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Subject: Re: Weighted analysis in R

Posted by [Bridgette-DHS](#) on Fri, 09 Aug 2024 13:35:37 GMT

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Following is a response from Senior DHS staff member, Tom Pullum:

You are making a bigger deal out of the weights than necessary. You are looking for some multiplier to re-scale the weights, but almost all DHS estimates--rates, means, proportions, regression coefficients, etc., are invariant with respect to such a multiplier. You can confirm this by, say, running an analysis with weight v005, as given in the data, and then multiplying v005 by 2 or 10 or 100, and re-running. Nothing will change, not even the standard errors.

The only exception would be if you are trying to estimate, say, the NUMBER of children age 0-23 months at the national level who were never breastfed. If that's what you want to do, you should re-scale to the population number of children age 0-23 months. You could get an estimate of that population number from Population Prospects 2024.

Weights for that purpose are called expansion weights. DHS reports, in both final reports and research reports, so far as I am aware, have never used expansion weights.

If you want to make pooled estimates, for example for "West Africa" (I put this in quotes because there are alternative lists of countries and in any list DHS has not had surveys in all countries) then you could multiply v005 by  $P/p$ , where  $P$  is the national population and  $p$  is the sum of the weights in the sample (without the factor of 1 million). But I would strongly recommend against such pooled estimates, because the pooled population is never well-defined and the results will be dominated by the largest country, such as Nigeria, obscuring differences between countries. If the goal of your pooling is to look at DIFFERENCES between countries, which is common, then you do not need to adjust the weights at all.

There have been many postings on weights on the forum. We have nothing to add to what has already been stated.

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