

Example 2: Frequency Calculation

In the following sample code, the percentage of people who currently have asthma (`astcur`) is examined by race (`racehpr2`) and by race and sex (`racehpr2*srsex`).

SAS:

```
PROC SURVEYMEANS DATA = data NOMCAR VARMETHOD=TAYLOR; a
STRATA tsvarstr;
CLUSTER tsvrunit; b
WEIGHT rakedw0;
VAR astcur;
CLASS astcur;
DOMAIN racehpr2 racehpr2*srsex; c
RUN;
```

Alternatively, PROC SURVEYFREQ may be useful especially for the variables with more than two categories. One caveat in creating multiple tables in one PROC SURVEYFREQ procedure is that the procedure takes the smallest applicable sample sizes among all variables. Therefore, creating one table per one PROC SURVEYFREQ procedure is recommended:

```
PROC SURVEYFREQ DATA = data NOMCAR VARMETHOD=TAYLOR; a
STRATA tsvarstr;
CLUSTER tsvrunit; b
WEIGHT rakedw0;
TABLE racehpr2*astcur/row;
RUN;
```

```
PROC SURVEYFREQ DATA = data NOMCAR VARMETHOD=TAYLOR; a
STRATA tsvarstr;
CLUSTER tsvrunit; b
WEIGHT rakedw0;
TABLE srsex*racehpr2*astcur/row;
RUN;
```

^a In SAS, the `NOMCAR` option presents the assumption that missing values are not completely at random. This, along with the `DOMAIN` statement, is the appropriate approach for domain analyses, which uses the entire sample for variance estimation.

^b When using concatenated data across adults, adolescents, and/or children, use `tsvrunit`; when using separate data files, delete the commands associated with `tsvrunit`.

^c If conducting a domain analysis, the `DOMAIN` statement is necessary for accurate variance estimation. Using `BY` or `WHERE` statements will not produce valid variance estimates for the subpopulation/domain.

SUDAAN:

```
PROC SORT DATA = data;
BY tsvarstr tsvrunit; d
RUN;

PROC CROSSTAB DATA = data FILETYPE=SAS DESIGN=WR;
NEST tsvarstr tsvrunit;
WEIGHT rakedw0;
TABLES racehpr2*astcur srsex*racehpr2*astcur;
SUBGROUP astcur racehpr2 srsex;
LEVELS 2 7 2;
RUN;
```

^d When using concatenated data across adults, adolescents, and/or children, use `tsvrunit`; when using separate data files, delete the commands associated with `tsvrunit`.

Example 2: Frequency Calculation continued.

Stata:

***Sample design specification step*^a**

```
use "DATASET LOCATION"  
svyset TSVRUNIT [pw=rakedw0], strata (TSVARSTR)b
```

***Analysis*^c**

```
svy: tabulate astcur racehpr2, col se ci  
svy, subpop (if srsex==1): tab astcur racehpr2, col se ci  
svy, subpop (if srsex==2): tab astcur racehpr2, col se ci
```

Stata, the sample design specification step should be included before conducting any analysis.

^b When using concatenated data across adults, adolescents, and/or children, use `tsvrunit`; when using separate data files, delete the commands associated with `tsvrunit`.

^c Stata V.10 and higher cannot accommodate 3 or more variables in the `tab` command.

SPSS:

***Sample design specification step*^d**

* Analysis Preparation Wizard.

```
CSPLAN ANALYSIS  
/PLAN FILE='\\PATH FOR COMPLEX SURVEY PLAN FILE\FILENAME.csaplan'  
/PLANVARS ANALYSISWEIGHT=RAKEDW0  
/PRINT PLAN  
/DESIGN STRATA= TSVARSTR CLUSTER=TSVRUNITe  
/ESTIMATOR TYPE=WR.
```

Analysis

* Complex Samples Crosstabs.

```
CSTABULATE  
/PLAN FILE = '\\PATH FOR COMPLEX SURVEY PLAN FILE\FILENAME.csaplan'  
/TABLES VARIABLES = astcur BY racehpr2  
/SUBPOP TABLE = srsex DISPLAY=LAYERED  
/CELLS POPSIZE COLPCT  
/STATISTICS SE CV CIN (95)  
/MISSING SCOPE = TABLE CLASSMISSING = EXCLUDE.
```

SPSS, the sample design specification step should be included before conducting any analysis.

^e When using concatenated data across adults, adolescents, and/or children, use `tsvrunit`; when using separate data files, delete the commands associated with `tsvrunit`.