

## SAS Analysis Examples Replication C6

\* SAS Analysis Examples Replication for ASDA 2nd Edition  
\* Berglund April 2017  
\* Chapter 6 ;

```
libname d "P:\ASDA 2\Data sets\nhanes 2011_2012\" ;  
ods listing ;  
ods graphics off ;  
options nodate nonumber ls=125 ps=68 ;  
ods rtf style=minimal bodytitle ;
```

```
data c6_nhanes ;  
  set d.nhanes1112_sub_8aug2016 ;  
run ;  
title "Example 6.1: Estimating the Proportion of the U.S. Adult Population with an Irregular Heart Beat. " ;  
* wald confidence limit is default ;  
proc surveyfreq data=c6_nhanes ;  
  strata sdmvstra ; cluster sdmvpsu ; weight wtmecl2yr ;  
  tables agel8p*irregular / deff row cl ;  
run ;  
* logit confidence limit ;  
proc surveyfreq data=c6_nhanes ;  
  strata sdmvstra ; cluster sdmvpsu ; weight wtmecl2yr ;  
  tables agel8p*irregular / deff row cl(logit) ;  
run ;  
* means for proportion of 0/1 variable ;  
proc surveymeans data=c6_nhanes ;  
  strata sdmvstra ; cluster sdmvpsu ; weight wtmecl2yr ;  
  domain agel8p ;  
  var irregular ;  
run ;  
title " Example 6.2: Estimating the Proportion of U.S. Adults by Race and Ethnicity using NHANES data. " ;  
proc surveyfreq data=c6_nhanes ;  
  strata sdmvstra ; cluster sdmvpsu ; weight wtmecl2yr ;  
  tables agel8p*ridreth1 / nowt nocellpercent row(deff cl ) ;  
run ;  
title "Example 6.3: Estimating the Proportions of U.S. Adults by Blood Pressure Category using the 2011-2012 NHANES Data."  
;  
proc surveyfreq data=c6_nhanes ;  
  strata sdmvstra ; cluster sdmvpsu ; weight wtmecl2yr ;  
  tables agel8p*bp_cat / nowt nocellpercent row(deff cl) ;  
run ;
```

```
libname russia "P:\ASDA 2\Data sets\ESS6 Russia" ;  
data c6_russia ;  
  set russia.ess6_russia_20aug2016 ;  
run ;  
title "Example 6.4: A Goodness of Fit Test for Proportions of Russians age 15+ by Marital Status." ;  
proc surveyfreq data=c6_russia ;  
  strata stratify ; cluster psu ; weight pspwght ;  
  tables marcat / row lrchisq(secondorder) testp=(.5 .25 .25) ;  
run ;  
title "Example 6.5: Pie Charts and Vertical Bar Charts of the Estimated Proportions of Russians age 15+ by Marital Status."  
;  
* Note PROC SGPLOT does not support weighted plots or pie charts so here we use a vertical bar with weight example from PROC  
FREQ instead ;  
ods graphics on ;  
proc freq data=c6_russia ;  
  tables marcat / plots=freqplot (scale=percent) ;  
  weight pspwght ;  
run ;  
ods graphics off ;  
libname ncsr "P:\ASDA 2\Data sets\ncsr\" ;  
data c6_ncsr ;  
  set ncsr.ncsr_sub_13nov2015 ;  
run ;  
title " Example 6.6: Estimation of Total and Row Proportions for the Crosstabulation of Gender and Lifetime Major Depression  
Status (Source: NCS-R)." ;  
proc surveyfreq data=c6_ncsr ;  
  strata sestrat ; cluster seclustr ; weight ncsrwtsh ;  
  tables sex*mde / deff chisq (secondorder) ;  
run ;  
proc surveyfreq data=c6_ncsr ;  
  strata sestrat ; cluster seclustr ; weight ncsrwtsh ;  
  tables sex*mde / row(deff cl) chisq(secondorder) ;  
run ;
```

```

title " Example 6.7: Comparing the Proportions of U.S. Adult Men and Women with Lifetime Major Depression." ;
* linear contrast of male v. female mde done with LSMEANS / DIFF option in PROC SURVEYREG ;
proc surveyreg data=c6_ncsr ;
  strata sestrat ; cluster seclustr ; weight ncsrwtsh ;
  class sex ;
  model mde = sex / solution ;
  lsmeans sex /diff ;
run ;
title " Example 6.8: Testing the Independence of MDE and Gender in U.S. Adults Using the NCS-R data." ;
proc surveyfreq data=c6_ncsr ;
  strata sestrat ; cluster seclustr ; weight ncsrwtsh ;
  tables sex*mde / chisq(secondorder) ;
run ;
* svy: tab sex mde, se ci deff ;
data c6_ncsr1 ;
  set c6_ncsr ;
  * create indicator for subpopulation of interest ;
  age18_28=0 ; if 18<=age<=28 then age18_28=1 ;
run ;

title "Example 6.9: Testing the Independence of Alcohol Dependence and Education Level in Young Adults (Ages 18-28) using
the NCS-R data. " ;
proc surveyfreq data=c6_ncsr1 ;
  strata sestrat ; cluster seclustr ; weight ncsrwtlg ;
  tables age18_28*ed4cat*ald / nocellpercent row chisq chisq(secondorder) ;
run ;

title "Example 6.10: Simple Logistic Regression to Estimate the NCS-R Male/Female Odds Ratio for Lifetime Major Depressive
Episode. " ;
proc surveylogistic data=c6_ncsr ;
  strata sestrat ; cluster seclustr ; weight ncsrwtsh ;
  model mde(event='1') = sexm ;
run ;
* Example 6.11: Using the NCS-R Data to Estimate and Test the Association between Gender and Depression in the U.S. Adult
Population when controlling for Age.

* NOTE: this is done using SUDAAN in book as SAS does not provide a SURVEY procedure for this test

* Example 6.12: A Simple Log-linear Model to Test the Association between Lifetime Major Depression Episode and Sex.
* NOTE: done in IVEware and R in book since SAS does not offer a SURVEY procedure for Log-Linear models ;
ods rtf close ;

```

Example 6.1: Estimating the Proportion of the U.S. Adult Population with an Irregular Heart Beat.

The SURVEYFREQ Procedure

Data Summary	
Number of Strata	14
Number of Clusters	31
Number of Observations	9756
Number of Observations Used	9338
Number of Obs with Nonpositive Weights	418
Sum of Weights	306590681

Table of age18p by irregular									
age18p	irregular	Frequency	Weighted Frequency	Std Err of Wgt Freq	Percent	Std Err of Percent	95% Confidence Limits for Percent		Design Effect
0	0	3642	72706140	5745470	24.5373	0.7485	22.9582	26.1164	2.7306
	1	11	305580	116221	0.1031	0.0385	0.0220	0.1843	1.2958
	Total	3653	73011720	5775234	24.6404	0.7560	23.0454	26.2355	2.7783
1	0	5264	219630508	13382261	74.1222	0.7705	72.4966	75.7479	2.7938
	1	110	3666308	459959	1.2373	0.1254	0.9727	1.5019	1.1617
	Total	5374	223296816	13647988	75.3596	0.7560	73.7645	76.9546	2.7783
Total	0	8906	292336649	18562605	98.6595	0.1460	98.3515	98.9676	1.4547
	1	121	3971887	522982	1.3405	0.1460	1.0324	1.6485	1.4547
	Total	9027	296308536	18854873	100.000				
Frequency Missing = 311									

Table of age18p by irregular					
age18p	irregular	Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
0	0	99.5815	0.1537	99.2571	99.9058
	1	0.4185	0.1537	0.0942	0.7429
	Total	100.000			
1	0	98.3581	0.1678	98.0041	98.7121
	1	1.6419	0.1678	1.2879	1.9959
	Total	100.000			
Total	0				
	1				
	Total				
Frequency Missing = 311					

Example 6.1: Estimating the Proportion of the U.S. Adult Population with an Irregular Heart Beat.

The SURVEYFREQ Procedure

Data Summary	
Number of Strata	14
Number of Clusters	31
Number of Observations	9756
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Table of age18p by irregular									
age18p	irregular	Frequency	Weighted Frequency	Std Err of Wgt Freq	Percent	Std Err of Percent	95% Confidence Limits for Percent		Design Effect
0	0	3642	72706140	5745470	24.5373	0.7485	22.9927	26.1505	2.7306
	1	11	305580	116221	0.1031	0.0385	0.0469	0.2264	1.2958
	Total	3653	73011720	5775234	24.6404	0.7560	23.0803	26.2700	2.7783
1	0	5264	219630508	13382261	74.1222	0.7705	72.4636	75.7144	2.7938
	1	110	3666308	459959	1.2373	0.1254	0.9988	1.5319	1.1617
	Total	5374	223296816	13647988	75.3596	0.7560	73.7300	76.9197	2.7783
Total	0	8906	292336649	18562605	98.6595	0.1460	98.3139	98.9351	1.4547
	1	121	3971887	522982	1.3405	0.1460	1.0649	1.6861	1.4547
	Total	9027	296308536	18854873	100.000				
Logit confidence limits are computed for percents.									
Frequency Missing = 311									

Table of age18p by irregular					
age18p	irregular	Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
0	0	99.5815	0.1537	99.0930	99.8074
	1	0.4185	0.1537	0.1926	0.9070
	Total	100.000			
1	0	98.3581	0.1678	97.9639	98.6770
	1	1.6419	0.1678	1.3230	2.0361
	Total	100.000			
Total	0				
	1				
	Total				
Logit confidence limits are computed for percents.					
Frequency Missing = 311					

Example 6.1: Estimating the Proportion of the U.S. Adult Population with an Irregular Heart Beat.

The SURVEYMEANS Procedure

Data Summary	
Number of Strata	14
Number of Clusters	31
Number of Observations	9756
Number of Observations Used	9338
Number of Obs with Nonpositive Weights	418
Sum of Weights	306590681

Statistics						
Variable	Label	N	Mean	Std Error of Mean	95% CL for Mean	
irregular	1=yes 0=no	9027	0.013405	0.001460	0.01032441	0.01648472

Example 6.1: Estimating the Proportion of the U.S. Adult Population with an Irregular Heart Beat.

The SURVEYMEANS Procedure

Domain Statistics in age18p							
Age >=18: 1=Yes 0=No	Variable	Label	N	Mean	Std Error of Mean	95% CL for Mean	
0	irregular	1=yes 0=no	3653	0.004185	0.001537	0.00094168	0.00742902
1	irregular	1=yes 0=no	5374	0.016419	0.001678	0.01287902	0.01995896

Example 6.2: Estimating the Proportion of U.S. Adults by Race and Ethnicity using NHANES data.

The SURVEYFREQ Procedure

Data Summary	
Number of Strata	14
Number of Clusters	31
Number of Observations	9756
Number of Observations Used	9338
Number of Obs with Nonpositive Weights	418
Sum of Weights	306590681

Table of age18p by RIDRETH1							
age18p	RIDRETH1	Frequency	Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent		Design Effect of Row Percent
0	1	747	15.3445	3.1660	8.6649	22.0241	28.7200
	2	434	8.1138	1.6928	4.5423	11.6854	14.3062
	3	827	53.2818	4.9603	42.8165	63.7472	36.7898
	4	1077	14.6731	2.8088	8.7470	20.5992	23.4540
	5	638	8.5867	1.1462	6.1684	11.0051	6.2301
	Total	3723	100.000				
1	1	569	7.9168	1.7251	4.2772	11.5563	22.9166
	2	577	6.6224	1.5193	3.4171	9.8278	20.9546
	3	2014	65.9386	3.8892	57.7332	74.1440	37.8077
	4	1505	11.7185	2.3370	6.7878	16.6491	29.6379
	5	950	7.8037	1.0917	5.5004	10.1070	9.2998
	Total	5615	100.000				
Total	1	1316					
	2	1011					
	3	2841					
	4	2582					
	5	1588					
	Total	9338					

Example 6.3: Estimating the Proportions of U.S. Adults by Blood Pressure Category using the 2011-2012 NHANES Data.

The SURVEYFREQ Procedure

Data Summary	
Number of Strata	14
Number of Clusters	31
Number of Observations	9756
Number of Observations Used	9338
Number of Obs with Nonpositive Weights	418
Sum of Weights	306590681

Table of age18p by bp_cat							
age18p	bp_cat	Frequency	Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent		Design Effect of Row Percent
0	1	1543	90.3833	0.9724	88.3317	92.4350	1.8474
	2	154	9.5266	0.9553	7.5110	11.5422	1.7980
	3	2	0.0901	0.0658	0.0000	0.2289	0.8163
	4	0	.	.	.	.	.
	Total	1699	100.000				
1	1	2438	47.2223	1.5521	43.9477	50.4970	5.1760
	2	2284	42.7985	1.2035	40.2593	45.3378	3.1684
	3	489	7.9778	0.5815	6.7509	9.2047	2.4669
	4	145	2.0013	0.4385	1.0762	2.9264	5.2493
	Total	5356	100.000				
Total	1	3981					
	2	2438					
	3	491					
	4	145					
	Total	7055					
Frequency Missing = 2283							

Example 6.4: A Goodness of Fit Test for Proportions of Russians age 15+ by Marital Status.

The SURVEYFREQ Procedure

Data Summary	
Number of Strata	8
Number of Clusters	184
Number of Observations	2484
Sum of Weights	2484

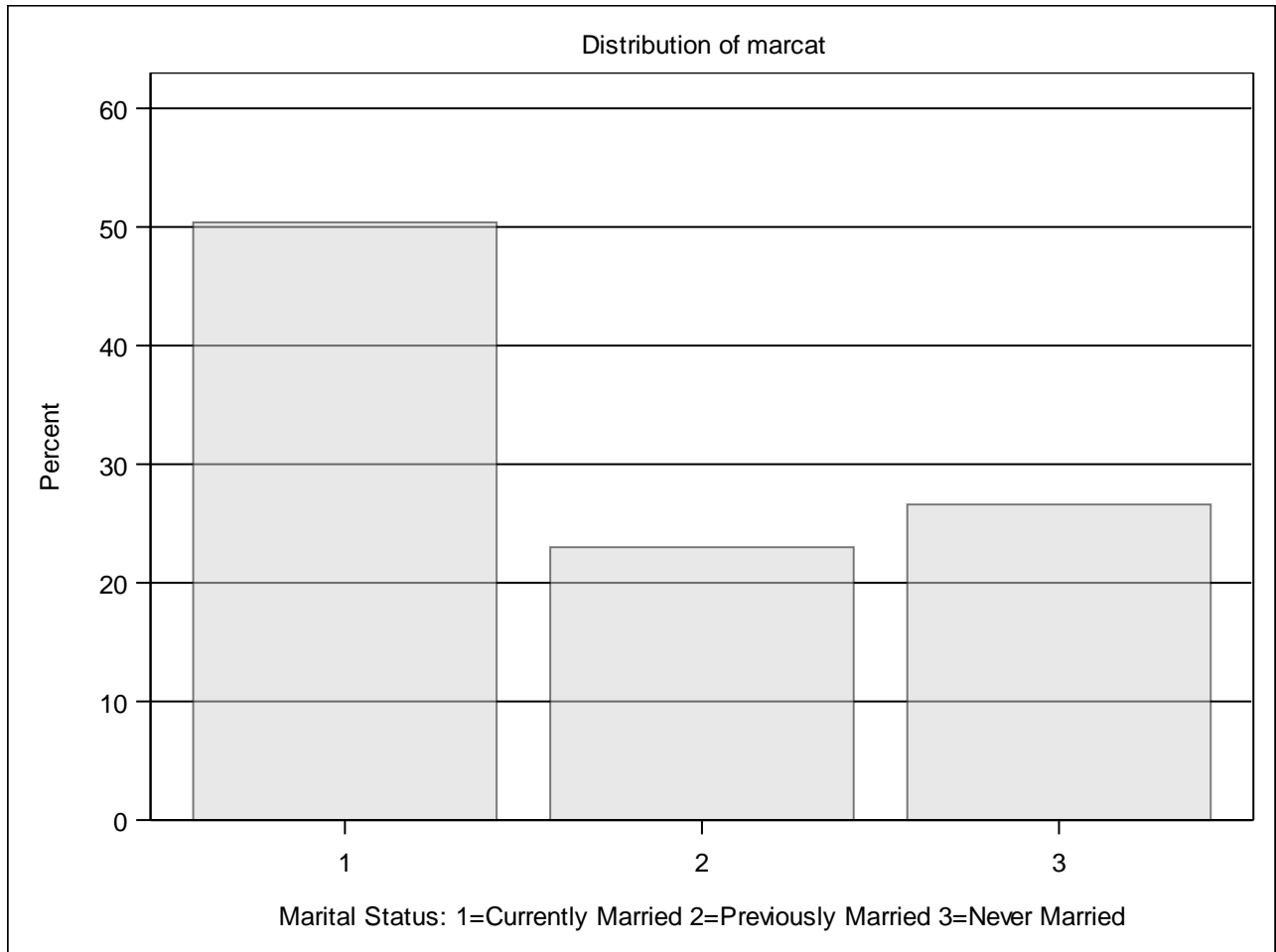
Marital Status: 1=Currently Married 2=Previously Married 3=Never Married						
marcat	Frequency	Weighted Frequency	Std Err of Wgt Freq	Percent	Test Percent	Std Err of Percent
1	1066	1236	61.07696	50.3860	50.00	1.2878
2	791	564.34716	36.12788	23.0066	25.00	1.1536
3	587	652.67253	37.60300	26.6074	25.00	1.3401
Total	2444	2453	94.17226	100.000		
Frequency Missing = 40						

Rao-Scott Likelihood Ratio Test	
Likelihood Ratio Chi-Square	6.5381
Design Correction	1.9332
First-Order Chi-Square	3.3821
Second-Order Chi-Square	3.2472
DF	1.92
Pr > ChiSq	0.1856
F Value	1.6910
Num DF	1.92
Den DF	337.97
Pr > F	0.1871
Sample Size = 2444	



The FREQ Procedure

Marital Status: 1=Currently Married 2=Previously Married 3=Never Married				
marcat	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	1235.957	50.39	1235.957	50.39
2	564.3472	23.01	1800.304	73.39
3	652.6725	26.61	2452.977	100.00
Frequency Missing = 31.023132863				



Example 6.6: Estimation of Total and Row Proportions for the Crosstabulation of Gender and Lifetime Major Depression Status (Source: NCS-R).

The SURVEYFREQ Procedure

Data Summary	
Number of Strata	42
Number of Clusters	84
Number of Observations	9282
Sum of Weights	9282.00015

Table of SEX by mde							
SEX	mde	Frequency	Weighted Frequency	Std Err of Wgt Freq	Percent	Std Err of Percent	Design Effect
1	0	3522	3774	169.19112	40.6644	0.6980	1.8741
	1	617	670.23208	57.70029	7.2208	0.3438	1.6372
	Total	4139	4445	215.70025	47.8852	0.5315	1.0508
2	0	3931	3728	195.07524	40.1644	0.5361	1.1097
	1	1212	1109	61.50166	11.9504	0.3028	0.8086
	Total	5143	4837	248.29286	52.1148	0.5315	1.0508
Total	0	7453	7503	349.57814	80.8289	0.4877	1.4245
	1	1829	1779	113.95611	19.1711	0.4877	1.4245
	Total	9282	9282	453.54554	100.000		

Rao-Scott Chi-Square Test	
Pearson Chi-Square	92.1499
Design Correction	1.3725
First-Order Chi-Square	67.1387
Second-Order Chi-Square	67.1387
DF	1
Pr > ChiSq	<.0001
F Value	67.1387
Num DF	1
Den DF	42
Pr > F	<.0001
Sample Size = 9282	

Example 6.6: Estimation of Total and Row Proportions for the Crosstabulation of Gender and Lifetime Major Depression Status (Source: NCS-R).

The SURVEYFREQ Procedure

Data Summary	
Number of Strata	42
Number of Clusters	84
Number of Observations	9282
Sum of Weights	9282.00015

Table of SEX by mde								
SEX	mde	Frequency	Weighted Frequency	Std Err of Wgt Freq	Percent	Std Err of Percent	Row Percent	Std Err of Row Percent
1	0	3522	3774	169.19112	40.6644	0.6980	84.9207	0.7748
	1	617	670.23208	57.70029	7.2208	0.3438	15.0793	0.7748
	Total	4139	4445	215.70025	47.8852	0.5315	100.000	
2	0	3931	3728	195.07524	40.1644	0.5361	77.0692	0.5647
	1	1212	1109	61.50166	11.9504	0.3028	22.9308	0.5647
	Total	5143	4837	248.29286	52.1148	0.5315	100.000	
Total	0	7453	7503	349.57814	80.8289	0.4877		
	1	1829	1779	113.95611	19.1711	0.4877		
	Total	9282	9282	453.54554	100.000			

Table of SEX by mde				
SEX	mde	95% Confidence Limits for Row Percent		Design Effect of Row Percent
1	0	83.3571	86.4842	1.9398
	1	13.5158	16.6429	1.9398
	Total			
2	0	75.9295	78.2088	0.9279
	1	21.7912	24.0705	0.9279
	Total			
Total	0			
	1			
	Total			

Rao-Scott Chi-Square Test	
Pearson Chi-Square	92.1499
Design Correction	1.3725
First-Order Chi-Square	67.1387
Second-Order Chi-Square	67.1387
DF	1
Pr > ChiSq	<.0001

Rao-Scott Chi-Square Test	
F Value	67.1387
Num DF	1
Den DF	42
Pr > F	<.0001
Sample Size = 9282	

Example 6.7: Comparing the Proportions of U.S. Adult Men and Women with Lifetime Major Depression.

The SURVEYREG Procedure

Regression Analysis for Dependent Variable mde

Data Summary	
Number of Observations	9282
Sum of Weights	9282.0
Weighted Mean of mde	0.19171
Weighted Sum of mde	1779.5

Design Summary	
Number of Strata	42
Number of Clusters	84

Fit Statistics	
R-Square	0.009928
Root MSE	0.3917
Denominator DF	42

Class Level Information			
CLASS Variable	Label	Levels	Values
SEX	Sex 1=Male 2=Female	2	1 2

Tests of Model Effects			
Effect	Num DF	F Value	Pr > F
Model	1	67.56	<.0001
Intercept	1	1560.02	<.0001
SEX	1	67.56	<.0001

The denominator degrees of freedom for the F tests is 42.

Estimated Regression Coefficients				
Parameter	Estimate	Standard Error	t Value	Pr >  t
Intercept	0.2293083	0.00564756	40.60	<.0001
SEX 1	-0.0785150	0.00955235	-8.22	<.0001
SEX 2	0.0000000	0.00000000	.	.

The degrees of freedom for the t tests is 42.

Matrix X'WX is singular and a generalized inverse was used to solve the normal equations. Estimates are not unique.

SEX Least Squares Means					
Sex 1=Male 2=Female	Estimate	Standard Error	DF	t Value	Pr >  t
1	0.1508	0.007748	42	19.46	<.0001
2	0.2293	0.005648	42	40.60	<.0001

Differences of SEX Least Squares Means						
Sex 1=Male 2=Female	Sex 1=Male 2=Female	Estimate	Standard Error	DF	t Value	Pr >  t
1	2	-0.07851	0.009552	42	-8.22	<.0001

Example 6.8: Testing the Independence of MDE and Gender in U.S. Adults Using the NCS-R data.

The SURVEYFREQ Procedure

Data Summary	
Number of Strata	42
Number of Clusters	84
Number of Observations	9282
Sum of Weights	9282.00015

Table of SEX by mde						
SEX	mde	Frequency	Weighted Frequency	Std Err of Wgt Freq	Percent	Std Err of Percent
1	0	3522	3774	169.19112	40.6644	0.6980
	1	617	670.23208	57.70029	7.2208	0.3438
	Total	4139	4445	215.70025	47.8852	0.5315
2	0	3931	3728	195.07524	40.1644	0.5361
	1	1212	1109	61.50166	11.9504	0.3028
	Total	5143	4837	248.29286	52.1148	0.5315
Total	0	7453	7503	349.57814	80.8289	0.4877
	1	1829	1779	113.95611	19.1711	0.4877
	Total	9282	9282	453.54554	100.000	

Rao-Scott Chi-Square Test	
Pearson Chi-Square	92.1499
Design Correction	1.3725
First-Order Chi-Square	67.1387
Second-Order Chi-Square	67.1387
DF	1
Pr > ChiSq	<.0001
F Value	67.1387
Num DF	1
Den DF	42
Pr > F	<.0001
Sample Size = 9282	

Example 6.9: Testing the Independence of Alcohol Dependence and Education Level in Young Adults (Ages 18-28) using the NCS-R data.

The SURVEYFREQ Procedure

Data Summary	
Number of Strata	42
Number of Clusters	84
Number of Observations	9282
Number of Observations Used	5692
Number of Obs with Nonpositive Weights	3590
Sum of Weights	5692.00048

Table of ED4CAT by ald						
Controlling for age18_28=0						
ED4CAT	ald	Frequency	Weighted Frequency	Std Err of Wgt Freq	Row Percent	Std Err of Row Percent
1	0	570	689.26106	48.65927	94.0454	0.7976
	1	71	43.64177	5.63734	5.9546	0.7976
	Total	641	732.90283	49.40849	100.000	
2	0	1223	1362	89.50257	94.1603	0.6250
	1	107	84.49599	11.21382	5.8397	0.6250
	Total	1330	1447	95.77820	100.000	
3	0	1145	1064	50.18931	93.8975	0.5242
	1	106	69.16919	7.39750	6.1025	0.5242
	Total	1251	1133	54.43718	100.000	
4	0	1138	1077	70.55346	96.8458	0.4829
	1	57	35.07967	4.91665	3.1542	0.4829
	Total	1195	1112	70.44264	100.000	
Total	0	4076	4193	184.54693		
	1	341	232.38662	17.38587		
	Total	4417	4425	194.71240		

Rao-Scott Chi-Square Test	
Pearson Chi-Square	13.1918
Design Correction	0.8128
First-Order Chi-Square	16.2305
Second-Order Chi-Square	12.1218
DF	2.24
Pr > ChiSq	0.0031
F Value	5.4102
Num DF	2.24



Rao-Scott Chi-Square Test	
Den DF	94.10
Pr > F	0.0044
Sample Size = 5692	

Table of ED4CAT by ald						
Controlling for age18_28=1						
ED4CAT	ald	Frequency	Weighted Frequency	Std Err of Wgt Freq	Row Percent	Std Err of Row Percent
1	0	186	200.86597	21.26023	90.8714	2.9380
	1	22	20.17818	6.69593	9.1286	2.9380
	Total	208	221.04416	21.91184	100.000	
2	0	356	384.76486	26.45399	95.1442	1.3460
	1	26	19.63715	5.96079	4.8558	1.3460
	Total	382	404.40202	28.73956	100.000	
3	0	424	413.14106	46.87778	95.1042	1.0042
	1	34	21.26768	4.69579	4.8958	1.0042
	Total	458	434.40873	48.50085	100.000	
4	0	207	192.43145	30.56315	93.0962	1.3640
	1	20	14.27020	3.30762	6.9038	1.3640
	Total	227	206.70164	32.22052	100.000	
Total	0	1173	1191	87.85136		
	1	102	75.35321	13.36129		
	Total	1275	1267	94.77459		

Rao-Scott Chi-Square Test	
Pearson Chi-Square	6.0957
Design Correction	1.4828
First-Order Chi-Square	4.1109
Second-Order Chi-Square	3.1310
DF	2.28
Pr > ChiSq	0.2536
F Value	1.3703
Num DF	2.28
Den DF	95.97
Pr > F	0.2591
Sample Size = 5692	

Example 6.10: Simple Logistic Regression to Estimate the NCS-R Male/Female Odds Ratio for Lifetime Major Depressive Episode.

The SURVEYLOGISTIC Procedure

Model Information		
Data Set	WORK.C6_NCSR	
Response Variable	mde	Major Depressive Episode 1=Yes 0=No
Number of Response Levels	2	
Stratum Variable	SESTRAT	SAMPLING ERROR STRATUM
Number of Strata	42	
Cluster Variable	SECLUSTER	SAMPLING ERROR CLUSTER
Number of Clusters	84	
Weight Variable	NCSRWTSH	NCSR sample part 1 weight
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	9282
Number of Observations Used	9282
Sum of Weights Read	9282
Sum of Weights Used	9282

Response Profile			
Ordered Value	mde	Total Frequency	Total Weight
1	0	7453	7502.5364
2	1	1829	1779.4637

Probability modeled is mde=1.

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	9074.130	8983.024
SC	9081.266	8997.296
-2 Log L	9072.130	8979.024

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	76.79	1	42	<.0001
Score	89.70	1	42	<.0001
Wald	57.26	1	42	<.0001

NOTE: First-order Rao-Scott design correction 1.2124 applied to the likelihood ratio test.

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr >  t
Intercept	-1.2122	0.0320	-37.93	<.0001
sexm	-0.5160	0.0682	-7.57	<.0001

NOTE: The degrees of freedom for the t tests is 42.

Odds Ratio Estimates			
Effect	Point Estimate	95% Confidence Limits	
sexm	0.597	0.520	0.685

NOTE: The degrees of freedom in computing the confidence limits is 42.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	31.3	Somers' D	0.135
Percent Discordant	17.8	Gamma	0.275
Percent Tied	50.9	Tau-a	0.043
Pairs	13631537	c	0.568