
Subject: regression to explore the relationship between neonatal mortality & maternal health seeking behavior

Posted by [Jeevana](#) on Mon, 10 Aug 2015 07:34:36 GMT

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Hi there,

I am using data from Nepal Demographic and Health Survey 2011 to explore the relationship between neonatal mortality and maternal health seeking behaviour. Dependent variable as neonatal mortality for last birth in five years preceding the survey (recoded as 1=neonatal death, 0=none). I am thinking to use multiple logistic regression for my analysis. After exploring the data, I found that the number of neonatal death is 71 out of 4079 last birth in five years preceding the survey. Is it (71 neonatal death) is too small in comparison to 4008 non death to use regression analysis? I gone through few papers and found no restriction in data using DHS data for neonatal death. Please suggest me.

Subject: Re: regression to explore the relationship between neonatal mortality & maternal health seeking behavior

Posted by [Reduced-For\(u\)m](#) on Mon, 10 Aug 2015 17:53:51 GMT

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It is true that you will have issues with power when trying to use (relatively) small samples to estimate determinants of neonatal mortality. If you only have 71 deaths, you probably won't be able to use many explanatory variables, and sampling variation can be pretty big. I would think that, essentially, with that few number of deaths you wouldn't be able to learn much about what determines them through regression analyses. I do have two comments though:

1 - the neonatal mortality rate published in the DHS is 33/1,000 - so with 4,000 observations you should have around 120-130 deaths. Are your estimates using the right weights? Is there any chance you missed some deaths? The DHS country report is here:

[http://dhsprogram.com/pubs/pdf/FR257/FR257\[13April2012\].pdf](http://dhsprogram.com/pubs/pdf/FR257/FR257[13April2012].pdf)

2 - if you pooled multiple rounds of the Nepal DHS you might get enough deaths to make some sort of claims about the relationship you are interested in, but you would be "trading variance for bias" - meaning that you would gain power by having more observations and deaths, but you would be introducing new sources of potential bias because birth outcomes and health care seeking behavior are both improving over time due to secular (meaning not related to anything observable in the DHS) trends in health, and health care availability and infrastructure.

Subject: Re: regression to explore the relationship between neonatal mortality & maternal health seeking behavior

Posted by [Liz-DHS](#) on Tue, 18 Aug 2015 14:09:12 GMT

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Dear User,

In addition to Reduced-For(u)m's response, you might find Further Analysis 75 useful as well. Recommended by the survey manager, Dr. Anjushree Pradhan. It can be found on our website [http://dhsprogram.com/publications/publication-FA75-Further- Analysis.cfm](http://dhsprogram.com/publications/publication-FA75-Further-Analysis.cfm)

Thank you!
