

Project I Data Analysis Plan

I. Descriptive Analyses

- These analyses should be reported in the Methods section. Some of this information should be presented in the *Subjects* section. The rest will be reported in the *Procedures* section.

A. Frequencies for Discrete Variables.

- Analyze —> Descriptive Statistics—>Frequencies
 - Variable(s) = day, time, sexsub, sexcon, help, path.
- Do not request any statistics or charts
- Paste to Syntax Sheet (Click on **Paste** and a new syntax window will open. Save this file as YOURNAME_Helping_Data_Syntax).
- You should obtain the following syntax.

FREQUENCIES

```
VARIABLES=sexsub sexcon help path day time  
/ORDER= ANALYSIS .
```

- To run this analysis, while in the syntax editor, highlight the desired block of syntax and click on the tool-bar-button with the black arrow pointing to the right (it looks like a play button on VCR, DVD, or CD player)

Report =

- *Participants* = Total number of Observations. Gender = % Male Subjects, % Female Subjects, % Male Confederates, % Female Confederates
- *Procedures* = Day of Observation (% Day 1, % Day 2, % Day 3), Time (% morning, % noon, % afternoon), Helping Behavior (% Help, % No Help), Path Impediment (% impeded, % not impeded).

II. Preliminary Analysis

- Should be reported as the first sub-section of the Results section.
- χ^2 Goodness of Fit Tests for Discrete Variables
 - Analyze—> Nonparametric Tests—> Chi Square
 - Test Variable List = day, time, sexsub, sexcon, help, path.
 - Expected Values: All categories equal
 - Though we should test gender of subjects using the 40/60 ratio. Since female = 1 enter 60 first (click add), then 40 (click add). If you run this, only run it for gensub (remove all other variables from the Test Variable List).
 - Expected Range: Get from data.
 - Paste to Syntax Sheet.
 - You should obtain the following syntax for the first chi square

NPAR TEST

```
/CHISQUARE=sexsub sexcon help path day  
/EXPECTED=EQUAL  
/MISSING ANALYSIS.
```

-If you conduct the sexsub analysis with the 60/40 ratio you will have the following syntax.

NPAR TEST

```
/CHISQUARE=sexsub  
/EXPECTED=60 40  
/MISSING ANALYSIS.
```

-Run these analyses

Report = For all significant analyses report the test results

E.g.

If $p < .05$, then $X^2(?, n = ?) = ?.??, p = .05$. (or whatever sig level given by spss).

- Since the group frequencies for each variable are presented in the Methods section, it is not necessary to report them here. However, you do need to explain what the results were.

- For Example: It was found that significantly more participants stopped to help than was expected by chance alone, $X^2(1, n = 174) = 57.47, p = .001$.

III. Main Analyses

- These Analyses will be reported in the second section of the Results Section
- Pearson's Chi Square Test of Association Between Discrete Variables
- Each hypothesis will have to be tested separately, but once you get the syntax for one analysis you can copy and paste it and just change the variables in the syntax.
 - Analyze —> Descriptive Statistics —> Crosstabs
 - Rows : Always put the variable with the most groups in the Rows.
 - Columns: Always put the variable with fewest groups into the Columns.
 - This simply keeps the output a little more interpretable (unless you print your output in landscape, then you should reverse the above rules).
 - Statistics: Chi-Square, Phi and Cramer V
 - Cells: All Counts, All Percentages, and Unstandardized Residuals
 - Paste to Syntax Sheet

- Time

Impeded Path x Helping:

Subjects whose paths were impeded are more likely to help than unimpeded subjects

Subject Sex x Help Hypothesis :

Female Subjects are more likely to help than male subjects.

Confederate Sex x Help Hypothesis:

Female Confederates are more likely to receive help than male confederates.

Subject Sex x Confederate Sex Interaction:

For Female Confederates: Male and female Subjects will be equally likely to help. No significant relationship is expected

For Male Confederates: Female Subjects will be more likely to help than male subjects

This analysis will require the use of the Split File Command. Essentially we will instruct spss to run the same Sex of Subject x Help analyses once just for female confederates and once just for male confederates.

Split File = Data —> Split File

- Organize output by groups
- Group Based on: ----> sexcon
- Paste, you should produce the following syntax.

```
SORT CASES BY sexcon .
SPLIT FILE
  SEPARATE BY sexcon .
```

- Complete Syntax for Main analysis:

```
CROSSTABS
/TABLES=path BY help
/FORMAT= AVALUE TABLES
/STATISTIC=CHISQ PHI
/CELLS= COUNT EXPECTED ROW COLUMN TOTAL RESID .
```

```
CROSSTABS
/TABLES=sexsub BY help
/FORMAT= AVALUE TABLES
/STATISTIC=CHISQ PHI
/CELLS= COUNT EXPECTED ROW COLUMN TOTAL RESID .
```

```
CROSSTABS
/TABLES=sexcon BY help
/FORMAT= AVALUE TABLES
/STATISTIC=CHISQ PHI
/CELLS= COUNT EXPECTED ROW COLUMN TOTAL RESID .
```

```
SORT CASES BY sexcon .
SPLIT FILE
  SEPARATE BY sexcon .
```

```
CROSSTABS
/TABLES=sexsub BY help
/FORMAT= AVALUE TABLES
/STATISTIC=CHISQ PHI
/CELLS= COUNT EXPECTED ROW COLUMN TOTAL RESID .
```

Report:

For each test, state the hypothesis, tell what type of analysis was used to test the hypothesis, state the results of the test (whether significant or non-significant), and present the observed frequencies in either the text or in a table.

Example:

It was hypothesized that female subjects would be more likely to help, compared to male participants. Chi-Square goodness of fit analysis support this hypothesis, $\chi^2(1, n = 174) = 4.99$, $p = .02$. Cramer's $V = .17$. See Table 1.1 for observed and expected frequencies.

Table 1

Crosstabulation of Sex of Subject and Helping Behavior

Classification	Pit Sweat Group	
	Increase	No Increase
Males	n = 31	n = 5
Females	n = 14	n = 70