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* Stata Analysis Examples Replication for ASDA 2nd Edition
* Berglund April 2017
* Chapter 10

use "P:\ASDA 2\Data sets\ncsr\ncsr_sub_5apr2017.dta", clear
rename *, lower

gen ageonsetmde=age
replace ageonsetmde=mde_ond if mde==1
tab ageonsetmde
gen intwage=age

* set survey time
stset ageonsetmde [pweight = ncsrwtsh], failure(mde==1)

* Section 10.3.3 KM Example
sts graph, by(racecat) legend(lab(1 "Other/Asian") lab(2 "Hisp/Mexican") lab(3 "Black") lab(4
"White"))
sts list, at(10 20 30 40 50 60 70)

* 10.4.5 Example: Fitting a Cox Proportional Hazards Model to Complex Sample Survey Data
gen swd=0
replace swd=1 if mar3cat==2
gen nevermarried=0
replace nevermarried=1 if mar3cat==3

gen ed12=0
replace ed12=1 if ed4cat==2
gen ed1315=0
replace ed1315=1 if ed4cat==3
gen ed16=0
replace ed16=1 if ed4cat==4

* set survey variables and time
svyset seclustr [pweight=ncsrwtsh], strata(sestrat) vce(linearized) singleunit(missing)
stset ageonsetmde [pweight = ncsrwtsh], failure(mde==1)
* Table 10.2
svy: stcox intwage ib2.sex i.mar3cat i.ed4cat i.racecat

* Figure 10.4
stphplot, by(racecat) legend(lab(1 "Other/Asian") lab(2 "Hisp/Mexican") lab(3 "Black") lab(4
"White"))

* Figure 10.5
stphplot, by(racecat) adj(intwage sexf swd nevermarried ed12 ed1315 ed16) nonnegative nolntime ///
legend(lab(1 "Other/Asian") lab(2 "Hisp/Mexican") lab(3 "Black") lab(4 "White"))

*10.5.5 Fitting a Discrete Time Model to Complex Sample Survey Data
* prepare data for model, shape into "long" file
expand intwage
bysort caseid: gen pyr = _n

gen mdetv = 1 if pyr == mde_ond
replace mdetv = 0 if pyr != mde_ond
tab mdetv

list caseid intwage ncsrwtsh sestrat seclustr pyr mdetv ageonsetmde if caseid == 1
* set survey variables and run logistic model for Table 10.5
svyset seclustr [pweight=ncsrwtsh], strata(sestrat) vce(linearized) singleunit(missing)
svy: logistic mdetv pyr intwage ib2.sex i.ed4cat i.racecat i.mar3cat if pyr <= ageonsetmde
* Table 10.6 CLOGLOG model
svy: cloglog mdetv pyr intwage ib2.sex i.ed4cat i.racecat i.mar3cat if pyr <= ageonsetmde, eform

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