ANALISYS PORTAFOLIO: SATISFACTION WITH LIFE

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Author notes:

I have no known conflict of interest to disclose.

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Abstract

The following is a descriptive analysis with a Correlation matrix, Independent sample t test, Repeated measure t test, One way ANOVA, Two wat ANOVA, and ACOVA.

Correlation Matrix

Correlations were conducted to assess the linear relationships between the dependent variable (Life Satisfaction) and each of the independent variables. The correlation between Sexual Shame Self and Life Satisfaction is significant $r(3043) = .330$, $p < .001$, indicating a weak but significant positive association between life satisfaction and sexual shame-self. The correlation between sexual shame partner and satisfaction with life is also significant $r(1238) = .221$, $p < .001$, indicating a weak but significant positive association between sexual-shame partner and satisfaction with life. Thus, both independent variables show a significant linear association with the dependent variable.

		Sexual Shame Scale-Self	Sexual Shame Scale-Partner	Satisfaction With Life Scale
Sexual Shame Scale-Self	Pearson Correlation	1	.949**	.330**
	Sig. (2-tailed)		<.001	<.001
	N	3059	1210	3045
Sexual Shame Scale-Partner	Pearson Correlation	.949**	1	.221**
	Sig. (2-tailed)	<.001		<.001
	N	1210	1244	1240
Satisfaction With Life Scale	Pearson Correlation	.330**	.221**	1
	Sig. (2-tailed)	<.001	<.001	
	N	3045	1240	4302

Independent Samples T Test

An independent samples t-test was run to examine whether there is a mean difference in Satisfaction with Life Scale (SWLS) between Men and Women. Levene's test for equal variances was significant ($p < .001$), indicating we must reject the null hypothesis that there are equal variances, which means variance cannot be assumed. The t-test will report with numbers for unequal variances. The results of the test (Table 1) revealed a significant mean difference,

$t(4048.03) = 4.95$, $p < .001$, indicating that the mean SWLS score for men ($M = 24.58$) is significantly greater than the mean SWLS score for women ($M = 23.50$). As measured by Cohen's $d = 0.15$, the effect size indicates a negligible effect of gender on SWLS. The 95% confidence interval indicates that the true mean difference between men and women regarding SWLS score is between 0.65 and 1.51. Thus, we reject the null hypothesis that there is no mean difference in SWLS scores between men and women.

Table. 1

Satisfaction with Life between men and women

	N	*M*	*SD*	M_d	*t*	*df*	*p*
Male	2289	24.58	6.70	1.08	4.95	4048.03	< .001
Female	1997	23.50	7.45				

Repeated Measure T Test

A repeated measures (paired) t-test was conducted to examine if there is a mean difference in standardized scores on the Sexual Shame Scale Self (SSS) scale and standardized scores on the Sexual Shame Scale Partner (SSP) scale. The t-test revealed a significant mean difference $t(1209) = -23.78$, $p < .001$, Cohen's $d = -0.68$. The $M_d = -0.23$ indicates that respondents felt significantly higher levels of SSS than SSP, and the $d = -0.68$ indicates that this is a moderate effect. The correlation between SSS and SSP was approximately .949 ($p < .001$). The 95% confidence interval indicates that the true mean difference between SSS and SSP is between -0.24 and -0.21. Thus, we reject the null hypothesis that there is no mean difference present between Sexual Shame Self and Sexual Shame Partner.

Table. 2

Repeated Measures t-test Results (n = 1210)

	M	*SD*	M_d	*t*	*df*	*p*	*Cohen's d*
SSS	-0.23	1.04	-0.22	-23.78	1209	< .001	-0.68
SSP	-0.01	1.00					

One Way ANOVA

A one-way ANOVA examined whether race/ethnicity affects the Satisfaction with Life (SWLS) score (Table 3). Levene's test was conducted and found to be non-significant, $F(6, 4293) = 1.94$, $p = .071$. Thus, the null is not rejected, and equal variances can be assumed. The results of the ANOVA revealed a statistically significant main effect of Race, $F(6, 4293) = 13.83$, $p < .001$, $\eta^2 = .019$, which indicates a small effect size. Post-hoc multiple comparisons (Tukey's) revealed several significant differences. The most noteworthy post-hoc multiple comparisons were African American respondents with significantly higher SWLS than every other group at $p < .001$ except for Alaska Native $p = .99$ and NHPI $p = .95$. Thus, these three ethnic groups had the highest scores together, with little difference. The other noteworthy result was that respondents in the "Other" category had significantly lower scores than every other racial group apart from NHPI $p = .4$**5**, indicating a risk factor for SWLS.

Table. 3

One-Way ANOVA Satisfaction with Life by Race

Race	*SS*	*df*	*MS*	*F*	*p*	*η2*
Between Groups	4108.61	6	684.77	13.833	<.001	.019
Within Groups	212506.87	4293	49.501			
Total	4299					

Two Way ANOVA

A 3x6 factorial Two-way ANOVA was run to examine whether there are main effects of gender and race, as well as the gender x race interaction, on the Satisfaction with Life Scale (SWLS). Levene's test was conducted, ($p < .001$), thus the null is rejected, and equal variances cannot be assumed. This is an assumption violation, but I will continue with the analysis for the purpose of this assignment. The results of the ANOVA revealed no significant main effect of

gender, $F(2, 4278) = 1.51$, $p = .22$, $\eta 2 = .001$, which indicates a negligible, non-significant effect of gender. There was no main effect of race, $F(6, 4278) = 1.10$, $p = .36$, $\eta 2 = .002$, which indicates a negligible, non-significant effect of race. No post-hoc tests were run as the main effects were not significant. The render x race interaction was statistically significant, $F(9, 4278) = 3.04$, $p = .001$, $\eta 2 = .006$, but the effect size indicated a very small effect. When examining the marginal means, it appears the Race x Gender interaction is driven by the "Other" category, in which all racial groups have significantly lower SWLS when compared to Males or Females except for those in the "Other" racial group, in which the "other/other" category has the highest overall SWLS of any other category.

Table. 4

3 x 6 ANOVA Satisfaction with Life by Gender x Race

Source	*SS*	*df*	*MS*	*p*	*η2*
Corrected Model	6937.023	17	408.060	8.335	<.001
Intercept	32570.983	1	32570.983	665.273	<.001
Race	321.916	6	53.653	1.096	.362
Gender	147.680	2	73.840	1.508	.221
Race * Gender	1340.828	9	148.981	3.043	.001
Error	209445.770	4278	48.959		
Total	2701883.000	4296			
Corrected Total	216382.793	4295			

ANCOVA

An ANCOVA was conducted to examine whether there is a main effect of Gender on Satisfaction with Life (SWL) score when controlling for Sexual Shame Self (SSS) score as a covariate. Levene's test was conducted ($p < .001$), thus the null is rejected, and equal variances cannot be assumed. This is an assumption violation, but for the purpose of this assignment, I will continue with the analysis. The model revealed a significant main effect of gender $F(2, 3038) =$

5.924, $p = .004$, $\eta 2 = .004$, indicating a negligible but significant effect of gender. There was also a significant effect of the covariate of SSS score $F(1, 3038) = 344.62$, $p < .001$, $\eta 2 = .102$, indicating a moderate, significant effect of the covariate. The model indicates that gender influences SWL when controlling for SSS score. Overall, the gender effect appears to be driven by the "Other" category, whose $M = 18$ is significantly less than the males $M = 25.17$ and females $M = 23.9$. The scatterplot below indicates the surprising relationship that, overall, as SSS increases for males and females, so does SWL. At the same time, the "Other" category displays a more erratic, non-linear pattern.

Table. 5

ANCOVA Satisfaction with Life by Gender controlling for Sexual Shame Self

Source	*SS*	*df*	*MS*	*p*	*η2*
Corrected Model	6937.023	17	408.060	8.335	<.001
Intercept	32570.983	1	32570.983	665.273	<.001
Race	321.916	6	53.653	1.096	.362
Gender	147.680	2	73.840	1.508	.221
Race * Gender	1340.828	9	148.981	3.043	.001
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