
Subject: Still births-infant mortality

Posted by [A.Z_Epi](#) on Sat, 06 Feb 2021 21:04:41 GMT

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I am doing an analysis on DHS for the following question.

"maternal education associated with child mortality" (stillbirths, infant). I have restricted the analysis to the births in the last 5 years preceding the survey.

1)Initially, I am just trying to calculate the numbers for infant and still births (to calculate power). For example for the number of children who died in the neonatal period, I am using the command `tab b7 exposure v if b19<60` where I have recoded b7 into 0/1=neonatal 3/12 post-neonatal number of deaths. (What can I do for the older DHS where b7 variable is not present).

2)I wish to know the code I need to calculate the number of stillbirths.

3)Later if plan to calculate odds for this association in logistic regression. Do I need to create an event file (tutorial 5 of contraceptive calendar) ?

I am not an expert Stata user. I have already tried the tread message #15076] in this forum but it did not work.

I hope you can guide me in the right direction

Thanks in advance.

Subject: Re: Still births-infant mortality

Posted by [Bridgette-DHS](#) on Tue, 09 Feb 2021 12:57:30 GMT

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Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

Neonatal deaths are those with $b7=0$. Post-neonatal have $1 \leq b7 \leq 11$. Months of age at death are completed months, so in the first month a child's age is 0 months. Deaths under 5 years, i.e. before the 5th birthday, have $b7 \leq 59$.

Stata code for the child mortality chapter of the main report, including stillbirths and perinatal mortality, is in our new GitHub site. Go to www.dhsprogram.com, the Data tab, and click on Data Users Forum. The link to the GitHub site is in the lower left corner of that page. You should be able to do most of what you want by using the BR (or KR) file, in which births are cases. To get at stillbirths you will probably need to get into the calendar data. I suggest that you start by doing as much as you can without the calendar.

Subject: Re: Still births-infant mortality

Posted by [A.Z_Epi](#) on Fri, 12 Feb 2021 03:10:53 GMT

Thank you for your reply it has clarified the problems. I have questions for a stata code I have used to calculate stillbirths and it has worked but I am second guessing if it exactly applies.

I have calculated total stillbirths using the IR file.

```
use caseid v001 v002 v003 v005 v008 v011 v013 v017 v018 v021 v022 v023 v024 v025 v106  
v190 v231 v242 b3*
```

```
> vcal_1 using"C:PKIR71FL.DTA", clear
```

```
. gen stillbirths = regexm(vcal_1,"TPPPPPP")
```

```
.
```

```
.
```

```
.
```

```
. gen early_neonatal_deaths = 0
```

```
.
```

```
. gen infant_deaths = 0
```

```
.
```

```
. gen child_deaths = 0
```

```
.
```

```
.
```

```
.
```

```
. * rename birth variables for use in forvalues loop
```

```
.
```

```
. rename b*_0* b*_*
```

```
.
```

```
.
```

```
.
```

```
. * Any early neonatal deaths, infant deaths, child deaths
```

```
.
```

```
. forvalues b = 1/20 {
```

```
2.
```

```
. * early neonatal - days 0-6
```

```
.
```

```
. replace early_neonatal_deaths = 1 if inrange(b6_`b',100,106)
```

```
3.
```

```
. * infant - from birth through age 11 months
```

```
.
```

```
. replace infant_deaths = 1 if inrange(b6_`b',100,211)
```

```
4.
```

```
. * child from 12 months up through 4 completed years
```

. replace child_deaths = 1 if inrange(b6_`b',212,304)
5.
tab stillbirths = 261 (also after using the iweight command)

the table Pakistan Demographic and Health Survey 2017-18 shows a total of 249 stillbirths.

Can you please guide where I might be making an error?

Subject: Re: Still births-infant mortality
Posted by [Bridgette-DHS](#) on Wed, 17 Feb 2021 13:02:06 GMT
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Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

You are identifying stillbirths with a string TPPPPPP, that is, a termination preceded by 6 (or more) months of pregnancy. T identifies terminations other than a live birth, and includes miscarriages, abortions, and stillbirths. However, if T is preceded by 6+ months of pregnancy, it is almost sure to be a stillbirth. That would be the usual assumption.

If a T occurs near month 80 of the calendar, there may be fewer than 6+ months of pregnancy. In fact, you will find some T's right in month 80, with NO preceding P's. (This point is probably not serious because you are probably not using the full calendar for your reference period.)

You are probably looking for stillbirths within the past 3 years. This means that the T occurred in that interval, not that TPPPPPP occurred in that interval. You need to identify these strings and THEN restrict to those for which T is in the past 3 years.

Note that the number of events given in the report will be weighted by v005. If your number is unweighted, and the number in the report is weighted (and rounded to the nearest integer) there will be a difference.

Please let us know if you still cannot get a match, taking these things into account.

Did you check how the GitHub code identifies stillbirths as a component of perinatal deaths?

Subject: Re: Still births-infant mortality
Posted by [SamH79](#) on Wed, 24 Feb 2021 11:46:43 GMT
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Dear Bridget

I have tried to calculate perinatal mortality (Stillbirth + early Neonatal) for SEA countries, but I have been confusing and stopped when using the loop and forevalues (from the calendar tutorial).

<https://www.dhsprogram.com/data/calendar-tutorial/>

Is there any simple method of calculating the perinatal mortality in different way with the calendar tutorial?

Thanks
Sam

Subject: Re: Still births-infant mortality
Posted by [Bridgette-DHS](#) on Wed, 24 Feb 2021 13:19:20 GMT
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Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

A Stata program for this indicator is included in the GitHub programs for chapter 8 of the main report:
https://github.com/DHSProgram/DHS-Indicators-Stata/blob/master/Chap08_CM/CM_PMR.do

Subject: Re: Still births-infant mortality
Posted by [SamH79](#) on Thu, 25 Feb 2021 00:15:06 GMT
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Thank you it is really helpful and works great.

I will also expand my research question to SURVIVAL STATUS/TIME of perinatal mortality, Is there any experience using DHS data to calculate such objectives? or any state command/syntax?

Best Regards,
Sam

Subject: Re: Still births-infant mortality
Posted by [Bridgette-DHS](#) on Thu, 25 Feb 2021 13:24:37 GMT
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Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

I don't believe survival analysis is possible with perinatal mortality. What would be the "time" variable?

Subject: Re: Still births-infant mortality
Posted by [SamH79](#) on Wed, 03 Mar 2021 21:26:57 GMT
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Thank you for your response,

Is there possible to use the time variable by calendar? As I understand the calendar to calculate perinatal mortality (after 7 months) of pregnancy. Can I use months as the measures for time variables?

Subject: Re: Still births-infant mortality
Posted by [SamH79](#) on Wed, 03 Mar 2021 21:51:04 GMT
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I have calculated the perinatal mortality rate use Timor Leste DHS datasets with the below syntax:

https://github.com/DHSProgram/DHS-Indicators-Stata/blob/master/Chap08_CM/CM_PMR.do

However I found the result is slightly different with what is written in the final report (Chapter 8.3, perinatal mortality).

<https://dhsprogram.com/publications/publication-fr329-dhs-final-reports.cfm>

In my calculation I found the differences are as follow:

For 5 Years	STATA Calculation	TL Final Report 2016
Total pregnancies (7+ Months)	7,200	7,319
Stillbirth	20	22
Early Neonatal	126	128
Perinatal Mortality (for 5 years)	146	150
Perinatal mortality rate (Per 1000)	20	20

As I go further, the differences also obvious when I tabulate other variables with the perinatal mortality: mother age, previous birth interval and municipalities/regions.

My questions:

Is there any possibility of miscalculation in the STATA syntax?

Any advice for this?

Thanks and Best Regards,

Sam

Subject: Re: Still births-infant mortality
Posted by [SamH79](#) on Thu, 04 Mar 2021 00:05:34 GMT
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Dear Tom,

I also want to calculate perinatal mortality in the Philippines using (PH DHS 2017). However, when I input the state it shows: variable vcal_1 not found. Is there any possibility of missing vcal_1 variables, but I found in the final report (PH DHS 2017) it is there (perinatal mortality rate /result calculation). Should I use different data sets other than BR/IR files?

Thanks,
Sam

Subject: Re: Still births-infant mortality
Posted by [Bridgette-DHS](#) on Thu, 04 Mar 2021 12:54:59 GMT
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Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

In survival analysis, the time variable is the elapsed time between entering a state and either leaving that state or being censored by the date of observation. For completed pregnancies, we have the duration of the pregnancy in months, but the range of months is narrow. You can use the calendar to look at duration of pregnancy and outcome of the pregnancy--for example, a stillbirth, or a live birth followed by neonatal death, or a live birth without a death. By definition, stillbirths are non-live birth terminations of pregnancies of duration 7+ months. That is, the duration of the pregnancy is built in to the definition of the outcome. You have the duration of a current (censored) pregnancy, but we don't know the date of conception and early pregnancies are under-reported. For these reasons, I don't see a useful application of survival analysis to pregnancy terminations. But perhaps another user has suggestions. We do apply survival analysis to the calendars to analyze contraceptive discontinuation, failure, and switching.

Subject: Re: Still births-infant mortality
Posted by [Bridgette-DHS](#) on Thu, 04 Mar 2021 14:40:00 GMT
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Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

Yes, you can use b6 or b7 (b7 is easier) for under-five deaths. I thought you were mainly interested in stillbirths and neonatal deaths (for which b7=0). That's why I didn't refer to b6 or b7. The DHS staff cannot help you to set up the model.

The Philippines 2017 DHS did not include a calendar. The Guide to DHS Statistics describes how to calculate the perinatal mortality rate without a calendar. You need to use the IR file to get at stillbirths--they do not appear in the KR or BR files.

Subject: Re: Still births-infant mortality
Posted by [SamH79](#) on Thu, 04 Mar 2021 18:28:19 GMT
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Dear Tom,

Thank you for your response, this is helping me so much, I will consider changing my research question of survival analysis in perinatal mortality.

My further queries,

I will also investigate factors correlated with perinatal mortality in a simple way using logistic regression (Socio-demographic, maternal health, etc). You know this.

My questions:

Is there any possibility to do further analysis after the logistic regression, such as PATH ANALYSIS, to model the correlations between variables with the perinatal mortality?

Thank you for your help

Best Regards,
Sam

Subject: Re: Still births-infant mortality
Posted by [SamH79](#) on Thu, 04 Mar 2021 18:31:16 GMT
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Dear Tom,

Can you help me with this?

I have calculated the perinatal mortality rate use Timor Leste DHS datasets with the below syntax:
https://github.com/DHSProgram/DHS-Indicators-Stata/blob/master/Chap08_CM/CM_PMR.do

However I found the result is slightly different with what is written in the final report (Chapter 8.3, perinatal mortality).

<https://dhsprogram.com/publications/publication-fr329-dhs-final-reports.cfm>

In my calculation I found the differences are as follow:

For 5 Years STATA Calculation TL Final Report 2016

Total pregnancies (7+ Months) 7,200 7,319

Stillbirth 20 22

Early Neonatal 126 128

Perinatal Mortality (for 5 years) 146 150

Perinatal mortality rate

(Per 1000) 20 20

As I go further, the differences also obvious when I tabulate other variables with the perinatal mortality: mother age, previous birth interval and municipalities/regions.

My questions:

Is there any possibility of miscalculation in the STATA syntax?

Any advice for this?

Thanks and Best Regards,
Sam

Subject: Re: Still births-infant mortality

Posted by [Bridgette-DHS](#) on Thu, 04 Mar 2021 19:53:01 GMT

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Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

You can definitely proceed with logit (=logistic) regression. That's what I would recommend. You can include intervening and control variables. Path analysis is really a procedure to partition correlations among continuous variables into total, direct, and indirect components using linear regression. I don't believe the logic extends to logit regression. Have you found examples of path analysis with logit regressions?

Subject: Re: Still births-infant mortality

Posted by [Bridgette-DHS](#) on Fri, 05 Mar 2021 14:38:44 GMT

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Following is a response from DHS Senior Analysis & Research Manager, Shireen Assaf:

The problem is that you are not using the weight variable, v005. If you include weights you should

get a match.

Subject: Re: Still births-infant mortality
Posted by [SamH79](#) on Fri, 05 Mar 2021 16:26:13 GMT
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Dear Tom,

Yes absolutely you are right, many thanks for the help

bw,
Sam

Subject: Re: Still births-infant mortality
Posted by [SamH79](#) on Wed, 10 Mar 2021 23:20:56 GMT
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Dear Tom,

I have successfully calculated perinatal mortality use the above syntax. however not all the variables for the analysis included in the new "perinatal_mortality_file

I want to merge variables v001 v002 v003 v040 v106 v107 v113 v115 v116 v119 v130 v131 v136 v137 v151 v150 v155 ml101 v201 v208 v209 (from BR files, after saved in different file) ... and possibly many others variables from different data sets: IR, KR, and others (depending on the research questions)

I have tried to merge (one to one / one to many/use v001/v002/v003) the above variables but didn't work

I know the number of observations is different (reduced in the perinatal mortality file) and is that the problem? Would you mind to help?

Many thanks
Sam

Subject: Re: Still births-infant mortality
Posted by [SamH79](#) on Wed, 10 Mar 2021 23:31:56 GMT
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I have merge but the number of observations exceeds the number of perinatal observations, means all pregnancy from the merge is included.

Did I do something wrong?

Thanks

Subject: Re: Still births-infant mortality

Posted by [Bridgette-DHS](#) on Thu, 11 Mar 2021 20:51:39 GMT

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Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

It may help to distinguish between neonatal deaths and stillbirths. Neonatal deaths are in the KR file because there was a live birth. Stillbirths are NOT in the KR file, but come from the calendar in the IR file. I would recommend that you construct one file for neonatal deaths, and one file for stillbirths, and then append them. You could do the various merges BEFORE appending.

Subject: Re: Still births-infant mortality

Posted by [SamH79](#) on Wed, 14 Apr 2021 00:20:42 GMT

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I have calculated the perinatal MR using the IR file as guided in the above syntax. I found different observations in the original IR file and the resulted calculation.

In the original IR file, was 12,607 and in the resulted file to calculate PNMR was 7,200.

- What makes a significant difference in the number of observations between the two files? Is that because of the criteria included in PNMR only pregnancy 7 months above? Or any other rationale?
- I also find observations in the BR file was 28,682. What causes a significant difference in the number of observations between the IR file and BR file

Best wishes
Sam

Subject: Re: Still births-infant mortality

Posted by [Bridgette-DHS](#) on Thu, 15 Apr 2021 20:48:07 GMT

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Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

I don't understand your question. The IR file is a file of interviewed women. The BR file has one record for each child ever born to these women. The perinatal mortality rate is calculated for

children born recently, e.g. in the past 3 years. The numbers you list are supposed to be different from one another.
