

**2-way Mixed ANOVA 80 points**

Do sex and environment (micro vs macro), alone or in combination, have any effect on optimism? This question will be answered using a 2-way mixed ANOVA. Our two factors are sex (between subjects) and environment (within subjects). When running the ANOVA, plot the cell means with environment (micro, macro) on the x-axis and sex as the bars (use the 95% CI for the error bars). Visually inspect the graph to describe the interaction effect. Follow all instructions carefully, and use the SPSS applications at the end of chapter 10 and/or video lab lecture 9.



**IMPORTANT:** we have too few people in categories other than male and female. To omit them from this analysis, go to: Data > Select Cases > If conditioned is satisfied. Then, in the field box, type: gender<3 This will leave us with male (gender = 1) and female (gender=2) for our analysis.

**TWO-WAY MIXED ANOVA**

**Mauchly's Test of Sphericity Assumption: 4 points**

Explain why Mauchly's test was not conducted in this analysis. Be specific. Also include an explanation of when Mauchly's would be tested. Be thorough.

**Levene's Test of HOV Assumption**

To test for HOV, look at the Levene's test results: **8 points**

	F value	Prob (sig value)	signif (y/n)	assumption true (y/n)
MICRO optimism				
MACRO optimism				

## ANOVA results 36 points

Effect tested	df betw	df error	F value	Sig value	Eta squared	Significant y/n
main effect of environment						
main effect of sex						
environment x sex						

Write down all 3 effects using correct APA statistical notation format. **12 points**

To learn how to put symbols into a Canvas assignment, [watch this video](#)

main effect of environment	
main effect of sex	
interaction between environment x sex	

## BONUS POINTS

Copy and paste the relevant SPSS output for the information you provided in all the tables above into a blank document. Hi-light the #s used. Save the document as a doc, docx, or pdf and upload it into Canvas under the assignment called "Digital Wellness Assignment 8: Bonus points". Do all this correctly and earn **5 bonus points** that you can redeem for rewards at the end of the semester.

## Describing the Interaction Effect through Visual Inspection of the Graph

Copy the graph of cell means that SPSS created. Paste this into a blank document and save it as a doc, docx, or pdf. You will need to upload this into Canvas. **4 points**

### Simple main effect of environment within sex

Describe the effect of environment for the male participants **(4 points)**

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Describe the effect of environment for the female participants **(4 points)**

**Simple main effect of sex within environment**

Describe the effect of sex for the micro environment **(4 points)**

Describe the effect of sex for the macro environment **(4 points)**