journal articles that are freely available through the University system will not be made available on Moodle: you will need to retrieve them for yourself.

Lectures and seminars can only provide you with a scaffold of information – it is your wider reading that will help you to develop a comprehensive understanding of the topics discussed in. It is suggested that you carry out the essential readings as we go along as this will enhance your understanding of the overall topics. It is often best to consolidate your learning by reading the text again; not only will this help you learn it will give you the information to digest any information provided in the lecture/seminar in your own way.

This module has been structured in such a way that the readings and lectures/workshops are integrated; someone who has prepared by carrying out the reading, attending the lecture and then reviewed the material should develop a good understanding of the material. A student who attends the lecture but does not carry out any of the readings will, in all likelihood, struggle to even understand what is being talked about in the lecture; they certainly will not develop the knowledge that will be required at more advance levels of their degree.

While the scheduled practical sessions are essential, it is also beneficial that you practice using the software as much as possible, whether that is at home or on campus. It has been shown experimentally that the best learning occurs cognitively when you reach a

problem solution yourself. Please try to remember this when you feel stuck or frustrated (or both) during the practical workshops. Read the handouts carefully and in order. It is often a case of slowing down, going back over the steps of the procedure and making sure you haven't missed something out. It is much less useful to simply ask for help and an answer – you are much less likely to remember the solution or understand it that way! Therefore, when you are working practically try to find a solution before you ask for help. At certain points in the procedure (and specifically at the end of the session) we will all stop and consider the analysis together as a group, so you can check whether you feel confident of the analysis you have produced.

A message about Research Methods I from the Module Leader

Research Methods, in general, is a module that many students approach in the wrong way; it is a 'dry' topic, it is difficult, it involves incomprehensible equations... these are common assumptions and are often incorrect if you approach it in the right way. Understanding how research works, from study inception to analyses, can give a whole new level of understanding to the exploration of every topic you cover. However, you need to be systematic and methodical in your approach to studying and understanding research methods; dipping in and out of the subject as and when you think something is interesting and/or important for you to learn for your assessment rarely works, and for this module certainly will not work.

The Module Series Information page of this document sets out what you will be doing across the course of this module and the suggested readings that go with each session. Before you engage in the readings for this module please consider three important points:

1. The 'core' SPSS book recommended for your readings is Brace et al. (2012), but if you prefer a different text that is fine (for example, some people prefer the Pallant [2010] over the Brace et al., text on using SPSS), just so long as it contains a similar level of coverage to the core text (you are not going to get the same level of understanding of a research methods and statistics book in a 'research for dummies' book). The Coolican (2014) and the Pallant books are available in our online library system whilst the Brace et al., book is only available as a hard copy, but your choices regarding access to these books should only play a small part in your choice.
2. The level of the readings and the classes for this module assume some degree of prior reading and initiative on your behalf; there is not enough hours to be taught **everything** that can possibly be taught in relation to research methods by me standing up and lecturing you! Engagement is critical and is key. As long as you approach things in a logical, linear way then you should have no problems with this module.

3. If you do struggle with this module, if you hate statistics, if you don't understand design... that is even more of a reason for you to attend and engage with the readings, lectures and workshops of this module. Research lies at the heart of all areas of psychology. Anywhere you go on to work, whether it be in science, mental health support, or an office job, you will (or should) always use evidence-based policy and procedures. Research tells us what works and what does not work. It is a skill you should master and then use for the rest of your life.

Your developing academic skills and research knowledge will be assessed through two academic reports, an exam and a reflective log. For each written assignment you will receive guidance on the academic proforma which will be posted on Moodle and you will be expected to demonstrate appropriate academic standards and referencing in each assessment component.

In the Module Information section of this handbook you will see that time has been allocated to each of the summative assessments for this module. This should provide you with ample time to complete your assessment but also emphasises the need to plan ahead and ensure that you spend the required time on your assessed work.

Please see the individual Assessment Proformas on the Research Methods I Moodle page for specific information regarding the assessment questions, requirements, and submission deadlines.

Please note: Lectures will start promptly at 9:05am. Late entry will only be permitted at points where the academic staff feel it is appropriate, as it is unfair on students who have arrived on time when their lecture is disrupted by late-attending students. Please also note that no materials will be repeated for those arriving late.

Assessment Criteria at Level 4

At Level 4 it is expected that students will demonstrate the following qualities:

- Be able to write in well-formed English sentences, paragraphs and essays so as to present arguments in a clear and effective manner.
- Be able to speak in a direct, coherent and effective fashion.
- Be able to find relevant information to inform written and oral communication.
- Understand how to gain information through the use of library facilities.
- Be able to work individually.
- Begin to understand the theoretical concepts behind the forms of knowledge encountered in their study.
- Understand the difference between, and relationship between, primary and secondary data.
- Be able to acquire computer and other IT skills.

The following pages set out the lecture structure for this module. This handbook and the associated Moodle folder should be used to keep track of what is being covered each week and what you are required to do to prepare for lectures and seminars each week.

Module Series Information and Assessment Plans

Date	Lecture Title	Workshop Topic	Preparation (Coolican, 2014 unless otherwise stated)	Time Allocated
Monday 27 th Jan	Differences between samples	Data collection for REP30_1 Chi ²	Chapters 17 & 18	6 hours
Monday 3 rd Feb	Organising data	Frequencies Interpretation of chi ² and reporting results	Chapters 13, 14, 15 & 18	8 hours
Monday 10 th Feb	Significance testing	Introduction to SPSS	Chapter 16	4 hours
Reading Week				
Monday 24 th Feb	Experimental and non- experimental designs	Variables and operational definitions	Chapters 3 & 5	6 hours
Monday 2 nd March	Correlation	Correlation analysis	Chapter 19	4 hours
Monday 9 th March	T-test	T-test analysis	Chapter 17	4 hours
Monday 16 th March	Introduction to qualitative research	Qualitative skills practical	Chapters 7, 10 & 11	6 hours
Monday 23 rd March	Qualitative methods and analysis	Qualitative analysis	Chapters 10 & 12	4 hours
Easter Break				
Monday 20 th April	Validity and reliability in psychological research	Psychological tests and measurement scales	Chapters 4 & 8	6 hours
Monday 27 th April	Revision session	None – revision time	None	0

Suggested plan for Assessment One: Chi ² Report		
Task	What it entails	Time assigned for task
Data collection	Participating in a task to collect data – you will then be provided with the data to conduct the appropriate analysis	This will take place during scheduled workshops
Topic readings	Reading related to the area of research; basic articles/books and more advanced specific journal articles	Basic reading = 10 hours Advanced reading = 6 hours
Data analysis	Simple descriptive statistical calculations; calculating and interpreting <i>chi-square</i>	This will be practiced during workshops and will require an additional 4 hours of independent work
Report first draft	Write main sections of report; Introduction Method Results Discussion	6 hours
Report second draft	Check for coherence of each section of the report; add abstract	4 hours
Report final draft	Constructing the version that is to be submitted, complete with citations and full reference list in APA style, and map/table of themes included in appendix	4 hours
Proofread and check	Proofread for structure and errors, check for correct formatting and presentation	2 hours
Total allocated to assessment = 36 hours		

Suggested plan for Assessment Two: T-test Report		
Task	What it entails	Time assigned for task
Topic readings	Reading related to the area of research; basic articles/books and more advanced specific journal articles	Basic reading = 10 hours Advanced reading = 6 hours
Report first draft	Write main sections of report; Introduction Method Results Discussion	6 hours

Data analysis	Enter data into SPSS; analyse data to report descriptive and inferential statistics	This will be practiced during workshops and will require an additional 4 hours of independent work
Report second draft	Check for coherence of each section of the report; add abstract	4 hours
Report final draft	Constructing the version that is to be submitted, complete with citations and full reference list in APA style, and all appendices included	4 hours
Proofread and check	Proofread for structure and errors, check for correct formatting and presentation	2 hours
Total allocated to assessment = 36 hours		

Suggested plan for Assessment Three: Reflective Log		
Task	What it entails	Time assigned for task
Recording studies you have participated in	Making notes following each study you take part in; record details of study, design flaws and ethical considerations	2 hours
Consolidation of research design and ethics knowledge	Revisiting information delivered throughout the module and engaging with textbooks	4 hours
First draft of reflective log	Write up initial draft of reflection including details of a number of studies you have participated in	4 hours
Second draft	Refining reflection and including a solid conclusion	2 hours
Final draft of reflective log	Writing final version that will be submitted, complete with citations in the text and a full reference list in APA style	2 hours
Proofread and check	Proofread for structure and errors, check for correct formatting and presentation	2 hours
Total allocated to assessment = 16 hours		

Suggested plan for Assessment Four: Open Book Exam		
Task	What it entails	Time assigned for task
Revisiting information from lectures/workshops	Finding and reading information related to the topics covered throughout the semester	34 hours
Total allocated to assessment = 34 hours		

Total time required to complete this module = 200 hours

Lecture One: Differences between samples

In this lecture you will be discussing the differences between parametric and nonparametric statistics and considering WHY this difference is important for the statistical test that we choose to use to analyse any data we collect. You will be introduced to some of the basic assumptions of parametric testing plus the alternative criteria of non-parametric testing. At the end of this lecture, we will start to look at the statistical calculation for a chi-square analysis and you will be practicing this in upcoming workshops.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press **Chapters 17 &18**

Workshop One: Data collection / Chi-square

For the first part of this workshop you will be engaging in a small research study in order to collect data to complete your first report assessment for this module. For the remainder of the session you will start to use 'dummy data' to practice calculating simple descriptive statistics and begin to work through calculating the chi-square analysis you will need to report for this assessment. This analysis is required for you to infer statistical significance from the specific study data you will be analysing.

Lecture Two: Organising data

In this lecture we will recap on how we use statistics in psychology. We will look at different types of data that we can collect when we conduct quantitative research and we will focus upon different levels of measurement. We will then look at how we can summarise a large amount of numbers/data and recap on how we use measures of central tendency and dispersion to describe the sample we use in our research. You will learn the importance of using sample/descriptive statistics to describe samples based upon the data you have gathered and will be introduced to the concepts of normal distribution and standard deviation. We will end the lecture with a brief look at frequencies within larger sets of data.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press **Chapters 13, 14, 15 &18**

Workshop Two: Frequencies / Chi-square

At the beginning of this workshop we will be looking again at why we use categorical variables in our research, and you will be introduced to frequency tables to show your data when collecting categorical data. We will then look at how to interpret the results of the chi-square analysis you have been calculating and how to present this appropriately in your full written report.

Lecture Three: Significance testing

In this lecture you will learn more about the ways in which we can use statistics in psychology, moving away from descriptive statistics to developing an understanding of probability, hypothesis testing and inferential statistics. We will look at the difference between the experimental hypothesis and null hypothesis, and you will learn what we mean by aiming to 'reject the null'. We will then move on to looking at level of significance, errors, and power within statistical testing.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press **Chapter 16**

Workshop Three: Introduction to SPSS

In this workshop you will be introduced to the Statistical Package for the Social Sciences (SPSS); a form of software that we use in psychology to run statistical analyses on data. You will start to input simple descriptive data and will be shown how to run basic descriptive statistical tests.

Lecture Four: Experimental and non-experimental designs

This week we will begin by exploring the role, and features, of experiments and we will discuss the difference between relationships between variables and differences between conditions in experiments. You will be introduced to the strengths and weaknesses of using certain types of designs in experimental settings, for example, related versus unrelated designs.

We will then explore a number of non-experimental designs in psychological research and will discuss the difference between ‘true’ experiments and field experiments. We will end the lecture with a brief introduction to qualitative research methods such as interviews.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press **Chapters 3 & 5**

Workshop Four: Variables and operational definitions

Just before the mid-point of this module, we will recap upon the different types of variables used in experimental and non-experimental designs. Using a number of different examples, you will learn how research questions are developed and the importance of using operational definitions and representative samples in your research.

Lecture Five: Correlation

During this week's lecture you will be introduced to the design and statistical analysis of correlation. We will be exploring the measurements and types of data that are required to be able to conduct this type of non-experimental analysis, and will discuss the strengths and limitations of using a correlation analysis. We will revisit significance levels and put this into context of explaining whether results are significant or non-significant, and whether we have a **relationship** between variables. We will end the lecture with a brief overview of the common uses of this types of test and we will discuss what CAN'T be assumed when using the correlation analysis, too.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press **Chapter 19**

Workshop Five: Correlation analysis

You will be using SPSS to practice the correlation analysis and we will begin to look at how we interpret the results of this statistical test.

Lecture Six: T-test

During this week's lecture you will be introduced to the statistical analysis of the t-test. We will be exploring the measurements and types of data that are required to be able to conduct this type of analysis, and will discuss the strengths and limitations of using a t-test analysis. We will revisit significance levels and put this into context of explaining whether results are significant or non-significant, and whether we can observe a **difference** between levels of our variables. We will end the lecture with a brief overview of the common uses of this types of test and we will discuss what CAN'T be interpreted through conducting a t-test analysis, too.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press **Chapter 17**

Workshop Six: T-test analysis

You will be using SPSS to practice the t-test analysis and we will begin to look at how we interpret the results of this statistical test. You will also be given time towards the end of this session to run the t-test analysis on your report data.

Lecture Seven: Introduction to qualitative research

During this lecture we will be exploring alternatives to the traditional scientific method in psychological research and debating the problem with quantification, and you will then be introduced to qualitative research methods. We will consider the role qualitative research has to play in psychology and explore a number of different qualitative methods, including interviews and focus groups.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press **Chapters 7, 10 & 11**

Workshop Seven: Qualitative skills practical

During this workshop you will be engaging in the practice of interviewing skills. You will be required to work in groups to create your own research questions (keeping in mind that these must fit a qualitative design), and you will then be using these questions to gather your 'data' from your peers.

Lecture Eight: Qualitative methods and analysis

We will continue to look at qualitative research methods this week and we will be exploring the effects of interpersonal variables when gathering and analysing qualitative data. You will then be introduced to the ways in which qualitative data may be analysed, specifically focusing on interview and focus group data (which are common methods of data collection employed for final year dissertations). We will end the lecture with a discussion about the reliability and validity of qualitative methods.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press **Chapters 10 & 12**

Workshop Eight: Qualitative analysis

For the entirety of this workshop you will be working through the steps of thematic analysis on a provided transcript. You are required to follow the steps of thematic analysis and attempt to analyse the information that has been presented from the data in the transcript. As part of a formative assessment for this module, this transcript will then be collected at the end of the session and feedback will be provided to each individual on the analysis you have conducted.

Lecture Nine: Validity and reliability in psychological research

In this lecture you will be introduced to the concept of psychometric standards in psychological research. You will learn about the importance of validity in experimental settings and in qualitative research, and will also discuss the importance of choosing reliable and valid measures when conducting research using surveys, for example. To end the lecture we will be looking at how validity and reliability can be measured and you will continue this in today's workshop.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press **Chapters 4 & 8**

Workshop Nine: Psychological tests and measurement scales

During this week's workshop you will be completing a number of scales, tests and/or questionnaires in order to practice scoring of psychological scales. You will be introduced to the concept of measuring reliability and validity and we will discuss why standardisation is important when choosing a scale to use in research.

Lecture Ten: Revision session

This week we will be using the lecture to revisit key areas covered throughout the module in preparation for your upcoming exam. You should use this lecture to clarify any issues you have, ask any questions and work with your peers to formulate a realistic plan for revising thoroughly for this exam.

Workshop Ten: Independent revision time

You are expected to use the workshop time this week to begin to engage in revision for the upcoming exam.