

**MSc Coaching / Coaching Psychology**  
**GCM256: Quantitative Research Methods and Statistics**  
**Component 2: Coursework based on Quantitative Data Analysis using SPSS.**

Submit your course work in the form of a report (**1,000 words**) based on quantitative data analysis using SPSS by noon on **6<sup>th</sup> July 2012**. This assessment is worth 30% of the total assessed coursework for this module.

You have been introduced to several exploratory quantitative data analysis concepts and techniques using SPSS. On UEL plus and also in Moodle you will find a fairly large SPSS data set with a number of variables. From this data set, you need to demonstrate your ability to use of a minimum of **two** of the statistical techniques (e.g. correlation and t-test). You are required to formulate relevant research questions and **four** hypotheses from the available data, and then select the appropriate statistical analysis in order to address those questions. You are asked to demonstrate your understanding of the data analysis in the form of a brief report.

**Research Scenario:**

After gaining ethical approval, a researcher has recruited 160 participants. 80 of these received a coaching intervention based on mindfulness training (labelled 'intervention group' in the SPSS file). The other 80 individuals recruited would not receive the training (labelled 'control group'). The data were collected using the following self-report questionnaire measures:

- Attentional control
- Trait anxiety
- Attachment anxiety
- Mindfulness

The measures obtained gave data for the following variables: the variable "attentional control" (range: from 20 for low control to 80 for high), the variable "trait anxiety" (range: from 20 for low to 80 for high); the variable "adult attachment anxiety" (range from 1 for low anxiety, to 100 for high anxiety), and the variable "mindfulness" (range: 15 low mindfulness to 90 high mindfulness). The first three measures were collected at the start of the study for both Groups A and B. The variable "mindfulness" was measured on two occasions: (i) once before the mindfulness coaching 'intervention' (pre-mindfulness), and (ii) once after the intervention (post-mindfulness). (Although, remember, only half the participants actually took part in the mindfulness coaching intervention.)

The data set for the above research was recorded in SPSS (N=160). Age, gender and ethnicity were also collected and recorded.

From this information, you could ask a number of questions. You could see whether there are relationships between two or more of the variables (correlation), or you could address whether the training intervention appears to work, by making a "difference" comparison using pre and post-mindfulness scores (t-test). These are examples – there may be other questions you can ask of the data, too, and you can explore the effects of demographics on the study variables too. Remember every analysis must be hypothesis driven though (and the logic of each hypothesis should be justified).

Formulate appropriate research questions and develop four hypotheses to test your predictions, choose the appropriate statistics, and then analyse the data accordingly using SPSS. Write up the results in appropriate (APA) format.

The write up format

Write up the above as a brief research report with the following section headings:

1. **Introduction** (approx 250 words) briefly justify your research questions and clearly state your four hypotheses
2. **Design(s)** (approx 200 words) you may have both experimental and non-experimental designs, the independent and the dependent variables must be listed. You also need to describe what type of design you have used for each hypothesis
3. **Results** (approx 200 words excluding graphs or tables) figures must be included and statistics reported in APA format with an appropriate narrative
4. **Discussion** (350 words) interpret the results and state whether you have supported your hypotheses or not, consider any limitations and reflect on the use of self-report measures and hypothesis testing in relation to the coaching profession
5. **References** (provide full reference details using APA referencing standards)
6. **Appendix** (which should consist of *relevant* SPSS outputs).

To complete this assessment you must:

- Select appropriate dependent variable/s and independent variable/s.
- Formulate aims/ research question/s.
- Formulate four suitable statistical hypotheses.
- Compute the relevant statistics using SPSS.
- Generate SPSS output.
- Analyse and interpret the results.
- Draw conclusions from your analyses and interpretations.

We are looking for sensible statistical interpretation, as well as practical understanding of the SPSS and knowledge of how to present the results in writing to readers. The word count (1000 words) does not include figures, references or appendices.