# Data Explore

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## Contents



# 1 Data

```
data.Original = rio::import(here::here("data", "PersianPersonality360AdjectivesEnglishTrans_ORIGINALdata.x
  rio::characterize() %>%
  janitor::clean_names()

#names(data.Original)
#Words between col numbers 7:367["irascible":"open_handed"]

adj.Original = data.Original %>% select(7:366)
#names(adj.Original)
table(is.na(adj.Original)) #check if there are any missing values
```

```
##
##  FALSE
## 289440
```

```
#Data ipsatized in SPSS
data.Ipsatized = rio::import(here::here("data", "PersianPersonality360AdjectivesEnglishTrans_IPSATIZED.xls
  rio::characterize() %>%
  janitor::clean_names()

#names(data.Ipsatized)
adj.Ipsatized  = data.Ipsatized %>% select(2:361)
table(is.na(adj.Ipsatized)) #check if there are any missing values
```

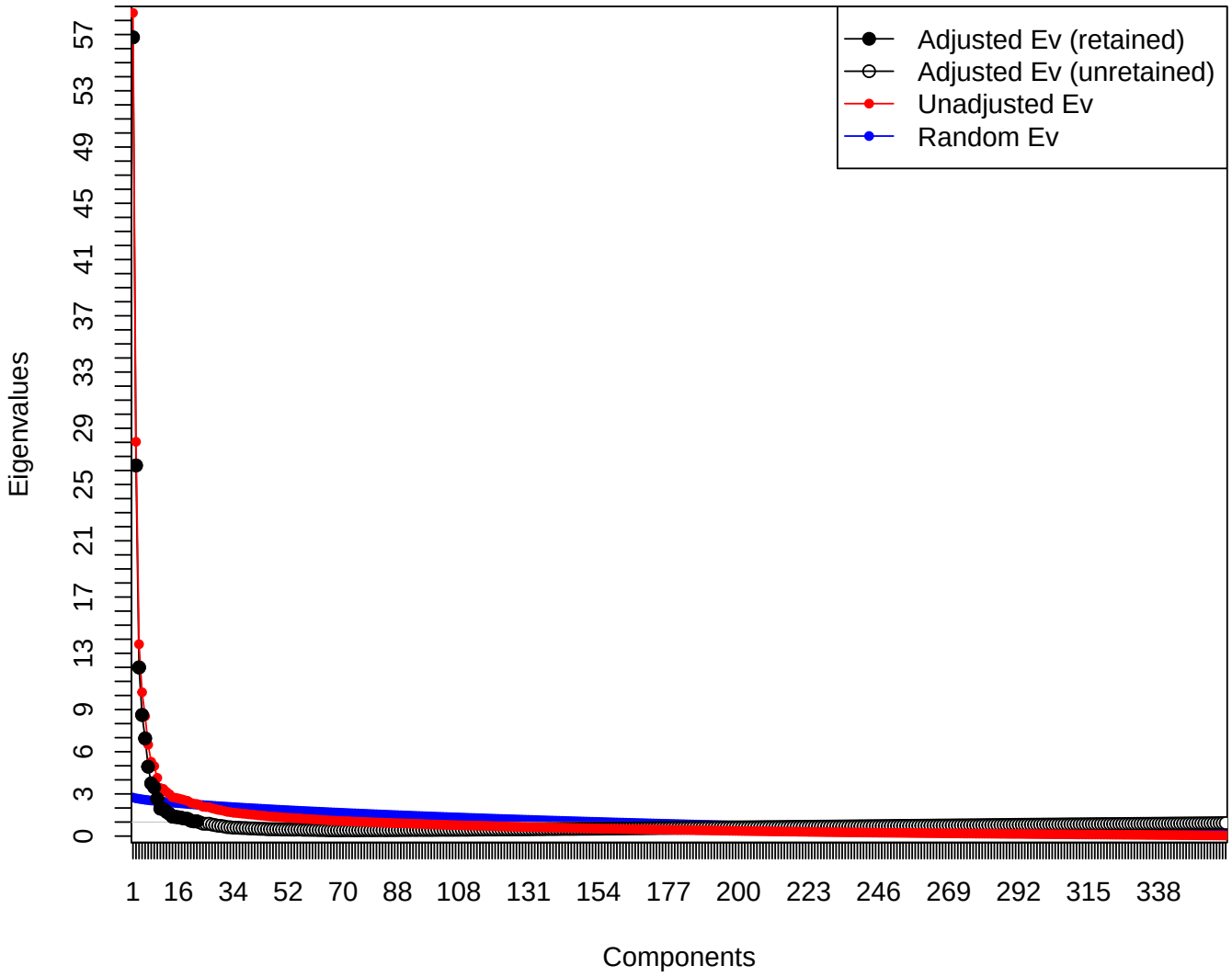
```
##
##  FALSE
## 289440
```

# 2 Parallel Analysis

### 2.0.1 PA - Original data

```
PA_original = paran::paran(adj.Original, iterations = 100,
                           quietly = FALSE, status = FALSE,
                          all = FALSE, cfa = FALSE, graph = TRUE,
                          color = TRUE, col = c("black", "red", "blue"),
                          lty = c(1, 2, 3), lwd = 1, legend = TRUE,
                          file = "", width = 640, height = 640,
                          grdevice = "png", seed = 0)
```

```
##
## Using eigendecomposition of correlation matrix.
##
## Results of Horn's Parallel Analysis for component retention
## 100 iterations, using the mean estimate
##
## ------------------------------------------------
## Component   Adjusted    Unadjusted    Estimated
##             Eigenvalue  Eigenvalue    Bias
## ------------------------------------------------
## 1          56.801230   58.539541      1.738310
## 2          26.355826   28.041932      1.686106
## 3          11.994780   13.645715      1.650934
## 4           8.614757   10.228674      1.613916
## 5           6.946982    8.529941      1.582959
## 6           4.938848    6.496986      1.558137
## 7           3.749772    5.282427      1.532655
## 8           3.466101    4.974153      1.508051
## 9           2.655033    4.139216      1.484182
## 10          1.957048    3.419486      1.462438
## 11          1.916229    3.357071      1.440842
## 12          1.730518    3.147429      1.416910
## 13          1.581581    2.979445      1.397864
## 14          1.378572    2.757730      1.379157
## 15          1.364363    2.722584      1.358220
## 16          1.335254    2.674848      1.339594
## 17          1.294446    2.617002      1.322555
## 18          1.250310    2.555049      1.304738
## 19          1.218346    2.504346      1.285999
## 20          1.097056    2.367435      1.270379
## 21          1.051327    2.303667      1.252340
## 22          1.046940    2.283015      1.236074
## ------------------------------------------------
##
## Adjusted eigenvalues > 1 indicate dimensions to retain.
## (22 components retained)
```



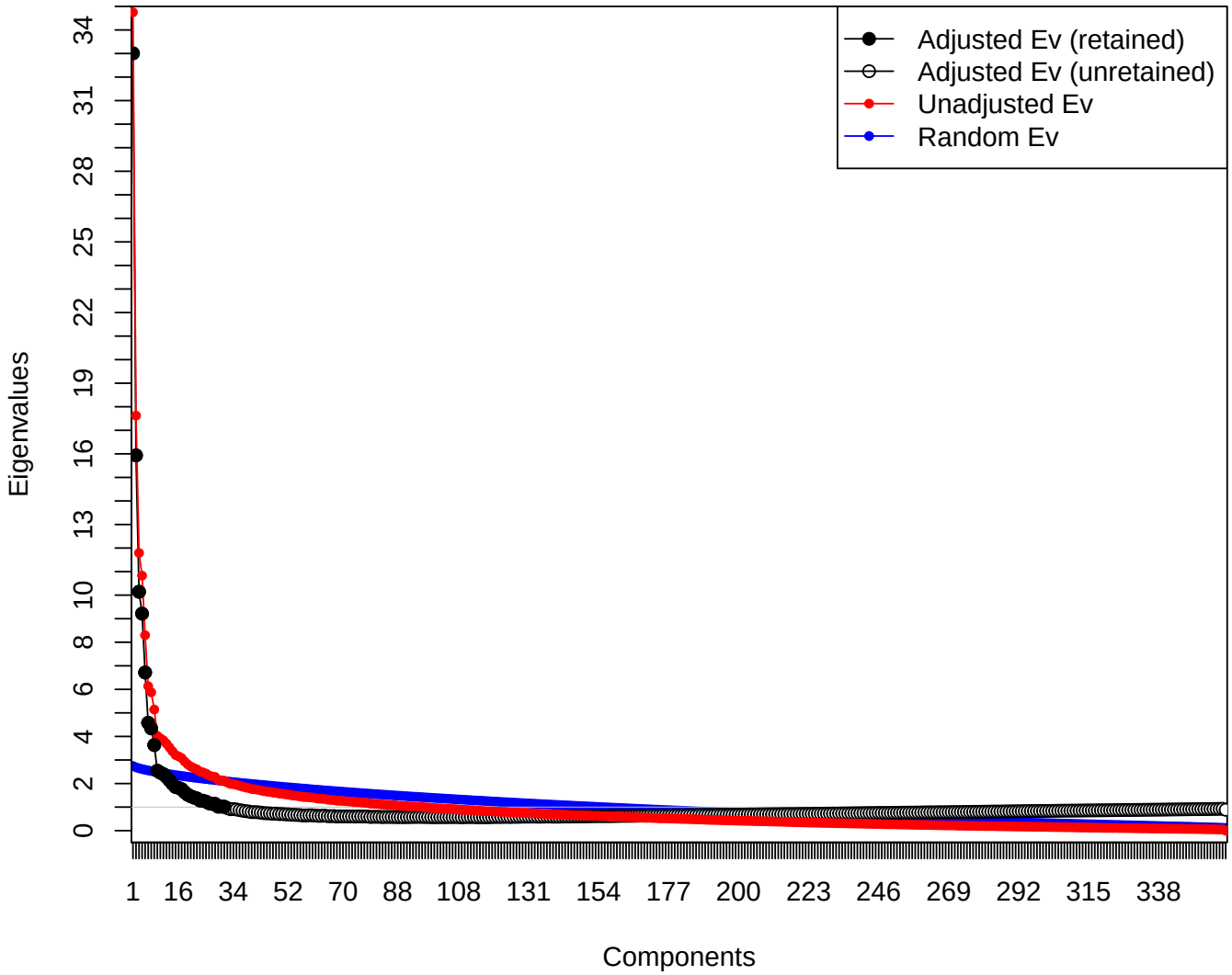

Parallel analysis suggested 22 components for Original data.

### 2.0.2 PA - Ipsatized data

```
PA_ipsatized = paran::paran(adj.Ipsatized, iterations = 100,
                            quietly = FALSE, status = FALSE,
                           all = FALSE, cfa = FALSE, graph = TRUE,
                           color = TRUE, col = c("black", "red", "blue"),
                           lty = c(1, 2, 3), lwd = 1, legend = TRUE,
                           file = "", width = 640, height = 640,
                           grdevice = "png", seed = 0)
```

```
##
## Using eigendecomposition of correlation matrix.
##
## Results of Horn's Parallel Analysis for component retention
## 100 iterations, using the mean estimate
##
## ----------------------------------------------------
```

```
## Component   Adjusted    Unadjusted    Estimated
##             Eigenvalue  Eigenvalue    Bias
## ------------------------------------------------
## 1           33.007246   34.750723     1.743477
## 2           15.935495   17.624247     1.688752
## 3           10.143704   11.792052     1.648347
## 4            9.214639   10.827837     1.613197
## 5            6.715696    8.299602     1.583905
## 6            4.579397    6.135565     1.556168
## 7            4.341270    5.874212     1.532941
## 8            3.635327    5.142253     1.506925
## 9            2.544050    4.025411     1.481361
## 10           2.460927    3.920086     1.459159
## 11           2.400080    3.836947     1.436867
## 12           2.282177    3.698891     1.416714
## 13           2.136918    3.533709     1.396790
## 14           1.988153    3.364808     1.376655
## 15           1.852967    3.211565     1.358597
## 16           1.815513    3.155043     1.339530
## 17           1.757138    3.079253     1.322114
## 18           1.629585    2.934473     1.304887
## 19           1.525068    2.812107     1.287039
## 20           1.456593    2.725311     1.268718
## 21           1.405242    2.657447     1.252205
## 22           1.365162    2.602680     1.237518
## 23           1.281825    2.504061     1.222235
## 24           1.269613    2.475843     1.206229
## 25           1.230762    2.422114     1.191351
## 26           1.162626    2.338471     1.175844
## 27           1.136569    2.298833     1.162263
## 28           1.133761    2.280277     1.146516
## 29           1.019247    2.150654     1.131406
## 30           1.021211    2.139020     1.117809
## 31           1.014867    2.118365     1.103497
## ------------------------------------------------
##
## Adjusted eigenvalues > 1 indicate dimensions to retain.
## (31 components retained)
```




Parallel analysis suggested 31 components for Ipsatized data.