

**ASDA2 ANALYSIS EXAMPLE REPLICATION SPSS C10**

```
* Syntax for Analysis Example Replication C10
* get NCSR data.
GET
  SAS DATA='P:\ASDA 2\Data sets\NCSR\ncsr_sub_5apr2017.sas7bdat'.
DATASET NAME DataSet1 WINDOW=FRONT.
* reverse coding and variable creation.
compute revag4cat=5-ag4cat.
compute reved4cat=5-ed4cat.
compute revmar3cat=4-mar3cat.
compute sexm=(sex=1).
compute revracecat=5-racecat.

compute ageonsetmde=age.
  if mde=1 ageonsetmde=mde_ond.
execute.

* examine distribution of the ageonsetmde variable.
DATASET ACTIVATE DataSet1.
  FREQUENCIES VARIABLES=ageonsetmde
  /ORDER=ANALYSIS.

* Figure 10.3.3 Kaplan Meier Survival Curve
* Complex Samples Cox Regression.
CSCOXREG ageonsetmde
  /PLAN file='P:\ASDA 2\Data sets\NCSR\ncsr_plwt.csaplan'
  /VARIABLES STATUS=mde(1) BASELINESTRATA=racecat
  /PRINT SAMPLEINFO EVENTINFO
  /STATISTICS PARAMETER SE CINTERVAL
  /PLOT SURVIVAL CI=NO
  /TEST TYPE=F PADJUST=LSD
  /CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1E-006 RELATIVE] LCONVERGE=[0] TIES=EFRON CILEVEL=95
  /SURVIVALMETHOD BASELINE=EFRON CI=LOG
  /MISSING CLASSMISSING=EXCLUDE.

* Complex Samples Cox Regression.
* Example 10.4.5
CSCOXREG ageonsetmde BY revmar3cat revracecat reved4cat WITH AGE sexm
  /PLAN file='P:\ASDA 2\Data sets\NCSR\ncsr_plwt.csaplan'
  /VARIABLES STATUS=mde(1)
  /MODEL revmar3cat revracecat reved4cat AGE sexm
  /PRINT SAMPLEINFO EVENTINFO
  /STATISTICS PARAMETER EXP SE CINTERVAL TTEST
  /PLOT SURVIVAL CI=NO
  /TEST TYPE=F PADJUST=LSD
  /CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1E-006 RELATIVE] LCONVERGE=[0] TIES=EFRON CILEVEL=95
  /SURVIVALMETHOD BASELINE=EFRON CI=LOG
  /MISSING CLASSMISSING=EXCLUDE.

* NOTE: CODES FOR RACECAT 1=OTHER 2=HISPANIC 3=BLACK 4=WHITE,
MARCAT 1=MARRIED 2=PREVIOUSLY MARRIED 3=NEVER MARRIED,
ED4CAT 1=0-11 2=12 3=13-15 4=16+ YEARS OF EDUCATION,
SEXM 1=MALE 0=NON-MALE.
* REVERSE CODING IS SIMPLY THE REVERSE OF THE ORIGINAL CODES.

*test proportional hazards assumption for the fitted Cox model using PLOT command.
* Complex Samples Cox Regression.
CSCOXREG ageonsetmde BY revmar3cat revracecat reved4cat WITH AGE sexm
  /PLAN file='P:\ASDA 2\Data sets\NCSR\ncsr_plwt.csaplan'
  /VARIABLES STATUS=mde(1)
  /MODEL revmar3cat revracecat reved4cat AGE sexm
  /PRINT SAMPLEINFO EVENTINFO
  /STATISTICS PARAMETER EXP SE CINTERVAL TTEST
  /PLOT LML CI=NO
  /PATTERN BY revracecat
  /TEST TYPE=F PADJUST=LSD
  /CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1E-006 RELATIVE] LCONVERGE=[0] TIES=EFRON CILEVEL=95
  /SURVIVALMETHOD BASELINE=EFRON CI=LOG
  /MISSING CLASSMISSING=EXCLUDE.
```

```

* Read in Expanded or Long Data Set for NCSR.
GET
  SAS DATA='P:\ASDA 2\Data sets\NCSR\c10_expanded1.sas7bdat'.
DATASET NAME DataSet1 WINDOW=FRONT.

* reverse coding and variable creation.
compute revag4cat=5-ag4cat.
compute reved4cat=5-ed4cat.
compute revmar3cat=4-mar3cat.
compute sexm=(sex=1).
compute revracecat=5-racecat.
compute mdetv=0.
if (pyr=mde_ond) mdetv=1.
execute.

USE ALL.

COMPUTE filter_$=(pyr <= ageonsetmde ).
VARIABLE LABEL filter_$ 'pyr = ageonsetmde (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.
filter off.

* Complex Samples Logistic Regression.
* Discrete Time Logistic Regression NCS-R data.
CSLOGISTIC mdetv(LOW) BY reved4cat revmar3cat revracecat WITH pyr sexm intwage
/PLAN file='P:\ASDA 2\Data sets\NCSR\ncsr_plwt.csaplan'
/MODEL reved4cat revmar3cat revracecat pyr sexm intwage
/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.

* Discrete Time Logistic with CLOGLOG link, note that signs differ but coefficients match the Stata output, see
documentation for details
* Repeat model but run with cloglog link, note that Odds Ratios are not provided with the Cloglog link, could be calculated
as the exponent(parameter).
CSORDINAL mdetv (descending) BY reved4cat revmar3cat revracecat WITH sexm pyr intwage
/PLAN file='P:\ASDA 2\Data sets\NCSR\ncsr_plwt.csaplan'
/LINK FUNCTION=CLOGLOG
/MODEL reved4cat revmar3cat revracecat sexm pyr intwage
/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 CLASSTABLE VARIABLEINFO 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 C10.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).

```

**ASDA2 ANALYSIS EXAMPLE REPLICATION SPSS C10**

```
* Syntax for Analysis Example Replication C10
* get NCSR data.
GET
  SAS DATA='P:\ASDA 2\Data sets\NCSR\ncsr_sub_5apr2017.sas7bdat'.
DATASET NAME DataSet1 WINDOW=FRONT.

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

compute ageonsetmde=age.
  if mde=1 ageonsetmde=mde_ond.
execute.

* examine distribution of the ageonsetmde variable.
DATASET ACTIVATE DataSet1.
FREQUENCIES VARIABLES=ageonsetmde
/ORDER=ANALYSIS.
```

**Frequencies**

**Statistics**

ageonsetmde

N	Valid	9282
	Missing	0

## ageonsetmde

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4.00	20	.2	.2	.2
	5.00	18	.2	.2	.4
	6.00	19	.2	.2	.6
	7.00	19	.2	.2	.8
	8.00	23	.2	.2	1.1
	9.00	16	.2	.2	1.2
	10.00	34	.4	.4	1.6
	11.00	28	.3	.3	1.9
	12.00	76	.8	.8	2.7
	13.00	70	.8	.8	3.5
	14.00	54	.6	.6	4.1
	15.00	66	.7	.7	4.8
	16.00	88	.9	.9	5.7
	17.00	64	.7	.7	6.4
	18.00	214	2.3	2.3	8.7
	19.00	212	2.3	2.3	11.0
	20.00	222	2.4	2.4	13.4
	21.00	200	2.2	2.2	15.5
	22.00	195	2.1	2.1	17.6
	23.00	184	2.0	2.0	19.6
	24.00	176	1.9	1.9	21.5
	25.00	203	2.2	2.2	23.7
	26.00	159	1.7	1.7	25.4
	27.00	194	2.1	2.1	27.5
	28.00	162	1.7	1.7	29.3
	29.00	152	1.6	1.6	30.9
	30.00	233	2.5	2.5	33.4
	31.00	148	1.6	1.6	35.0
	32.00	186	2.0	2.0	37.0
	33.00	159	1.7	1.7	38.7
	34.00	180	1.9	1.9	40.7
	35.00	194	2.1	2.1	42.7
	36.00	171	1.8	1.8	44.6
	37.00	182	2.0	2.0	46.6
	38.00	215	2.3	2.3	48.9
	39.00	153	1.6	1.6	50.5

40.00	209	2.3	2.3	52.8
41.00	158	1.7	1.7	54.5
42.00	194	2.1	2.1	56.6
43.00	193	2.1	2.1	58.6
44.00	162	1.7	1.7	60.4
45.00	151	1.6	1.6	62.0
46.00	126	1.4	1.4	63.4
47.00	160	1.7	1.7	65.1
48.00	142	1.5	1.5	66.6
49.00	160	1.7	1.7	68.3
50.00	150	1.6	1.6	70.0
51.00	124	1.3	1.3	71.3
52.00	141	1.5	1.5	72.8
53.00	122	1.3	1.3	74.1
54.00	115	1.2	1.2	75.4
55.00	94	1.0	1.0	76.4
56.00	121	1.3	1.3	77.7
57.00	100	1.1	1.1	78.8
58.00	112	1.2	1.2	80.0
59.00	96	1.0	1.0	81.0
60.00	103	1.1	1.1	82.1
61.00	76	.8	.8	82.9
62.00	82	.9	.9	83.8
63.00	74	.8	.8	84.6
64.00	90	1.0	1.0	85.6
65.00	79	.9	.9	86.4
66.00	70	.8	.8	87.2
67.00	71	.8	.8	88.0
68.00	90	1.0	1.0	88.9
69.00	70	.8	.8	89.7
70.00	64	.7	.7	90.4
71.00	75	.8	.8	91.2
72.00	63	.7	.7	91.9
73.00	65	.7	.7	92.6
74.00	75	.8	.8	93.4
75.00	59	.6	.6	94.0
76.00	75	.8	.8	94.8
77.00	57	.6	.6	95.4

78.00	64	.7	.7	96.1
79.00	45	.5	.5	96.6
80.00	54	.6	.6	97.2
81.00	54	.6	.6	97.8
82.00	32	.3	.3	98.1
83.00	30	.3	.3	98.4
84.00	32	.3	.3	98.8
85.00	17	.2	.2	99.0
86.00	19	.2	.2	99.2
87.00	19	.2	.2	99.4
88.00	13	.1	.1	99.5
89.00	10	.1	.1	99.6
90.00	15	.2	.2	99.8
91.00	6	.1	.1	99.8
92.00	4	.0	.0	99.9
93.00	5	.1	.1	99.9
94.00	2	.0	.0	100.0
95.00	1	.0	.0	100.0
98.00	2	.0	.0	100.0
99.00	1	.0	.0	100.0
Total	9282	100.0	100.0	

```

* Figure 10.3.3 Kaplan Meier Survival Curve
* Complex Samples Cox Regression.
CSCOXREG ageonsetmde
/PLAN file='P:\ASDA 2\Data sets\NCSR\ncsr_plwt.csaplan'
/VARIABLES STATUS=mde(1) BASELINESTRATA=racecat
/PRINT SAMPLEINFO EVENTINFO
/STATISTICS PARAMETER SE CINTERVAL
/PLOT SURVIVAL CI=NO
/TEST TYPE=F PADJUST=LSD
/CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1E-006 RELATIVE] LCONVERGE=[0] TIES=EFRON CILEVEL=95
/SURVIVALMETHOD BASELINE=EFRON CI=LOG
/MISSING CLASSMISSING=EXCLUDE.

```

**Complex Samples: Cox Regression**

**Warnings**

There are no predictors in the model. The baseline hazard only model is considered. Any tables related to regression parameters are ignored.

**Sample Design Information**

			N
Unweighted Counts	Valid	Subjects	9282
		Cases	9282
	Invalid Cases		0
	Total Cases		9282
Population Subject Size			9282.000
Stage 1	Strata		42
	Units		84
Sampling Design Degrees of Freedom			42

**Event and Censoring Information**

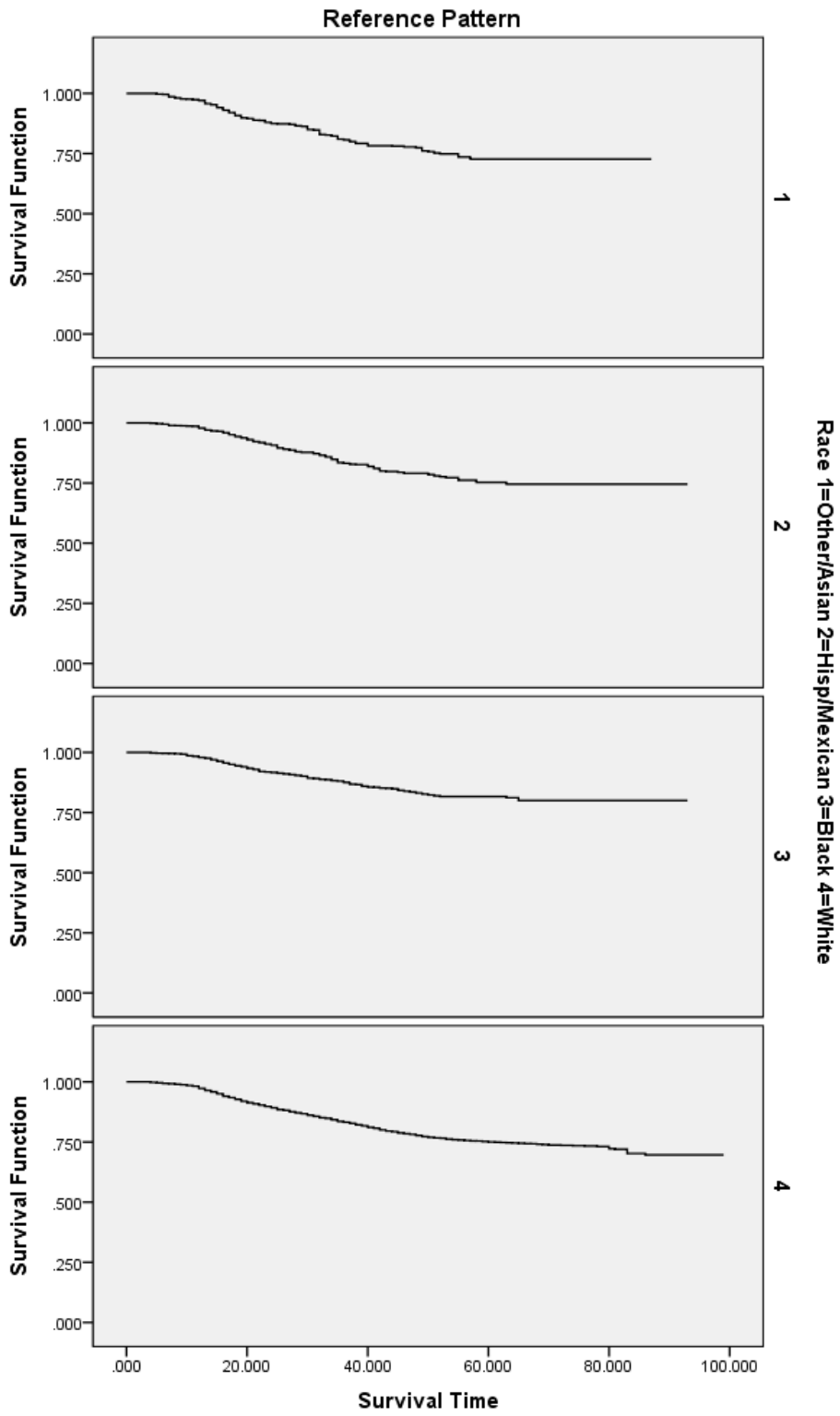
Baseline Strata		Total		Event		Censored	
		Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
Race 1=Other/Asian	1	473	404.334	103	81.677	370	322.657
2=Hispanic/Mexican 3=Black 4=White	2	883	1006.616	165	164.894	718	841.723
	3	1230	1072.792	184	150.990	1046	921.802
	4	6696	6798.258	1377	1381.903	5319	5416.355
Total		9282	9282.000	1829	1779.464	7453	7502.536

**Event and Censoring Information**

Baseline Strata		Censored Percent	
		Unweighted	Weighted
Race 1=Other/Asian 2=Hispanic/Mexican 3=Black 4=White	1	78.2%	79.8%
	2	81.3%	83.6%
	3	85.0%	85.9%
	4	79.4%	79.7%
Total		80.3%	80.8%

Event Status variable: Major Depressive Episode 1=Yes 0=No = 1

Survival Function Charts





\* Complex Samples Cox Regression.  
 \* Example 10.4.5

```
CSCOXREG ageonsetmde BY revmar3cat revracecat reved4cat WITH AGE sexm
/PLAN file='P:\ASDA 2\Data sets\NCSR\ncsr_plwt.csaplan'
/VARIABLES STATUS=mde(1)
/MODEL revmar3cat revracecat reved4cat AGE sexm
/PRINT SAMPLEINFO EVENTINFO
/STATISTICS PARAMETER EXP SE CINTERVAL TTEST
/PLOT SURVIVAL CI=NO
/TEST TYPE=F PADJUST=LSD
/CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1E-006 RELATIVE] LCONVERGE=[0] TIES=EFRON CILEVEL=95
/SURVIVALMETHOD BASELINE=EFRON CI=LOG
/MISSING CLASSMISSING=EXCLUDE.
```

**Complex Samples: Cox Regression**

**Sample Design Information**

			N
Unweighted Counts	Valid	Subjects	9282
		Cases	9282
	Invalid Cases		0
	Total Cases		9282
Population Subject Size			9282.000
Stage 1	Strata		42
	Units		84
Sampling Design Degrees of Freedom			42

**Event and Censoring Information**

Total		Event		Censored		Censored Percent	
Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
9282	9282.000	1829	1779.464	7453	7502.536	80.3%	80.8%

Event Status variable: Major Depressive Episode 1=Yes 0=No = 1

**Tests of Model Effects**

Source	df1	df2	Wald F	Sig.
revmar3cat	2.000	41.000	34.634	.000
revracecat	3.000	40.000	13.435	.000
reved4cat	3.000	40.000	1.975	.133
AGE	1.000	42.000	431.229	.000
sexm	1.000	42.000	53.012	.000

Survival Time Variable: ageonsetmde

Event Status Variable: Major Depressive Episode 1=Yes 0=No = 1

Model: revmar3cat, revracecat, reved4cat, AGE, sexm

Parameter Estimates<sup>a</sup>

Parameter	B	Std. Error	95% Confidence Interval		Hypothesis Test			Exp(B)
			Lower	Upper	t	df	Sig.	
[revmar3cat=1.00]	.082	.089	-.098	.262	.914	42.000	.366	1.085
[revmar3cat=2.00]	.505	.060	.383	.626	8.364	42.000	.000	1.657
[revmar3cat=3.00]	.000 <sup>b</sup>	.	.	.	.	.	.	1.000
[revracecat=1.00]	.078	.118	-.160	.317	.661	42.000	.512	1.081
[revracecat=2.00]	-.481	.150	-.783	-.179	-3.212	42.000	.003	.618
[revracecat=3.00]	-.251	.135	-.524	.021	-1.860	42.000	.070	.778
[revracecat=4.00]	.000 <sup>b</sup>	.	.	.	.	.	.	1.000
[reved4cat=1.00]	-.091	.064	-.220	.038	-1.430	42.000	.160	.913
[reved4cat=2.00]	.045	.058	-.073	.163	.774	42.000	.444	1.046
[reved4cat=3.00]	-.057	.067	-.193	.078	-.853	42.000	.399	.944
[reved4cat=4.00]	.000 <sup>b</sup>	.	.	.	.	.	.	1.000
AGE	-.050	.002	-.055	-.045	-20.766	42.000	.000	.952
sexm	-.455	.063	-.582	-.329	-7.281	42.000	.000	.634

Parameter Estimates<sup>a</sup>

Parameter	95% Confidence Interval for Exp(B)	
	Lower	Upper
[revmar3cat=1.00]	.906	1.299
[revmar3cat=2.00]	1.467	1.871
[revmar3cat=3.00]	.	.
[revracecat=1.00]	.852	1.373
[revracecat=2.00]	.457	.836
[revracecat=3.00]	.592	1.022
[revracecat=4.00]	.	.
[reved4cat=1.00]	.802	1.038
[reved4cat=2.00]	.930	1.177
[reved4cat=3.00]	.824	1.082
[reved4cat=4.00]	.	.
AGE	.947	.956
sexm	.559	.720

Survival Time Variable: ageonsetmde

Event Status Variable: Major Depressive Episode 1=Yes 0=No = 1

Model: revmar3cat, revracecat, reved4cat, AGE, sexm<sup>a</sup>

a. Tie breaking method: Efron

b. Set to zero because this parameter is redundant.

**Pattern Values**

	Survival Time Interval		Age	Male 1=Yes 0=No	revmar3cat	revracecat	reved4cat
	Start	End					
Reference Pattern 1	.000	<sup>a</sup>	44.78	.48	3.00	4.00	4.00

Unspecified predictor is assigned the value of this predictor at the reference pattern.

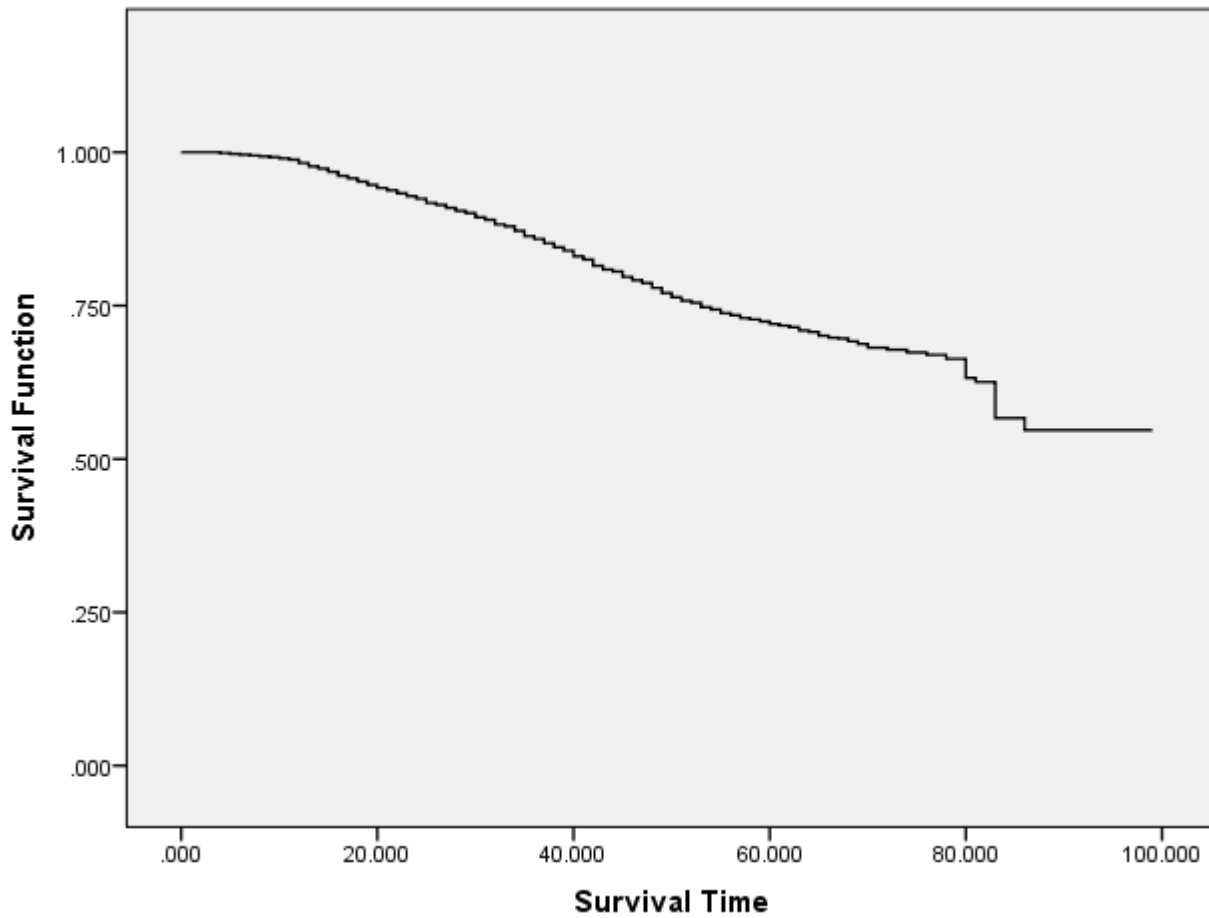
Each Survival Time Interval is defined as Start < Survival Time <= End.

Model: revmar3cat, revracecat, reved4cat, AGE, sexm.

a. Unbounded

**Survival Function Charts**

**Reference Pattern**



\* NOTE: CODES FOR RACECAT 1=OTHER 2=HISPANIC 3=BLACK 4=WHITE,  
 MARCAT 1=MARRIED 2=PREVIOUSLY MARRIED 3=NEVER MARRIED,  
 ED4CAT 1=0-11 2=12 3=13-15 4=16+ YEARS OF EDUCATION,  
 SEXM 1=MALE 0=NON-MALE.  
 \* REVERSE CODING IS SIMPLY THE REVERSE OF THE ORIGINAL CODES.

\*test proportional hazards assumption for the fitted Cox model using PLOT command.  
 \* Complex Samples Cox Regression.  
 CSCOXREG ageonsetmde BY revmar3cat revracecat reved4cat WITH AGE sexm  
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 /VARIABLES STATUS=mde(1)  
 /MODEL revmar3cat revracecat reved4cat AGE sexm  
 /PRINT SAMPLEINFO EVENTINFO  
 /STATISTICS PARAMETER EXP SE CINTERVAL TTEST  
 /PLOT LML CI=NO  
 /PATTERN BY revracecat  
 /TEST TYPE=F PADJUST=LSD  
 /CRITERIA MXITER=100 MXSTEP=5 PCONVERGE=[1E-006 RELATIVE] LCONVERGE=[0] TIES=EFRON CILEVEL=95  
 /SURVIVALMETHOD BASELINE=EFRON CI=LOG  
 /MISSING CLASSMISSING=EXCLUDE.

**Complex Samples: Cox Regression**

**Sample Design Information**

			N
Unweighted Counts	Valid	Subjects	9282
		Cases	9282
	Invalid Cases		0
	Total Cases		9282
Population Subject Size			9282.000
Stage 1	Strata	42	
	Units	84	
Sampling Design Degrees of Freedom			42

**Event and Censoring Information**

Total		Event		Censored		Censored Percent	
Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
9282	9282.000	1829	1779.464	7453	7502.536	80.3%	80.8%

Event Status variable: Major Depressive Episode 1=Yes 0=No = 1

**Tests of Model Effects**

Source	df1	df2	Wald F	Sig.
revmar3cat	2.000	41.000	34.634	.000
revracecat	3.000	40.000	13.435	.000
reved4cat	3.000	40.000	1.975	.133
AGE	1.000	42.000	431.229	.000
sexm	1.000	42.000	53.012	.000

Survival Time Variable: ageonsetmde

Event Status Variable: Major Depressive Episode 1=Yes 0=No = 1

Model: revmar3cat, revracecat, reved4cat, AGE, sexm

**Parameter Estimates<sup>a</sup>**

Parameter	B	Std. Error	95% Confidence Interval		Hypothesis Test			Exp(B)
			Lower	Upper	t	df	Sig.	
[revmar3cat=1.00]	.082	.089	-.098	.262	.914	42.000	.366	1.085
[revmar3cat=2.00]	.505	.060	.383	.626	8.364	42.000	.000	1.657
[revmar3cat=3.00]	.000 <sup>b</sup>	.	.	.	.	.	.	1.000
[revracecat=1.00]	.078	.118	-.160	.317	.661	42.000	.512	1.081
[revracecat=2.00]	-.481	.150	-.783	-.179	-3.212	42.000	.003	.618
[revracecat=3.00]	-.251	.135	-.524	.021	-1.860	42.000	.070	.778
[revracecat=4.00]	.000 <sup>b</sup>	.	.	.	.	.	.	1.000
[reved4cat=1.00]	-.091	.064	-.220	.038	-1.430	42.000	.160	.913
[reved4cat=2.00]	.045	.058	-.073	.163	.774	42.000	.444	1.046
[reved4cat=3.00]	-.057	.067	-.193	.078	-.853	42.000	.399	.944
[reved4cat=4.00]	.000 <sup>b</sup>	.	.	.	.	.	.	1.000
AGE	-.050	.002	-.055	-.045	-20.766	42.000	.000	.952
sexm	-.455	.063	-.582	-.329	-7.281	42.000	.000	.634

**Parameter Estimates<sup>a</sup>**

Parameter	95% Confidence Interval for Exp(B)	
	Lower	Upper
[revmar3cat=1.00]	.906	1.299
[revmar3cat=2.00]	1.467	1.871
[revmar3cat=3.00]	.	.
[revracecat=1.00]	.852	1.373
[revracecat=2.00]	.457	.836
[revracecat=3.00]	.592	1.022
[revracecat=4.00]	.	.
[reved4cat=1.00]	.802	1.038
[reved4cat=2.00]	.930	1.177
[reved4cat=3.00]	.824	1.082
[reved4cat=4.00]	.	.
AGE	.947	.956
sexm	.559	.720

Survival Time Variable: ageonsetmde

Event Status Variable: Major Depressive Episode 1=Yes 0=No = 1

Model: revmar3cat, revracecat, reved4cat, AGE, sexm<sup>a</sup>

a. Tie breaking method: Efron

b. Set to zero because this parameter is redundant.

**Pattern Values**

		Survival Time Interval		Age	Male 1=Yes 0=No	revmar3cat	revracecat	reved4cat
		Start	End					
Reference Pattern	1	.000	<sup>a</sup>	44.78	.48	3.00	4.00	4.00
Pattern 1.1	1	.000	<sup>a</sup>	44.78	.48	3.00	1.00	4.00
Pattern 1.2	1	.000	<sup>a</sup>	44.78	.48	3.00	2.00	4.00
Pattern 1.3	1	.000	<sup>a</sup>	44.78	.48	3.00	3.00	4.00
Pattern 1.4	1	.000	<sup>a</sup>	44.78	.48	3.00	4.00	4.00

Unspecified predictor is assigned the value of this predictor at the reference pattern.

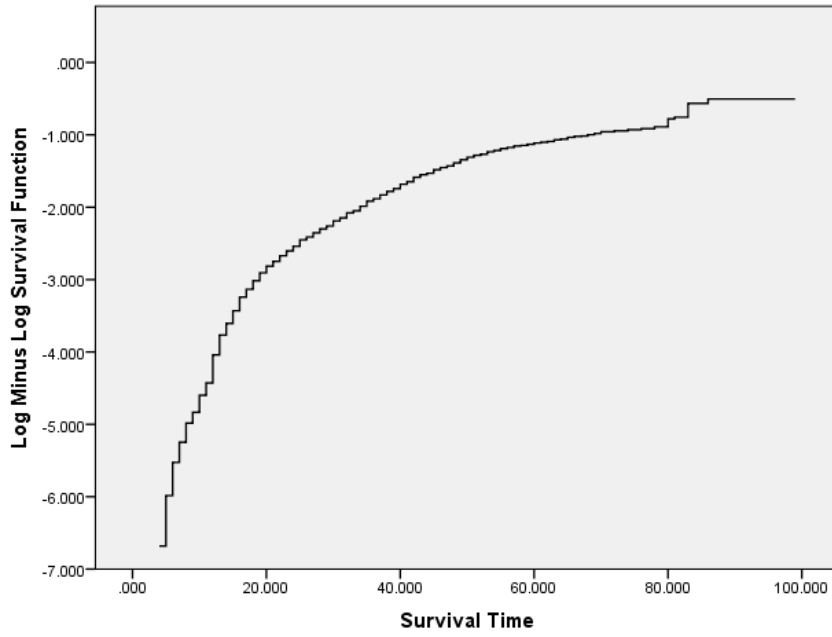
Each Survival Time Interval is defined as Start < Survival Time <= End.

Model: revmar3cat, revracecat, reved4cat, AGE, sexm.

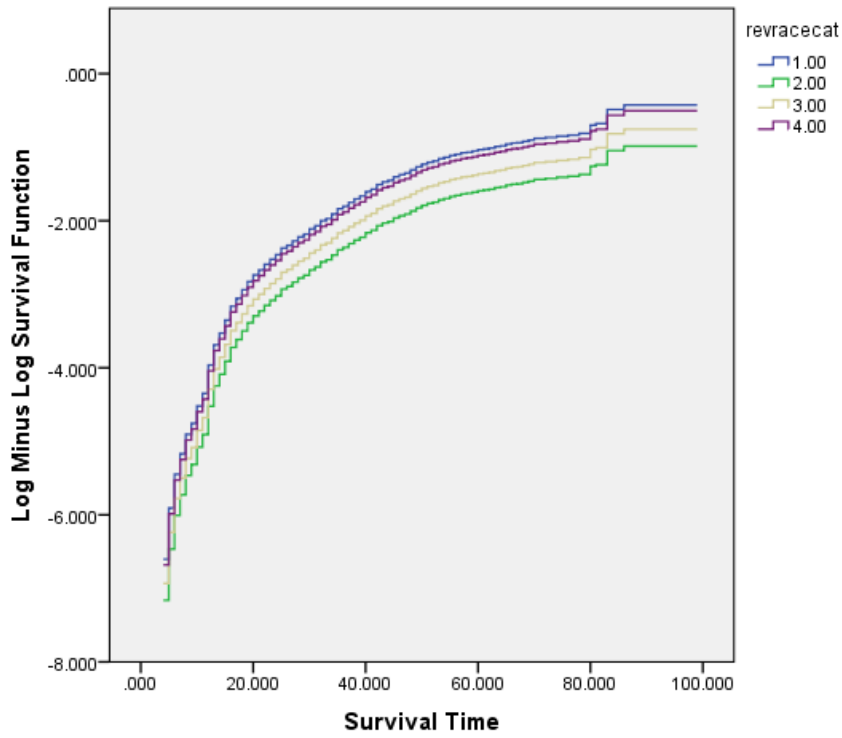
a. Unbounded

# Log Minus Log Survival Function Charts

## Reference Pattern



## Pattern 1



```

* Read in Expanded or Long Data Set for NCSR.
GET
  SAS DATA='P:\ASDA 2\Data sets\NCSR\c10_expanded1.sas7bdat'.
DATASET NAME DataSet1 WINDOW=FRONT.

* reverse coding and variable creation.
compute revag4cat=5-ag4cat.
compute reved4cat=5-ed4cat.
compute revmar3cat=4-mar3cat.
compute sexm=(sex=1).
compute revracecat=5-racecat.
compute mdetv=0.
if (pyr=mde_ond) mdetv=1.
execute.

USE ALL.

COMPUTE filter_$(pyr = ageonsetmde ).
VARIABLE LABEL filter_$ 'pyr = ageonsetmde (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.
filter off.

* Complex Samples Logistic Regression.
* Discrete Time Logistic Regression NCS-R data.
CSLOGISTIC mdetv(LOW) BY reved4cat revmar3cat revracecat WITH pyr sexm intwage
/PLAN file='P:\ASDA 2\Data sets\NCSR\ncsr_plwt.csaplan'
/MODEL reved4cat revmar3cat revracecat pyr sexm intwage
/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	415219
	Invalid	0
	Total	415219
Population Size		415607.200
Stage 1	Strata	42
	Units	84
Sampling Design Degrees of Freedom		42

**Pseudo R Squares**

Cox and Snell	.002
Nagelkerke	.041
McFadden	.040

Dependent Variable: mdetv (reference category = 0)

Model: (Intercept), reved4cat, revmar3cat, revracecat, pyr, sexm, intwage

**Tests of Model Effects**

Source	df1	df2	Wald F	Sig.
(Corrected Model)	11.000	32.000	54.813	.000
(Intercept)	1.000	42.000	1961.970	.000
reved4cat	3.000	40.000	1.866	.151
revmar3cat	2.000	41.000	35.983	.000
revracecat	3.000	40.000	10.713	.000
pyr	1.000	42.000	171.697	.000
sexm	1.000	42.000	49.747	.000
intwage	1.000	42.000	558.912	.000

Dependent Variable: mdetv (reference category = 0)

Model: (Intercept), reved4cat, revmar3cat, revracecat, pyr, sexm, intwage

**Parameter Estimates**

mdetv	Parameter	B	Std. Error	95% Confidence Interval		Hypothesis Test		
				Lower	Upper	t	df	Sig.
1	(Intercept)	-3.605	.150	-3.907	-3.304	-24.112	42.000	.000
	[reved4cat=1.00]	-.026	.058	-.143	.092	-.440	42.000	.662
	[reved4cat=2.00]	.085	.054	-.023	.193	1.587	42.000	.120
	[reved4cat=3.00]	-.012	.062	-.138	.113	-.200	42.000	.843
	[reved4cat=4.00]	.000 <sup>a</sup>	.	.	.	.	.	.
	[revmar3cat=1.00]	-.016	.080	-.177	.144	-.206	42.000	.838
	[revmar3cat=2.00]	.440	.053	.333	.547	8.325	42.000	.000
	[revmar3cat=3.00]	.000 <sup>a</sup>	.	.	.	.	.	.
	[revraccat=1.00]	.076	.105	-.137	.288	.717	42.000	.478
	[revraccat=2.00]	-.400	.136	-.675	-.125	-2.933	42.000	.005
	[revraccat=3.00]	-.204	.124	-.455	.047	-1.644	42.000	.108
	[revraccat=4.00]	.000 <sup>a</sup>	.	.	.	.	.	.
	pyr	.028	.002	.023	.032	13.103	42.000	.000
	sexm	-.402	.057	-.518	-.287	-7.053	42.000	.000
	intwage	-.054	.002	-.059	-.049	-23.641	42.000	.000

**Parameter Estimates**

mdetv	Parameter	Exp(B)	95% Confidence Interval for Exp(B)	
			Lower	Upper
1	(Intercept)	.027	.020	.037
	[reved4cat=1.00]	.975	.866	1.096
	[reved4cat=2.00]	1.089	.977	1.213
	[reved4cat=3.00]	.988	.871	1.120
	[reved4cat=4.00]	1.000	.	.
	[revmar3cat=1.00]	.984	.838	1.155
	[revmar3cat=2.00]	1.553	1.395	1.727
	[revmar3cat=3.00]	1.000	.	.
	[revracecat=1.00]	1.079	.872	1.334
	[revracecat=2.00]	.670	.509	.883
	[revracecat=3.00]	.815	.634	1.048
	[revracecat=4.00]	1.000	.	.
	pyr	1.028	1.024	1.032
	sexm	.669	.596	.750
	intwage	.947	.943	.952

Dependent Variable: mdetv (reference category = 0)

Model: (Intercept), reved4cat, revmar3cat, revracecat, pyr, sexm, intwage

a. Set to zero because this parameter is redundant.

\* Discrete Time Logistic with CLOGLOG link, note that signs differ but coefficients match the Stata output, see documentation for details  
 \* Repeat model but run with cloglog link, note that Odds Ratios are not provided with the Cloglog link, could be calculated as the exponent(parameter).  
 CSORDINAL mdetv (descending) BY reved4cat revmar3cat revracecat WITH sexm pyr intwage  
 /PLAN file='P:\ASDA 2\Data sets\NCSR\ncsr\_plwt.csaplan'  
 /LINK FUNCTION=CLOGLOG  
 /MODEL reved4cat revmar3cat revracecat sexm pyr intwage  
 /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 CLASSTABLE VARIABLEINFO SAMPLEINFO.

**Complex Samples: Ordinal Regression**

**Sample Design Information**

		N
Unweighted Cases	Valid	415219
	Invalid	0
	Total	415219
Population Size		415607.200
Stage 1	Strata	42
	Units	84
Sampling Design Degrees of Freedom		42

**Categorical Variable Information**

		Weighted Count	Weighted Percent
mdetv <sup>a</sup>	1	1779.464	0.4%
	0	413827.736	99.6%
reved4cat	1.00	99818.991	24.0%
	2.00	106481.812	25.6%
	3.00	134189.397	32.3%
	4.00	75117.000	18.1%
revmar3cat	1.00	62285.817	15.0%
	2.00	106815.404	25.7%
	3.00	246505.979	59.3%
revracecat	1.00	315215.483	75.8%
	2.00	44886.427	10.8%
	3.00	38825.765	9.3%
	4.00	16679.524	4.0%
Population Size		415607.200	100.0%

a. Dependent variable values are sorted in descending order.

**Covariate Information**

	Mean
Male 1=Yes 0=No	.47
pyr	26.37
intwage	51.73

**Pseudo R Squares**

Cox and Snell	.002
Nagelkerke	.041
McFadden	.040

Dependent Variable: mdetv

(Descending)

Model: (Threshold), reved4cat,

revmar3cat, revracecat, sexm, pyr,

intwage

Link function: Complementary log-log

**Tests of Model Effects**

Source	df1	df2	Wald F	Sig.
reved4cat	3.000	40.000	1.854	.153
revmar3cat	2.000	41.000	36.049	.000
revracecat	3.000	40.000	10.690	.000
sexm	1.000	42.000	49.710	.000
pyr	1.000	42.000	171.810	.000
intwage	1.000	42.000	559.192	.000

Dependent Variable: mdetv (Descending)

Model: (Threshold), reved4cat, revmar3cat, revracecat, sexm, pyr, intwage

Link function: Complementary log-log

**Parameter Estimates**

Parameter	B	Std. Error	95% Confidence Interval		Hypothesis Test		
			Lower	Upper	t	df	Sig.
			Threshold [mdetv=1]	-3.613	.149	-3.914	-3.312
Regression [reved4cat=1.00]	.025	.058	-.092	.143	.437	42.000	.664
[reved4cat=2.00]	-.085	.053	-.192	.023	-1.584	42.000	.121
[reved4cat=3.00]	.012	.062	-.113	.137	.196	42.000	.846
[reved4cat=4.00]	.000 <sup>a</sup>	.	.	.	.	.	.
[revmar3cat=1.00]	.017	.079	-.143	.176	.209	42.000	.835
[revmar3cat=2.00]	-.439	.053	-.545	-.332	-8.330	42.000	.000
[revmar3cat=3.00]	.000 <sup>a</sup>	.	.	.	.	.	.
[revracecat=1.00]	-.075	.105	-.288	.137	-.716	42.000	.478
[revracecat=2.00]	.398	.136	.124	.673	2.929	42.000	.005
[revracecat=3.00]	.204	.124	-.047	.454	1.642	42.000	.108
[revracecat=4.00]	.000 <sup>a</sup>	.	.	.	.	.	.
sexm	.401	.057	.286	.516	7.051	42.000	.000
pyr	-.027	.002	-.032	-.023	-13.108	42.000	.000
intwage	.054	.002	.049	.058	23.647	42.000	.000

Dependent Variable: mdetv (Descending)

Model: (Threshold), reved4cat, revmar3cat, revracecat, sexm, pyr, intwage

Link function: Complementary log-log

a. Set to zero because this parameter is redundant.

**Classification**

Observed	Predicted		
	0	1	Percent Correct
0	413827.736	.000	100.0%
1	1779.464	.000	0.0%
Overall Percent	100.0%	0.0%	99.6%

Dependent Variable: mdetv (Descending)

Model: (Threshold), reved4cat, revmar3cat, revracecat, sexm, pyr, intwage

Link function: Complementary log-log

\* Export Output.

OUTPUT EXPORT

/CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRINTSETTING

/DOC DOCUMENTFILE='P:\ASDA 2\Analysis Example Replication\SPSS\Analysis Example Replication '+  
'SPSS C10.doc'

NOTESCAPTIONS=YES WIDETABLES=WRAP PAGEBREAKS=YES

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