Subject: Query about FGM prevalence statistics
Posted by DHS user on Tue, 26 Jul 2016 11:47:13 GMT
View Forum Message <> Reply to Message

We have been making use of the FGM statistics from many of your reports. We are trying to compare FGM prevalence between different reports, to see how the overall prevalence of FGM has changed with time in a given country. I wondered if you could help me to understand the uncertainty on the prevalence rate, in order that we can understand whether we observe significant changes. For example in Kenya we observe a 23% fall in FGM prevalence from 2008-9 (27.1%) to 2014 (21%). However in Uganda we observe a 130% increase in FGM prevalence from 0.6% (2006) to 1.4% (2011).

I assume that there will be some statistical uncertainty from the sampling, and perhaps some systematic uncertainty perhaps e.g. from the way in which the surveys were carried out. I would be very grateful if someone could advise me on how to derive these uncertainties so we can understand the significance of the prevalence changes.

Subject: Re: Query about FGM prevalence statistics
Posted by Bridgette-DHS on Tue, 26 Jul 2016 11:50:24 GMT
View Forum Message <> Reply to Message

Following is a response from Senior DHS Stata Specialist, Tom Pullum:

The significance of the change in a proportion or percentage depends much more on the arithmetic difference than on the relative difference. As you noticed, the relative difference is much greater between the Uganda surveys than between the Kenya surveys, but the opposite is observed for the arithmetic differences. In fact, both of the percentages from Uganda would round to the same value, 1%.

A statistical test indicates that the difference between the two Kenya surveys is highly significant, with a p-value of .0011. This is much less than the threshold of .01 that I would recommend, as a guideline or threshold (the smaller p is, the more significant the difference).

The same test applied to the two Uganda surveys gives a p value of .0331. For a .01 guideline, this is not significant. For a less stringent .05 test, the difference IS significant. You can choose your own cutoff for significance, but there is no question that we would have much more confidence that the decline observed in Kenya was real (in the population) than that the slight increase observed in Uganda was real.

The attached Stata program and log file show the details (both are text files and can be viewed with Notepad). I don't know whether you are a Stata user yourself, but if not, and you want to do more tests of this sort, I hope you can find someone to help. I'm sorry to say that there is not a good way to do this without going to the data files. I could give you an approximate test based just on the numbers in the reports but it would be complicated and just an approximation.

File Attachments

1) diffs_between_surveys_do_22July2016.txt, downloaded 610 times
2) diffs_between_surveys_log_22July2016.txt, downloaded 569 times