research

Anil Battalahalli Sreenath

3/18/2021

```
cl <- makeCluster(detectCores())
```

```
df <- read.csv('absolute_grand_final.csv')
df$unef <- ifelse(df$unemp >= 6, TRUE, FALSE)
df$hdif <- ifelse(df$HDI >= 0.55, TRUE, FALSE)
df$intf <- ifelse(df$Year >= 2010, TRUE, FALSE)
df$gdppcf <- ifelse(df$GDP >=3000, TRUE, FALSE)
```

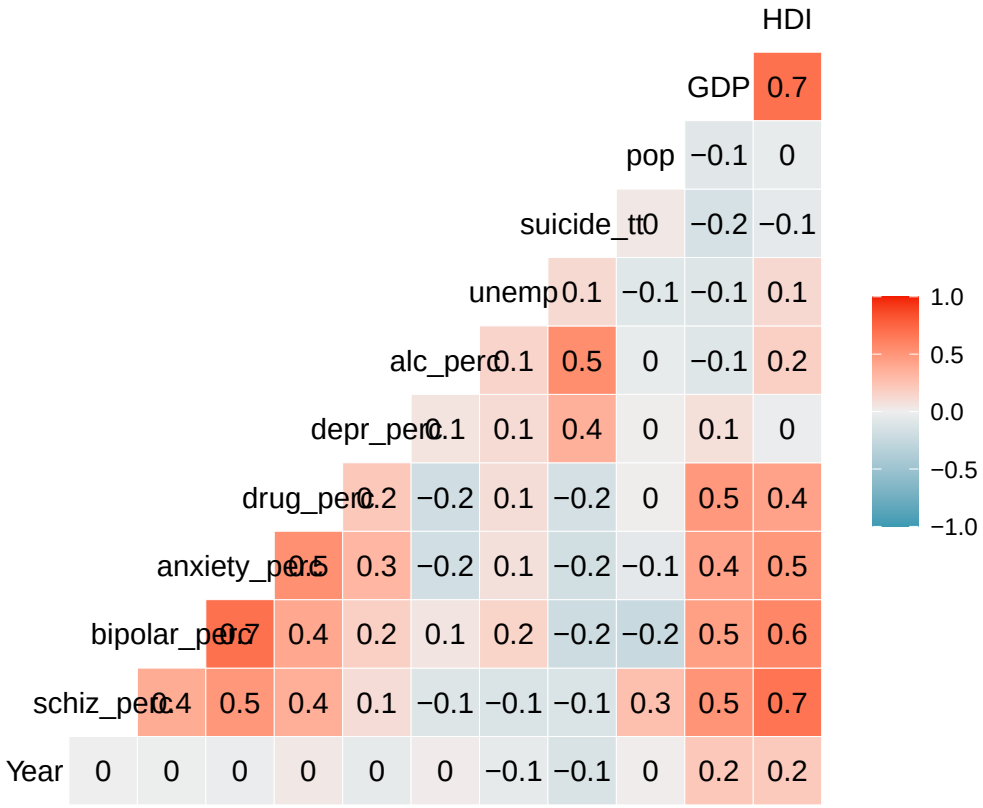
Column Names:

```
names(df)
```

```
##  [1] "Country"      "Year"         "schiz_perc"   "bipolar_perc" "anxiety_perc"
##  [6] "drug_perc"    "depr_perc"    "alc_perc"     "unemp"        "suicide_tt"
## [11] "pop"          "GDP"          "HDI"          "unef"         "hdif"
## [16] "intf"         "gdppcf"
```

Select Columns for Pair Plot:

```
df_num <- subset(df, select = -c(Country, unef, hdif, intf, gdppcf))
ggcorr(df_num, palette = "RdBu", label = TRUE)
```



Research Questions:

1. Do bipolar disorder and anxiety disorders coexist? Bootstrap
2. What is the gini coefficient for different illnesses? Jackknife
3. Mean difference of illnesses and suicide between lower HDI and higher HDI Bootstrap
4. Mean difference of illnesses and suicide between lower GDP and higher GDP Bootstrap

1. Do bipolar disorder and anxiety disorders coexist? Using Bootstrap

```
dis <- c("schiz_perc", "bipolar_perc", "anxiety_perc", "depr_perc")
c <- t(combn(dis,2))
```

```
get_corr <- function(x, index){
  a = names(x)[1]
  b = names(x)[2]
  x_sample <- x[index,]
  return(cor(x_sample[a],x_sample[b]))
}

do_boot <- function(x){
  print(names(x))
  boot_corr <- boot(x, statistic = get_corr, R = 1000, parallel = 'snow', cl=cl)
  print(boot.ci(boot_corr, type = c("basic"), conf = 0.95))
  cat("\n\n")
}
```

```
for (i in 1:dim(c)[1]){
  do_boot(df[c[i,]])
}
```

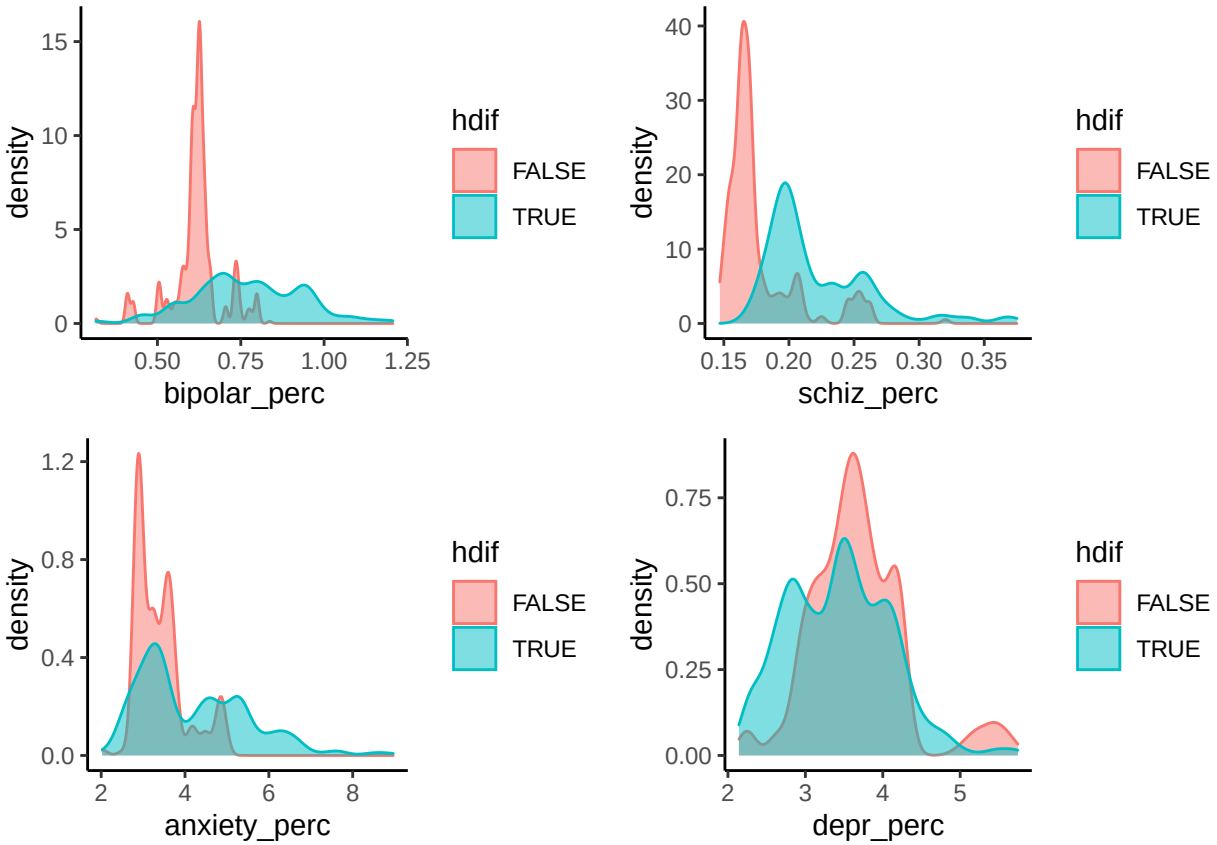
```
## [1] "schiz_perc"   "bipolar_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.3392,  0.4170 )
## Calculations and Intervals on Original Scale
##
##
## [1] "schiz_perc"   "anxiety_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.4686,  0.5265 )
## Calculations and Intervals on Original Scale
##
##
## [1] "schiz_perc" "depr_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.0657,  0.1354 )
## Calculations and Intervals on Original Scale
##
##
## [1] "bipolar_perc" "anxiety_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.6775,  0.7106 )
## Calculations and Intervals on Original Scale
##
##
## [1] "bipolar_perc" "depr_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
```

```
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.1433,  0.2009 )
## Calculations and Intervals on Original Scale
##
##
## [1] "anxiety_perc" "depr_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.2911,  0.3418 )
## Calculations and Intervals on Original Scale
```

3. Mean difference of illnesses and suicide between lower HDI and higher HDI Bootstrap

```
valcol <- c("schiz_perc","bipolar_perc","anxiety_perc","drug_perc","depr_perc","alc_perc","suicide_tt")
```

```
a <- ggplot(df, aes(x = bipolar_perc, color = hdif, fill = hdif)) + geom_density(alpha = 0.5)+theme_cla
b <- ggplot(df, aes(x = schiz_perc, color = hdif, fill = hdif)) + geom_density(alpha = 0.5)+theme_classi
c <- ggplot(df, aes(x = anxiety_perc, color = hdif, fill = hdif)) + geom_density(alpha = 0.5)+theme_cla
d <- ggplot(df, aes(x = depr_perc, color = hdif, fill = hdif)) + geom_density(alpha = 0.5)+theme_classi
grid.arrange(a, b, c, d, nrow=2, ncol=2)
```



Difference between higher HDI and lower HDI

```
get_meandiff <- function(x, index, a){
  x_sample <- x[index,]
  return(mean(as.matrix(x_sample[x_sample$hdif,][a]))-mean(as.matrix(x_sample[!x_sample$hdif,][a])))
}

for (i in valcol){
  print(i)
  boot_corr <- boot(df, statistic = get_meandiff, a = i, R = 1000, parallel = 'snow', cl=cl)
  print(boot.ci(boot_corr, type = c("basic"), conf = 0.95))
  cat("\n\n")
}
```

```
## [1] "schiz_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.0429,  0.0476 )
## Calculations and Intervals on Original Scale
##
##
## [1] "bipolar_perc"
```

```
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.1448,  0.1603 )
## Calculations and Intervals on Original Scale
##
##
## [1] "anxiety_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.7365,  0.8570 )
## Calculations and Intervals on Original Scale
##
##
## [1] "drug_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.2762,  0.3244 )
## Calculations and Intervals on Original Scale
##
##
## [1] "depr_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.2841, -0.1961 )
## Calculations and Intervals on Original Scale
##
##
## [1] "alc_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
```

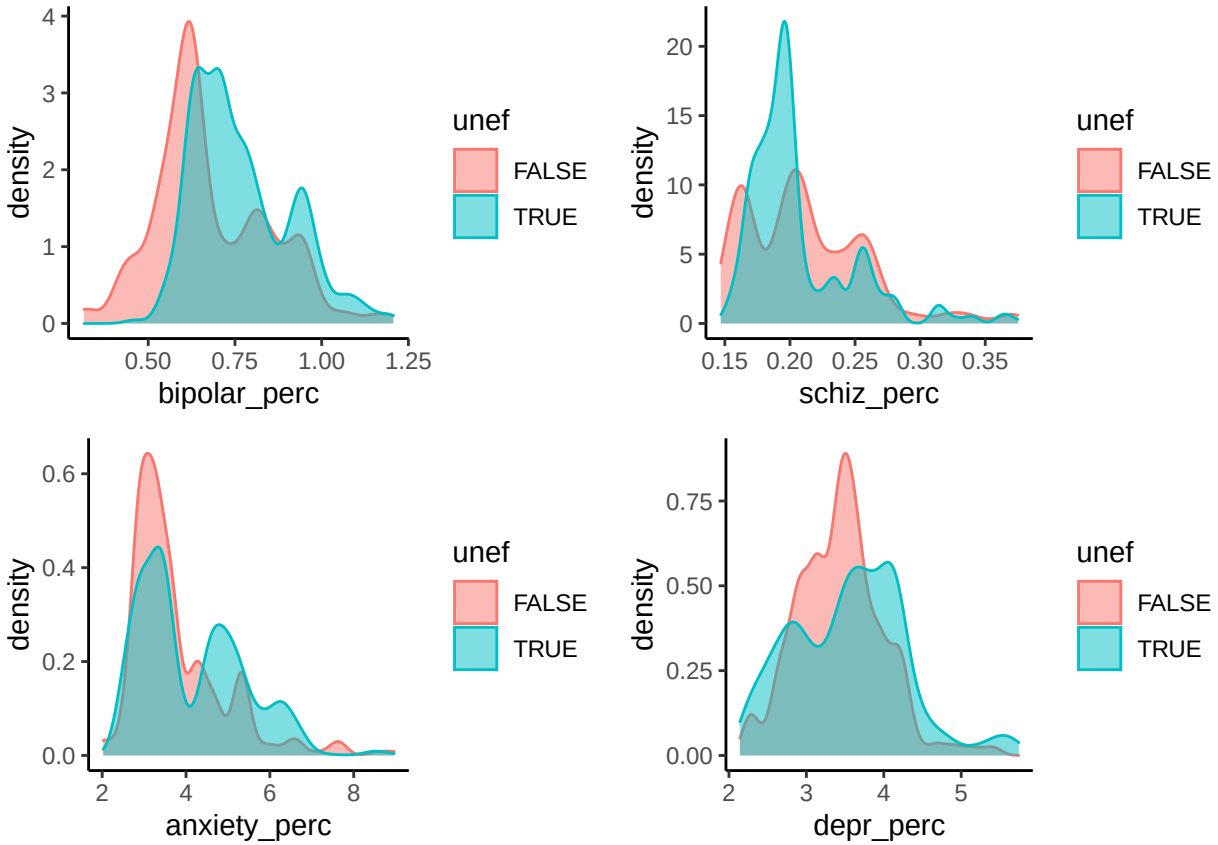
```
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.3913,  0.4893 )
## Calculations and Intervals on Original Scale
##
##
## [1] "suicide_tt"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-1.883, -0.980 )
## Calculations and Intervals on Original Scale
```

```
mean(as.matrix(df[df$hdif, ][valcol[1]]))
```

```
## [1] 0.2222258
```

4. Mean difference of illnesses and suicide between lower Unemployment and higher Unemployment Bootstrap

```
a <- ggplot(df, aes(x = bipolar_perc, color = unef, fill = unef)) + geom_density(alpha = 0.5)+theme_cla
b <- ggplot(df, aes(x = schiz_perc, color = unef, fill = unef)) + geom_density(alpha = 0.5)+theme_classi
c <- ggplot(df, aes(x = anxiety_perc, color = unef, fill = unef)) + geom_density(alpha = 0.5)+theme_cla
d <- ggplot(df, aes(x = depr_perc, color = unef, fill = unef)) + geom_density(alpha = 0.5)+theme_classi
grid.arrange(a, b, c, d, nrow=2, ncol=2)
```




```
get_meandiff <- function(x, index, a){
  x_sample <- x[index,]
  return(mean(as.matrix(x_sample[!x_sample$unef,][a]))-mean(as.matrix(x_sample[x_sample$unef,][a])))
}

for (i in valcol){
  print(i)
  boot_corr <- boot(df, statistic = get_meandiff, a = i, R = 1000, parallel = 'snow', cl=cl)
  print(boot.ci(boot_corr, type = c("basic"), conf = 0.95))
  cat("\n\n")
}
```

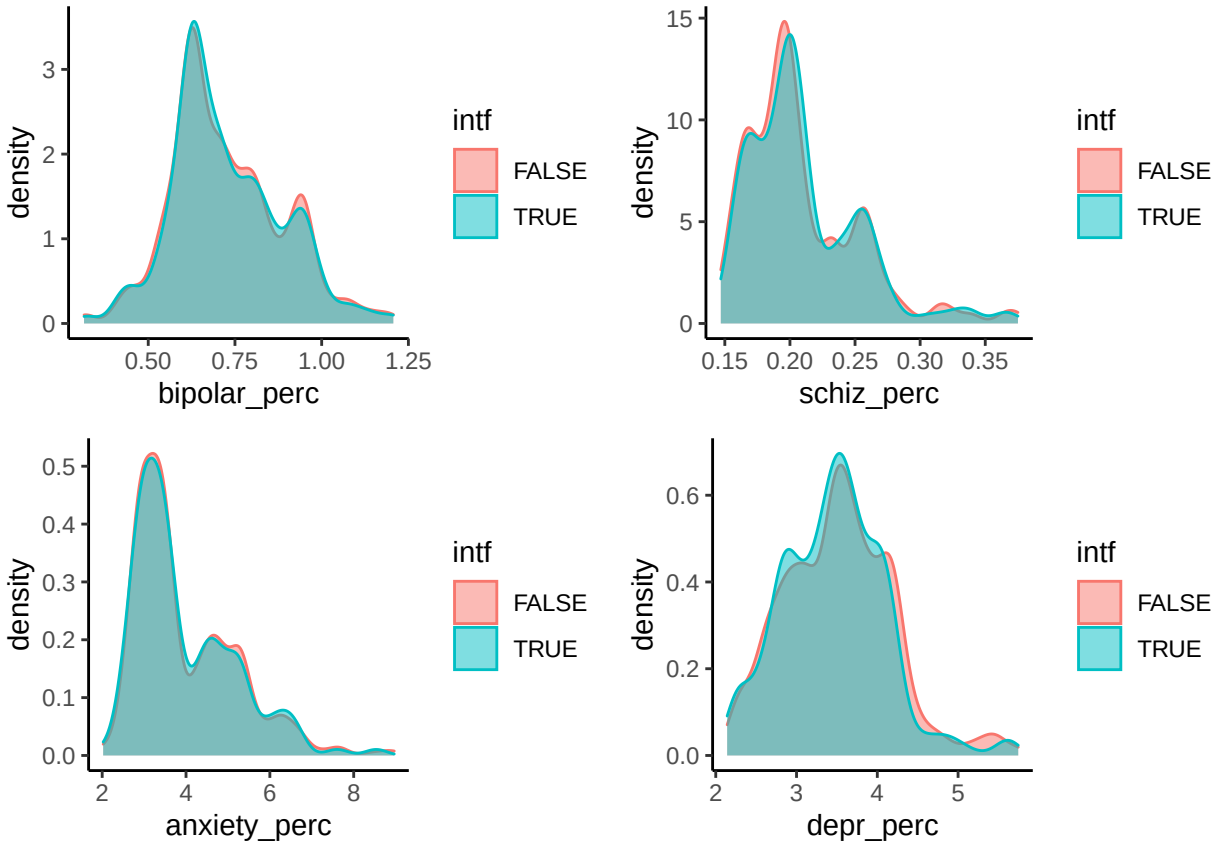
```
## [1] "schiz_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.0026,  0.0081 )
## Calculations and Intervals on Original Scale
##
##
## [1] "bipolar_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
```

```
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.0963, -0.0764 )
## Calculations and Intervals on Original Scale
##
##
## [1] "anxiety_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.4303, -0.2767 )
## Calculations and Intervals on Original Scale
##
##
## [1] "drug_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.1554, -0.1015 )
## Calculations and Intervals on Original Scale
##
##
## [1] "depr_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.1602, -0.0777 )
## Calculations and Intervals on Original Scale
##
##
## [1] "alc_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
```

```
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.4279, -0.3187 )
## Calculations and Intervals on Original Scale
##
##
## [1] "suicide_tt"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-1.615, -0.672 )
## Calculations and Intervals on Original Scale
```

5. Mean difference of illnesses and suicide between before internet and after internet Bootstrap

```
a <- ggplot(df, aes(x = bipolar_perc, color = intf, fill = intf)) + geom_density(alpha = 0.5)+theme_cla
b <- ggplot(df, aes(x = schiz_perc, color = intf, fill = intf)) + geom_density(alpha = 0.5)+theme_classi
c <- ggplot(df, aes(x = anxiety_perc, color = intf, fill = intf)) + geom_density(alpha = 0.5)+theme_cla
d <- ggplot(df, aes(x = depr_perc, color = intf, fill = intf)) + geom_density(alpha = 0.5)+theme_classi
grid.arrange(a, b, c, d, nrow=2, ncol=2)
```




```
get_meandiff <- function(x, index, a){
  x_sample <- x[index,]
  return(mean(as.matrix(x_sample[!x_sample$intf,][a]))-mean(as.matrix(x_sample[x_sample$intf,][a])))
}

for (i in valcol){
  print(i)
  boot_corr <- boot(df, statistic = get_meandiff, a = i, R = 1000, parallel = 'snow', cl=cl)
  print(boot.ci(boot_corr, type = c("basic"), conf = 0.95))
  cat("\n\n")
}
```

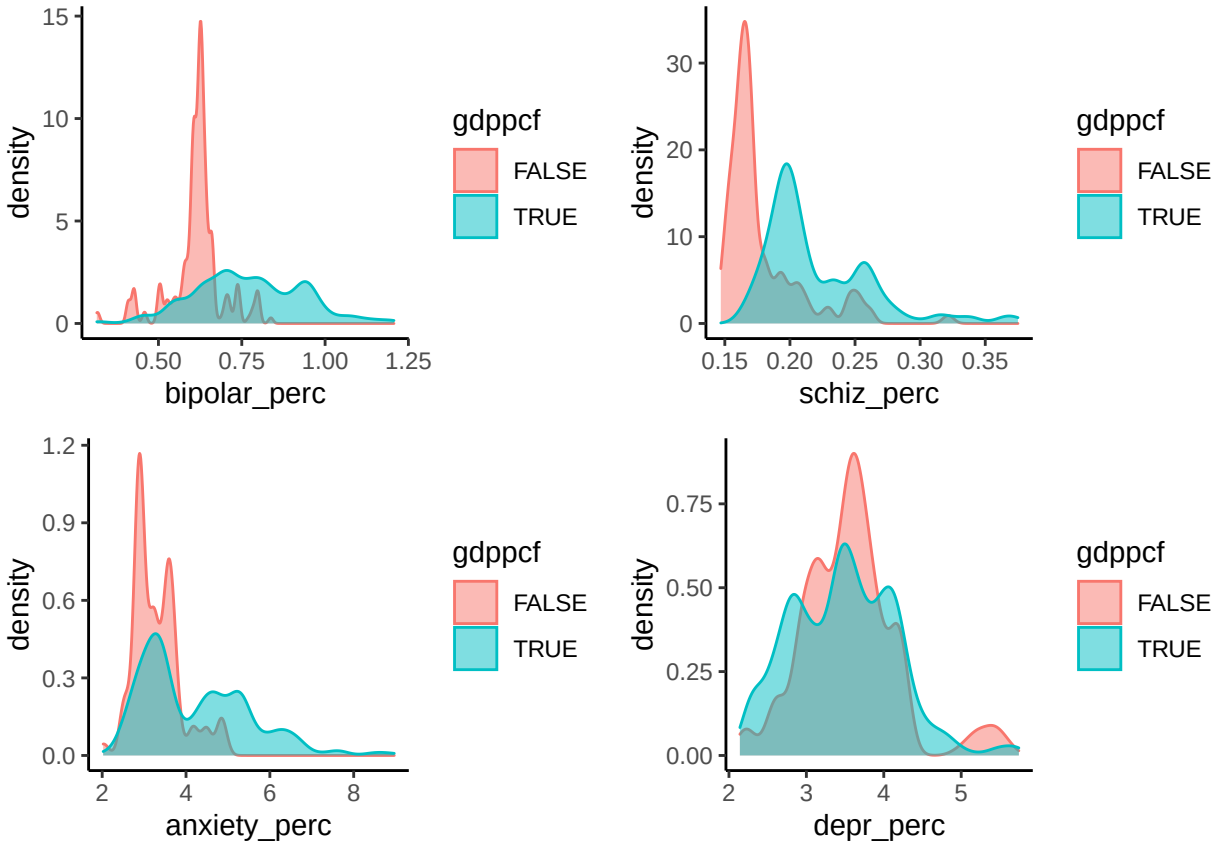
```
## [1] "schiz_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.0042,  0.0017 )
## Calculations and Intervals on Original Scale
##
##
## [1] "bipolar_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
```

```
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.0088,  0.0131 )
## Calculations and Intervals on Original Scale
##
##
## [1] "anxiety_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.0623,  0.1098 )
## Calculations and Intervals on Original Scale
##
##
## [1] "drug_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.0621,  0.0003 )
## Calculations and Intervals on Original Scale
##
##
## [1] "depr_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.0159,  0.1058 )
## Calculations and Intervals on Original Scale
##
##
## [1] "alc_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
```

```
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.0855,  0.0437 )
## Calculations and Intervals on Original Scale
##
##
## [1] "suicide_tt"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 1.427,  2.382 )
## Calculations and Intervals on Original Scale
```

6. Mean difference of illnesses and suicide between low GDPPC and high GDPPC Bootstrap

```
a <- ggplot(df, aes(x = bipolar_perc, color = gdppcf, fill = gdppcf)) + geom_density(alpha = 0.5)+theme
b <- ggplot(df, aes(x = schiz_perc, color = gdppcf, fill = gdppcf)) + geom_density(alpha = 0.5)+theme_cl
c <- ggplot(df, aes(x = anxiety_perc, color = gdppcf, fill = gdppcf)) + geom_density(alpha = 0.5)+theme
d <- ggplot(df, aes(x = depr_perc, color = gdppcf, fill = gdppcf)) + geom_density(alpha = 0.5)+theme_cla
grid.arrange(a, b, c, d, nrow=2, ncol=2)
```




```
get_meandiff <- function(x, index, a){
  x_sample <- x[index,]
  return(mean(as.matrix(x_sample[!x_sample$gdppcf,][a]))-mean(as.matrix(x_sample[x_sample$gdppcf,][a])))
}

for (i in valcol){
  print(i)
  boot_corr <- boot(df, statistic = get_meandiff, a = i, R = 1000, parallel = 'snow', cl=cl)
  print(boot.ci(boot_corr, type = c("basic"), conf = 0.95))
  cat("\n\n")
}
```

```
## [1] "schiz_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.045, -0.040 )
## Calculations and Intervals on Original Scale
##
##
## [1] "bipolar_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
```

```
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.1634, -0.1482 )
## Calculations and Intervals on Original Scale
##
##
## [1] "anxiety_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.9827, -0.8604 )
## Calculations and Intervals on Original Scale
##
##
## [1] "drug_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.3556, -0.3099 )
## Calculations and Intervals on Original Scale
##
##
## [1] "depr_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.0437,  0.1376 )
## Calculations and Intervals on Original Scale
##
##
## [1] "alc_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
```

```
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.3669, -0.2691 )
## Calculations and Intervals on Original Scale
##
##
## [1] "suicide_tt"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 1.035,  1.965 )
## Calculations and Intervals on Original Scale
```

Experimental: To see if k-means clustering can generate stratified samples from the data

```
names(df)
```

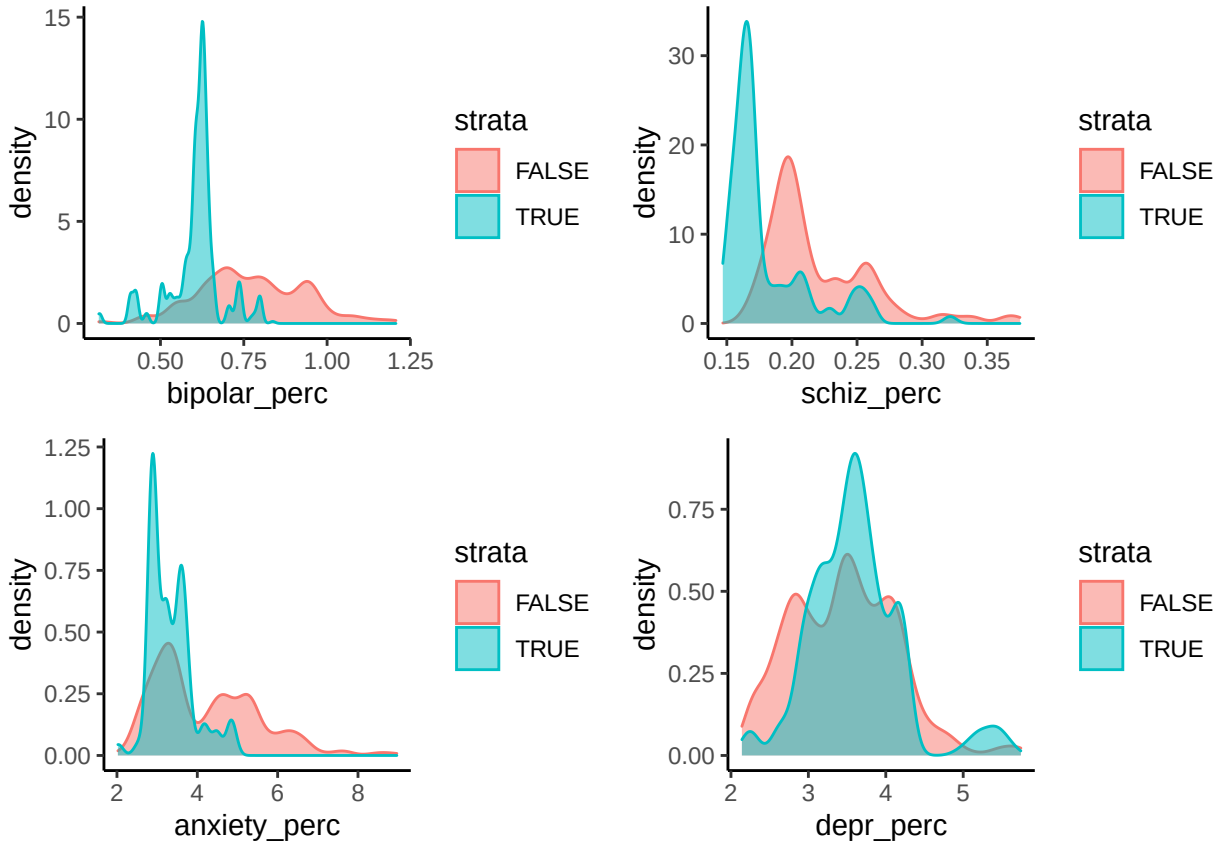
```
##  [1] "Country"      "Year"         "schiz_perc"   "bipolar_perc" "anxiety_perc"
##  [6] "drug_perc"    "depr_perc"    "alc_perc"     "unemp"        "suicide_tt"
## [11] "pop"          "GDP"          "HDI"          "unef"         "hdif"
## [16] "intf"         "gdppcf"
```

```
u <- df %>% select(c("Year","GDP","HDI","unef","hdif","intf","gdppcf","pop")) %>%
      mutate_if(is.numeric, scale) %>%
      vegdist(method = "gower") %>%
      pam(k=2, diss=TRUE)
```

```
df$strata <- ifelse(u$clustering == 1, yes=TRUE, no=FALSE)
```

Plotting all the illnesses

```
a <- ggplot(df, aes(x = bipolar_perc, color = strata, fill = strata)) + geom_density(alpha = 0.5)+theme
b <- ggplot(df, aes(x = schiz_perc, color = strata, fill = strata)) + geom_density(alpha = 0.5)+theme_cl
c <- ggplot(df, aes(x = anxiety_perc, color = strata, fill = strata)) + geom_density(alpha = 0.5)+theme
d <- ggplot(df, aes(x = depr_perc, color = strata, fill = strata)) + geom_density(alpha = 0.5)+theme_cla
grid.arrange(a, b, c, d, nrow=2, ncol=2)
```

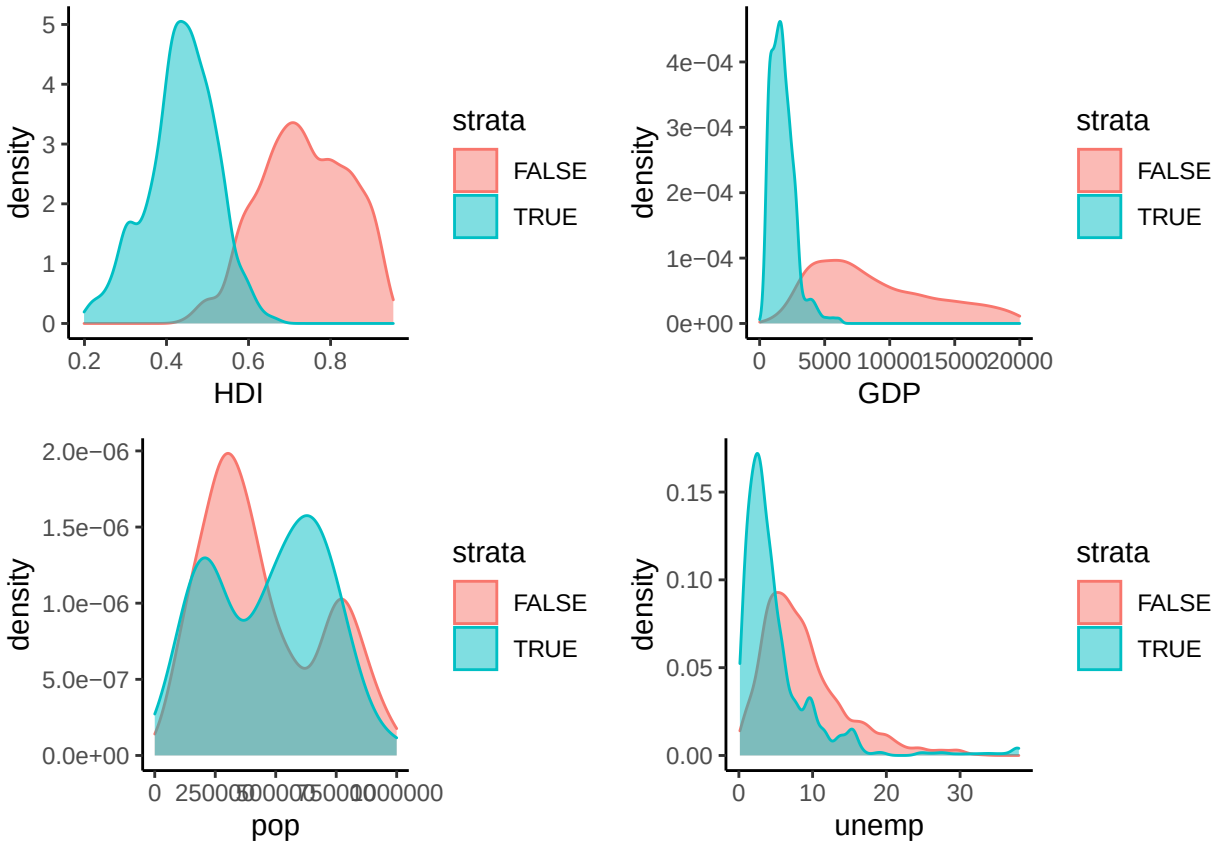



```
names(df)
```

```
##  [1] "Country"      "Year"         "schiz_perc"   "bipolar_perc" "anxiety_perc"
##  [6] "drug_perc"    "depr_perc"    "alc_perc"     "unemp"        "suicide_tt"
## [11] "pop"          "GDP"          "HDI"          "unef"         "hdif"
## [16] "intf"         "gdppcf"       "strata"
```

Plotting all the good things

```
a <- ggplot(df, aes(x = HDI, color = strata, fill = strata)) + geom_density(alpha = 0.5)+theme_classic()
b <- ggplot(df, aes(x = GDP, color = strata, fill = strata)) + geom_density(alpha = 0.5)+xlim(c(0, 2000
c <- ggplot(df, aes(x = pop, color = strata, fill = strata)) + geom_density(alpha = 0.5)+theme_classic()
d <- ggplot(df, aes(x = unemp, color = strata, fill = strata)) + geom_density(alpha = 0.5)+theme_classi
grid.arrange(a, b, c, d, nrow=2, ncol=2)
```



Difference between FALSE (developed) and TRUE (underdeveloped)

```
get_meandiff <- function(x, index, a){
  x_sample <- x[index,]
  return(mean(as.matrix(x_sample[!x_sample$strata,][a]))-mean(as.matrix(x_sample[x_sample$strata,][a])))
}

for (i in valcol){
  print(i)
  boot_corr <- boot(df, statistic = get_meandiff, a = i, R = 1000, parallel = 'snow', cl=cl)
  print(boot.ci(boot_corr, type = c("basic"), conf = 0.95))
  cat("\n\n")
}
```

```
## [1] "schiz_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.0381,  0.0430 )
## Calculations and Intervals on Original Scale
##
##
## [1] "bipolar_perc"
```

```
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.1572,  0.1720 )
## Calculations and Intervals on Original Scale
##
##
## [1] "anxiety_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.8149,  0.9295 )
## Calculations and Intervals on Original Scale
##
##
## [1] "drug_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.2986,  0.3473 )
## Calculations and Intervals on Original Scale
##
##
## [1] "depr_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-0.1957, -0.1119 )
## Calculations and Intervals on Original Scale
##
##
## [1] "alc_perc"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
```

```
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   ( 0.3450,  0.4394 )
## Calculations and Intervals on Original Scale
##
##
## [1] "suicide_tt"
## BOOTSTRAP CONFIDENCE INTERVAL CALCULATIONS
## Based on 1000 bootstrap replicates
##
## CALL :
## boot.ci(boot.out = boot_corr, conf = 0.95, type = c("basic"))
##
## Intervals :
## Level      Basic
## 95%   (-2.064, -1.170 )
## Calculations and Intervals on Original Scale
```