Subject: Re: Query regarding child BMI standard deviation Posted by Bridgette-DHS on Thu, 23 May 2019 10:19:35 GMT View Forum Message <> Reply to Message

Following is a response from DHS Lead Nutrition Research Associate, Rukundo Benedict:

Depending on your research question, including adolescent BMI as a determinant may make sense. Others have explored something similar with regards to child undernutrition. For your analysis I would suggest reading the methods section of CR47 available on the DHS website. And to get you started I have provided STATA code to calculate the BMI-for-age z-scores that you will need to categorize adolescent BMI. Note the code uses the KR file (i.e. children's recode file) not the PR file (household recode).

Note

*To calculate the BMI-for-age zscore you will need to install the zanthro package OR use WHO's igrow-up package

*DHS collects data on 15-49yrs. An adolescent is anyone with an age <20years *When using zanthro make sure to use age in months.

* 1) BMI-for-age

**Using KR file of 2016

gen wgt=v005/1000000 svyset [pw=wgt], psu (v021) strata (v023)

*Drop if woman has had a birth in last two months---****THIS SHOULD HAPPEN FOR ALL women's BMI**** ta v222 drop if v222<2 ta v222

/*Body mass index (BMI), or Quetelet's index, for the respondent is defined as weight in kilograms divided by the square of height in meters (W/H2). Variable has two implied decimal places so divide 100*/ gen bmi=v445/100 replace bmi=. if bmi >50 sum bmi

INSTALL zanthro package findit zanthro

****Age-sex specific BMI-zscore****

*create a sex var first gen sex=0 replace sex=2 if v213==0| v213==1

*generate age in months for adolescents** gen age_in_months=v008-v011 label variable age_in_months "Age in months"

keep those 15-19yrs keep if age_in_months<240

run package
egen zbaWHO = zanthro(bmi,ba,WHO), xvar(age_in_months) gender(sex) gencode(male=1,
female=2) ageunit(month) nocutoff

*Remove if beyond WHO BMI flags <-5SD or >+5SD drop if zbaWHO<-5 drop if zbaWHO>5

```
*Adolescent BMI categories
gen adolbmi=0
replace adolbmi =1 if (zbaWHO>=-2) & (zbaWHO<=1)
replace adolbmi =2 if zbaWHO<-2
replace adolbmi =3 if zbaWHO>1
replace adolbmi =. if zbaWHO==.
label define 1 "normal" 2 "thin" 3 "overweight/obese"
label values adolbmi adolbmi
```

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