Subject: Re: Weight to use for regression that has children and mother level variables
Posted by Janet-DHS on Wed, 06 Jul 2022 13:38:21 GMT
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Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

We would normally do the kind of analysis you describe with the KR file, which has one record for each child born in the past five years. Virtually all of the mother's information is on the child's record. For some outcomes, the response is only obtained for the youngest child (the most recent birth). This introduces some bias, if your interest is in ALL children, mainly because the youngest child is biased toward low-fertility women (see https://www.dhsprogram.com/pubs/pdf/MR14/MR14.pdf). If you were to weight up those children, in proportion to the number of children under five, you would not be reducing that bias--you would be magnifying it. I recommend that you not do any such weighting, but just describe the selectivity in the data.

Other variables, such as the height-for-age (HAZ) score, do not have this kind of selectivity. Our practice would be to use all the children (in the KR file, since you want to relate to the mother; the Z scores are also in the PR file for all children in the household) and just use v005. The mother's weight is assigned to the child.

You may also be thinking of maternal clustering. Children of the same mother tend to have similar outcomes because of omitted variables. Some people have gone to a lot of trouble to adjust for maternal clustering. However, it's hard to apply a multi-level model to such data because there are so few level-1 units (children) per level-2 unit (mothers)