load\_libraries <- function(){

if (!require("bootnet"))

install.packages("bootnet"); library(bootnet)

if (!require("dplyr"))

install.packages("dplyr"); library(dplyr)

if (!require("magrittr"))

install.packages("magrittr"); library(magrittr)

if (!require("psych"))

install.packages("psych"); library(psych)

if (!require("qgraph"))

install.packages("qgraph"); library(qgraph)}

load\_libraries()

# Data:

library(dplyr)

zz <- file.path("U:","My Documents")

yfffloc <- file.path(zz,"YFFF.sav")

YFFF <- read.spss(yfffloc)

YFFF <- data.frame(YFFF)

Y <- YFFF[,1:20]

Y

Y$gender %<>% factor(levels = 1:2,

labels = c("Male", "Female"))

# Estimating networks:

network\_male <- estimateNetwork(Y %>%

filter(gender == "Male") %>%

select(-gender),

default = "EBICglasso",

corMethod = "spearman")

network\_female <- estimateNetwork(Y %>%

filter(gender == "Female") %>%

select(-gender),

default = "EBICglasso",

corMethod = "spearman")

compareCentrality <- function(net1, net2,

include = c("Strength",

"Closeness",

"Betweenness",

"ExpectedInfluence",

"all",

"All"),

orderBy = c("Strength",

"Closeness",

"Betweenness",

"ExpectedInfluence"),

decreasing = T,

legendName = '',

net1Name = 'Network 1',

net2Name = 'Network 2'){

library(ggplot2)

library(forcats)

if(include == "All" | include == "all"){include = c("Strength", "Closeness",

"Betweenness",

"ExpectedInfluence")}

df <- centralityTable(net1, net2) %>% filter(measure %in% include)

df %>%

mutate(graph = case\_when(graph == 'graph 1' ~ net1Name,

graph == 'graph 2' ~ net2Name),

graph = as.factor(graph),

node = as.factor(node)) %>%

mutate(node = fct\_reorder(node, value)) %>%

ggplot(aes(x = node, y = value, group = graph)) +

geom\_line(aes(linetype = graph), size = 1) +

labs(x = '', y = '') +

scale\_linetype\_discrete(name = legendName) +

coord\_flip() +

facet\_grid(~measure) +

theme\_bw()}

compareCentrality(network\_male, network\_female,

include = "all",

legendName = "Networks by Gender",

net1Name = "Male",

net2Name = "Female")