Subject: Combine weights Men and Women - Cambodia DHS
Posted by pie on Mon, 01 Jun 2020 07:17:31 GMT
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Hi everyone,

I am seeking help on how to apply sampling weights when comparing sexually active "Men vs Women". I am trying to merge IR dataset with MR dataset.

For men, mv005 (sample weight), mv021 (sampling units), and mv022 (strata) are used to declare survey design in Stata. For women, v005 (sample weight), v021 (sampling units), and v022 (strata) are used to declare survey design in Stata.

Could anyone please help me with regard to different weights [(mv005, mv021, mv022) & (v005, v021, v022)]?

I would like to compare men with women with respect to a number of characteristics (age, education,....etc.). Chi-square or Fisher's exact or t-test will be used.

Thanks!
Pie

Subject: Re: Combine weights Men and Women - Cambodia DHS
Posted by Bridgette-DHS on Fri, 05 Jun 2020 19:19:36 GMT
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Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

The weights are given by v005, the clusters by v021, the strata by v022. (These may have a prefix h or m, depending on what file they are in.) Weights, clusters, and strata are very different things. They should be incorporated in estimates--in Stata, using the svyset and svy commands (enter "help svy", for example). I that other users can help you.

Subject: Re: Combine weights Men and Women - Cambodia DHS
Posted by pie on Wed, 01 Jul 2020 08:26:48 GMT
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Dear DHS specialist,

Many thanks for your response.

I have first appended 3 IR files (2005, 2010 & 2014), and then MR files (2005, 2010 & 2014).

Finally, I have appended both combined files to get only one large dataset, so that I can examine trends across years and for efficiency reasons. However, I am still having some problems although I have read so many related posts on DHS forum.

I would like to construct a single graph with point estimates and their 95% CIs for the following subpopulations:

- Subpopulation #1 (Sexually active men): ever tested for HIV in 2005 [95%CI], 2010 [95%CI] and 2014 [95%CI].

- Subpopulation #2 (Sexually active women): ever tested for HIV in 2005 [95%CI], 2010 [95%CI] and 2014 [95%CI].

- Subpopulation #3 (Pregnant who received antenatal care): tested for HIV as part of ANC in 2005 [95% CI], 2010 [95%CI] and 2014 [95%CI].

- Subpopulation #4 (Male partners who presented during ANC visit): ever tested for HIV in 2005 [95%CI], 2010 [95%CI] and 2014 [95%CI].

---> Questions: How should I deal with different sampling weights across multiple DHS surveys in order to construct such graph? and if possible, may you please help me with STATA code to construct the graph?

Your help would be greatly appreciated.

Best
Pie

Subject: Re: Combine weights Men and Women - Cambodia DHS
Posted by Bridgette-DHS on Tue, 07 Jul 2020 18:58:46 GMT
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Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

You should be ok if you just use the original weights, which are v005 for data in the IR files and mv0005 for data in the MR files. You do not need to make other adjustments and you do not need the 021 and 022 variables.

I recommend a separate graph for each outcome. You could use lines or bars. Unfortunately, we cannot give more details on how to do this.

Subject: Re: Combine weights Men and Women - Cambodia DHS
Posted by pie on Tue, 07 Jul 2020 21:50:31 GMT
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Dear Dr. Pollum,

I greatly appreciate your response.

I have one more question. In each of my multivariate logistic regression analyses (2005, 2010 and 2014), pre-test counseling has been found to be the most significant predictor of HIV testing during ANC. However, in 2014, the counseling coverage was only about 60% nationally, and as low as 30% in some under-developed regions.

My next step is to build a multivariate prediction model [outcome: HIV testing during ANC (Yes/No), exposure: pre-test counseling (Yes/No), confounders: category variables, and time-points: 2005, 2010 & 2014]. I would like the model to predict the minimum pre-testing counseling coverage required to reach a certain percentage of HIV testing during ANC (e.g. at least 90% of ANC-attending women will receive testing, nationally and/or in any particular regions).

I have done a lot of reading on potential statistical methods (e.g. multivariate time series analysis...etc.). Unfortunately, I still do not know where to begin. I would greatly appreciate it if you could give me some guidance.

Sincerely
Pie

Subject: Re: Combine weights Men and Women - Cambodia DHS
Posted by Bridgette-DHS on Fri, 10 Jul 2020 13:36:09 GMT
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Following is another response from DHS Research & Data Analysis Director, Tom Pullum:

Very interesting question. A big conceptual issue is that the relationship between the outcome and pre-test counseling is not deterministic and if you could change the level of pre-test counseling (in a real population) then the other covariates in the model might change too. However, this is less serious for an intervention than for other covariates and it could be a way to generate target levels of pre-test counseling.

Think of x as the observed proportion (not percentage) of women with 1 on the intervention, in the entire survey or (better) in a more homogeneous sub-population. Say that P is the corresponding proportion who have 1 on the outcome. Say that b is the coefficient for the intervention (preferable in a model that includes controls). Say that X is the target level of x.

The observed P corresponds with the observed x, and P=.9 corresponds with the target X. Therefore log(.9/.1) log[P/(1-P)] equals b(X-x). The other terms in the regression equation drop

out. Solving for X, the only unknown, you have
X = x+{[log(9) log[P/(1-P)]}/b . This is a simple approach but it may be TOO simple, because I see that it can generate values of X that are greater than 1, and that would not be legal for a probability. I suggest you try it. Maybe other forum users will have suggestions.