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1
2 // Stata Workshop 3
3 // Department of Social Sciences, School of Arts and Social Sciences, The Open University of Hong
  Kong
4 // March, 2021
5 // Source of data: https://www.stata.com/bookstore/gentle-introduction-to-stata
6
7
8 // Part 1. ANOVA
9 // Part 1.1. One-way ANOVA: Between-subjects factor
10 // Dataset: gss2006_chapter9.dta
11 oneway tvhours marital, bonferroni tab
12
13 // Part 1.2. Repeated-measures ANOVA: Within-subjects factor
14 // Dataset: wide9.dta
15 sum test1 test2 test3
16
17 reshape long test, i(id) j(time) // wide format -> long format
18 sort time
19 by time: sum test
20
21 anova test id time, repeated(time)
22 pwcompare time, pveffects mcompare(bonferroni)
23
24 // Part 2. Correlation and Simple Regression
25 // Dataset: gss2006_chapter8.dta
26
27 // Part 2.1. Correlation
28 pwcorr educ happy health, obs sig star(.05) // pairwise
29 pwcorr educ happy health, listwise obs sig star(.05) // listwise
30
31 // Part 2.2. Scatterplot
32 twoway (scatter educ paeduc)
33
34 // among females; add best fit line
35 codebook sex
36 twoway (scatter educ paeduc) (lfit educ paeduc) if sex==2
37
38 // add titles
39 twoway (scatter educ paeduc) (lfit educ paeduc) if sex==2, ///
40 ytitle(Daughter's education) xtitle(Father's education) ///
41 title(Relationship between father's education and daughter's education)
42
43 // modify the format
44 twoway (scatter educ paeduc) (lfit educ paeduc) if sex==2, ///
45 ytitle(Daughter's education) xtitle(Father's education) ///
46 title(Relationship between father's education and daughter's education, size(medium)) legend (off)
47
48 // Part 2.3. Simple regression
49 reg hrs1 educ
50 reg hrs1 educ, beta // show standardized coefficient
51
52 // Part 2.4. Graph showing the best fit line and the confidence interval
53 twoway (lfitci hrs1 educ)
54
55 // modify the format
56 twoway (lfitci hrs1 educ), ///
57 ytitle(Number of working hours) xtitle(Years of education) legend (off)
```