

Regression Data: Output and Write-up

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I have no known conflict of interest to disclose.

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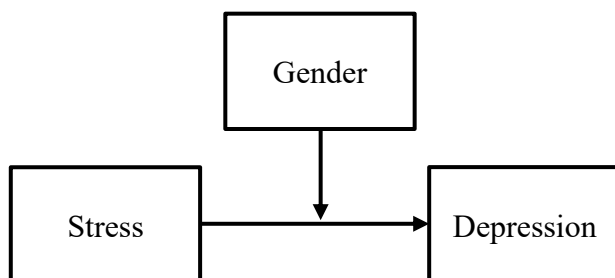
Results of Simple Moderator Analysis

A simple moderator analysis using Hayes (2018) model 1 was completed using the variables gender, a dichotomous (categorical) variable with two groups of male and female, as the moderator (W), Stress, as measured by DASS-Stress, a continuous-interval level of measurement variable, as the predictor (X) and Depression, as measured by DASS-Depression, a continuous-interval level of measurement variable, as the criterion (Y) from the EDCO 745 course dataset. The data were screened and tests of assumptions for multiple regression were completed, as demonstrated in the Week 6 assignment, Regression Data: Screening Output Assignment. Although there was a minor deviation from normality for the residuals, the data were not transformed. Violation of the normality of residuals does not lead to issues with significance testing, particularly with larger sample sizes, and does not suggest any discrepancies with model coefficients should be anticipated. Instead, this violation may be an indication that a better regression model may be needed (Cohen et al., 2003). The tests of assumptions demonstrated the data are suitable for conducting the moderator analysis.

The research question of to what extent, if any, does gender moderate the predictive effect between Stress (X) and Depression (Y), was addressed by testing the null hypothesis of Gender does not significantly moderate the predictive effect between Stress (X) and Depression (Y). The relationships examined are presented in Figure 1.

Figure 1

Conceptual Model of Simple Moderator Analysis



A moderator analysis using PROCESS (v.4.0; Hayes, 2018) was conducted to test the null hypothesis. There was a significant predictive effect between Stress and Depression, $t = 19.9224$, $p < .001$, $b = 0.9353$. The result of the interaction effect between gender and Stress upon Depression was not statistically significant, $t = -0.8145$, $p = .4155$, $b = -0.0251$. See Tables 1 and 2. The results failed to reject the null hypotheses, which stated that gender does not significantly moderate the predictive effect between Stress (X) and Depression (Y). The results suggest that although there is a significant predictive effect between Stress and Depression, the extent of the effect between Stress and Depression is not dependent upon one's gender.

Table 1*Model Summary for Moderator Analysis*

<i>R</i>	<i>R</i> -squared	MSE	F	df1	df2	<i>p</i>
.8571	.7345	40.0287	1136.3851	3.0000	1232.0000	.0000

Table 2*Model Coefficients*

	Coeff	SE	<i>t</i>	<i>p</i>	LLCI	ULCI
Constant	1.8529	1.0222	1.8127	.0701	-0.1526	0.3884
DASSSTRS	0.9353	0.0469	19.9224	.0000	0.8432	1.0274
Gender	-0.7888	0.6510	-1.2116	.2259	-2.0661	0.4884
Int_1	-0.0251	0.0308	-0.8145	.4155	-0.0856	0.0354

Note. Y variable is DASSDEP