

ASDA2 ANALYSIS EXAMPLE REPLICATION SPSS C8

```
* Syntax for Analysis Example Replication C8
* get NCSR data.
GET
  SAS DATA='P:\ASDA 2\Data sets\NCSR\ncsr_sub_5apr2017.sas7bdat'.
DATASET NAME DataSet2 WINDOW=FRONT.

* Complex Samples Crosstabs.
* Analysis Example 8.1.
CSTABULATE
  /PLAN FILE='P:\ASDA 2\Data sets\NCSR\ncsr_p2wt.csaplan'
  /TABLES VARIABLES=ag4cat MAR3CAT SEX ED4CAT ald BY mde
  /CELLS ROWPCT
  /STATISTICS SE CIN(95)
  /TEST INDEPENDENCE
  /MISSING SCOPE=TABLE CLASSMISSING=EXCLUDE.

* reverse coding and variable creation.
compute revag4cat=5-ag4cat.
compute reved4cat=5-ed4cat.
compute revmar3cat=4-mar3cat.
compute sexm=(sex=1).
execute.

* Complex Samples Logistic Regression.
* Model Estimation.

CSLOGISTIC mde(LOW) BY revag4cat reved4cat revmar3cat WITH sexm ald
  /PLAN FILE='P:\ASDA 2\Data sets\NCSR\ncsr_p2wt.csaplan'
  /MODEL revag4cat reved4cat revmar3cat sexm ald
  /INTERCEPT INCLUDE=YES SHOW=YES
  /STATISTICS PARAMETER EXP SE CINTERVAL TTEST
  /TEST TYPE=F PADJUST=LSD
  /MISSING CLASSMISSING=EXCLUDE
  /CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1E-006 RELATIVE] LCONVERGE=[0] CHKSEP=20 CILEVEL=95
  /PRINT SUMMARY SAMPLEINFO.

* Note: no option to produce average marginal effects in CSLOGISTIC.

* Logistic model with Interaction Testing of Sex*(age education, ALD, and marital status).
CSLOGISTIC mde(LOW) BY revag4cat reved4cat revmar3cat WITH sexm ald
  /PLAN FILE='P:\ASDA 2\Data sets\NCSR\ncsr_p2wt.csaplan'
  /MODEL revag4cat reved4cat revmar3cat sexm ald sexm*revag4cat sexm*reved4cat sexm*ald revmar3cat*sexm
  /INTERCEPT INCLUDE=YES SHOW=YES
  /STATISTICS PARAMETER EXP SE CINTERVAL TTEST
  /TEST TYPE=F PADJUST=LSD
  /MISSING CLASSMISSING=EXCLUDE
  /CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1E-006 RELATIVE] LCONVERGE=[0] CHKSEP=20 CILEVEL=95
  /PRINT SUMMARY SAMPLEINFO.

* No significant interactions, therefore these terms are dropped.

* Section 8.8 Comparing the Logistic Probit and CLL GLMs.

* Complex Samples Ordinal Regression: Logistic Regression.
CSORDINAL ald (ASCENDING) BY revag4cat reved4cat revmar3cat WITH sexm
  /PLAN FILE='P:\ASDA 2\Data sets\NCSR\ncsr_p2wt.csaplan'
  /LINK FUNCTION=LOGIT
  /MODEL revag4cat reved4cat revmar3cat sexm
  /STATISTICS PARAMETER SE CINTERVAL TTEST
  /TEST TYPE=F PADJUST=LSD
  /MISSING CLASSMISSING=EXCLUDE
  /CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1e-006 RELATIVE] LCONVERGE=[0] METHOD=NEWTON CHKSEP=20 CILEVEL=95
  /PRINT SUMMARY SAMPLEINFO.

* Complex Samples Ordinal Regression: Probit Regression.
CSORDINAL ald (ASCENDING) BY revag4cat reved4cat revmar3cat WITH sexm
  /PLAN FILE='P:\ASDA 2\Data sets\NCSR\ncsr_p2wt.csaplan'
  /LINK FUNCTION=PROBIT
  /MODEL revag4cat reved4cat revmar3cat sexm
  /STATISTICS PARAMETER SE CINTERVAL TTEST
  /TEST TYPE=F PADJUST=LSD
  /MISSING CLASSMISSING=EXCLUDE
  /CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1e-006 RELATIVE] LCONVERGE=[0] METHOD=NEWTON CHKSEP=20 CILEVEL=95
```

```
/PRINT SUMMARY SAMPLEINFO.
```

```
* Complex Samples Ordinal Regression: CLL Regression.
```

```
* Note: use of descending option for outcome. This produces same numbers as Stata but some are reversed in sign.  
Interpretation is affected by this feature.
```

```
CSORDINAL ald (DESCENDING) BY revag4cat reved4cat revmar3cat WITH sexm
```

```
/PLAN FILE='P:\ASDA 2\Data sets\NCSR\ncsr_p2wt.csaplan'
```

```
/LINK FUNCTION=CLOGLOG
```

```
/MODEL revag4cat reved4cat revmar3cat sexm
```

```
/STATISTICS PARAMETER SE CINTERVAL TTEST
```

```
/TEST TYPE=F PADJUST=LSD
```

```
/MISSING CLASSMISSING=EXCLUDE
```

```
/CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1e-006 RELATIVE] LCONVERGE=[0] METHOD=NEWTON CHKSEP=20 CILEVEL=95
```

```
/PRINT SUMMARY SAMPLEINFO.
```

```
* Export Output.
```

```
OUTPUT EXPORT
```

```
/CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRINTSETTING
```

```
/DOC DOCUMENTFILE='P:\ASDA 2\Analysis Example Replication\SPSS\Analysis Example Replication '+  
'SPSS C8.doc'
```

```
NOTESCAPTIONS=YES WIDETABLES=WRAP PAGEBREAKS=YES
```

```
PAGESIZE=INCHES(8.5, 11.0) TOPMARGIN=INCHES(1.0) BOTTOMMARGIN=INCHES(1.0)
```

```
LEFTMARGIN=INCHES(.5) RIGHTMARGIN=INCHES(.5).
```

```

OUTPUT ASDA2 ANALYSIS EXAMPLE REPLICATION SPSS C8
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  /CELLS ROWPCT
  /STATISTICS SE CIN(95)
  /TEST INDEPENDENCE
  /MISSING SCOPE=TABLE CLASSMISSING=EXCLUDE.

```

Complex Samples: Tables

Age 1=17-29 2=30-44 3=45-59 4=60+ * Major Depressive Episode 1=Yes 0=No

Age 1=17-29 2=30-44 3=45-59 4=60+		Major Depressive Episode 1=Yes 0=No			
		0	1	Total	
1	% within Age 1=17-29 2=30-44	Estimate	81.6%	18.4%	100.0%
	3=45-59 4=60+	Standard Error	0.9%	0.9%	0.0%
	95% Confidence Interval	Lower	79.7%	16.7%	100.0%
		Upper	83.3%	20.3%	100.0%
2	% within Age 1=17-29 2=30-44	Estimate	77.1%	22.9%	100.0%
	3=45-59 4=60+	Standard Error	1.1%	1.1%	0.0%
	95% Confidence Interval	Lower	74.8%	20.7%	100.0%
		Upper	79.3%	25.2%	100.0%
3	% within Age 1=17-29 2=30-44	Estimate	77.7%	22.3%	100.0%
	3=45-59 4=60+	Standard Error	1.3%	1.3%	0.0%
	95% Confidence Interval	Lower	75.0%	19.9%	100.0%
		Upper	80.1%	25.0%	100.0%
4	% within Age 1=17-29 2=30-44	Estimate	88.9%	11.1%	100.0%
	3=45-59 4=60+	Standard Error	1.0%	1.0%	0.0%
	95% Confidence Interval	Lower	86.9%	9.3%	100.0%
		Upper	90.7%	13.1%	100.0%
Total	% within Age 1=17-29 2=30-44	Estimate	80.8%	19.2%	100.0%
	3=45-59 4=60+	Standard Error	0.6%	0.6%	0.0%
	95% Confidence Interval	Lower	79.5%	17.9%	100.0%
		Upper	82.1%	20.5%	100.0%

Marital Status 1=Married 2=Previously Married 3=Never Married * Major Depressive Episode 1=Yes 0=No

				Major Depressive Episode 1=Yes	
				0=No	
Marital Status 1=Married 2=Previously Married 3=Never Married				0	1
1	% within Marital Status 1=Married 2=Previously Married 3=Never Married	Estimate		82.7%	17.3%
		Standard Error		0.7%	0.7%
		95% Confidence Interval	Lower	81.1%	15.9%
			Upper	84.1%	18.9%
2	% within Marital Status 1=Married 2=Previously Married 3=Never Married	Estimate		76.1%	23.9%
		Standard Error		1.4%	1.4%
		95% Confidence Interval	Lower	73.1%	21.1%
			Upper	78.9%	26.9%
3	% within Marital Status 1=Married 2=Previously Married 3=Never Married	Estimate		80.6%	19.4%
		Standard Error		1.2%	1.2%
		95% Confidence Interval	Lower	78.2%	17.2%
			Upper	82.8%	21.8%
Total	% within Marital Status 1=Married 2=Previously Married 3=Never Married	Estimate		80.8%	19.2%
		Standard Error		0.6%	0.6%
		95% Confidence Interval	Lower	79.5%	17.9%
			Upper	82.1%	20.5%

Marital Status 1=Married 2=Previously Married 3=Never Married * Major Depressive Episode 1=Yes 0=No

Marital Status 1=Married 2=Previously Married 3=Never Married				Major Depressive Episode 1=Yes 0=No	
				Total	
1	% within Marital Status 1=Married 2=Previously Married 3=Never Married	Estimate		100.0%	
		Standard Error		0.0%	
		95% Confidence Interval	Lower	100.0%	
			Upper	100.0%	
2	% within Marital Status 1=Married 2=Previously Married 3=Never Married	Estimate		100.0%	
		Standard Error		0.0%	
		95% Confidence Interval	Lower	100.0%	
			Upper	100.0%	
3	% within Marital Status 1=Married 2=Previously Married 3=Never Married	Estimate		100.0%	
		Standard Error		0.0%	
		95% Confidence Interval	Lower	100.0%	
			Upper	100.0%	
Total	% within Marital Status 1=Married 2=Previously Married 3=Never Married	Estimate		100.0%	
		Standard Error		0.0%	
		95% Confidence Interval	Lower	100.0%	
			Upper	100.0%	

Sex 1=Male 2=Female * Major Depressive Episode 1=Yes 0=No

Sex 1=Male 2=Female			Major Depressive Episode 1=Yes 0=No			
			0	1	Total	
1	% within Sex 1=Male 2=Female	Estimate		84.7%	15.3%	100.0%
		Standard Error		0.9%	0.9%	0.0%
		95% Confidence Interval	Lower	82.8%	13.5%	100.0%
			Upper	86.5%	17.2%	100.0%
2	% within Sex 1=Male 2=Female	Estimate		77.4%	22.6%	100.0%
		Standard Error		0.7%	0.7%	0.0%
		95% Confidence Interval	Lower	76.0%	21.3%	100.0%
			Upper	78.7%	24.0%	100.0%
Total	% within Sex 1=Male 2=Female	Estimate		80.8%	19.2%	100.0%
		Standard Error		0.6%	0.6%	0.0%
		95% Confidence Interval	Lower	79.5%	17.9%	100.0%
			Upper	82.1%	20.5%	100.0%

Education 1=0-11 2=12 3=13-15 4=16+ Yrs * Major Depressive Episode 1=Yes 0=No

Education 1=0-11 2=12 3=13-15 4=16+ Yrs				Major Depressive Episode 1=Yes 0=No		
				0	1	Total
1	% within Education 1=0-11 2=12 3=13-15 4=16+ Yrs	Estimate	83.7%	16.3%	100.0%	
		Standard Error	1.2%	1.2%	0.0%	
		95% Confidence Interval	Lower	81.1%	14.0%	100.0%
			Upper	86.0%	18.9%	100.0%
2	% within Education 1=0-11 2=12 3=13-15 4=16+ Yrs	Estimate	81.5%	18.5%	100.0%	
		Standard Error	0.8%	0.8%	0.0%	
		95% Confidence Interval	Lower	79.7%	16.9%	100.0%
			Upper	83.1%	20.3%	100.0%
3	% within Education 1=0-11 2=12 3=13-15 4=16+ Yrs	Estimate	78.8%	21.2%	100.0%	
		Standard Error	1.0%	1.0%	0.0%	
		95% Confidence Interval	Lower	76.6%	19.2%	100.0%
			Upper	80.8%	23.4%	100.0%
4	% within Education 1=0-11 2=12 3=13-15 4=16+ Yrs	Estimate	80.3%	19.7%	100.0%	
		Standard Error	1.1%	1.1%	0.0%	
		95% Confidence Interval	Lower	78.0%	17.6%	100.0%
			Upper	82.4%	22.0%	100.0%
Total	% within Education 1=0-11 2=12 3=13-15 4=16+ Yrs	Estimate	80.8%	19.2%	100.0%	
		Standard Error	0.6%	0.6%	0.0%	
		95% Confidence Interval	Lower	79.5%	17.9%	100.0%
			Upper	82.1%	20.5%	100.0%

Alcohol Dependence 1=Yes 0=No * Major Depressive Episode 1=Yes 0=No

Alcohol Dependence 1=Yes 0=No		Major Depressive Episode 1=Yes 0=No				
		0	1	Total		
0	% within Alcohol Dependence 1=Yes 0=No	Estimate	82.3%	17.7%	100.0%	
		Standard Error	0.7%	0.7%	0.0%	
		95% Confidence Interval	Lower	81.0%	16.4%	100.0%
			Upper	83.6%	19.0%	100.0%
1	% within Alcohol Dependence 1=Yes 0=No	Estimate	54.8%	45.2%	100.0%	
		Standard Error	2.9%	2.9%	0.0%	
		95% Confidence Interval	Lower	48.9%	39.4%	100.0%
			Upper	60.6%	51.1%	100.0%
Total	% within Alcohol Dependence 1=Yes 0=No	Estimate	80.8%	19.2%	100.0%	
		Standard Error	0.6%	0.6%	0.0%	
		95% Confidence Interval	Lower	79.5%	17.9%	100.0%
			Upper	82.1%	20.5%	100.0%

Tests of Independence

		Chi-Square	Adjusted F	df1	df2	Sig.
Age 1=17-29 2=30-44 3=45-59 4=60+ * Major Depressive Episode 1=Yes 0=No	Pearson	75.970	26.390	2.761	115.970	.000
	Likelihood Ratio	82.167	28.543	2.761	115.970	.000
Marital Status 1=Married 2=Previously Married 3=Never Married * Major Depressive Episode 1=Yes 0=No	Pearson	24.142	11.085	1.899	79.745	.000
	Likelihood Ratio	23.378	10.734	1.899	79.745	.000
Sex 1=Male 2=Female * Major Depressive Episode 1=Yes 0=No	Pearson	49.117	44.834	1	42	.000
	Likelihood Ratio	49.666	45.335	1	42	.000
Education 1=0-11 2=12 3=13-15 4=16+ Yrs * Major Depressive Episode 1=Yes 0=No	Pearson	10.081	4.304	2.903	121.925	.007
	Likelihood Ratio	10.180	4.347	2.903	121.925	.007
Alcohol Dependence 1=Yes 0=No * Major Depressive Episode 1=Yes 0=No	Pearson	141.704	120.028	1	42	.000
	Likelihood Ratio	114.974	97.387	1	42	.000

The adjusted F is a variant of the second-order Rao-Scott adjusted chi-square statistic. Significance is based on the adjusted F and its degrees of freedom.

```

* reverse coding and variable creation.
compute revag4cat=5-ag4cat.
compute reved4cat=5-ed4cat.
compute revmar3cat=4-mar3cat.
compute sexm=(sex=1).
execute.

```

```

* Complex Samples Logistic Regression.
* Model Estimation.

```

```

CSLOGISTIC mde(LOW) BY revag4cat reved4cat revmar3cat WITH sexm ald
/PLAN FILE='P:\ASDA 2\Data sets\NCSR\ncsr_p2wt.csaplan'
/MODEL revag4cat reved4cat revmar3cat sexm ald
/INTERCEPT INCLUDE=YES SHOW=YES
/STATISTICS PARAMETER EXP SE CINTERVAL TTEST
/TEST TYPE=F PADJUST=LSD
/MISSING CLASSMISSING=EXCLUDE
/CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1E-006 RELATIVE] LCONVERGE=[0] CHKSEP=20 CILEVEL=95
/PRINT SUMMARY SAMPLEINFO.

```

Complex Samples: Logistic Regression

Sample Design Information

		N
Unweighted Cases	Valid	5692
	Invalid	3590
	Total	9282
Population Size		5692.000
Stage 1	Strata	42
	Units	84
Sampling Design Degrees of Freedom		42

Pseudo R Squares

Cox and Snell	.051
Nagelkerke	.081
McFadden	.053

Dependent Variable: Major Depressive

Episode 1=Yes 0=No (reference

category = 0)

Model: (Intercept), revag4cat,

reved4cat, revmar3cat, sexm, ald

Tests of Model Effects

Source	df1	df2	Wald F	Sig.
(Corrected Model)	10.000	33.000	28.070	.000
(Intercept)	1.000	42.000	937.702	.000
revag4cat	3.000	40.000	19.031	.000
reved4cat	3.000	40.000	2.130	.112
revmar3cat	2.000	41.000	16.603	.000
sexm	1.000	42.000	55.907	.000
ald	1.000	42.000	85.285	.000

Dependent Variable: Major Depressive Episode 1=Yes 0=No (reference category = 0)

Model: (Intercept), revag4cat, reved4cat, revmar3cat, sexm, ald

Parameter Estimates

Major Depressive Episode 1=Yes 0=No		Parameter	B	Std. Error	95% Confidence Interval		Hypothesis Test	
					Lower	Upper	t	df
1	(Intercept)	-1.583	.121	-1.827	-1.340	-13.120	42.000	
	[revag4cat=1.00]	-.676	.141	-.961	-.391	-4.783	42.000	
	[revag4cat=2.00]	.206	.092	.022	.391	2.256	42.000	
	[revag4cat=3.00]	.256	.094	.065	.446	2.708	42.000	
	[revag4cat=4.00]	.000 ^a	.	.	.	.	.
	[reved4cat=1.00]	.163	.111	-.060	.386	1.473	42.000	
	[reved4cat=2.00]	.231	.093	.043	.418	2.477	42.000	
	[reved4cat=3.00]	.079	.097	-.116	.275	.818	42.000	
	[reved4cat=4.00]	.000 ^a	.	.	.	.	.
	[revmar3cat=1.00]	.116	.108	-.102	.333	1.071	42.000	
	[revmar3cat=2.00]	.486	.085	.314	.659	5.695	42.000	
	[revmar3cat=3.00]	.000 ^a	.	.	.	.	.
	sexm	-.577	.077	-.733	-.422	-7.477	42.000	
	ald	1.424	.154	1.113	1.735	9.235	42.000	

Parameter Estimates

Major Depressive Episode 1=Yes 0=No		Hypothesis	Exp(B)	95% Confidence Interval for Exp(B)	
		Test		Lower	Upper
0=No	Parameter	Sig.			
1	(Intercept)	.000	.205	.161	.262
	[revag4cat=1.00]	.000	.509	.383	.677
	[revag4cat=2.00]	.029	1.229	1.022	1.479
	[revag4cat=3.00]	.010	1.291	1.067	1.562
	[revag4cat=4.00]	.	1.000	.	.
	[reved4cat=1.00]	.148	1.177	.941	1.471
	[reved4cat=2.00]	.017	1.259	1.044	1.519
	[reved4cat=3.00]	.418	1.082	.890	1.316
	[reved4cat=4.00]	.	1.000	.	.
	[revmar3cat=1.00]	.290	1.123	.903	1.396
	[revmar3cat=2.00]	.000	1.626	1.369	1.932
	[revmar3cat=3.00]	.	1.000	.	.
	sexm	.000	.561	.480	.656
	ald	.000	4.152	3.042	5.668

Dependent Variable: Major Depressive Episode 1=Yes 0=No (reference category = 0)

Model: (Intercept), revag4cat, reved4cat, revmar3cat, sexm, ald

a. Set to zero because this parameter is redundant.

* Note: no option to produce average marginal effects in CSLOGISTIC.

```

* Logistic model with Interaction Testing of Sex*(age education, ALD, and marital status).
CSLOGISTIC mde(LOW) BY revag4cat reved4cat revmar3cat WITH sexm ald
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/STATISTICS PARAMETER EXP SE CINTERVAL TTEST
/TEST TYPE=F PADJUST=LSD
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/CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1E-006 RELATIVE] LCONVERGE=[0] CHKSEP=20 CILEVEL=95
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Nagelkerke	.082
McFadden	.054

Dependent Variable: Major Depressive

Episode 1=Yes 0=No (reference

category = 0)

Model: (Intercept), revag4cat,

reved4cat, revmar3cat, sexm, ald,

revag4cat * sexm, reved4cat * sexm,

sexm * ald, revmar3cat * sexm

Tests of Model Effects

Source	df1	df2	Wald F	Sig.
(Corrected Model)	19.000	24.000	17.150	.000
(Intercept)	1.000	42.000	959.904	.000
revag4cat	3.000	40.000	12.750	.000
reved4cat	3.000	40.000	2.253	.097
revmar3cat	2.000	41.000	7.045	.002
sexm	1.000	42.000	26.929	.000
ald	1.000	42.000	54.170	.000
revag4cat * sexm	3.000	40.000	.248	.863
reved4cat * sexm	3.000	40.000	.126	.944
sexm * ald	1.000	42.000	.684	.413
revmar3cat * sexm	2.000	41.000	.765	.472

Dependent Variable: Major Depressive Episode 1=Yes 0=No (reference category = 0)

Model: (Intercept), revag4cat, reved4cat, revmar3cat, sexm, ald, revag4cat * sexm, reved4cat * sexm, sexm * ald, revmar3cat * sexm

Parameter Estimates

Major Depressive Episode 1=Yes 0=No		Parameter	B	Std. Error	95% Confidence Interval		Hypothesis
					Lower	Upper	Test
							t
1		(Intercept)	-1.600	.134	-1.870	-1.329	-11.939
		[revag4cat=1.00]	-.646	.175	-.999	-.292	-3.685
		[revag4cat=2.00]	.215	.102	.008	.421	2.094
		[revag4cat=3.00]	.220	.114	-.009	.450	1.937
		[revag4cat=4.00]	.000 ^a	.	.	.	.
		[reved4cat=1.00]	.242	.152	-.064	.549	1.595
		[reved4cat=2.00]	.297	.117	.061	.534	2.540
		[reved4cat=3.00]	.131	.084	-.038	.299	1.559
		[reved4cat=4.00]	.000 ^a	.	.	.	.
		[revmar3cat=1.00]	.017	.130	-.245	.279	.134
		[revmar3cat=2.00]	.418	.111	.195	.641	3.780
		[revmar3cat=3.00]	.000 ^a	.	.	.	.
		sexm	-.546	.357	-1.267	.174	-1.530
		ald	1.553	.211	1.127	1.979	7.360
		[revag4cat=1.00] * sexm	-.038	.302	-.647	.572	-.125
		[revag4cat=2.00] * sexm	.003	.213	-.427	.432	.012
		[revag4cat=3.00] * sexm	.097	.201	-.309	.502	.482
		[revag4cat=4.00] * sexm	.000 ^a	.	.	.	.
		[reved4cat=1.00] * sexm	-.194	.344	-.889	.501	-.564
		[reved4cat=2.00] * sexm	-.169	.269	-.712	.375	-.627
		[reved4cat=3.00] * sexm	-.138	.271	-.685	.409	-.508
		[reved4cat=4.00] * sexm	.000 ^a	.	.	.	.
		sexm * ald	-.200	.242	-.689	.288	-.827
		[revmar3cat=1.00] * sexm	.232	.212	-.196	.660	1.094
		[revmar3cat=2.00] * sexm	.183	.208	-.237	.602	.878
		[revmar3cat=3.00] * sexm	.000 ^a	.	.	.	.

Parameter Estimates

Major Depressive Episode 1=Yes 0=No		Hypothesis Test				
		df	Sig.		Lower	Upper
1	(Intercept)	42.000	.000	.202	.154	.265
	[revag4cat=1.00]	42.000	.001	.524	.368	.747
	[revag4cat=2.00]	42.000	.042	1.239	1.008	1.524
	[revag4cat=3.00]	42.000	.059	1.247	.991	1.568
	[revag4cat=4.00]	.	.	1.000	.	.
	[reved4cat=1.00]	42.000	.118	1.274	.938	1.731
	[reved4cat=2.00]	42.000	.015	1.346	1.063	1.705
	[reved4cat=3.00]	42.000	.126	1.139	.962	1.349
	[reved4cat=4.00]	.	.	1.000	.	.
	[revmar3cat=1.00]	42.000	.894	1.017	.783	1.322
	[revmar3cat=2.00]	42.000	.000	1.519	1.215	1.898
	[revmar3cat=3.00]	.	.	1.000	.	.
	sexm	42.000	.134	.579	.282	1.190
	ald	42.000	.000	4.726	3.087	7.236
	[revag4cat=1.00] * sexm	42.000	.901	.963	.523	1.771
	[revag4cat=2.00] * sexm	42.000	.990	1.003	.653	1.541
	[revag4cat=3.00] * sexm	42.000	.633	1.102	.734	1.652
	[revag4cat=4.00] * sexm	.	.	1.000	.	.
	[reved4cat=1.00] * sexm	42.000	.576	.824	.411	1.650
	[reved4cat=2.00] * sexm	42.000	.534	.845	.490	1.455
	[reved4cat=3.00] * sexm	42.000	.614	.871	.504	1.506
	[reved4cat=4.00] * sexm	.	.	1.000	.	.
	sexm * ald	42.000	.413	.818	.502	1.334
	[revmar3cat=1.00] * sexm	42.000	.280	1.261	.822	1.934
[revmar3cat=2.00] * sexm	42.000	.385	1.200	.789	1.826	
[revmar3cat=3.00] * sexm	.	.	1.000	.	.	

Dependent Variable: Major Depressive Episode 1=Yes 0=No (reference category = 0)

Model: (Intercept), revag4cat, reved4cat, revmar3cat, sexm, ald, revag4cat * sexm, reved4cat * sexm, sexm * ald, revmar3cat * sexm

a. Set to zero because this parameter is redundant.

* No significant interactions, therefore these terms are dropped.

```

* Section 8.8 Comparing the Logistic Probit and CLL GLMs.
* Complex Samples Ordinal Regression: Logistic Regression.
CSORDINAL ald (ASCENDING) BY revag4cat reved4cat revmar3cat WITH sexm
/PLAN FILE='P:\ASDA 2\Data sets\NCSR\ncsr_p2wt.csaplan'
/LINK FUNCTION=LOGIT
/MODEL revag4cat reved4cat revmar3cat sexm
/STATISTICS PARAMETER SE CINTERVAL TTEST
/TEST TYPE=F PADJUST=LSD
/MISSING CLASSMISSING=EXCLUDE
/CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1e-006 RELATIVE] LCONVERGE=[0] METHOD=NEWTON CHKSEP=20 CILEVEL=95
/PRINT SUMMARY SAMPLEINFO.

```

Complex Samples: Ordinal Regression

Sample Design Information

		N
Unweighted Cases	Valid	5692
	Invalid	3590
	Total	9282
Population Size		5692.000
Stage 1	Strata	42
	Units	84
Sampling Design Degrees of Freedom		42

Pseudo R Squares

Cox and Snell	.022
Nagelkerke	.063
McFadden	.052

Dependent Variable: Alcohol

Dependence 1=Yes 0=No (Ascending)

Model: (Threshold), revag4cat,
reved4cat, revmar3cat, sexm

Link function: Logit

Tests of Model Effects

Source	df1	df2	Wald F	Sig.
revag4cat	3.000	40.000	12.058	.000
reved4cat	3.000	40.000	4.797	.006
revmar3cat	2.000	41.000	6.537	.003
sexm	1.000	42.000	70.210	.000

Dependent Variable: Alcohol Dependence 1=Yes 0=No (Ascending)

Model: (Threshold), revag4cat, reved4cat, revmar3cat, sexm

Link function: Logit

Parameter Estimates

Parameter	B	Std. Error	95% Confidence Interval		Hypothesis Test		
			Lower	Upper	t	df	Sig.
Threshold [ald=0]	3.124	.225	2.670	3.579	13.869	42.000	.000
Regression [revag4cat=1.00]	-1.120	.212	-1.549	-.692	-5.273	42.000	.000
[revag4cat=2.00]	-.051	.144	-.341	.240	-.352	42.000	.726
[revag4cat=3.00]	.146	.178	-.213	.506	.821	42.000	.416
[revag4cat=4.00]	.000 ^a	.	.	.	.	.	.
[reved4cat=1.00]	-.736	.197	-1.134	-.338	-3.734	42.000	.001
[reved4cat=2.00]	-.264	.176	-.620	.091	-1.502	42.000	.141
[reved4cat=3.00]	-.268	.194	-.659	.123	-1.386	42.000	.173
[reved4cat=4.00]	.000 ^a	.	.	.	.	.	.
[revmar3cat=1.00]	.065	.169	-.275	.406	.387	42.000	.701
[revmar3cat=2.00]	.518	.142	.231	.805	3.645	42.000	.001
[revmar3cat=3.00]	.000 ^a	.	.	.	.	.	.
sexm	.998	.119	.758	1.238	8.379	42.000	.000

Dependent Variable: Alcohol Dependence 1=Yes 0=No (Ascending)

Model: (Threshold), revag4cat, reved4cat, revmar3cat, sexm

Link function: Logit

a. Set to zero because this parameter is redundant.

```

* Complex Samples Ordinal Regression: Probit Regression.
CSORDINAL ald (ASCENDING) BY revag4cat reved4cat revmar3cat WITH sexm
/PLAN FILE='P:\ASDA 2\Data sets\NCSR\ncsr_p2wt.csaplan'
/LINK FUNCTION=PROBIT
/MODEL revag4cat reved4cat revmar3cat sexm
/STATISTICS PARAMETER SE CINTERVAL TTEST
/TEST TYPE=F PADJUST=LSD
/MISSING CLASSMISSING=EXCLUDE
/CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1e-006 RELATIVE] LCONVERGE=[0] METHOD=NEWTON CHKSEP=20 CILEVEL=95
/PRINT SUMMARY SAMPLEINFO.

```

Complex Samples: Ordinal Regression

Sample Design Information

		N
Unweighted Cases	Valid	5692
	Invalid	3590
	Total	9282
Population Size		5692.000
Stage 1	Strata	42
	Units	84
Sampling Design Degrees of Freedom		42

Pseudo R Squares

Cox and Snell	.022
Nagelkerke	.064
McFadden	.053

Dependent Variable: Alcohol

Dependence 1=Yes 0=No (Ascending)

Model: (Threshold), revag4cat,

reved4cat, revmar3cat, sexm

Link function: Probit

Tests of Model Effects

Source	df1	df2	Wald F	Sig.
revag4cat	3.000	40.000	15.256	.000
reved4cat	3.000	40.000	4.787	.006
revmar3cat	2.000	41.000	6.660	.003
sexm	1.000	42.000	69.832	.000

Dependent Variable: Alcohol Dependence 1=Yes 0=No (Ascending)

Model: (Threshold), revag4cat, reved4cat, revmar3cat, sexm

Link function: Probit

Parameter Estimates

Parameter	B	Std. Error	95% Confidence Interval		Hypothesis Test		
			Lower	Upper	t	df	Sig.
Threshold [ald=0]	1.719	.105	1.507	1.932	16.320	42.000	.000
Regression [revag4cat=1.00]	-.531	.093	-.720	-.343	-5.694	42.000	.000
[revag4cat=2.00]	-.034	.067	-.170	.101	-.515	42.000	.609
[revag4cat=3.00]	.065	.085	-.105	.236	.772	42.000	.444
[revag4cat=4.00]	.000 ^a	.	.	.	.	.	.
[reved4cat=1.00]	-.340	.092	-.526	-.153	-3.672	42.000	.001
[reved4cat=2.00]	-.124	.085	-.296	.047	-1.461	42.000	.152
[reved4cat=3.00]	-.124	.095	-.316	.068	-1.302	42.000	.200
[reved4cat=4.00]	.000 ^a	.	.	.	.	.	.
[revmar3cat=1.00]	.039	.077	-.117	.194	.506	42.000	.616
[revmar3cat=2.00]	.255	.070	.114	.396	3.652	42.000	.001
[revmar3cat=3.00]	.000 ^a	.	.	.	.	.	.
sexm	.471	.056	.357	.585	8.357	42.000	.000

Dependent Variable: Alcohol Dependence 1=Yes 0=No (Ascending)

Model: (Threshold), revag4cat, reved4cat, revmar3cat, sexm

Link function: Probit

a. Set to zero because this parameter is redundant.

* Complex Samples Ordinal Regression: CLL Regression.

* Note: use of descending option for outcome. This produces same numbers as Stata but some are reversed in sign. Interpretation is affected by this feature.

```
CSORDINAL ald (DESCENDING) BY revag4cat reved4cat revmar3cat WITH sexm
/PLAN FILE='P:\ASDA 2\Data sets\NCSR\ncsr_p2wt.csaplan'
/LINK FUNCTION=CLOGLOG
/MODEL revag4cat reved4cat revmar3cat sexm
/STATISTICS PARAMETER SE CINTERVAL TTEST
/TEST TYPE=F PADJUST=LSD
/MISSING CLASSMISSING=EXCLUDE
/CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1e-006 RELATIVE] LCONVERGE=[0] METHOD=NEWTON CHKSEP=20 CILEVEL=95
/PRINT SUMMARY SAMPLEINFO.
```

Complex Samples: Ordinal Regression

Sample Design Information

		N
Unweighted Cases	Valid	5692
	Invalid	3590
	Total	9282
Population Size		5692.000
Stage 1	Strata	42
	Units	84
Sampling Design Degrees of Freedom		42

Pseudo R Squares

Cox and Snell	.022
Nagelkerke	.063
McFadden	.052

Dependent Variable: Alcohol

Dependence 1=Yes 0=No (Descending)

Model: (Threshold), revag4cat,

reved4cat, revmar3cat, sexm

Link function: Complementary log-log

Tests of Model Effects

Source	df1	df2	Wald F	Sig.
revag4cat	3.000	40.000	11.515	.000
reved4cat	3.000	40.000	4.771	.006
revmar3cat	2.000	41.000	6.500	.004
sexm	1.000	42.000	70.326	.000

Dependent Variable: Alcohol Dependence 1=Yes 0=No (Descending)

Model: (Threshold), revag4cat, reved4cat, revmar3cat, sexm

Link function: Complementary log-log

Parameter Estimates

Parameter	B	Std. Error	95% Confidence Interval		Hypothesis Test		
			Lower	Upper	t	df	Sig.
Threshold [ald=1]	-3.148	.218	-3.588	-2.709	-14.469	42.000	.000
Regression [revag4cat=1.00]	1.083	.209	.662	1.504	5.191	42.000	.000
[revag4cat=2.00]	.045	.140	-.237	.327	.324	42.000	.748
[revag4cat=3.00]	-.143	.171	-.488	.202	-.836	42.000	.408
[revag4cat=4.00]	.000 ^a	.	.	.	.	.	.
[reved4cat=1.00]	.713	.190	.328	1.097	3.741	42.000	.001
[reved4cat=2.00]	.256	.169	-.085	.596	1.516	42.000	.137
[reved4cat=3.00]	.260	.185	-.113	.633	1.406	42.000	.167
[reved4cat=4.00]	.000 ^a	.	.	.	.	.	.
[revmar3cat=1.00]	-.060	.164	-.391	.270	-.370	42.000	.713
[revmar3cat=2.00]	-.494	.136	-.767	-.220	-3.638	42.000	.001
[revmar3cat=3.00]	.000 ^a	.	.	.	.	.	.
sexm	-.965	.115	-1.198	-.733	-8.386	42.000	.000

Dependent Variable: Alcohol Dependence 1=Yes 0=No (Descending)

Model: (Threshold), revag4cat, reved4cat, revmar3cat, sexm

Link function: Complementary log-log

a. Set to zero because this parameter is redundant.

* Export Output.

OUTPUT EXPORT

/CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRINTSETTING

/DOC DOCUMENTFILE='P:\ASDA 2\Analysis Example Replication\SPSS\Analysis Example Replication '+
'SPSS C8.doc'

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