SOCI 30005_PS3_Hinojosa

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5/18/2019

Setup

Git-Overleaf publish commands git pull origin master git add . git commit -m "message" git push -u origin master

```
##      school          teacher           id           group
##  Min.   : 1.000   Min.   : 1.0   Min.   : 1.0   Min.   :1.000
##  1st Qu.: 1.000   1st Qu.: 4.0   1st Qu.:19.0   1st Qu.:2.000
##  Median : 2.000   Median : 8.0   Median :35.0   Median :3.000
##  Mean   : 4.469   Mean   :10.9   Mean   :31.8   Mean   :2.659
##  3rd Qu.: 9.000   3rd Qu.:18.0   3rd Qu.:43.0   3rd Qu.:4.000
##  Max.   :13.000   Max.   :55.0   Max.   :61.0   Max.   :4.000
##
##     treatmt           cch1            cch2          pre_test
##  Min.   :1.000   Min.   :0.000   Min.   :0.000   Min.   : 0.000
##  1st Qu.:1.000   1st Qu.:1.000   1st Qu.:1.000   1st Qu.: 4.000
##  Median :1.000   Median :1.000   Median :2.000   Median : 6.000
##  Mean   :1.289   Mean   :1.136   Mean   :1.652   Mean   : 5.964
##  3rd Qu.:2.000   3rd Qu.:2.000   3rd Qu.:2.000   3rd Qu.: 9.000
##  Max.   :2.000   Max.   :3.000   Max.   :3.000   Max.   :14.000
##                  NA's   :58      NA's   :62      NA's   :58
##    post_test         ccprod1          ccprod2           ccrdr1
##  Min.   : 0.000   Min.   : 0.000   Min.   : 0.000   Min.   :0.0000
##  1st Qu.: 6.000   1st Qu.: 2.000   1st Qu.: 3.000   1st Qu.:0.0000
##  Median : 9.000   Median : 4.000   Median : 5.000   Median :0.0000
##  Mean   : 8.551   Mean   : 3.906   Mean   : 4.879   Mean   :0.8447
##  3rd Qu.:11.000   3rd Qu.: 6.000   3rd Qu.: 7.000   3rd Qu.:1.0000
##  Max.   :15.000   Max.   :17.000   Max.   :19.000   Max.   :8.0000
##  NA's   :62       NA's   :58       NA's   :62       NA's   :58
##      ccrdr2           grade            CSIW              T
##  Min.   : 0.000   Min.   :1.000   Min.   :0.0000   Min.   :0.0000
##  1st Qu.: 0.000   1st Qu.:1.000   1st Qu.:0.0000   1st Qu.:0.0000
##  Median : 1.000   Median :1.000   Median :1.0000   Median :1.0000
##  Mean   : 2.536   Mean   :1.476   Mean   :0.7112   Mean   :0.7139
##  3rd Qu.: 3.000   3rd Qu.:2.000   3rd Qu.:1.0000   3rd Qu.:1.0000
##  Max.   :12.000   Max.   :2.000   Max.   :1.0000   Max.   :1.0000
##  NA's   :63       NA's   :39
##      dhigh             dave             dlow             d_ld
##  Min.   :0.0000   Min.   :0.0000   Min.   :0.0000   Min.   :0.0000
##  1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.:0.0000
##  Median :0.0000   Median :0.0000   Median :0.0000   Median :0.0000
##  Mean   :0.2289   Mean   :0.2234   Mean   :0.2071   Mean   :0.3406
##  3rd Qu.:0.0000   3rd Qu.:0.0000   3rd Qu.:0.0000   3rd Qu.:1.0000
##  Max.   :1.0000   Max.   :1.0000   Max.   :1.0000   Max.   :1.0000
##
##      grade5           grade4
##  Min.   :0.0000   Min.   :0.0000
```

```
##  1st Qu.:0.0000   1st Qu.:0.0000
##  Median :0.0000   Median :1.0000
##  Mean   :0.4756   Mean   :0.5244
##  3rd Qu.:1.0000   3rd Qu.:1.0000
##  Max.   :1.0000   Max.   :1.0000
##  NA's   :39       NA's   :39
```

Key Variables

- CSIW (treatmt)
  - 1=CSIW
  - 0=control
- Achievement Level (group)
  - 1=High
  - 2=Average
  - 3=Low
  - 4=Learning Disability
- Holistic pretest (cch1)
  - pre-test on writing achievement
- Holistic posttest (cch2)
  - post-test on writing achievement
- Grade (grade)
  - 1=Grade 4
  - 2=Grade 5
- School

Intro

Our aim in this assignment is the same as it was in Assignment 2: To study the impact of cognitive strategies on writing on writing (CSIW). But now we are going to confront and solve two key problems that were ignored in Assignment 2: a) the nested character of the data; b) missing data.

You should have already re-coded Achievement Level into 4 dummy variables and grade into 1 dummy variable.

A. Nested Data

Run a cross tab in which the rows are the schools ("school") and rows are CSIW. Based on this, tell us at what level the treatment ("CSIW") varies.

B. Build the MDM file

Sort the cases by "school." The level-1 and level-2 files will be the same. Choose the relevant child level variables at level-1 and the relevant school variable at level 2. B. Analysis of covariance (ANCOVA) model. Indicate that there are missing data, and tell the program to delete missing level-1 cases at run time.

C. Analysis of Covariance

1. Write down the level-1 model with relevant covariates (do not include quadratic terms or interactions at this time). 2. Write down the level-2 model. 3. Estimate the model and tell us the estimated treatment effect and its standard error (model based and robust).