mmr practice

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I examined the extent to which exam grades (E) were predicted by anxiety (A) and preparation (P). As indicated in Table 1, when the predictors were examined individually, there was a strong positive relation between anxiety and exam grades, r = .68, 95% CI[.62, .72], such that as anxiety increased exam grades increased. There was a moderate positive relation between preparation and exam grades, r = .53, 95% CI[.46, .59], such that as preparation increased so did exam grades.

I used moderated multiple regression to test the extent to which the relation between anxiety and exam grades depended on the amount of exam preparation. I assessed this moderation by examining the interaction between anxiety and preparation using centered predictors (consistent with the recommendations of Cohen, Cohen, West, and Aiken (2003)), see Table 2. Together the predictors (anxiety, preparation, and their product) accounted for a all of the variance in exam grades, R2 = .1, 95% CI[1.00, 1.00], p < .001.

The p-value for the anxiety by preparation product term was below .01, t(486) = 219.7, p = > .001, which suggests the presence of an interaction. The simple-slope cross-sections are presented in Figure 1. When preparation was high (i.e., +1 SD) there was a positive relation b = 30.84, 95% CI[30.64, 31.05], t(496) = 295.5, p > .0001. When preparation was low (i.e., -1 SD) there was a negative relation between anxiety and exam grades, b = −0.82,95% CI[-1.02, -.062], t(496) = -.8.05, p < .001, see Equation 2 below.

Eˆ = 30.34 + 53.67 (1) Eˆ = −0.82A + 40.42 (2)