**Quantitative Portfolio (CW2)**

## Learning Outcome for CW2

On successful completion of this module, you will be able to:

1. Demonstrate competence in selecting, conducting and interpreting a range of statistical techniques using appropriate computer software for statistical analysis (SPSS), appropriate to a range of quantitative research designs (CW2);

You will be presented with **three** research questions and accompanying data sets. You may be required to enter the data by hand or to transfer it from Excel to SPSS for analysis. For each question you are required to conduct and then report the findings of an appropriate analysis of the data provided, in the reporting style shown during the module. You should clean and screen the data prior to any analyses and routinely report appropriate estimates of effect size and other relevant statistical information where appropriate. You should also include appropriate and clearly expressed predictions.

For each question/exercise you should include the following sections:

• Prediction(s): These should be clearly written and explain what you would predict based upon the description of the research question.

• Results: This section should begin with coverage of data screening. You should then write up the results of the chosen statistical test(s) in the reporting style you will be shown during the module.

• Discussion: There should be a brief (i.e. a few sentences) discussion of the findings of the results in light of the research question.

• Appendix *(not included in word count):* Please include any calculations and all relevant SPSS outputs (e.g. data screening checks, analyses etc.) as appendices. (Please provide an appendix for each question, rather than a single appendix at the end).

**NOTE: The raw data needed for each question can be found in the accompanying raw data document. Note the data are all presented in Excel format. You will need to transfer the data to SPSS in order to conduct the analyses.**

**Question 1: BASS Dataset**

Media images of unrealistic beauty have been identified as a determinant of women’s body dissatisfaction. A researcher aimed to explore whether the negative impact of such images could be reduced by a one-time educational intervention teaching women to be critical of media images. Participants were randomly assigned to one of three groups:

1) Educational intervention with presentation only;

2) Educational intervention with presentation + discussion;

3) Control group. Body dissatisfaction was measured using The Body Areas Satisfaction Scale (BASS) (Cash, 2002) where higher scores, out of 5, are more satisfied. BMI was also calculated for all participants.

***Do body dissatisfaction scores differ between the three groups, when controlling for BMI?***

**Question 2: CHD Symptoms**

Eighty patients at a cardiac clinic were examined for symptoms of coronary heart disease (CHD). Investigators also administered a PET scan to examine how occluded (blocked) their arteries were. The data set you have been provided with contains the following variables:

1. Occlusion (degree of arterial occlusion)
2. Patient age (in years)
3. CHD symptoms (where 1 = yes (symptoms present), 0 = no (symptoms absent))

**You have been asked to examine whether occlusion score (the degree to which the arteries are occluded) and age of patient predicts the presence or absence of CHD symptoms.**

**Guidelines**

Most of the exercises do not have precise ‘model answers’ as this can be restrictive. Although examples will be provided throughout the module on how to word answers, these are not necessarily definitive; as long as the answers contain the correct information presented in a clear manner, it is possible for a student to pass (or achieve a high grade) even if they haven’t followed the exemplars word-for-word.

A passing answer will show some ability to state predictions for analyses, but may omit some aspects of the analysis and may not include meaningful directions. Screening and treatment of data may be limited or may require clearer justification. The tests chosen will largely be suitable and will be performed and reported adequately, but there may be some errors, lack of detail or lack of understanding evident in places, and effect sizes and power calculations may not always be included. There will be some relevant discussion of findings but this may be overly brief or require a clearer focus on the research question. Relevant SPSS outputs will be included but some parts may be missing.

A good answer will include clearly stated predictions for all aspects of the analysis (e.g. main effects and interactions) with meaningful directions. There will be full screening of data, with clear justification for any treatment of data and for the use of each statistical test. The tests chosen will be suitable, correctly performed and clearly reported in an appropriate format, including effect sizes and power calculations where appropriate. The findings will be clearly discussed with reference to the research question. All relevant SPSS outputs will be included.