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Subject: Philippines Multilevel analysis

Posted by [Rhency Legaspi](#) on Fri, 21 May 2021 05:28:45 GMT

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Hi,

I have read the framework you released for weights approximation in doing multilevel analysis (<https://dhsprogram.com/pubs/pdf/MR27/MR27.pdf>). I have some questions specific to the Philippines DHS 2017 data.

1. I don't think the data on M\_h, the average number of households per cluster by strata, is available in the Philippine DHS data. What is available is the "Average PSU size in households" per REGION instead of strata. Strata in this case are provinces/cities within regions. Can I use that instead and assume that the number of households per PSU per clusters is the same for all strata belonging to the same region?

2. For S\_h which is the households selected per stratum, Philippines used two values: 26 for provinces and 20 for non-provinces. Should I use weighted average of that for S\_h?

Thank you very much.

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Subject: Re: Philippines Multilevel analysis

Posted by [Bridgette-DHS](#) on Mon, 24 May 2021 12:15:21 GMT

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Following is a response from DHS Senior Sampling Specialist, Mahmoud Elkasabi:

It is true the final report of the 2017 Philippines DHS does not provide the average PSU size by strata. For this case it is OK to use the average per region from Table A.1 as approximation for M\_h.

Regarding the households selected per stratum, S\_h, you can assign the variable as 26 or 20 according to the province type. This does not need to be a fixed value across all strata; it is a strata-level information.

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Subject: Re: Philippines Multilevel analysis

Posted by [Rhency Legaspi](#) on Tue, 25 May 2021 07:30:26 GMT

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Thank you for the reply. I followed your suggestions and continued with the modelling. However, I am getting this error "hierarchical groups are not nested within v001" when adding a random intercept for either the region or stratum variable. I understand that naturally, multilevel analysis is appropriate for nested data. In this case, it's women within households within strata

(provinces/cities) within regions. Do you have an explanation for the error? Thanks.

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