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Subject: Social norms and women's work\_India  
Posted by [Isha](#) on Thu, 13 Oct 2022 15:50:07 GMT

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Hello,

I am using all five rounds of the India DHS. One of my independent variables is social norms and I wanted to measure women's behavior at the community level. I see that studies measure practices at the PSU level to get at community-level behavior (eg. fertility at the PSU level).

Since women's work is a key variable for me, I am trying to create a (a) a community-level women's work variable, (b) one that can be constructed for all five rounds of the NFHS.

I used the full sample of NFHS4 and NFHS5 and assign a value to all women based on the proportion of women engaged in work even irrespective if they were asked the question on women's work. I had done that earlier by creating a community-level variable at the level of residence and state (eg. rural Uttar Pradesh vs urban Uttar Pradesh), but reviewers did not find that it captured homogenous norms. So I was trying to find a more local level (like PSU, strata or cluster). PSU has very small sample size (such as 1 respondent in a PSU), so I need guidance on what you think would work for all rounds of the data and make conceptual sense.

Now I am thinking to:

- Trimmed the NFHS4 and NFHS5 to limit it to the state-sample since women's work is only available for this dataset and could use either 'strata' or 'cluster' instead of PSU to create women's work at the community-level (eg. proportion of women employed in agriculture by strata).
- Can you guide me which would be at a local level and have enough sample and ALSO could be calculated from all five rounds of the NFHS.

Thank you so much!

Best,  
Isha

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Subject: Re: Social norms and women's work\_India  
Posted by [Isha](#) on Sun, 16 Oct 2022 15:15:34 GMT

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Hello,

I wanted to follow up with my last message. As I shared I am creating a community-level variable. Most papers I have seen do so at the PSU/cluster level but in NFHS, the max number of respondents in a PSU is 22. My analytical sample also includes a sub-sample of NFHS4 and NFHS5 (state module since I am analyzing women's work) and in this sample, the highest number of women in a PSU is 20. Many have 1-4 women so I cannot create a community-level variable at the PSU level. I am creating it at the strata level. HOWEVER, I wanted you to clarify:

- What is meant by strata in NFHS4 and NFHS5 (since it is by district) [v022/v023]
- What is meant by strata in NFHS1, 2 and 3 [v022/v023]

What commonalities do women in the same strata share? Are they living in geographically contiguous areas? Are they similar in literacy, caste or pop size of their PSU? I am not clear after reading the methodology in the five reports (to what is common among all women belonging to the SAME strata) in all five ROUNDS.

It would be great if you could just clarify this.

A look into the dataset shows that women belonging to the same strata are in the same state and place of residence, but there are multiple strata in a state, which is something I am looking for. Since I need a lower level of aggregation to define 'community' and PSU is not possible.

Thank you!

Best,  
Isha

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Subject: Re: Social norms and women's work\_India  
Posted by [Bridgette-DHS](#) on Mon, 17 Oct 2022 16:44:50 GMT  
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Following is a response from DHS staff members, Tom Pullum and Fred Arnold:

The sampling strata (v022 and v023, which are equal) are always intended to be relatively homogeneous internally, and relatively different from one another. You could use a multi-level model or one-way analysis of variance to quantify "relatively". But a stratum is not a social unit. Typically, it is a group of urban areas or a group of villages (the individual urban areas or villages are the PSUs).

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Subject: Re: Social norms and women's work\_India  
Posted by [Bridgette-DHS](#) on Tue, 18 Oct 2022 13:36:49 GMT  
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Following is a response from DHS staff member, Tom Pullum:

You seem to be making a distinction between PSU and cluster. The clusters ARE the PSUs. The clusters are probably optimal for your purposes, in terms of providing a normative context for attitudes about women's work, as well as a local labor market. In the past two years DHS has prepared two analytical studies that treat the cluster as the local context:

<https://www.dhsprogram.com/pubs/pdf/AS82/AS82.pdf> and

<https://www.dhsprogram.com/pubs/pdf/AS76/AS76.pdf> .

These reports describe strategies to deal with the small numbers of cases in the clusters. The clusters are small, but there are many of them.

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Subject: Re: Social norms and women's work\_India  
Posted by [Isha](#) on Tue, 18 Oct 2022 15:17:02 GMT  
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Dear Tom and Fred,

Thank you so much for sharing your insights! I am so glad you shared these reports and I will be reading and acknowledging them. It so good to read how you are taking the study of social norms forward with DHS data.

Yes, I checked the data and see that PSU and cluster are the same. Some scholarly papers use the word 'PSU' and others mention 'cluster' (when measuring norms), so maybe that is why I needed clarification.

I wanted to clarify two things based on your message.

- I was not sure what you meant by strata is not a social unit (and do you mean to say that PSU is)? I understand that strata is a geographical unit and I am guessing that PSU is both a geographical and social unit? I believe you are saying that strata are more of an element of design that the researcher uses?

- What do you feel about the datasets having quite a few cases with less than 20 women per cluster to develop a community-level variable? Some even have 1 respondent per PSU. Since I am using all rounds of the NFHS, it is different for each but I need to use the same technique. I am not sure if I should drop clusters with few women (and up to what sample size do you feel it is okay to drop). Or does it not make a big difference statistically? I came across a study by Kaggwa et al. (2008) that mentioned they dropped all clusters with less than 25 women for a different country DHS, but in the NFHS, the max sample of women per PSU is 22.

I am very grateful to you! Thank you for your quick response!

Best,  
Isha

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Subject: Re: Social norms and women's work\_India  
Posted by [Bridgette-DHS](#) on Tue, 18 Oct 2022 20:15:51 GMT  
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Following is a response from DHS staff member, Tom Pullum:

A stratum is something like "rural Tamil Nadu" and "urban Tamil Nadu". You could make a map of Tamil Nadu, with blue dots on the map for clusters in the rural stratum and red dots for clusters in the urban stratum. It's up to you to say whether the red dots or blue dots, collectively, are social units or geographical units.

In your analysis, I expect that the results would be weighted by the number of cases in each cluster. A cluster with 20 women will have 20 times the weight of a cluster with 1 woman. That's the approach in the analytical studies we have done and is probably better than dropping clusters with fewer than some arbitrary number of cases.

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Subject: Re: Social norms and women's work\_India  
Posted by [Isha](#) on Thu, 20 Oct 2022 14:31:43 GMT  
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Dear Tom,

This is so helpful. Thank you for taking out the time and clarifying the meaning of strata and for suggesting the way to move forward.

Very grateful!

Best,  
Isha