

The general “blueprint” for writing results sections is described below. **Feel free to copy any given blueprint.** You’ll just need to modify it slightly to “fit” your project.

**The statistical notation needs to be updated to APA 7<sup>th</sup> edition format – stay tuned!**

## Results

To test the effect of IV on DV, (or to see if there was a relationship between x and y), DV scores were analyzed using a name of statistical test. (Give additional details of inferential test). Figure x provides a summary of these results. The results showed .... (Now report using APA formatted statistical notation, then explain what this means in English.)

### **Example: independent or dependent t-test**

To test the effect of type of milk (breast vs formula) on defecation frequency, scores were analyzed using a(n) dependent (independent) t-test. Figure 1 provides a summary of these results. The t-test was significant,  $t(19) = 5.87, p = .031, d=0.26$ . On average, breast feed babies had fewer dirty diapers compared to babies fed formula.

*Note: if you do not provide a figure or table showing the means and SEMs, then you need to report each group’s mean (M) and standard deviation (s) here, in text. Never do both.*

### **Example: 1 way ANOVA (independent or repeated)**

To test the effect of eye color on perceived likeability by strangers, Social Acceptance Inventory scores were analyzed with a one-way independent ANOVA. The results were significant,  $F(2,24) = 6.54, p < .01, \eta^2 = 0.33$ . Post hoc analyses using Tukey HSD tests showed that blue eyed people were perceived as more likeable by strangers compared to brown ( $p=.020$ ) and green eyed people ( $p=.033$ ) who did not differ from each other ( $p>.05$ ). These results are summarized in Figure 1.

*Note: if you do not provide a figure or table showing the means and SEMs, then you need to report each group’s mean (M) and standard deviation (s) here, in text. Never do both.*

### **Example: 2 way independent, repeated, or mixed ANOVA (interaction not significant)**

For each participant, burnout was measured by subtracting their Maslach Burnout Inventory (MBI) score 6 months after employment from their MBI score upon hire. **(note to student: this example illustrates that you may need to explain how certain scores were calculated before you report how the hypothesis was tested and the test results)** To test the effect of sex and age on employment induced stress, burnout scores were analyzed using a 2x3 independent ANOVA. The first factor was sex (men, women), and the second factor was age (young, middle, old). Figure 1 provides a summary of these results. The ANOVA showed no significant main effect of sex,  $F(1, 45) = 2.24, p > .05, \eta p^2 = .01$ . Men and women experienced the same amount of stress resulting from employment. The main effect of age was significant,  $F(2, 45) = 6.66, p < .01, \eta p^2 = 0.42$ . A Tukey post hoc test showed that older participants experienced more stress from employment compared to young ( $p=.016$ ) and middle-aged participants ( $p=.001$ ), who did not differ from each other ( $p>.05$ ). The interaction between sex and age was not significant,  $F(2, 45) = 3.39, p > .05, \eta p^2 = .02$ . The effect of sex on stress was the same for each age group.

*Note: if you do not provide a figure or table showing the means and SEMs, then you need to report each group's mean (M) and standard deviation (s) here, in text. Never do both. Also, if reporting a mixed ANOVA, indicate which factor was between subjects and which was within.*

### **Example: 2 way independent, repeated, or mixed ANOVA (significant interaction)**

For each participant, burnout was measured by subtracting their Maslach Burnout Inventory (MBI) score 6 months after employment from their MBI score upon hire. **(note to student: this example illustrates that you may need to explain how certain scores were calculated before you report how the hypothesis was tested and the test results)** To test the effect of sex and age on employment induced stress, burnout scores were analyzed using a 2x3 independent ANOVA. The first factor was sex (male, female), and the second factor was age (young, middle, old). Figure 1 provides a summary of these results. The ANOVA showed no significant main effect of sex,  $F(1, 45) = 2.24, p > .05, \eta p^2 = .09$ , and a significant main effect of age,  $F(2, 45) = 6.66, p < .01, \eta p^2 = 0.43$ . The main effect of age was qualified by a significant interaction with sex,  $F(2, 45) = 8.39, p < .01, \eta p^2 = 0.39$ . To explore the nature of the

interaction, tests of the simple main effects were performed. A one way independent ANOVA to test the simple main effect of age within men was not significant,  $F(2, 45) = 1.22, p > .05, \eta^2 = .10$ .

Young, middle and older men all experienced the same level of employment induced stress. A one way independent ANOVA to test the simple main effect of age within women was significant,  $F(2, 45) = 10.22, p < .05, \eta^2 = 0.46$ . Post hoc analyses using Tukey's HSD tests showed that young women experienced more employment induced stress compared to middle ( $p=.014$ ) and old aged women ( $p=.041$ ). Middle aged women experienced more stress than older women ( $p=.024$ ).

*Note: if you do not provide a figure or table showing the means and SEMs, then you need to report each group's mean (M) and standard deviation (s) here, in text. Never do both. Also, if reporting a mixed ANOVA, indicate which factor was between subjects and which was within. However, given the interaction was significant, a Figure (graph) of the interaction is strongly advised.*

### **Example: correlation**

To investigate the relationship between GPA and distance from school (in km), a Pearson's correlation coefficient was computed. The results were significant,  $r(55) = -0.81, p < .05$ . The further a student lived from school the lower his/her overall GPA.

*Note: you may have many correlations to report in your paper. In this case, you would proceed identify the test used to investigate the relationships (i.e. Pearson's r), then refer the reader to Table 1 for a summary of the results. You can indicate which correlations were significant with a \*  $p < .05$  and \*\*  $p < .01$ . Note: df for correlation is  $N-2$  where  $N$  is the # of xy pairs*

### **Example: Chi Square**

To investigate the relationship between language (English, French) and vote (Yes, No, maybe), the number of people falling into the resulting six categories was recorded. This data is summarized in Table 1. These frequencies were analyzed with a Chi Square Contingency test. The results were significant,  $\chi^2(4, N=90) = 6.91, p = .001$ . French speaking people were more likely to vote yes, while English-speaking people were more likely to vote no. Approximately the same number of French and English-speaking people indicated they would vote "maybe".

## Multiple Regression

Multiple regression using the Enter method was conducted to determine the linear combination of sex, grades in high school, and parents' education for predicting math achievement test scores. The means, standard deviations, and inter-correlations can be found in Table 1. This combination of variables significantly predicted math achievement,  $F(4,68) = 10.40, p < .001$ , with all four variables significantly contributing to the prediction. The beta weights, presented in Table 2, suggest that good grades in high school contributed most to predicting math achievement, and that being male and having parents who are more highly educated also contributed to this prediction. The adjusted  $R$  squared value was .38. This indicates that 38% of the variance in math achievement was explained by the model.

*Note: See next page for examples of tables to include.*

Table 8.2a

*Means, Standard Deviations, and Intercorrelations for Math Achievement and Predictor Variables (N = 73)*

Variable	<i>M</i>	<i>SD</i>	Grades in h.s.	Father's education	Mother's education	Gender
Math Achievement	12.66	6.50	.47**	.38**	.35**	-.27*
Predictor variables						
Grades in h.s.	5.70	1.55	--	.27*	.19	.14
Father's education	4.73	2.83		--	.68**	-.27*
Mother's education	4.14	2.26			--	-.20*
Gender	.55	.50				--

\* $p < .05$ ; \*\* $p < .01$ .

Table 8.2b

*Simultaneous Multiple Regression Analysis Summary for Grades in High School, Father's and Mother's Education, and Gender Predicting Math Achievement (N = 73)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i>
Grades in h.s.	1.95	.43	.47	4.56	<.001
Father's education	.19	.31	.08	.61	.544
Mother's education	.41	.38	.14	1.08	.282
Gender	3.86	1.32	-.29	-2.85	.006
Constant	1.05	2.53			

*Note.*  $R^2 = .38$ ;  $F(4, 68) = 10.40$ ,  $p < .001$ .

## ANCOVA

To test the effect of oil type and time on mood valence, a two-way mixed ANCOVA was performed. The between-subjects factor was oil (control, corn, olive), and the within subjects factor

was time (pretest vs. posttest). Our covariates were stress and physical activity. The analysis showed that each of the covariates was significant. After adjusting for the effect of the covariates on mood scores, the ANCOVA revealed no main effect of oil,  $F(2, 42) = 2.00, p > .05, \eta p^2 = .01$ , or time,  $F(1,42) = 3.25, p = .072, \eta p^2 = .01$ , and no interaction between group and time,  $F(1,42) = 0.016, p > .05, \eta p^2 < .01$ .

*Note: show a table of means and s before and after the adjustment (see example below)*

Table 1  
*Adjusted and Unadjusted Means for Mood Using Stress and Physical Activity as Covariates*

	<i>N</i>	<i>Unadjusted</i>		<i>Adjusted</i>	
		<i>M</i>	<i>s</i>	<i>M</i>	<i>s</i>
Control	15	14.76	6.03	12.89	.73
Olive	15	13.23	5.55	12.02	.68
Corn	15	14.01	6.21	12.80	.70
Pre-test	45	14.00	5.92	11.99	.69
Post-test	45	14.55	6.70	12.29	.66

Note: reporting an ANCOVA is essentially the same as reporting a 2 way ANOVA, as described in the previous pages. You should consult that write up to see what to do if the main effects and/or interaction effects are significant.