***Some Guidance regarding Centering***

Group-Mean Centering

* When βb ≠ βw, provides an appropriate estimator of person-level effects (fixed level-1 coefficients)
* Produces an unbiased estimator of βw (in models for estimating fixed level-1 coefficients)
* Not appropriate when primarily concerned with estimating level-2 fixed effects while adjusting for level-1 covariates (where there is no compositional effect) – as the effects of level-2 will be unadjusted for level-1 covariates (unless you include the group means in the level-2 model)
* Provides an accurate estimate of slope variance
* Provides more robust EB estimates of level-1 random coefficients, when group means of X (level-1 explanatory variables) very substantially across groups.

Grand-Mean Centering

* Efficient for estimating fixed level-1 coefficients in unbalanced designs, when βb = βw (no compositional effect)
* EB slope estimates are less credible under grand-mean centering