SPSS Workshop

DAC NETWORKING DAY

Presented by Offord Centre for Child Studies

June 7, 2007

Introduction

- SPSS – statistical package for the social sciences
- User-Friendly
- Available at a lower cost if you are affiliated with a university in ON since we have a consortium

Overview

- Explanation followed by example and time to complete exercise
- 2 datasets are found on your computer
  - excel file: OCCS data
  - SPSS file: sample data

Topics

- Transferring files from SPSS to Excel and back
- Data/Variable View
- Specifying valid cases
- Comparisons
- Effect size
- Aggregation of data

Transferring files from SPSS to Excel and back

- Open SPSS
- -> File
- -> Open
- -> Data
- in the “files of type” click and select “all files”
- Look for the excel file with your data, highlight it, and click on the “open” button
- You’ll notice there are no value labels or variable labels with the data.

Transferring files from SPSS to Excel and back

- One can get the variable and value labels by using the following steps:
- -> Data
- -> copy data properties
- In the external SPSS data file box, browse and select the appropriate SPSS data file you want to use
- Click on Finish
- Save SPSS data file

Data & Variable Views

- 2 views in SPSS: Data View and Variable View
- Tab at the bottom left of the screen
- Data View – scanned & scored dataset
- Variable View – EDI variables, labels/coding and values

Transferring files from SPSS to Excel and back

- Saving SPSS files as other files – useful if you want to use the data with other statistical software such as Excel, STATA or SAS.
- File -> Save as -> in the "save as type" select the appropriate file type, e.g. Excel
- In the file name, type in the name of the file, e.g. Canada data. NB the extension of "xls" will be added automatically by Excel
- NB- transferring data from SPSS to Excel means loss of value labels and variable labels. One option is to click to save value labels instead of data (where applicable)

Exercise 1

- Read the SPSS file "sample_data.sav"
- Create an Excel file
- Read into SPSS the Excel file "occs_data.xls". Apply the data dictionary from the SPSS file "sample_data.sav"

Specifying valid cases

- Select if JKSK = 2, SN = 0 & VALID = 1, data for a child are excluded if JKSK classification is missing
- data for a child are excluded if SN classification is missing
- data for a child are excluded if they are missing more than one domain

Specifying valid cases

- Using SPSS, go to Data
- Click on “select cases”
- Click on “if condition is satisfied”, then click on the “if” button
- Create the condition by dragging items into the window and using the appropriate mathematical conditions

Exercise 2

Using the data file "sample_data.sav" read into SPSS in Exercise 1, select the valid cases for further analyses

Comparisons

- Compare results of population subgroups
- Click on "analyze"
- Click on "compare means" then "means"
- Dependent List insert domains
- Independent List insert variable of interest

Exercise 3

- Using data read in Exercise 2, compare children on all five domains

  (a) who attended French/English Immersion versus those who did not attend French/English immersion version those who did not

  (b) who had English/French as a second language versus those who did not

Effect sizes

- Effect size is a measure of the strength of the relationship between two variables. In scientific experiments, it is often useful to know not only whether an experiment has a statistically significant effect, but also the size of any observed effects. Unlike significance tests, these indices are independent of sample size
- Here we are recommending using the variations in domain scores to contextualize the change from one year to the next.
- Computed as: **ES = (mean year 2 - mean year 1) / sd base year**.

Effect sizes

What is effect size?

- We divide a two-point mean difference by the standard deviation of one group:

  e.g. (8.91 – 7.52)/1.62 = 0.85

  which would indicate that the mean of the one group was 0.85 standard deviations higher than the mean of the other
- Cohen (1969) describes an effect size of 0.2 as 'small'. An effect size of 0.5 is described as 'medium' and Cohen describes an effect size of 0.8 as 'grossly perceptible and therefore large'.

Aggregation of data

- AGGREGATE procedure
- School and neighbourhood reports are created making use of this procedure in SPSS
- Functions available include minimum, maximum, mean, standard deviation, %, etc.

Aggregation of data

- Steps:
- -> Data
- -> Aggregate
- In “break variable” box put unit of aggregation
- In “summaries of variables” box, click and drag the variables you need.
- Next click on the “function” button and change that to the appropriate aggregate function
- Chose method of saving and proceed to “OK”

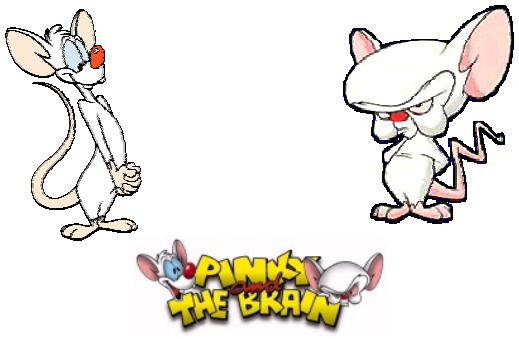
Exercise 4

Using the data read into SPSS in Exercise 3, we need to aggregate data to neighbourhood level and compute descriptive statistics, % lows on each domain, % vulnerable and % MCI, as well as the number of children assessed in each neighbourhood into another SPSS file

Computing change

- Compute % low on each domain and vulnerability using cut-offs from a baseline sample, e.g. Ontario Baseline
- Compute differences between implementations in terms of the %lows per domain and overall
- Summarize results in a table of N, %'s and differences
- Use SES data, other data to help explain observed differences between implementations

Any Questions ???



Brain: Are you pondering what I'm pondering?
Pinky: I think so, Brain, but why does a forklift have to be so big if all it does is lift forks?

Finally….

The OCCS, MCYS would like to thank you for your participation in this year's Networking Day and SPSS workshop.

See You Next Year! ☺