Subject: Denormalization of weights required?
Posted by MiFoo on Sun, 02 May 2021 21:28:09 GMT
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Hello,
I am using the BDHS from 2011 and 2017/2018 (PR file) to estimate a model of the form
svyglm(outcome ~ group * year + controls, design =sdata, family=binomial
followed by the calculation of average marginal effects of the change in the outcome over time for each group.

I ensured that that strata and PSU ID codes are unique in both surveys before creating the pooled survey design object by adding a year suffix. However, I am not sure whether a denormalization of weights is required for this kind of analysis. Some people in the User Forum said that different scales of weights in single surveys should not matter if I look at the results by year (i.e. include a year dummy). But multiplying the weights in 2011 by a random number changed my estimated regression coefficients (including the interaction term) and the marginal effects even though not very much?

Do I need to denormalize the weights and if yes is it right to multiply the weights by
(total number of residential households in the country in the year of the survey round)/ (total number of households interviewed in the survey)
regardless of the fact that 1) I am looking at individuals not households and 2) I am using only a subset of people (e.g. age>40)

Best,
MiFoo

Subject: Re: Denormalization of weights required?
Posted by Bridgette-DHS on Mon, 03 May 2021 13:02:52 GMT
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Following is a response from DHS Senior Sampling Specialist, Mahmoud Elkasabi:

I would advise you to de-normalize the weight of the two survey. This would be the safest approach to use. It is fine to multiply the weight by (total number of residential households in the country in the year of the survey round)/ (total number of households interviewed in the survey). It would be even better to multiply the weight by (total number of adults 40+ in the country in the year of the survey round)/ (total adults 40+ listed in the survey).