Multilevel Models, Equations, Syntax & English

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| model | equation | Stata | English |
| --- | --- | --- | --- |
| Intercept Only |  | mixed y | We estimated the mean of [outcome] |
| Intercept Independent Variable(s) |  | mixed y x mixed y x z | We estimated the relationship of [independent variable(s)] with [outcome] |
| Intercept Random variation of the intercept |  | mixed y || groupid: | We estimated the mean of [outcome]. We allowed the intercept of the model to vary by [groupid]. |
| Unconditional intraclass correlation coefficient (ICC) |  | mixed y || groupid: estat icc | XX% of the variation in [outcome] was explained by clustering of participants in [groupid] |
| Intercept Independent variable(s) Random variation of the intercept |  | mixed y x || groupid: mixed y x z || groupid: | We estimated the relationship of [independent variable(s)] with [outcome]. We allowed the intercept of the model to vary by group. |
| Intercept Independent variable Random intercept Random slope |  | mixed y x || groupid: x | We estimated the relationship of [independent variable] with [outcome]. We allowed the intercept of the model to vary by group. We also allowed the relationship of [independent variable] with [outcome] to vary by group. |
| We can estimate multilevel models with more than 1 random slope. |  | mixed y x z || /// groupid: x z |  |