Subject: How to transform children's height into standardized height
Posted by sanoussi on Tue, 10 Feb 2015 09:37:15 GMT
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Hello everyone,
I have a serious problem and I would like you to help me to solve it. I want to use Stata to standardize children's height, taking reference population for girls 24 months of age. Specifically, I want to implement the formula found in the file attached to this email. Am using DHS data children file) for Togo 1998 and reference population WHO 2006 (healthy population of children). Thank you

File Attachments
1) Standardized height.docx, downloaded 546 times

Subject: Re: How to transform children's height into standardized height
Posted by Reduced-For(u)m on Tue, 10 Feb 2015 19:42:52 GMT
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Use the child recode, look at variable HW70 - that is the HAZ score using the WHO standards. See the recode manual here:
http://dhsprogram.com/pubs/pdf/DHSG4/Recode5DHS_23August2012 .pdf

If Togo 1998 doesn't have HW70 because it is too old, in Stata type "findit zscore06" - with that package you can calculate your own z-scores from the WHO standards using the age, gender, and raw height variables in the child recode.

Subject: Re: How to transform children's height into standardized height
Posted by sanoussi on Wed, 11 Feb 2015 08:42:02 GMT
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Thank you very much,
I comeback to you again.
After calculating my own z-scores from the WHO standards using zscore06 package, i want to determine what children's height would be if they are all girls at 24 months of age. This is an example of what i want to do:

From the DHS data, if we observe a 46-month-old male who is 95.3 cm in height. Using the 2000

CDC growth charts for a 46-month male, we calculate his Z-score to be 1.40. We then use this relative position to determine what his height would be if he were a 24-month-old female, which is 80.1 cm. This 46-month old male with 95.3 cm thus maintains his relative position, but has a standardized height that can be compared to standardized heights for other children at different ages and sex. The standardized height of 46-month old male with 95.3 cm is 80.1 cm.

this is done by the formula attached
Thank you for your help

File Attachments
1) Standardized height.docx, downloaded 500 times

Subject: Re: How to transform children's height into standardized height
Posted by Reduced-For(u)m on Wed, 11 Feb 2015 18:58:37 GMT
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Interesting - without knowing why you'd want to do that, let me offer a suggestion:

Generate some fake data on a bunch of observations (N), all with age of 48 and gender female. Then, for each observation, give them a height "70, 70.1, 70.2... 96.7, 96.8" etc.

Now, use zscore06 to calculate the HAZ for each of these fake observations (maybe to 1 decimal place or something). Now you have a dataset that links HAZ with girls height at age 48 months. With the output from that, you could write a little program that takes the z-scores you calculated for your real children and gives you height for girl at age 48 months. One way would be to export your fake data into Excel, and use the "stupid excel trick" to write code (essentially: write columns with "replace RawHieghtGirl48 = $c1" and "if HAZreal==$d1" - and use the concatenate command).

Then paste that code into a Stata .do file, and use it to convert the real HAZ into the height of a 48 month old girl (so you'd have N lines of code, one for each value of HAZ, all looking almost exactly the same but referring to different real HAZ values). Then just run the do file and get, for each person, what their raw height would be if they had that HAZ and were 48 month old girls.

If this is helpful, in exchange you can explain to me the value of making everyone comparably-heighted to a 4 year old girl (it must be buying you some kind of comparison you want...)

Subject: Re: How to transform children's height into standardized height
Posted by sanoussi on Thu, 12 Feb 2015 08:17:10 GMT
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Thank you for your suggestion,

Am analysing health inequality based on the height of children up to 48 months of age. Because variance of height naturally increases as children get older, and because i wish to give variations in each age group equal importance in the analysis, i plan to use a transformed height measure for the inequality analysis. The transformed height measure is standardized using a fixed age/sex reference group, which in our case is girls at 24 months of age. The actual height of children in the sample is transformed to a standardized height using the distribution of heights, by age and sex, of the NCHS reference population. The standardized height measure is constructed such that the position, in terms of percentiles, is the same for actual height in the actualage/sex group and the transformed height in the reference group NCHS distribution.