Subject: Total females age 15-49 in the country at the time of the survey
Posted by anselm on Mon, 09 Mar 2015 20:09:38 GMT
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I am trying to de-normalize DHS standard weight as am using pooled data from various countries. Can the total number of female age 15-49 in the country at the time of the survey and number of women age 15-49 interviewed in the survey be gotten from each countries DHS country manual, for example, in the Nigeria 2008 DHS manual, page 459; Table B.1 gives allocation of completed interviews by region and state and Nigeria basic information projected total women in 2007. Is the total women figure of 31,624,485 equivalent to the total number of women aged 15-49 and the figure 36800 equivalent to the number of women aged 15-49 interviewed in the survey. Thanks.

Subject: Re: Total females age 15-49 in the country at the time of the survey
Posted by Liz-DHS on Mon, 16 Mar 2015 22:26:40 GMT
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Dear User,
Your post has been forwarded to one of our experts. Once we have a response we will post.
Thank you!

Subject: Re: Total females age 15-49 in the country at the time of the survey
Posted by anselm on Wed, 18 Mar 2015 13:23:23 GMT
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Thanks dear Liz, i was able to get information about the women population aged 15-49 from UN projection and the number of women interview from the dhs manual of individual countries. I tried to denormalize using this formula; V005*=V005×(total females age 15-49 in the country at the time of the survey)/(number of women age 15-49 interviewed in the survey). Of course, i divided v005/1000000 before using it in the formula. But am kind of lost, before denormalization i had a total sample of 25,438 (unweight count), however, after denormalization and using the denormalized weights am getting a total sample of 9,954329 cases. Is there something i am doing wrong as the number of cases is too large while using the denormalized weights and will affect the bivaraite analysis in terms of significance.
Is there a need for further analysis like;
[(denormalized weights*total number of women(15-49) interviewed in the survey)/total number of women (15-49)at the time of survey].
Thanks.

Subject: Re: Total females age 15-49 in the country at the time of the survey
Posted by Liz-DHS on Thu, 19 Mar 2015 19:23:36 GMT
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Dear User,
Here is a response from one of our sampling experts, Dr. Ruilin Ren:

Quote:Firstly, the DHS survey final report usually does not provide the target population size estimation (women 15-49) which is the first piece of information needed for de-normalizing the women weight. So in general cases, you need to find out this piece of information from outside sources. But for the Nigeria 2008 DHS, we did provided an estimation of the target population size (women 15-49), as you cited 31,624,485, given in table B.1.
Secondly, for the number of women interviewed in a DHS survey which is the second piece of information needed for de-normalizing the women weight, we provide this piece of information in the DHS survey final report, usually in chapter one, table 1.2 in the section "Response rate". For the Nigeria 2008 DHS, this number is 33385. The number you cited 36800 from table B.1 is not the actual number of women interviewed, it was the expected number of women interviews calculated in the sample design.
Hope this helps.

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Subject: Re: Total females age 15-49 in the country at the time of the survey
Posted by anselm on Thu, 19 Mar 2015 21:08:38 GMT
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Thanks for the response, i noticed my mistake and have corrected that already, also, i have gotten my target population size estimation for women 15-49 from countries census and UN datas. But after denormalization, using this formula; V005*=V005×(total females age 15-49 in the country at the time of the survey)/(number of women age 15-49 interviewed in the survey) and applying the denormalized weights, am getting a total sample size of 9,954329 cases for all the countries in my analysis. The total unweight sample was 25,438. Is there something i am doing wrong as the number of cases is too large while using the denormalized weights and will affect the bivaraite analysis in terms of significance.

Thanks.

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Subject: Re: Total females age 15-49 in the country at the time of the survey
Posted by anselm on Thu, 19 Mar 2015 21:17:41 GMT
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Thanks for the response, i noticed my mistake and have corrected that already, also, i have gotten my target population size estimation for women 15-49 from countries census and UN datas. But after denormalization, using this formula; V005*=V005×(total females age 15-49 in the country at the time of the survey)/(number of women age 15-49 interviewed in the survey) and applying the denormalized weights, am getting a total sample size of 9,954329 cases for all the countries in my analysis. The total unweight sample was 25,438. Is there something i am doing wrong as the number of cases is too large while using the denormalized weights and will affect the bivaraite analysis in terms of significance. Note, i did the denormalization seperately for each country and did not use V005*=V005×(total females age 15-49 in all the countries at the time of the survey)/(number of women age 15-49 in all the countries interviewed in the survey)

Thanks.

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Subject: Re: Total females age 15-49 in the country at the time of the survey
Posted by Reduced-For(u)m on Thu, 19 Mar 2015 22:02:28 GMT
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What is the total number of women aged 15-49 that you found from the UN census data?

Subject: Re: Total females age 15-49 in the country at the time of the survey
Posted by anselm on Fri, 20 Mar 2015 00:06:43 GMT
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I attached an Excel file of the countries, number of women 15-49 and women interviewed during the time of survey.

The UN data link is below

esa.un.org/wpp/unpp/panel_indicators.htm

Thanks

File Attachments
1) survey1.xlsx, downloaded 564 times

Subject: Re: Total females age 15-49 in the country at the time of the survey
Posted by Reduced-For(u)m on Fri, 20 Mar 2015 00:26:59 GMT
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I asked about the number of women you used because the de-normalizing process essentially re-scales the weights away from summing up to total sample size and to summing up to number of women the survey represents (this is what allows it to make the weights representational across countries). That 9m number should correspond to something like the number of women in that age group in all your countries, if you are doing the calculation right.

Also - the sum of the weights doesn't really matter within any one survey - you are using them for probability proportioning. My usual strategy is to just de-normalize such that the weights in each survey sum to 1 (new weight = oldweight/sum-of-weights). This makes each survey in total have the same weight in cross-country regressions. The DHS method essentially weights each individual survey by the number of (in this case) women aged 15-49 in each country.

But the main point is that interpreting the weighted averages as a number of observations is the wrong way to think about it.  You want to think about it as doing two things: within survey it is distributing weight based on probability of selection; between surveys it is weighting by population.

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Subject: Re: Total females age 15-49 in the country at the time of the survey
Posted by anselm on Fri, 20 Mar 2015 14:26:44 GMT
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Thanks for your response,
we calculated de-normalized weight for each country.
After denormalization and using the denormalized weights we got a total sample of 9,954329 cases, however our total sample of 25,438 (unweight count). using denomalized size, all univariate comparisons were significant.
If we recalculate this with denomalized weight as below formula;
[(denormalized weights*total number of women(15-49) interviewed in the survey)/total number of women (15-49)at the time of survey].
This makes each survey in total have the same weight in cross-country regressions and univariate comparisons will be better.
It is the best, isn't it?
Is it possible to use this approach for univariate comparison?
Thank you for your collaboration

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