Outline of workshop section 1, Introduction to R Studio:

Script file: IntroWorkshop.R

Topics:

1. Working with a script file or in the script window –ctrl enter to execute, that way you can save what you did for future reference
2. Getwd, list.files, setwd, using the menus to setwd
3. Loading a data file
   1. CSV: use read.csv(‘dataset\_anova\_twoWay\_interactions.csv’) as example, show Excel file
   2. Excel, SPSS, etc., requires a library—see later
   3. Read.table() as a more generic method
      1. mydata2

<- read.table('dataset\_anova\_twoWay\_interactions.txt', header=T)

1. Summary command
   1. How it works for a dataset
   2. Str() command
   3. Where to get more information: Everywhere!
2. Working with datasets
   1. Numbers, strings
   2. Indexing
   3. Mean, median, mode, standard deviation
   4. Subsetting
   5. Filtering
   6. Finding complete cases
3. Factor command and asfactor()
   1. Turns numerically coded data into nominal variable (as.factor)
   2. Can group by value using cut()
4. Saving new data, exporting
   1. Directories and paths
   2. Quit: q()
5. Tidy data format for organizing the data: easier to work with
   1. Example of within and between subject organization
   2. T-tests and basic ANOVA
   3. Model language—DV ~ IV + covariates
   4. Where to get more information
   5. Where to get more information
6. Loading a library: Library(packagename)
   1. Why: not all functions come built in
   2. Examples: MASS (built in), foreign (imported)
   3. Library(foreign) for reading an SPSS file
      1. Survey.sav from <http://spss.allenandunwin.com.s3-website-ap-southeast-2.amazonaws.com/data-files.html#.WLMefIErLIU>
      2. Read.spss(‘survey.sav’)
   4. You can see what’s installed both in RStudio window, and with installed.packages()