Subject: Effect of Fertility decline on Maternal Mortality
Posted by Tesfay on Sat, 08 Oct 2022 23:37:12 GMT
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Dear DHS experts, peace and health for you.
I am Mr. Tesfay Brhane. I am a Ph.D. student and I am studying the effect of fertility decline on maternal and child health using Ethiopian DHS data.
I want to see the effect of the decline in the general fertility rate from 2000 to 2016 on the maternal mortality rate by decomposing the changes in the number of maternal deaths (2000-2016) into its 3 components: Changes in GFR, changes in the number of women of age 15-49, and changes in the Maternal Mortality Ratio (MMR) as suggested by John A. Ross1 and Ann K. Blanc (doi:10.1007/s10995-011-0777-x). In this regard, I do have concerns that I need support from experts.
1. Is it possible to work such a decomposition using data from DHS?
2. If so, how can I get the changes in the total number of women in the RAG? The latest available national census in Ethiopia, next to 1994, is that of 2007. How can I use it for this purpose?
3. If it is not possible to run such a decomposition, how can I assess the effect of change in fertility on changes in maternal mortality?
Since the data on dead women is collected from the sister (sibling method), how can I get the fertility history and other background information of the deceased mother?

I thank your cooperation in advance.

Subject: Re: Effect of Fertility decline on Maternal Mortality
Posted by Janet-DHS on Wed, 12 Oct 2022 13:37:01 GMT
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Following is a response from DHS staff member Tom Pullum:

Your question is very much worth studying. It is outside the scope of the DHS user's forum, but I will give some thoughts.

I recommend that you do the analysis with fertility and adult mortality rates, and population estimates, from the UN Population Division (Population Prospects 2022) and maternal mortality rates from WHO/UNICEF (a new report should be issued before the end of 2022). The estimates of rates for Ethiopia from those sources are based in large part on DHS surveys, but will be much easier to use and have been forced to be internally consistent. You could probably use the DHS surveys in some way but a decomposition will be much easier with the other sources. The population estimates in Population Prospects 2022 include age groups.

I agree with you that the decomposition should start with the number of maternal deaths per calendar year. You could express that as a product of (1) the number of women age 15-49, (2) the all-cause death rate for women 15-49, and (3) the proportion of deaths that are maternal. You could also express it as the product of (1) the number of women age 15-49, (2) the fertility rate for women 15-49, i.e. the GFR, and (3) the MMRatio. (I am ignoring factors of 1,000, 100,000, etc.)
There are two kinds of proportionality: relative to deaths or relative to births.

I won't try to push this any further but I encourage you to proceed--with the data sources I suggested.

Subject: Re: Effect of Fertility decline on Maternal Mortality
Posted by Tesfay on Wed, 12 Oct 2022 18:51:15 GMT
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Thank you very much, it is a helpful and timely direction
