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Subject: Multilevel model for SPA data

Posted by [Lucia](#) on Fri, 10 Feb 2023 15:12:14 GMT

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Hello, I am conducting an analysis of the labor and delivery observations using data from SPAs conducted in Kenya 2010, Malawi 2013-14, and Nepal 2021.

I want to carry out a multilevel mixed-effect model for each country, however, I have read different opinions about it in the forum.

I saw that some people suggest setting the `clwgt = 1` and just using the `fcwgt` for the multilevel model, this is because the `clwgt` already takes into account the `fcwgt`.

Others suggest using both weights with this code: `svyset inv_id, weight(fcwgt) strata(strata) singleunit(centered) ||_n, weight(clwgt)`.

I also saw that there is a document that explains how to approximate level weights, however, it is for DHS data and not SPA data.

I was wondering if you could help me in understanding which method should I use, and if the document on DHS data is applicable to SPA data.

many thanks,  
Kind regards,  
Lucia

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Subject: Re: Multilevel model for SPA data

Posted by [SaraDHS](#) on Tue, 14 Feb 2023 14:50:50 GMT

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Hi Lucia,

So first, the document on approximating the level weights for DHS data is not applicable to the SPA data since the two surveys have very different sampling approaches.

Second, in general, and especially in this case since you are using the labor and delivery observations, I would recommend using facility weight as the first level weight, and assume equal weight for all clients (`clwt=1`) in the same facility. Although the latter assumption is not always true, in the case of the three surveys you are using, in over 90% of facilities ALL labor and delivery clients at the facility were included in the observation, so it is pretty close in these cases.

I hope this is helpful,

Sara

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