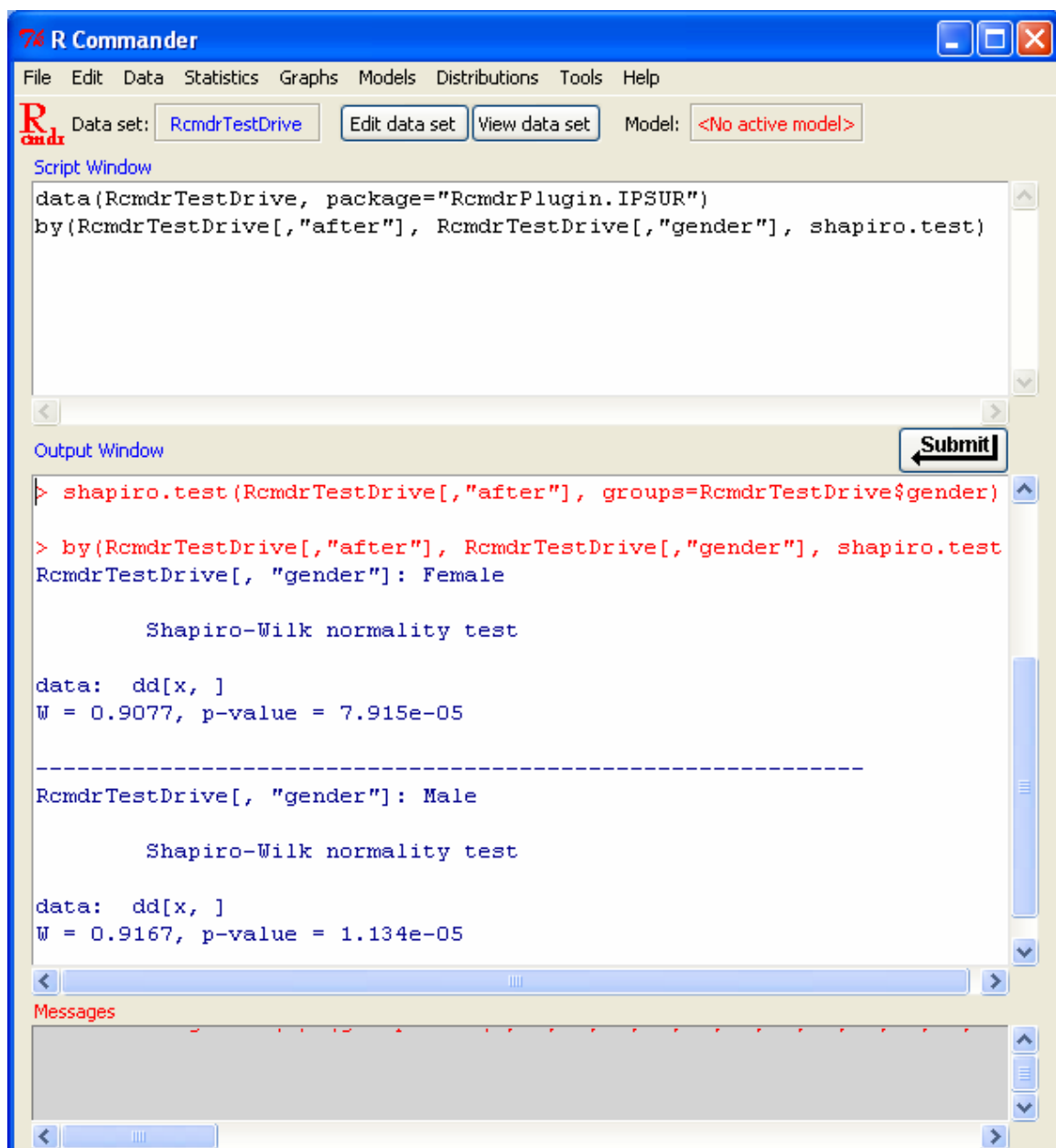


## Normality Tests for Subgroups in a Data File

If you have a quantitative variable **after** (in RcmdrTestDrive file) in a data file and you wish to test for normality for after variable for male and female subjects separately, the following is the R command to do it.

Assume the RcmdrTestDrive has the quantitative variable “after” and the qualitative variable “gender”, the R command to do normality test on “after” variable for each gender is using a **by** command as the following: (You may enter this command in the Script Window and click on **Submit** button in the R Commander window)

```
by(RcmdrTestDrive[, "after"], RcmdrTestDrive[, "gender"], shapiro.test)
```



The screenshot displays the R Commander interface. At the top, the menu bar includes File, Edit, Data, Statistics, Graphs, Models, Distributions, Tools, and Help. Below the menu, the Data set is set to 'RcmdrTestDrive' and the Model is '<No active model>'. The Script Window contains the following R code:

```
data(RcmdrTestDrive, package="RcmdrPlugin.IPSUR")
by(RcmdrTestDrive[, "after"], RcmdrTestDrive[, "gender"], shapiro.test)
```

The Output Window shows the results of the command, with a 'Submit' button visible above the text:

```
> shapiro.test(RcmdrTestDrive[, "after"], groups=RcmdrTestDrive$gender)

> by(RcmdrTestDrive[, "after"], RcmdrTestDrive[, "gender"], shapiro.test
RcmdrTestDrive[, "gender"]: Female

        Shapiro-Wilk normality test

data:  dd[x, ]
W = 0.9077, p-value = 7.915e-05

-----
RcmdrTestDrive[, "gender"]: Male

        Shapiro-Wilk normality test

data:  dd[x, ]
W = 0.9167, p-value = 1.134e-05
```

At the bottom, the Messages window is visible but empty.