
Subject: Sample size and systematic sampling
Posted by [Valko](#) on Sun, 07 Dec 2014 12:06:47 GMT
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Greetings!

I plan to work with Kyrgyzstan DHS-2012, males datasets, in SPSS software. I would like to decrease the sample size up to 380 males.

In this regards, I have two questions:

1) Calculation of a sample size for population proportions is done in the EpiInfo, and results at $n=345$, with additional 10% for missing values, $n=380$.
Pls advise, whether in the sample size calculation I should also consider for design effect of 1.5? Design effect refers to the cumulative effect of the differences in precision estimates in a study that could be attributed to the variations in design. In this case, my sample size after multiplying to 1.5 will be 570.

2) Is systematic sampling is appropriate to get a sample size of 380? How to conduct a systematic sampling in SPSS?

Looking forward for your advice.

thank you,

Valeriya Kogay

Subject: Re: Sample size and systematic sampling
Posted by [Reduced-For\(u\)m](#) on Mon, 08 Dec 2014 01:41:02 GMT
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I can't answer your question (I don't do SPSS), but why do you only want a sample of 380? Is this for some sort of simulation or something? A sample size that comes from a power calculation is just the *minimum* sample size you would need to detect an effect of a certain pre-specified size. It doesn't mean you should throw out the remaining data. Am I missing something in what you are trying to do?

Also - in general you do need to account for the design effect, but where did 1.5 come from? You can specify a number of clusters (PSUs) and an inter-cluster correlation coefficient that will give you better power calculations based on beliefs or knowledge about the data, the extent of within-cluster correlation, and the number of clusters.

But maybe I'm just totally mis-understanding what you are trying to do. In that case, very sorry.

Subject: Re: Sample size and systematic sampling
Posted by [Valko](#) on Sun, 14 Dec 2014 19:58:20 GMT
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Thank you for your reply. The design effect to be taken is 1.5 when Deft is not specified (as advised by DHS Sampling and Household Listing manual).

Subject: Re: Sample size and systematic sampling
Posted by [Reduced-For\(u\)m](#) on Sun, 14 Dec 2014 22:50:37 GMT
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Right. I just saw that on the forum. But Deft is about multiplying your confidence interval size, not your sample size, as best as I know. I think you would need to transform this by backing out the new sample size from the power calculation.

I still don't see any reason to throw away observations though, so I think it doesn't matter. Just use all the observations.
