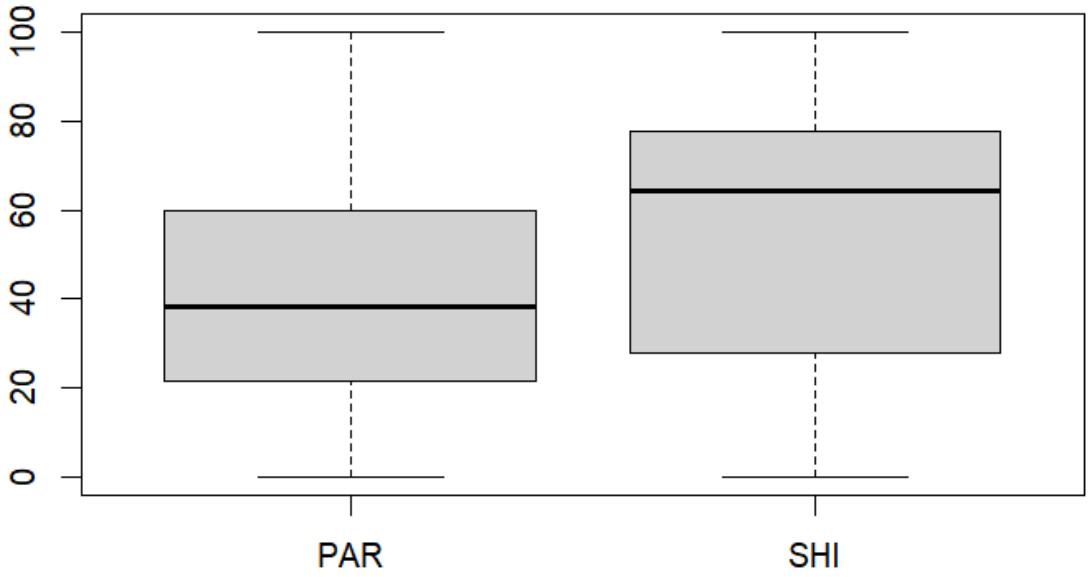
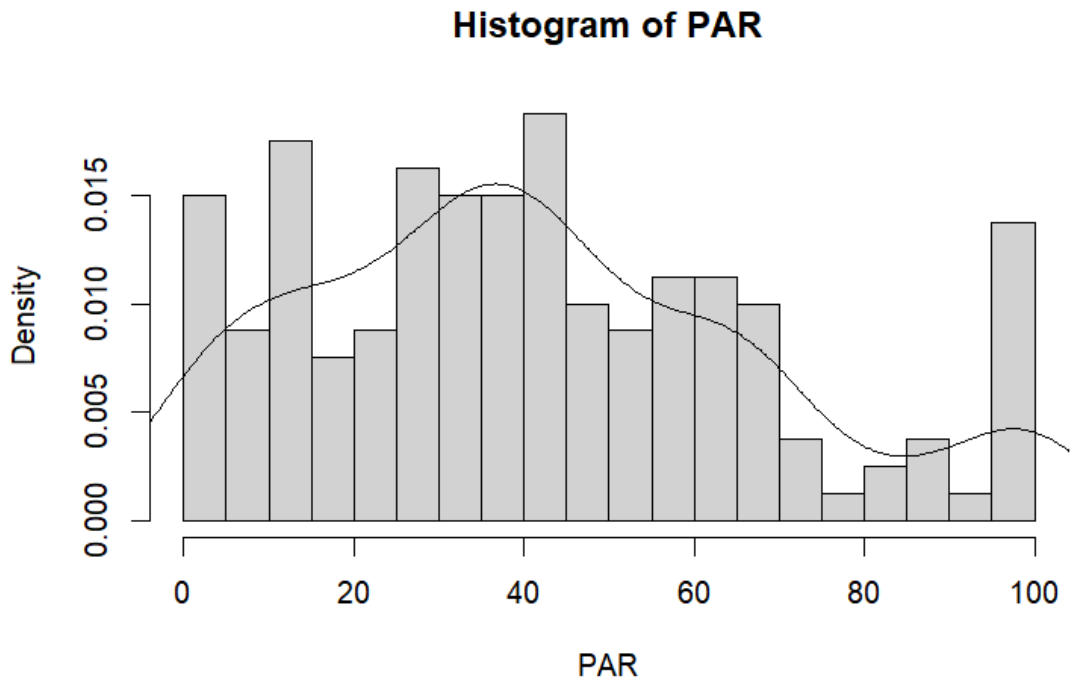
Variable Summaries:

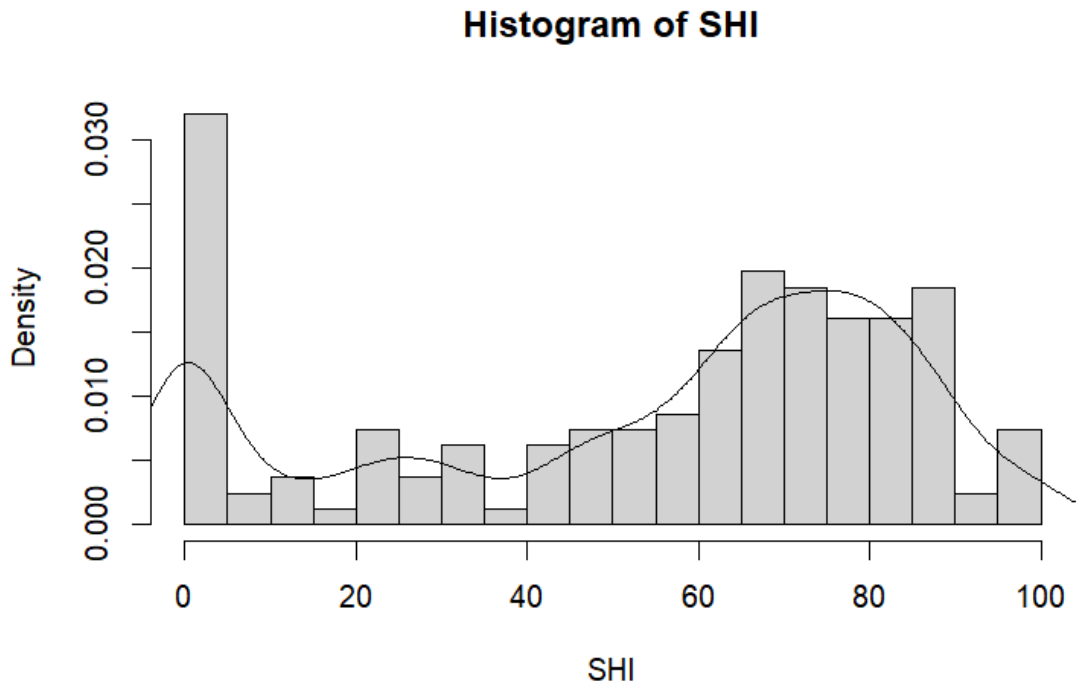
```
> summary(PAR)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
   0.00   22.00   38.25   41.41   59.58  100.00
> summary(SHI)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
   0.00   28.38   64.45   53.83   77.80  100.00
```

Variable Box Plots:

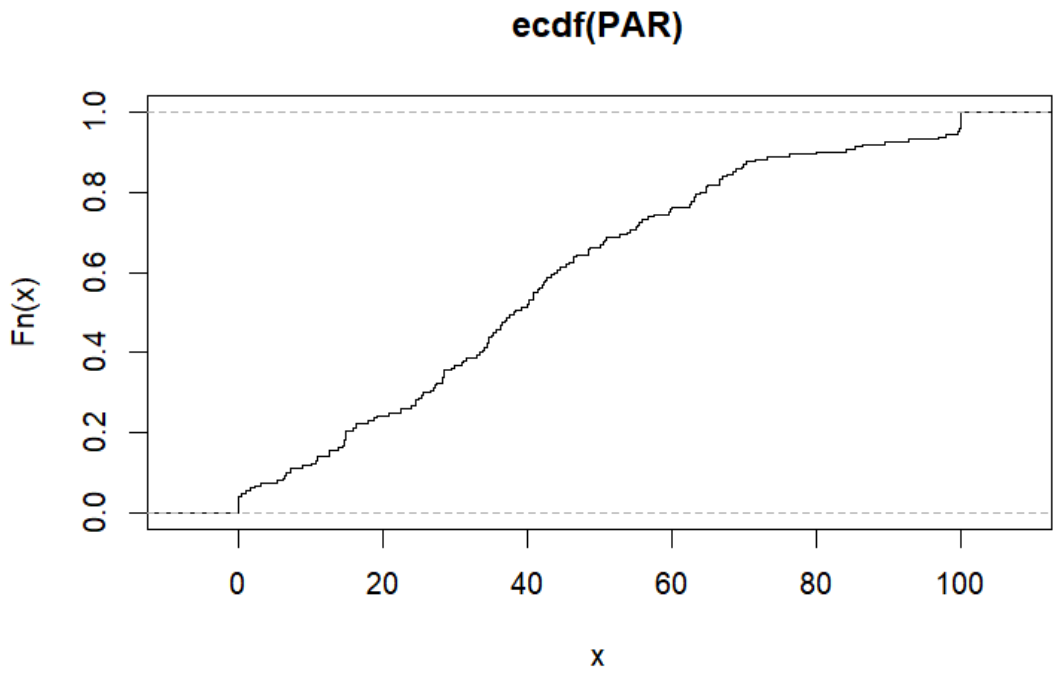


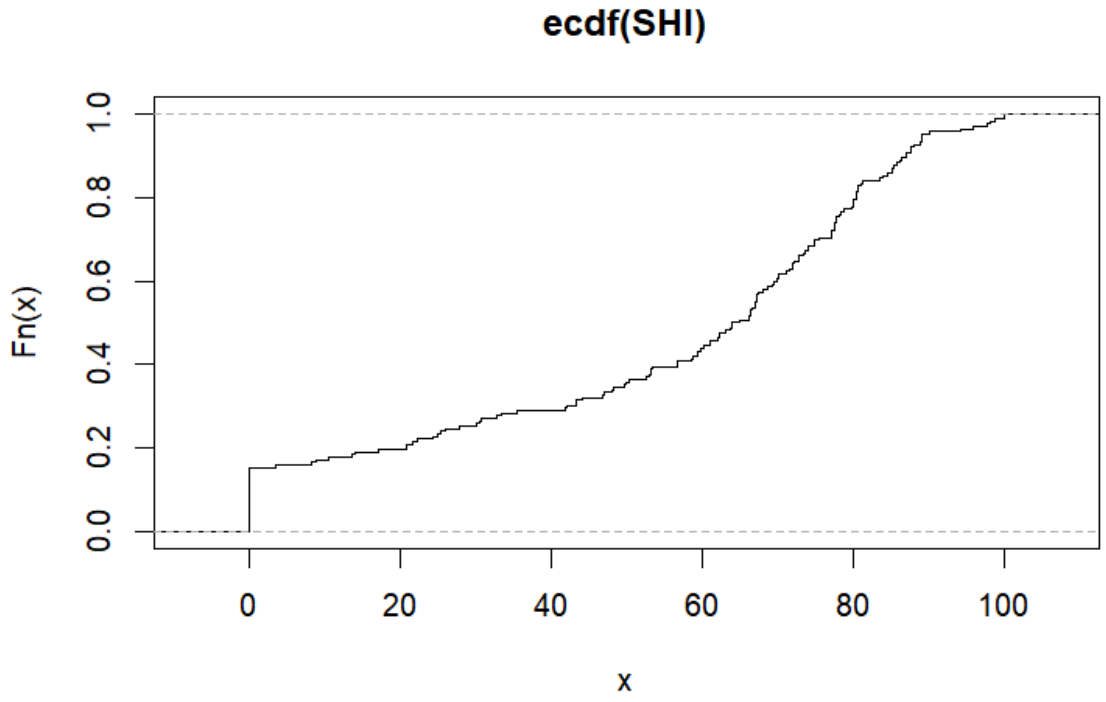
Histogram with overlayed theoretical probability distributions





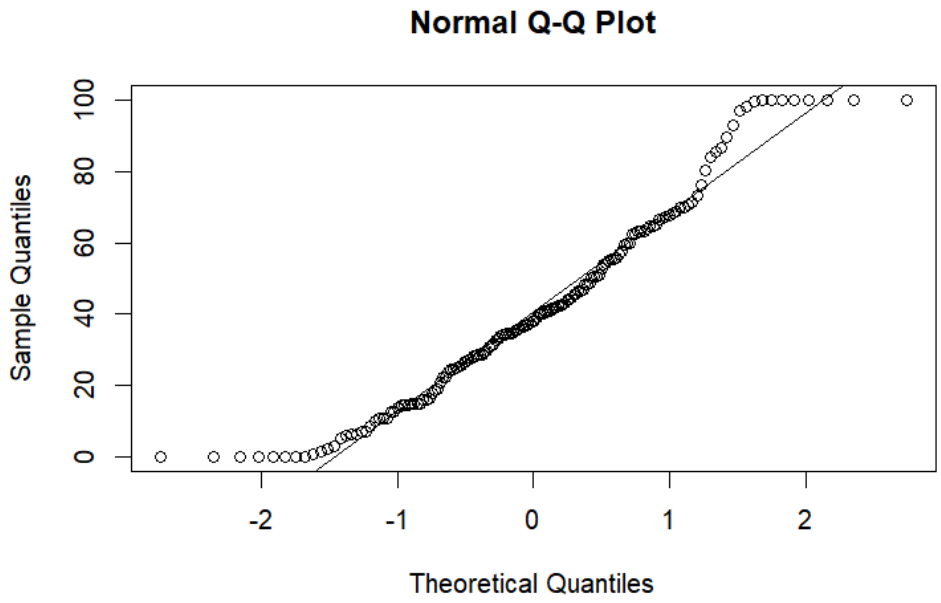
ECDF plots


ecdf(PAR)
Fn(x)
0.0
0.2
0.4
0.6
0.8
1.0
0
20
40
60
80
100
x

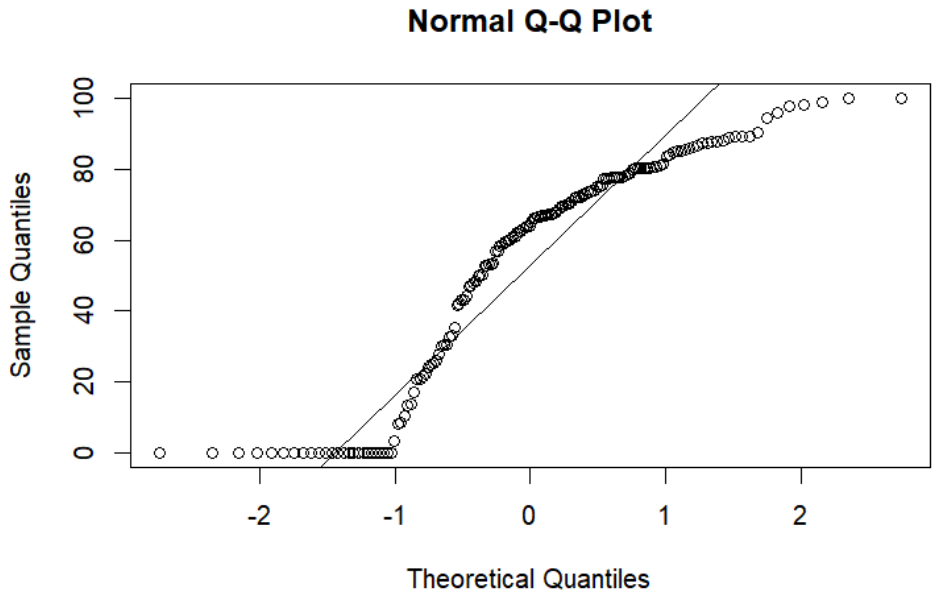

ecdf(SHI)
Fn(x)
0.0
0.2
0.4
0.6
0.8
1.0
0
20
40
60
80
100
x

QQ plots against normal distribution

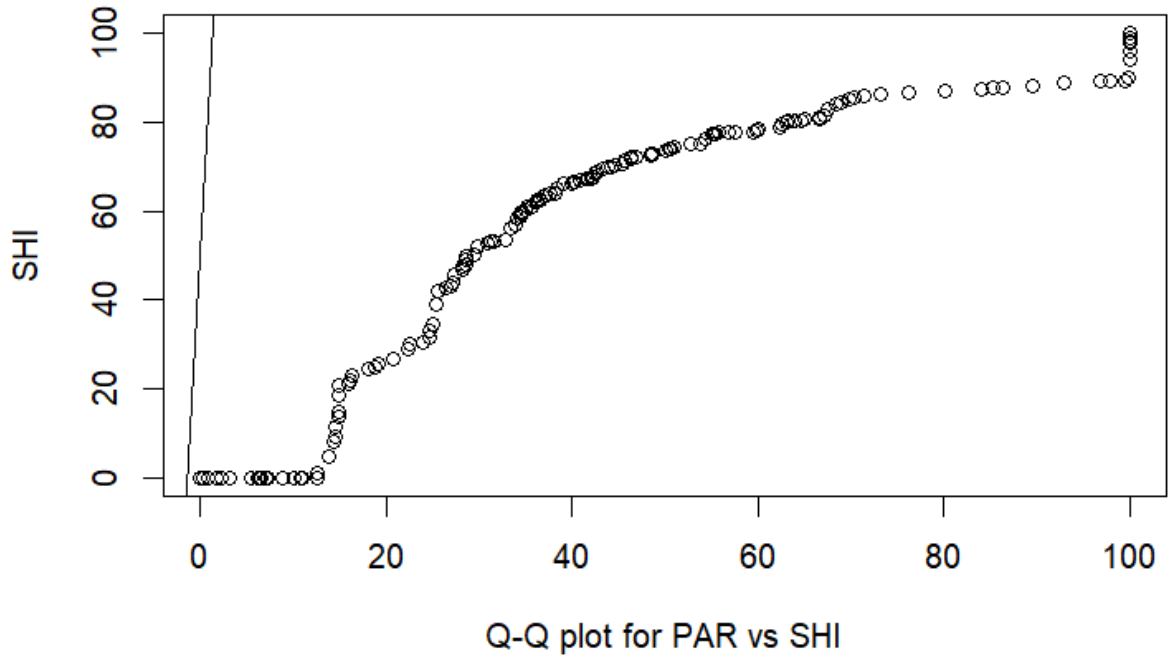
PAR:



SHI:



QQ Plot against Each other



Normality Tests

```
> shapiro.test(PAR)

        Shapiro-Wilk normality test

data:  PAR
W = 0.95572, p-value = 5.779e-05

> shapiro.test(SHI)

        Shapiro-Wilk normality test

data:  SHI
W = 0.88508, p-value = 7.118e-10
```

Statistical Tests for same distribution

```
> # Statistical test for variables having same distribution
> ks.test(PAR, SHI)

        Asymptotic two-sample Kolmogorov-Smirnov test

data:  PAR and SHI
D = 0.33634, p-value = 2.463e-08
alternative hypothesis: two-sided


Warning message:
In ks.test.default(PAR, SHI) :
  p-value will be approximate in the presence of ties


> wilcox.test(PAR,SHI)

        Wilcoxon rank sum test with continuity correction

data:  PAR and SHI
W = 9560.5, p-value = 4.673e-05
alternative hypothesis: true location shift is not equal to 0
```

Variance Tests

```
> # Variance tests
> var.test(PAR,SHI)

        F test to compare two variances

data:  PAR and SHI
F = 0.75198, num df = 159, denom df = 161, p-value = 0.07248
alternative hypothesis: true ratio of variances is not equal to 1
95 percent confidence interval:
 0.5510611 1.0264554
sample estimates:
ratio of variances
         0.7519751

> t.test(PAR,SHI)

        Welch Two Sample t-test

data:  PAR and SHI
t = -3.8316, df = 314.74, p-value = 0.0001537
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
 -18.804664  -6.044503
sample estimates:
mean of x mean of y
 41.40875  53.83333
```