Psy 524

Lab #5 MANOVA/MANCOVA

1. Using the example in T&F, write matrix syntax in SPSS to show all the steps to calculating the sums-of-square-and-cross-products (SSCP) matrix for disability, the determinant of the SD matrix, the determinant of the SD + SS(DT) matrix, Wilk’s Lambda and the approximate F for Wilk’s Lambda. Yes, all through syntax. Copy and paste the syntax and the output below. Interpret and annotate.

**Highlight here and paste syntax and output.**

1. Run a multivariate Tau Squared analysis; this is called Tau Squared (Τ2) because it is the multivariate equivalent of a t-test. Open “**forclass.sav**”; **Analyze** 🡪 **General Linear Model** 🡪 **Multivariate**. Predict **sos**, **ego**, **n**, **e**, **o**, **a** and **c** by **gender** (assume 0 is male and 1 is female). Include descriptives, estimates of effects size, homogeneity tests and graphs of gender. Copy, paste, annotate and interpret (make sure to include alpha adjustment in the univariate tests).

**Highlight here and paste output.**

1. Open “**survey.sav**”.
   1. Perform MANOVA predicting **total optimism**, **total mastery**, **total positive affect**, **total life satisfaction**, **total perceived stress**, **total self esteem** and **total social desirability** by **source of stress**. Include descriptives, estimates of effects size, homogeneity tests and Scheffe test. Copy, paste, annotate and interpret the output.
   2. Perform MANOVA predicting total optimism, total mastery, total positive affect, total life satisfaction, total perceived stress, total self esteem and total social desirability by source of stress **and** marital status. Include descriptives, estimates of effects size and homogeneity tests. Copy, paste, annotate and interpret the output.
   3. Perform a Roy-Bargman stepdown procedure of ‘b’ using the order in the data (total optimism, total mastery, total positive affect, total life satisfaction, total perceived stress, total self esteem and total social desirability). Copy, paste, annotate and interpret the data.

**Highlight here and paste output.**

1. Open “**hatco.sav**” and perform a MANCOVA analysis. Predict **Delivery Speed**, **Price Level**, **Price Flexibility**, **Manufacturer Image**, **Service,** **Salesforce Image**, **Product Quality** by **Firm Size** and **Type of Industry** (SIC) with **Slevel** as a covariate. Include descriptives, estimates of effects size and homogeneity tests. Copy, paste, annotate and interpret.

**Highlight here and paste output.**

1. Open “MANOVA.sav”.
   1. Run a MANCOVA predicting **Self esteem**, **Introversion-extroversion** and **Neuroticism** by **andrm** using control and **attrole** as covariates. Do all appropriate screening tests. Include descriptives, estimates of effects size and homogeneity tests in the analysis. Do planned comparisons of masculine versus feminine, masculine and feminine vs. undifferentiated and androgynous, and undifferentiated vs. androgynous (hint: you must use syntax, refer to T&F for syntax to add the covariates using “WITH”). Are these orthogonal? Do you need to do an adjustment for multiple tests?
   2. Write a results section including at least one APA style table and one APA style figure.