**SPSS assignment**

Worth 15 marks

1. SPSS statistical analysis of “dummy” data and interpretation - 15%.

Based upon their hypothesis, students will create a dummy data set that mimics the data collection that they propose. Students use SPSS to analyse this dummy data set and submit the analysis and interpretation of the analysis. Although students are encouraged to work on the SPSS assignment as a team helping each other out, **each student must complete their own SPSS assignment.** This assignment is to be e-mailed to the TA in a Word Document by the deadline.

If students show their TA’s their work in advance of the deadline and still have time to correct any issues that the TA’s find, they can get the whole 15%. While students can hand in their assignment to be verified prior to the deadline, the TA’s will accept it no more than 2 times because it is assumed that after going over it twice students should be more than well informed and we wouldn't want to be 'doing' the assignment for them. If they show TA’s their work in advance but don't leave TA’s enough time to send them feedback so they can send in a correct version by the deadline- they will get partial marks.

Bottom Line- all students can easily get 15 marks.

As one TA wrote to me: “So far many students have been really great about getting my input and help before the deadline so I suspect there will be lots of 15’s”

1. **How material should be submitted**

TA’s will want to receive electronic copies of the material in a Microsoft Word Document. In addition, students must also attach the SPSS output – you can scan or attach the SPSS output by copy and paste each table, graph etc. Each student will need to submit their own material.

**What to submit in the word document:**

1. Hypothesis or hypotheses if several
2. Data to test hypothesis in forms of tables, graphs, histograms, bar-graphs, scattergrams etc as appropriate
3. A statistical test (e.g. t-test; r; ANOVA, Chi-Square, etc) Using APA guidelines – see next page
4. Show test output from SPSS e.g. the tables from a t-test- this will not be put into your final paper- but helps TA see your work for this exercise.\*\*\*
5. A statement as to whether the test was significant or not. For example, you may state in this section: t(8)=3.47, p=.017 This is a significant result- the null hypothesis is rejected and we support the first hypothesis noted in section 1 above. Or r(55)= +0.49, p<0.001 This is a significant correlation- the first hypothesis is supported.
6. A conclusion in the form of “The results support the hypotheses that university graduates score higher on self-esteem tests than non- university graduates.”
7. We want to see how you deal with supported and non-supported hypotheses. If you have more than 1 hypothesis, you must create the data set so that at least one is supported and at least one is not. If you only have 1 hypothesis, you must create the data set twice- once where the hypothesis is supported, and once where it is not supported.

\*\*\* Please attach your SPSS output to your word document

**Other options to gain access to the SPSS Program**

There are several locations on campus where you can access SPSS. You will need access to FAS - File Access Service is an account. To obtain FAS - login to Manage My Services

WebFAS (allows you to use SPSS at home.) WebFAS is a new UIT web service that enables remote access to many applications in labs and Libraries.. For access and information go to: http://www.yorku.ca/computing/students/labs/webfas/

Students are encouraged to work in their teams during the SPSS classes. You may decide to have one large SPSS file that covers all of your groups variables, or you may wish to have one file per student. It really does not matter- both work well.

**You might find this guidelines helpful- taken from the Illinois State University WEB site.**

**Reporting Statistics in APA Style**

**Dr. Jeffrey Kahn, Illinois State University**

The following examples illustrate how to report statistics in the text of a research report. You will note that significance levels in journal articles--especially in tables—are often reported as either *"p* > .05," "*p* < .05," "*p* <.01," or "*p* < .001." APA style dictates reporting the exact p value within the text of a manuscript (unless the p value is less than .001).

Please pay attention to issues of italics and spacing. APA style is very precise about these. Also, with the exception of some p values, most statistics should be rounded to two decimal places.

**Mean and Standard Deviation are most clearly presented in parentheses:**

The sample as a whole was relatively young (*M* = 19.22, *SD* = 3.45).

The average age of students was 19.22 years (*SD* = 3.45).

**Percentages are also most clearly displayed in parentheses with no decimal places:**

Nearly half (49%) of the sample was married.

**Chi-Square statistics** are reported with degrees of freedom and sample size in parentheses, the Pearson chi-square value (rounded to two decimal places), and the significance level:

The percentage of participants that were married did not differ by gender, χ2 (1, N = 90) = 0.89, *p* = .35

**T Tests** are reported like chi-squares, but only the degrees of freedom are in parentheses. Following that, report the t statistic (rounded to two decimal places) and the significance level.

There was a significant effect for gender, *t*(54) = 5.43, *p* < .001, with men receiving higher scores than women.

**ANOVA**s (both one-way and two-way) are reported like the t test, but there are two degrees-of-freedom numbers to report. First report the between-groups degrees of freedom, then report the within-groups degrees of freedom (separated by a comma). After that report the F statistic (rounded off to two

decimal places) and the significance level.

There was a significant main effect for treatment, *F*(1, 145) = 5.43, *p* = .02, and a significant interaction, F(2,

145) = 3.24, p = .04.

**Correlations** are reported with the degrees of freedom (which is N-2) in parentheses and the significance level:

The two variables were strongly correlated, *r*(55) = .49, *p* < .01.

**Regression** results are often best presented in a table. APA doesn't say much about how to report regression results in the text, but if you would like to report the regression in the text of your Results section,

you should at least present the unstandardized or standardized slope (beta), whichever is more interpretable given the data, along with the t-test and the corresponding significance level. (Degrees of freedom for the t-test is N-k-1 where k equals the number of predictor variables.) It is also customary to report the percentage of variance explained along with the corresponding F test.

Social support significantly predicted depression scores, b = -.34, *t*(225) = 6.53, *p* < .001. Social support also

explained a significant proportion of variance in depression scores, R2 = .12, *F*(1, 225) = 42.64, *p* < .001.

**Tables** are useful if you find that a paragraph has almost as many numbers as words. If you do use a table, do not also report the same information in the text. It's either one or the other.

**Based on: *American Psychological Association.* (2010). Publication manual of the American Psychological Association (6th ed.). Washington, DC: Author.**