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Subject: Cluster sampling

Posted by [okunloladavid](#) on Thu, 08 Apr 2021 21:46:25 GMT

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Dear everyone,

Is it possible for the cluster and household randomly selected in a previous DHS be chosen randomly again in a later survey? How can one detect that for instance in 2013 and 2018 Nigeria DHS?

I am asking this question because I assume this might have some implications for appending DHS datasets because I assume it is possible to have the same cluster id but different cluster in different datasets, but appending such datasets will combine these different clusters but with the same IDs as the same cluster.

It might also be possible that the same cluster with different IDs in different datasets will be treated as different clusters when these datasets are merged.

This also has implications for cluster effect on in multilevel modelling using pooled data because we don't know which cluster affects the outcome because a respondent might be in different clusters in the pooled data, especially if the same respondent emerged in the different but pooled data.

I will be pleased to read anyone's take on this. Thank you.

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Subject: Re: Cluster sampling

Posted by [Bridgette-DHS](#) on Fri, 09 Apr 2021 11:34:19 GMT

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Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

It is very unlikely that the same cluster will be selected in successive surveys, and especially unlikely that the same households or individuals will be sampled. However, there is no way to tell whether that has happened. The identifiers for the selected clusters and households are not retained. There is therefore no way to eliminate the possibility, for example by removing previously selected clusters from the sampling frame. I believe that if you did a simulation study that allowed for repeated selection, you would find that any adjustments, for example a finite population correction, would have a negligible effect.