WesVar Analysis Example Replication C12

WesVar 5.1 is primarily a point and click application and though a text file of commands can be used in the WesVar (V5.1) batch processing environment, all examples presented here use the GUI method. For more information on the batch processing approach, see the WesVar documentation addendum for V5.1.

Due to use of GUI method, no syntax is presented prior to results. Typically, WesVar results and setups are stored in WesVar workbooks. The analysis example replication documents include selected parts of the workbook output to highlight key results. For more on additional outputs and program features, see the WesVar documentation.

Output WesVar Analysis Example Replication C12

Numbers for Table 12.3 Weighted Estimates of Means for Selected Variables, Pre and Post-Imputation

```
WESVAR VERSION NUMBER :      v5.1.18
TIME THE JOB EXECUTED :      10:02:48 07/06/2017
INPUT DATASET NAME :  P:\ASDA 2\Data sets\nhanes 2011_2012\c12_nhanes.var
TIME THE INPUT DATASET CREATED :    09:59:26 07/06/2017
FULL SAMPLE WEIGHT :  wtmec2yr
REPLICATE WEIGHTS :   RPL01...RPL31
VARIANCE ESTIMATION METHOD : JKn

OPTION COMPLETE :    ON
OPTION FUNCTION LOG : ON
OPTION VARIABLE LABEL :      OFF
OPTION VALUE LABEL :  OFF
OPTION OUTPUT REPLICATE ESTIMATES :  OFF
FINITE POPULATION CORRECTION FACTOR :       1.00000
VALUE OF ALPHA (CONFIDENCE LEVEL %) :       0.05000 (95.00000 %)
DEGREES OF FREEDOM :  17
t VALUE :     2.110
SUBSET CRITERIA :

ANALYSIS VARIABLES :  bmxbmi, indfmpir, bpxdi1_1
VARIABLES :   None Specified.
CORRELATION : None Specified.
BY :   None Specified.

FACTOR(S) :   1.00
JKn FACTOR(S) :      0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.50
       0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50
       0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50

NUMBER OF REPLICATES :       31
NUMBER OF OBSERVATIONS READ :       5615

WEIGHTED NUMBER OF OBSERVATIONS READ :      232002539.045
```

Pre-Imputation (Complete Case)

Statistics	Unweighted	Weighted	SE Weighted
Mean BMI	28.621	28.612	0.212
Mean Poverty Index	2.403	2.892	0.105
Mean Diastolic BP	71.104	71.711	0.524

After Imputation using Imputation Model 1 (With Design Variables in Imputation Model)

```
 WESVAR VERSION NUMBER :      v5.1.18
 TIME THE JOB EXECUTED :      10:25:22 07/06/2017
 INPUT DATASET NAME :  P:\ASDA 2\Data sets\nhanes 2011_2012\outimpm1_wide.var
 TIME THE INPUT DATASET CREATED :     10:22:01 07/06/2017
 FULL SAMPLE WEIGHT :  wtmec2yr
 REPLICATE WEIGHTS :   RPL01...RPL31
 VARIANCE ESTIMATION METHOD : JKn

 OPTION COMPLETE :     ON
 OPTION FUNCTION LOG : ON
 OPTION VARIABLE LABEL :      OFF
 OPTION VALUE LABEL :  OFF
 OPTION OUTPUT REPLICATE ESTIMATES :  OFF
 FINITE POPULATION CORRECTION FACTOR :       1.00000
 VALUE OF ALPHA (CONFIDENCE LEVEL %) :       0.05000 (95.00000 %)
 DEGREES OF FREEDOM :  17
 t VALUE :     2.110
 SUBSET CRITERIA :

 ANALYSIS VARIABLES :  bmxbmi5, bmxbmi4, bmxbmi3, bmxbmi2, bmxbmi1, bpxdi15, bpxdi14, bpxdi13, bpxdi12, bpxdi11, indfmpir5, indfmpir4, indfmpir3,
indfmpir2, indfmpir1
 VARIABLES :   None Specified.
 CORRELATION : None Specified.
 BY :   None Specified.

 FACTOR(S) :   1.00
 JKn FACTOR(S) :      0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.50
       0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50
       0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50

 NUMBER OF REPLICATES :       31
 NUMBER OF OBSERVATIONS READ :       5615
 WEIGHTED NUMBER OF OBSERVATIONS READ :      232002539.045
```

BMXBMI (Imputation 1-5)			
Statistics	Unweighted	Weighted	SE Weighted
Mean	28.611	28.626	0.211
Mean	28.618	28.622	0.211
Mean	28.608	28.614	0.212
Mean	28.614	28.632	0.217
Mean	28.616	28.613	0.205

BPXDI1_1 (Imputation 1-5)			
Statistics	Unweighted	Weighted	SE Weighted
Mean	71.069	71.641	0.526
Mean	70.994	71.546	0.481
Mean	71.051	71.599	0.524
Mean	71.034	71.582	0.546
Mean	71.042	71.602	0.512

INDFMPIR (Imputation 1-5)			
Statistics	Unweighted	Weighted	SE Weighted
Mean	2.369	2.824	0.101
Mean	2.367	2.831	0.101
Mean	2.361	2.832	0.101
Mean	2.358	2.822	0.097
Mean	2.361	2.825	0.102

Numbers for Table 12.4 Proportion of US Adults with DBP >= 90

Complete Case

```
 WESVAR VERSION NUMBER :      v5.1.18
 TIME THE JOB EXECUTED :      10:49:33 07/06/2017
 INPUT DATASET NAME :  P:\ASDA 2\Data sets\nhanes 2011_2012\c12_nhanes.var
 TIME THE INPUT DATASET CREATED :    09:59:26 07/06/2017
 FULL SAMPLE WEIGHT :  wtmec2yr
 REPLICATE WEIGHTS :   RPL01...RPL31
 VARIANCE ESTIMATION METHOD : JKn

 OPTION COMPLETE :    ON
 OPTION FUNCTION LOG : ON
 OPTION VARIABLE LABEL :      OFF
 OPTION VALUE LABEL :  OFF
 OPTION OUTPUT REPLICATE ESTIMATES :  OFF
 FINITE POPULATION CORRECTION FACTOR :       1.00000
 VALUE OF ALPHA (CONFIDENCE LEVEL %) :       0.05000 (95.00000 %)
 DEGREES OF FREEDOM :  17
 t VALUE :     2.110
 SUBSET CRITERIA :

 ANALYSIS VARIABLES :  None Specified.
 COMPUTED STATISTIC :  None Specified.
 TABLE(S) :    high_dbp

 FACTOR(S) :   1.00
 JKn FACTOR(S) :      0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.50
       0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50
       0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50

 NUMBER OF REPLICATES :       31
 NUMBER OF OBSERVATIONS READ :       5615
 WEIGHTED NUMBER OF OBSERVATIONS READ :      232002539.045
```

Complete Case	STATISTIC	EST_TYPE	ESTIMATE	STDERROR	LOWER 95%	UPPER 95%	CV(%)	CELL_n	DENOM_n	DEFF
1	SUM_WTS	PERCENT	6.082	0.797	4.400	7.764	13.106	317	5112	5.686

Model with Design Variables in Imputation Model

```
 WESVAR VERSION NUMBER :      v5.1.18
 TIME THE JOB EXECUTED :      10:59:35 07/06/2017
 INPUT DATASET NAME :  P:\ASDA 2\Data sets\nhanes 2011_2012\outimpm1_wide.var
 TIME THE INPUT DATASET CREATED :    10:22:01 07/06/2017
 FULL SAMPLE WEIGHT :  wtmec2yr
 REPLICATE WEIGHTS :   RPL01...RPL31
 VARIANCE ESTIMATION METHOD : JKn

 OPTION COMPLETE :     ON
 OPTION FUNCTION LOG : ON
 OPTION VARIABLE LABEL :      OFF
 OPTION VALUE LABEL :  OFF
 OPTION OUTPUT REPLICATE ESTIMATES :  OFF
 FINITE POPULATION CORRECTION FACTOR :       1.00000
 VALUE OF ALPHA (CONFIDENCE LEVEL %) :       0.05000 (95.00000 %)
 DEGREES OF FREEDOM :  17
 t VALUE :     2.110
 SUBSET CRITERIA :

 ANALYSIS VARIABLES :  None Specified.
 COMPUTED STATISTIC :  m_impdp=pv(mean( high_dbp1 high_dbp2 high_dbp3 high_dbp4 high_dbp5))
 TABLE(S) :    None Specified.

 FACTOR(S) :   1.00
 JKn FACTOR(S) :      0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.50
       0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50
       0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50

 NUMBER OF REPLICATES :       31
 NUMBER OF OBSERVATIONS READ :       5615
 WEIGHTED NUMBER OF OBSERVATIONS READ :      232002539.045
```

From Model with Design Variables STATISTIC	EST_TYPE	ESTIMATE	STDERROR	LOWER 95%	UPPER 95%	CV(%)	CELL_n	DEFF
m_impdp	VALUE	0.061	0.008	0.044	0.077	13.240	5615	N/A

Model without Design Variables in Imputation Model

```
 WESVAR VERSION NUMBER :      v5.1.18
 TIME THE JOB EXECUTED :      11:15:40 07/06/2017
 INPUT DATASET NAME :  P:\ASDA 2\Data sets\nhanes 2011_2012\outimpm2_wide.var
 TIME THE INPUT DATASET CREATED :     11:13:01 07/06/2017
 FULL SAMPLE WEIGHT :  wtmec2yr
 REPLICATE WEIGHTS :   RPL01...RPL31
 VARIANCE ESTIMATION METHOD : JKn

 OPTION COMPLETE :     ON
 OPTION FUNCTION LOG : ON
 OPTION VARIABLE LABEL :      OFF
 OPTION VALUE LABEL :  OFF
 OPTION OUTPUT REPLICATE ESTIMATES :  OFF
 FINITE POPULATION CORRECTION FACTOR :       1.00000
 VALUE OF ALPHA (CONFIDENCE LEVEL %) :       0.05000 (95.00000 %)
 DEGREES OF FREEDOM :  17
 t VALUE :     2.110
 SUBSET CRITERIA :

 ANALYSIS VARIABLES :  None Specified.
 COMPUTED STATISTIC :  m_highdp=pv(mean( high_dbp1 high_dbp2 high_dbp3 high_dbp4 high_dbp5))
 TABLE(S) :    None Specified.

 FACTOR(S) :   1.00
 JKn FACTOR(S) :      0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.50
       0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50
       0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50

 NUMBER OF REPLICATES :       31
 NUMBER OF OBSERVATIONS READ :       5615
 WEIGHTED NUMBER OF OBSERVATIONS READ :      232002539.045
```

From Model without Design Variables STATISTIC	EST_TYPE	ESTIMATE	STDERROR	LOWER 95%	UPPER 95%	CV(%)	CELL_n
m_highdp	VALUE	0.061	0.008	0.045	0.077	12.482	5615

NOTE: NO FEFI OPTION IN WESVAR.

Table 12.5 Logistic Regression Models for High Diastolic Blood Pressure of US Adults, NHANES data

Complete Case

```
 WESVAR VERSION NUMBER :      v5.1.18
 TIME THE JOB EXECUTED :      11:39:41 07/06/2017
 INPUT DATASET NAME :  P:\ASDA 2\Data sets\nhanes 2011_2012\c12_nhanes.var
 TIME THE INPUT DATASET CREATED :     09:59:26 07/06/2017
 FULL SAMPLE WEIGHT :  wtmec2yr
 REPLICATE WEIGHTS :   RPL01...RPL31
 VARIANCE ESTIMATION METHOD : JKn
 JKn FACTOR(S) :       0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.50
       0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50
       0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50

 TYPE OF ANALYSIS :    LOGISTIC
 CONVERGENCE CRITERION :      1e-06
 MAXIMUM NUMBER OF ITERATIONS :       25
 VALUE OF ALPHA (CONFIDENCE LEVEL %) :       0.05000 (95.00000 %)
 OPTION OUTPUT REPLICATE COEFFICIENTS :      OFF
 OPTION OUTPUT ITERATION HISTORY :    OFF

 MODEL(S):     high_dbp = ridreth1.2  ridreth1.3  ridreth1.4  ridreth1.5  riagendr.2  agec  agecsq

 NUMBER OF REPLICATES :       31
 NUMBER OF OBSERVATIONS READ :        5615
 WEIGHTED NUMBER OF OBSERVATIONS READ :      232002539.045

 MODEL :       high_dbp = ridreth1.2  ridreth1.3  ridreth1.4  ridreth1.5  riagendr.2  agec  agecsq
  Class Variable Index :
       ridreth1.1 : 1
       ridreth1.2 : 2
       ridreth1.3 : 3
       ridreth1.4 : 4
       ridreth1.5 : 5
       riagendr.1 : 1
       riagendr.2 : 2
```

	PARAMETER	STANDARD ERROR	TEST FOR H0:			
PARAMETER	ESTIMATE	OF ESTIMATE	PARAMETER=0	PROB>|T|	LOWER 95%	UPPER 95%
INTERCEPT	-2.250	0.201	-11.202	0.000	-2.674	-1.826
ridreth1.2	-0.726	0.249	-2.916	0.010	-1.251	-0.201
ridreth1.3	0.131	0.230	0.570	0.576	-0.354	0.617
ridreth1.4	0.658	0.251	2.625	0.018	0.129	1.187
ridreth1.5	0.050	0.248	0.201	0.843	-0.474	0.574
riagendr.2	-0.547	0.209	-2.613	0.018	-0.988	-0.105
agec	0.008	0.007	1.180	0.254	-0.007	0.024
agecsq	-0.002	0.000	-5.795	0.000	-0.002	-0.001

NOTE: Logistic Regression with Plausible Variables is NOT Supported in WesVar 5.1. Only PV for a continuous outcome is allowed.