**SPSS Syntax for Logistic Regression DIF Analyses**

/\* computing centered values and interaction \*/

**COMPUTE** c\_total = total -19.784344.

**EXECUTE**.

**COMPUTE** c\_group = course - .616270.

**EXECUTE.**

**COMPUTE** interact = c\_total \* c\_group.

**EXECUTE.**

/\* OMS commands to strip data from SPSS output; First Logistic Regression \*/

**OMS**

**/SELECT** **TABLES TEXTS**

/**IF COMMANDS =** ['Logistic Regression']

**SUBTYPES =** ['Model Summary']

/**DESTINATION FORMAT = SAV NUMBERED**=TableNumber\_

**OUTFILE =** ‘*your folder*\LR1\_coefficients.sav'.

/\* Define macro for first Logistic Regression procedure \*/

**DEFINE** LRmac1 (arg1 = !TOKENS(1)

/arg2 = !TOKENS(1))

**!DO !i** = !arg1 !TO !arg2.

**LOGISTIC REGRESSION variables =** !CONCAT(I,!i)

**/METHOD=ENTER** c\_total

**/CRITERIA=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).**

**!DOEND**

**!ENDDEFINE.**

LRmac1 arg1 = 1 arg2 = 31.

**OMSEND.**

/\* OMS commands to strip data from SPSS output; Second Logistic Regression \*/

**OMS**

**/SELECT TABLES TEXTS**

**/IF COMMANDS =** ['Logistic Regression']

**SUBTYPES =** ['Model Summary']

**/DESTINATION FORMAT = SAV NUMBERED=TableNumber\_**

**OUTFILE =** ‘*your folder*\LR2\_coefficients.sav'.

/\* Define macro for second Logistic Regression procedure \*/

**DEFINE** LRmac2 (**arg1 = !TOKENS(1)**

**/arg2 = !TOKENS(1))**

**!DO !i** **= !arg1 !TO !arg2.**

**LOGISTIC REGRESSION variables** **= !CONCAT(I,!i)**

**/METHOD=ENTER** c\_total c\_course

**/CRITERIA=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).**

**!DOEND**

**!ENDDEFINE.**

LRmac2 arg1 = 1 arg2 = 31.

**OMSEND.**

/\* OMS commands to strip data from SPSS output; Third Logistic Regression \*/

**OMS**

**/SELECT TABLES TEXTS**

**/IF COMMANDS =** ['Logistic Regression']

**SUBTYPES =** ['Model Summary']

**/DESTINATION FORMAT = SAV NUMBERED=TableNumber\_**

**OUTFILE =** ‘*your folder*\LR3\_coefficients.sav'.

/\* Define macro for third Logistic Regression procedure \*/

**DEFINE** LRmac3 (**arg1 = !TOKENS(1)**

**/arg2 = !TOKENS(1))**

**!DO !i** **= !arg1 !TO !arg2.**

**LOGISTIC REGRESSION variables** **= !CONCAT(I,!i)**

**/METHOD=ENTER** c\_total c\_course interact

**/CRITERIA=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).**

**!DOEND**

**!ENDDEFINE.**

LRmac3 arg1 = 1 arg2 = 31.

**OMSEND.**

/\* Begin commands to strip LR values from three LR files, merge, compute LR difference tests, and save new file \*/

**GET FILE**=’*your folder*\LR1\_coefficients.sav'.

**DELETE VARS** **Command\_ Subtype\_ Label\_ Var1 CoxSnellRSquare NagelkerkeRSquare.**

**RENAME VARIABLES** (**TableNumber\_ =** item) **(@2Loglikelihood =** LR1).

**EXECUTE.**

**SAVE OUTFILE** = ‘*your folder*\LR1.sav'.

**GET FILE=***’your folder\*LR2\_coefficients.sav'.

**DELETE VARS** **Command\_ Subtype\_ Label\_ Var1 CoxSnellRSquare NagelkerkeRSquare.**

**RENAME VARIABLES** (**TableNumber\_ =** item) **(@2Loglikelihood =** LR2).

**EXECUTE.**

**SAVE OUTFILE =** ‘*your folder*\LR2.sav'.

**GET FILE=**’*your folder*\***LR3\_coefficients.sav'*.**

**DELETE VARS** **Command\_ Subtype\_ Label\_ Var1 CoxSnellRSquare NagelkerkeRSquare.**

**RENAME VARIABLES** (**TableNumber\_ =** item) **(@2Loglikelihood =** LR3).

**EXECUTE.**

**SAVE OUTFILE =** ‘*your folder*\*LR3.sav'*.

**MATCH FILES**

/**FILE=**’*your folder*\LR1.sav'

/**FILE=**’*your folder*\LR2.sav'

/**FILE=**’*your folder*\LR3.sav'

/**BY** item.

**EXECUTE.**

**SAVE OUTFILE =** ‘*your folder*\LR.sav'

/**KEEP =** item LR1 LR2 LR3.

**COMPUTE** Udif=LR1-LR2.

**COMPUTE** NUdif = LR2-LR3.

**COMPUTE** prob1 = 1- **cdf.chisq**(Udif, 1).

**COMPUTE** prob2 = 1- **cdf.chisq**(NUdif, 1).

**EXECUTE.**

**SAVE OUTFILE =** ‘*your folder*\LR.sav'.

/\*Call merged file, sort values from high to low, and print in output \*/

**DATASET NAME** LR.

**SORT CASES BY** Udif(**D**) NUdif(**D**).

**PRINT/** item (F2.0, 2X) LR1 to LR3 (3(F9.4, 4X)) Udif to prob2 (4(F5.4, 4X)).

/\* Begin commands to write data out to a text file \*/

**WRITE OUTFILE =**'*my folder*\LRoutput.txt'/

Item (F2.0) LR1 to LR3 (3(F9.4, 4X)) Udif to prob2 (4(F5.4, 4X)).

**EXECUTE.**