**Running Interactions in HLM Software**

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Let’s say this is your (main effects) model, where gender (MALE), having closeness with the teacher (CLOSE), and the teachers’ emotional support (M\_EMO at level 2) are predicting children’s sound awareness (S07A\_SA).



To run an interaction between males and the teachers’ emotional support, you add emotional support as a predictor to the Level-2 equation that corresponds to the Level-1 variable. So, in the above scenario, the effect of being male is B1. So, add Emotional Support as a predictor to the Level-2 equation that begins with B1.



In terms of output, you’ll get something like this:

Final estimation of fixed effects

 (with robust standard errors)

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 Standard Approx.

 Fixed Effect Coefficient Error T-ratio d.f. P-value

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 For INTRCPT1, B0

 INTRCPT2, G00 487.402745 1.395467 349.276 34 0.000

 M\_EMO, G01 1.961758 1.777621 1.104 34 0.278

 For MALE slope, B1

 INTRCPT2, G10 -0.841122 1.306990 -0.644 173 0.520

 M\_EMO, G11 -4.947517 2.393270 -2.067 173 0.040

 For CLOSE slope, B2

 INTRCPT2, G20 2.318725 0.890133 2.605 173 0.010

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Notice that for Male, there is now an intercept (the main effect) and a value (under Male) for Emotional Support (the interaction). In this instance, neither main effect is not significant, but the interaction is.