Section 5.2 The One-way Randomized Experiment and Its Observational Sibling

Loaded needed packages.

```
library(Stat2Data)
library(mosaic)
```

EXAMPLE 5.4 Walking babies

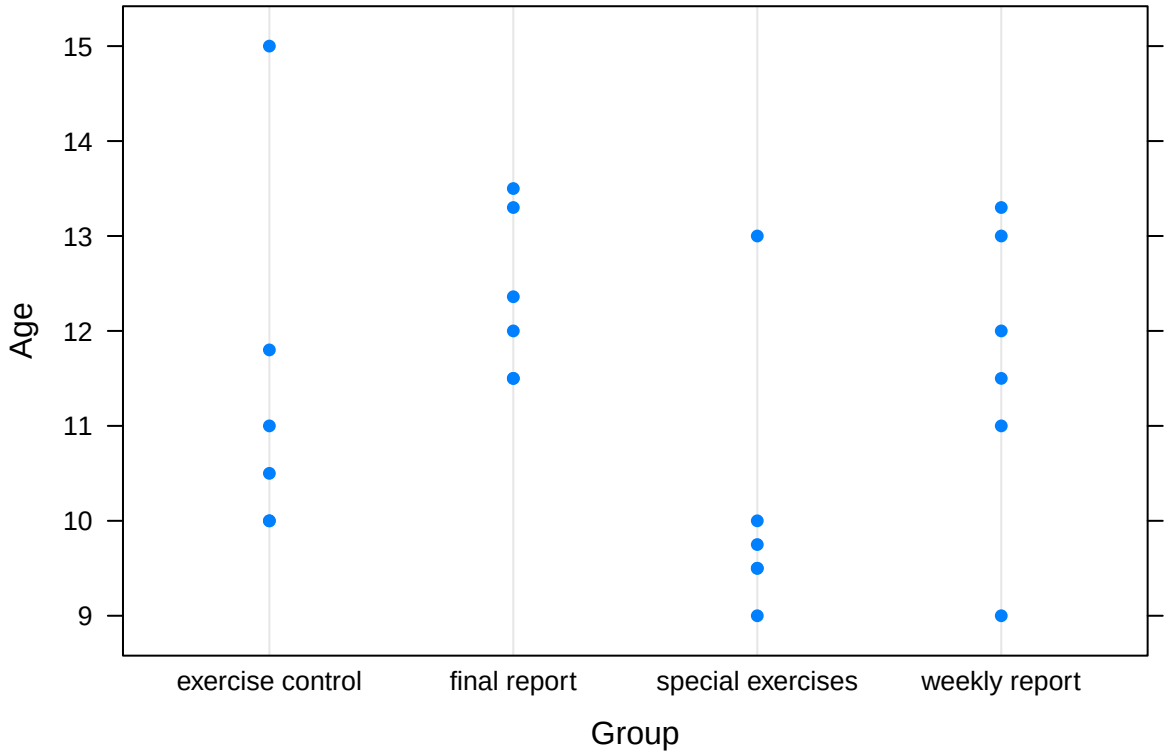
Create a dataframe for **WalkingBabies** and look at the structure of the data.

```
data("WalkingBabies")
str(WalkingBabies)
```

```
## 'data.frame':    24 obs. of  2 variables:
##  $ Group: Factor w/ 4 levels "exercise control",..: 3 3 3 3 3 3 1 1 1 1 ...
##  $ Age  : num  9 9.5 9.75 10 13 9.5 11 10 10 11.8 ...
```

FIGURE 5.4 Walking babies: Time (in months) to walk unaided related to instructions to parents

```
dotplot(Age~Group,data=WalkingBabies,xlab="Group")
```



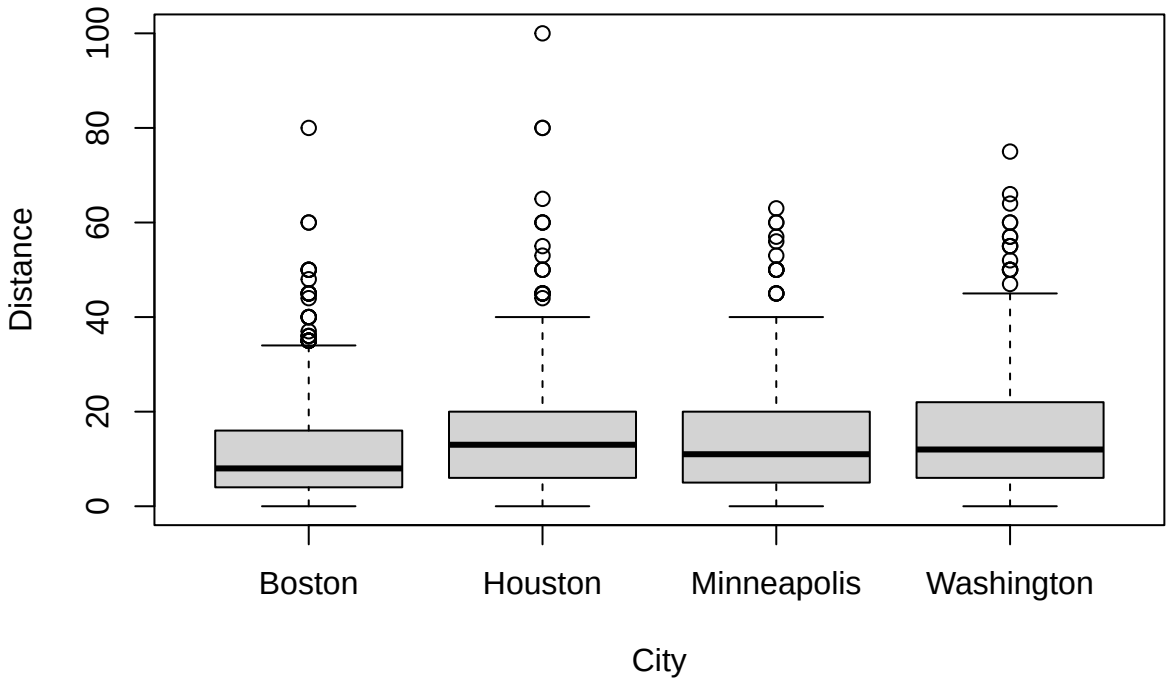
Create a dataframe for **MetroCommutes** and look at the structure of the data.

```
data("MetroCommutes")
str(MetroCommutes)
```

```
## 'data.frame':    2000 obs. of  3 variables:
##  $ City    : Factor w/ 4 levels "Boston","Houston",..: 1 1 1 1 1 1 1 1 1 1 ...
##  $ Distance: int  8 5 10 10 15 25 12 8 8 2 ...
##  $ Time    : int  20 30 40 15 25 35 35 20 15 30 ...
```

Boxplots to compare commute distance by city.

```
boxplot(Distance~City,data=MetroCommutes,ylab="Distance")
```



Summary statistics for distance by city.

```
favstats(Distance~City,data=MetroCommutes)
```

```
##          City min Q1 median Q3 max   mean       sd   n missing
## 1      Boston   0  4      8 16  80 12.038 11.63957 500       0
## 2     Houston   0  6     13 20 100 15.760 12.84462 500       0
## 3 Minneapolis   0  5     11 20  63 14.346 11.93445 500       0
## 4  Washington   0  6     12 22  75 15.918 12.94304 500       0
```