Exercise 7\_codes. Estimates of Time spent in physical activity in ATUS well-being module

1. **SAS syntax**

**Separate data into person and activity records, create new activities, and remerge files**

data ipums.act;

 set IPUMS.atus\_00021;

if rectype ne 3 then delete;

run;

data ipums.resp;

 set ipums.atus\_00021;

 if rectype ne 2 then delete;

 run;

data ipums.actsum;

 set ipums.act;

 by caseid;

 retain modact vigact modvigact totact;

 if first.caseid then do;

 modact = 0;

 vigact = 0;

 modvigact = 0;

 totact = 0;

 end;

 if 3 <= metvalue < 6 then modact + duration;

 if 6 <= metvalue < 900 then vigact + duration;

 if 3 <= metvalue < 900 then modvigact + duration;

 totact + duration;

 if last.caseid then output ipums.actsum;

 keep caseid modact vigact modvigact totact;

run;

 proc means;

 var modact vigact modvigact totact;

run;

\*/

**proc** **sort** data = ipums.actsum;

 by caseid;

 **run**;

 **proc** **sort** data = ipums.resp;

 by caseid;

 **run**;

 **data** ipums.respact;

 merge ipums.resp ipums.actsum;

 by caseid;

 **run**;

**Recode variables and Produce tables**

**data** temp;

 set IPUMS.respact;

 if genhealth>**5** then genhealth=**.**;

 twalkbike = sum (walkbike\_nottrans, walkbike\_trans);

 if **10** < BMI < **19** then bmicat = **1**;

 else if **18** < bmi < **25** then bmicat = **2**;

 else if **24** < bmi < **30** then bmicat = **3**;

 else if **29** < BMI < **40** then bmicat = **4**;

 else if **39** < bmi < **999** then bmicat = **5**;

 else bmicat = **.**;

\*exercise\_tot = exercise\_tot;

**proc** **means**;

var bmicat genhealth exercise\_tot walkbike\_nottrans walkbike\_trans modact vigact modvigact;

weight ehwt;

 **run**;

**proc** **sort**;

 by bmicat;

 **proc** **means**;

 var exercise\_tot walkbike\_nottrans walkbike\_trans modact vigact modvigact;

 weight ehwt;

 by bmicat;

 **run**;

**proc** **sort**;

 by genhealth;

 **proc** **means**;

var exercise\_tot walkbike\_nottrans walkbike\_trans modact vigact modvigact;

 weight ehwt;

 by genhealth;

 **run**;

**B. Stata syntax**

/\*1. run extract\*/

quietly do atus\_00451.do;

save extract\_hier.dta, replace;

/\*2. activity data\*/

keep if rectype==3;

/\*keep only activity-level variables\*/

keep caseid actline duration where activity metvalue;

/\*flag activities of interest\*/

gen \_onlyex=duration if (activity>=130000 & activity<130200);

gen \_onlywkbk=duration if (where==232 | where==235);

gen \_wkbkex=duration if (where==232 | where==235) | (activity>=130000 & activity<130200);

gen \_modmet=duration if metvalue>=3 & metvalue<6;

gen \_vigmet=duration if metvalue>=6 & metvalue<999;

gen \_anymet=duration if metvalue>=3 & metvalue<999;

/\*summarize time during activities of interest\*/

egen onlyex=sum(\_onlyex),by(caseid);

egen onlywkbk=sum(\_onlywkbk),by(caseid);

egen wkbkex=sum(\_wkbkex),by(caseid);

egen modmet=sum(\_modmet),by(caseid);

egen vigmet=sum(\_vigmet),by(caseid);

egen anymet=sum(\_anymet),by(caseid);

/\*retain only the first activity record and variables for merging with the person record\*/

keep if actline==1;

keep caseid actline onlyex onlywkbk wkbkex modmet vigmet anymet;

sort caseid;

save activity.dta, replace;

/\*2. person variables\*/

clear;

use extract\_hier.dta;

/\*keep only person-level data\*/

keep if rectype==2;

/\*keep only person-level variables\*/

drop activity-actlinew;

/\*recode BMI and HEALTH\*/

gen bmicat=.;

 replace bmicat=1 if bmi>=19 & bmi<=24;

 replace bmicat=2 if bmi>=25 & bmi<=29;

 replace bmicat=3 if bmi>=30 & bmi<=39;

 replace bmicat=4 if bmi>=40 & bmi<=998;

gen health=.;

 replace health=genhealth if genhealth<96;

sort caseid;

save person.dta, replace;

/\*3. merge files\*/

merge 1:1 caseid using activity.dta;

save act\_person\_merge.dta, replace;

/\*4. analysis\*/

svyset [weight=ehwt];

foreach v in onlyex onlywkbk wkbkex modmet vigmet anymet {;

 svy: mean `v', over(bmicat);

 svy: mean `v', over(health);

 };

**C: SPSS Syntax**

\*\*\*\*\*\*Define characteristics.

COMPUTE exercise=0.

IF ACTIVITY GE 130000 AND ACTIVITY LT 130200 exercise=duration.

COMPUTE walk\_bike=0.

IF WHERE=232 OR WHERE=235 walk\_bike=duration.

COMPUTE ex\_walk\_bike=0.

IF (ACTIVITY GE 130000 AND ACTIVITY LT 130200) OR WHERE=232 OR WHERE=235 ex\_walk\_bike=duration.

COMPUTE moderate=0.

IF METVALUE GE 3 AND METVALUE LT 6 moderate=duration.

COMPUTE vigorous=0.

IF METVALUE GE 6 AND METVALUE LT 999 vigorous=duration.

\*\*\*\*\*\*Aggregate durations.

AGGREGATE

 /OUTFILE=\* MODE=ADDVARIABLES

 /BREAK=CASEID

 /time\_exercise=SUM(exercise)

 /time\_walk\_bike=SUM(walk\_bike)

 /time\_ex\_walk\_bike=SUM(ex\_walk\_bike)

 /time\_moderate=SUM(moderate)

 /time\_vigorous=SUM(vigorous).

SELECT IF rectype=2.

COMPUTE time\_moderate\_vigor=time\_moderate+time\_vigorous.

\*\*\*\*\*\*\*\*\*Recode BMI and Health.

COMPUTE BMI\_group=0.

IF bmi ge 19 and bmi lt 25 BMI\_group=1.

IF bmi ge 25 and bmi lt 30 BMI\_group=2.

if bmi ge 30 and bmi lt 40 BMI\_group=3.

if bmi ge 40 and bmi lt 998 BMI\_group=4.

if bmi =998 or bmi=999 BMI\_group=9.

VAL LABEL BMI\_group 1 'Normal'

2 'Overweight'

3 'Obese'

4 'Extreme obese'.

MISSING VALUES BMI\_group (0,9).

MISSING VALUES GENHEALTH (96, 97,99).

\*\*\*\*\*\*\*\*\*Compute table.

WEIGHT BY EHWT.

MEANS TABLES=time\_exercise time\_walk\_bike time\_ex\_walk\_bike time\_moderate time\_vigorous

 time\_moderate\_vigor BY BMI\_group GENHEALTH

 /CELLS=MEAN.