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Subject: Re: Query regarding child BMI standard deviation  
Posted by [Bridgette-DHS](#) on Thu, 23 May 2019 10:19:35 GMT  
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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/H<sup>2</sup>).

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