Subject: STATA Code for NMR
Posted by Anonymous on Thu, 02 Feb 2023 00:27:58 GMT
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Hello all,

I am trying to calculate district wise NMR of India using DHS-VII dataset. Can someone please provide me the STATA code for it?

Thank you.

Subject: Re: STATA Code for NMR
Posted by Bridgette-DHS on Thu, 02 Feb 2023 13:25:52 GMT
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Following is a response from Senior DHS staff member, Tom Pullum:

Both NFHS-4 and NFHS-5 were DHS-VII surveys. Which one are you referring to? And by NMR do you mean the Neonatal Mortality Rate or something else?

Subject: Re: STATA Code for NMR
Posted by Anonymous on Fri, 03 Feb 2023 00:32:25 GMT
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Hello,

Thank you very much for my response. I meant NFHS-5. Yes, by NMR, I mean neonatal mortality rate.

Apologies for the confusion.

Warm regards.
Kanika

Subject: Re: STATA Code for NMR
Posted by Bridgette-DHS on Fri, 03 Feb 2023 16:19:29 GMT
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Following is a response from Senior DHS staff member, Tom Pullum:

The following Stata program calculates the neonatal mortality rate for districts. It is set up to run on just one state (Gujarat; v024=24). There are some important comments at the beginning which I won't repeat here, except to emphasize that DHS does NOT recommend calculating these rates

at the district level. The confidence intervals are very wide. However, I'm posting this program because it would have other applications for other surveys and other subpopulations.

The NRM can be obtained just by doing a logit regression with no covariates. You don't have to use the general program for under-5 mortality.

The program also illustrates a trick for saving results. FYI it took about 5 seconds to produce the estimates for all the districts in Gujarat.

```
* Program to produce neonatal mortality rates for districts in the India NFHS-5 survey.
* Can be adapted for subpopulations in any DHS survey.

* The time interval is the past five years, all births in the KR file except those
*  in the month of interview.

* DHS does not recommend district-level estimates of mortality.
* The program provides the lower and upper ends of 95% confidence intervals.
* The intervals are very wide.
* The estimates use svy, including subpop (within the state).
* Bayesian procedures would reduce the confidence intervals and move the estimates
*  toward the state value

* Trick: the results are saved into the workfile and then the workfile is reduced
*  to just the saved results

* specify a workspace
cd e:\DHS\DHS_data\scratch

use "...IAKR7DFL.DTA"
keep v001 v002 v003 v005 v008 v023 v024 v025 sdist bidx b3 b6 b7

* drop births in the month of interview
drop if v008==b3

* Construct a binary variable for neonatal death
gen neonatal_death=0

* To match DHS
replace neonatal_death=1 if b7==0

* To match WHO definition of neonatal
* replace neonatal_death=1 if b6<128

**********
* for testing; comment out the next line for a national run
keep if v024==24
**********
```

```
save IAKR7Dtemp.dta, replace

levelsof v024, local(lstates)
foreach ls of local lstates {
use IAKR7Dtemp.dta, clear
keep if v024==`ls'

* Trick: use this file to save the results
gen vstate=`ls'
gen vdist=.
gen vb=.
gen vL=.
gen vU=.
gen vcases=.

svyset v001 [pweight=v005], strata(v023) singleunit(centered)

* First do the state estimate
svy: logit neonatal_death
matrix T=r(table)
replace vb=T[1,1]  if _n==1
replace vL=T[5,1]  if _n==1
replace vU=T[6,1]  if _n==1
replace vcases=e(N) if _n==1

* Now loop through all the districts in this state
scalar sline=2
levelsof sdist, local(ldistricts)
  quietly foreach ld of local ldistricts {

  * Construct a variable for subpop to select the district
  gen select_dist=1 if sdist==`ld'

  svy, subpop(select_dist): logit neonatal_death
  matrix T=r(table)
  replace vdist=`ld' if _n==sline
  replace vb=T[1,1]  if _n==sline
  replace vL=T[5,1]  if _n==sline
  replace vU=T[6,1]  if _n==sline
  replace vcases=e(N) if _n==sline
  drop select_dist
  scalar sline=sline+1
  }

* Finished with a state; save the results for this state in a data file
drop if vb==.
keep vstate vdist vb vL vU vcases
```

```
rename v* *

* Re-attach the labels for state and district; must confirm the names of these labels
label values state V024
label values dist SDIST

gen NMR=1000*exp(b/(1+exp(b)))
gen NMR_L=1000*exp(L/(1+exp(L)))
gen NMR_U=1000*exp(U/(1+exp(U)))
save results_`ls'.dta, replace
}

format NMR* %6.1f
list, table clean noobs
```