**Mplus Workshop 1: Introduction to Mplus and Basic Univariate Analyses**

* Introduction to Mplus
	+ Used to model various continuous and categorical observed and latent variables
	+ Types of analyses
		- Linear regression – moderation and mediation
		- Logistic regression
		- Poisson regression
		- Path analysis
		- Exploratory/confirmatory factor analysis
		- Structural equation modeling
		- Latent class analysis
		- Growth modeling
		- Multilevel – hierarchical modeling
		- Time survival analysis
		- Monte Carlo studies
	+ Programming rules
		- There are 10 programming commands:
			* Title – Identifies analysis
			* Data – Identifies location and name of data file for analysis
			* Variable – Names and describes the variables to be analyzed
			* Define – Transforms existing variables and creates new variables
			* Analysis – Describes the analysis to be performed
			* Model – Describes the model to be estimated
			* Output – Specifies output options
			* Savedata – Saves the data in ASCII files (.csv or .dat)
			* Plot – Provides graphical displays of data and results
			* Montecarlo – Defines parameters for simulation studies
* Clean, code, and format data in another package such as Excel, SPSS, SAS, or Stata
	+ Enter/convert data into a Microsoft Excel file
	+ Compare and match to codebook **(Organized codebook is extremely important)**
		- Remove headers (no letters in datafile)
			* Put headers in separate codebook
				+ Variable names should not be greater than 8 characters
		- Identify and code missing values (-99 is common code)
		- Then save as a .CSV file format
* Import data into Mplus
	+ Syntax will also give you basic univariate statistics
	+ Make sure to change any backslashes to forward slashes in the file location
	+ Reverse score variables if necessary
	+ Create composite scores if necessary and check univariate statistics
	+ Check for normality of variables
		- If non-normal, then transform with “Define” command
	+ Plot histograms of variables
	+ Print out output using GUI
	+ Save data from analysis
		- Text-to-columns to modify variables to individual columns in spreadsheet
		- Add new variables to codebook

data:

File is "C:\Users\rrb0005\Desktop\ExFHS.csv";

Variable:

Names are

PID Health Weight Active;

Usevariables

Health Weight;

Missing are all (-99);

Analysis:

Type = general;

Estimator = ML;

Model:

 Health ON Weight;

OUTPUT:

 sampstat cinterval standardized;