
Subject: Re: Multilevel modeling in DHS-Sri Lanka
Posted by [Bridgette-DHS](#) on Fri, 22 Feb 2019 18:37:52 GMT
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Following is a response from Senior DHS Specialist, Tom Pullum:

Decisions such as this are at the discretion of the researcher, and can vary from one country to another, and are not something for which we maintain a rule book. The adjustment for clustering by PSU basically comes from the survey design. We always recommend including that adjustment in svyset, which is equivalent to including it as level 2 in a hierarchical model. I am surprised that the ICC is so low in this survey.

You could look at this as an empirical matter, I suppose, and let either the mother or the household be the level 2 unit if they have a higher ICC than the PSU does. Ideally, or conceptually, I think of a hierarchy of children/mothers/households/PSUs, and, but (a) methods to include all levels are complex and (b) the impact, which is limited to the standard errors of the coefficients, can be small.

So yes, in my opinion at least, if you find a higher ICC at the level of the mother or the household than at the level of the PSU, and you are limited to a two-level model, you would be justified in placing level 2 where it would have the largest effect.

Also there is a cumulative nature to these effects. For example, if you include a mother-level adjustment, you will definitely account for most of a household-level ICC and possibly for most of a PSU-level ICC.