Bivariate Graphing in R

Categorical(IV) → Categorical(DV)

table(DV, IV) for counts, e.g.

```
> table(nesarc.data$TAB12MDX, nesarc.data$MAJORDEPLIFE)

      0   1
  0 455  66
  1 510 289
```

prop.table(table(DV, IV),2) for column percentages, e.g.

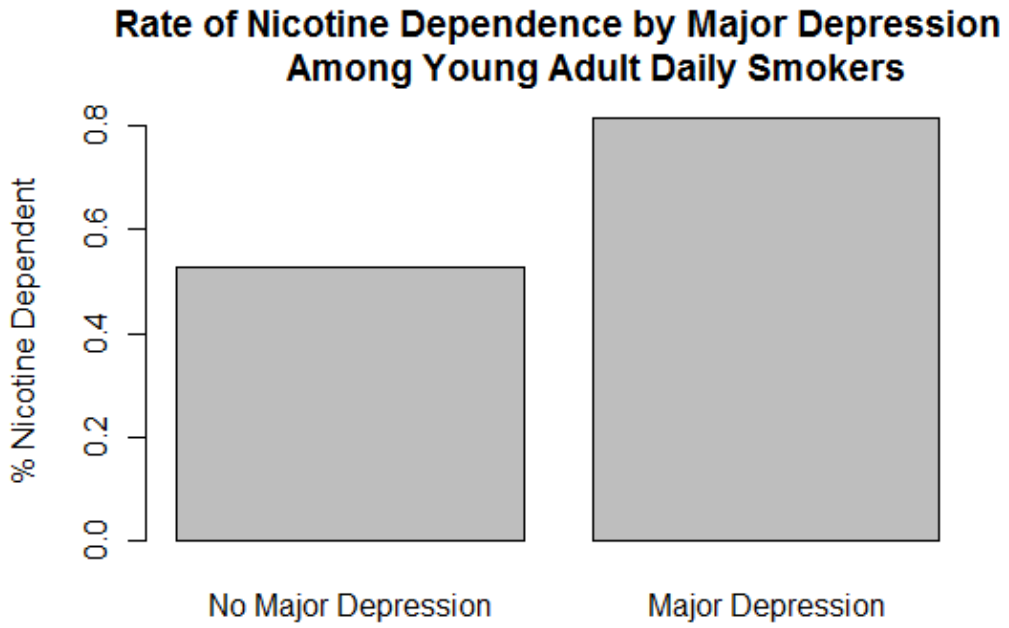
```
> prop.table(table(nesarc.data$TAB12MDX, nesarc.data$MAJORDEPLIFE),2)

            0         1
  0 0.4715026 0.1859155
  1 0.5284974 0.8140845
```

Can plot highlighted values in Excel, or

barplot(prop.table(table(DV, IV), 2)[rows,]), e.g.

```
> barplot(prop.table(table(nesarc.data$TAB12MDX,
nesarc.data$MAJORDEPLIFE),2)[2,], names=c("No Major Depression",
"Major Depression"), ylab="% Nicotine Dependent", main = "Rate of
Nicotine Dependence by \n Major Depression Among Young Adult Daily
Smokers")
```



Categorical(IV) → Categorical(DV)

table(DV, IV) for counts, e.g.

```
> table(nesarc.data$TAB12MDX,nesarc.data$usquan1)
      3   8  13  18  37
  0 130 210  43 114  24
  1 119 267  91 254  68
```

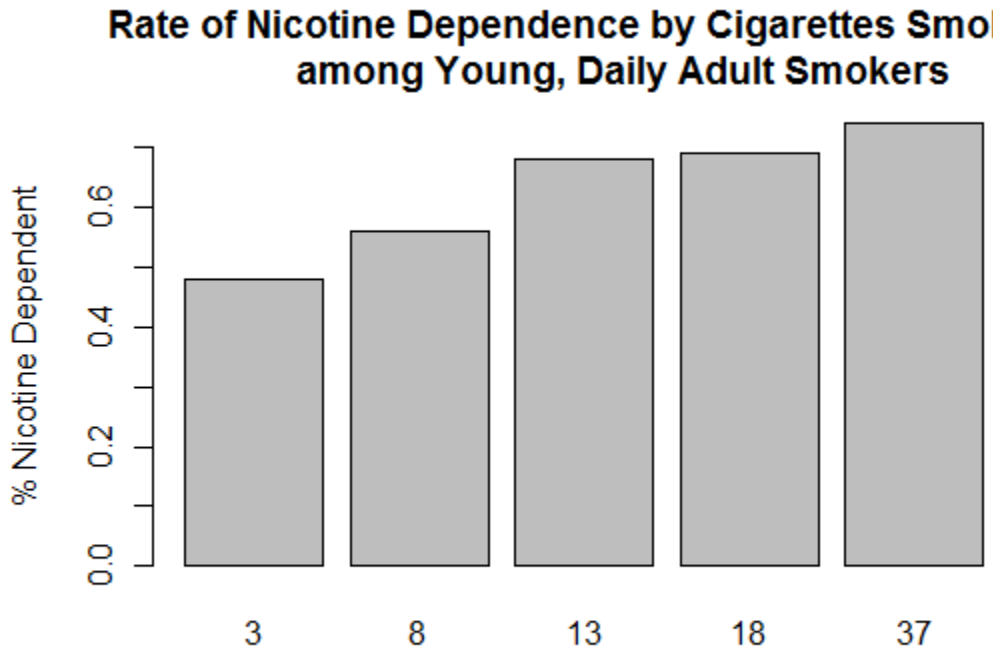
prop.table(table(DV, IV),2) for column percentages, e.g.

```
> prop.table(table(nesarc.data$TAB12MDX,nesarc.data$usquan1),2)
            3         8         13        18        37
  0 0.5220884 0.4402516 0.3208955 0.3097826 0.2608696
  1 0.4779116 0.5597484 0.6791045 0.6902174 0.7391304
```

Can plot highlighted values in Excel, or

barplot(prop.table(table(DV, IV), 2)[rows,], options), e.g.

```
> barplot(prop.table(table(nesarc.data$TAB12MDX,
nesarc.data$usquan1),2)[2,], main="Rate of Nicotine Dependence by
Cigarettes Smoked \n among Young, Daily Adult Smokers", ylab="%
Nicotine Dependent")
```

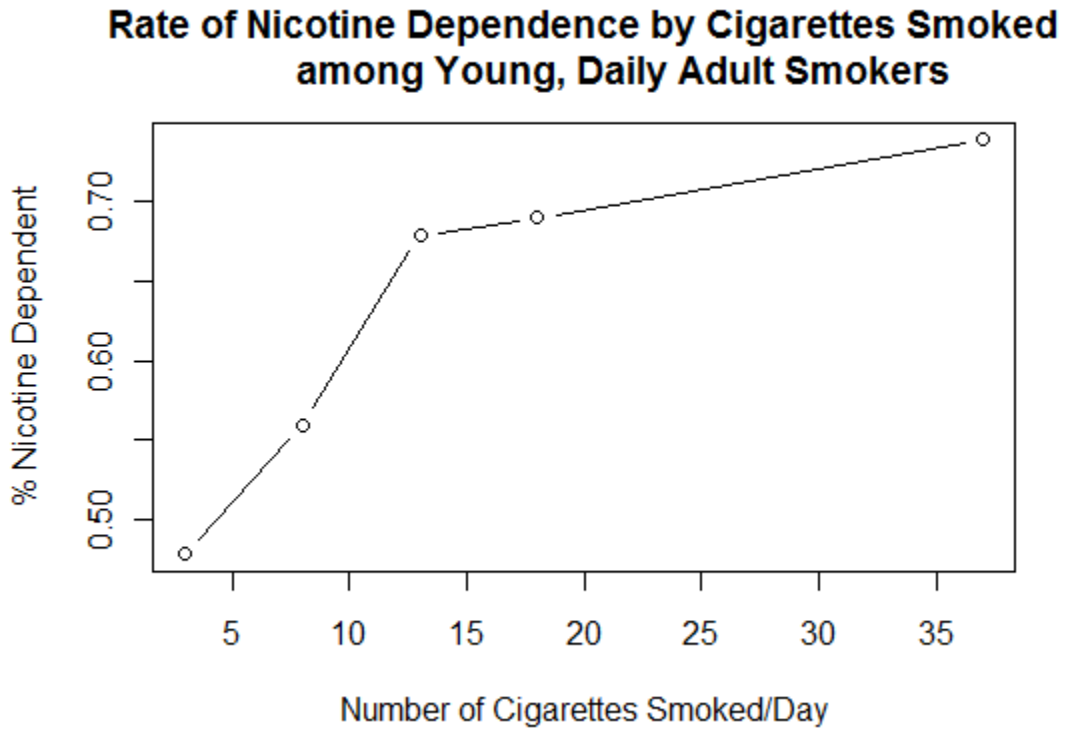


Quantitative(IV) → Categorical(DV)

Make meaningful categories with the quantitative IV and follow C→C instructions.

For a point-and=line plot,
plot(x, y, type = “b”, options), e.g.

```
> plot(levels(nesarc.data$usquan1),
prop.table(table(nesarc.data$TAB12MDX, nesarc.data$usquan1),2)[2,],
type="b", ylab="% Nicotine Dependent", main="Rate of Nicotine
Dependence by Cigarettes Smoked \n among Young, Daily Adult Smokers",
xlab="Number of Cigarettes Smoked/Day")
```



Categorical(IV) → Quantitative(DV)

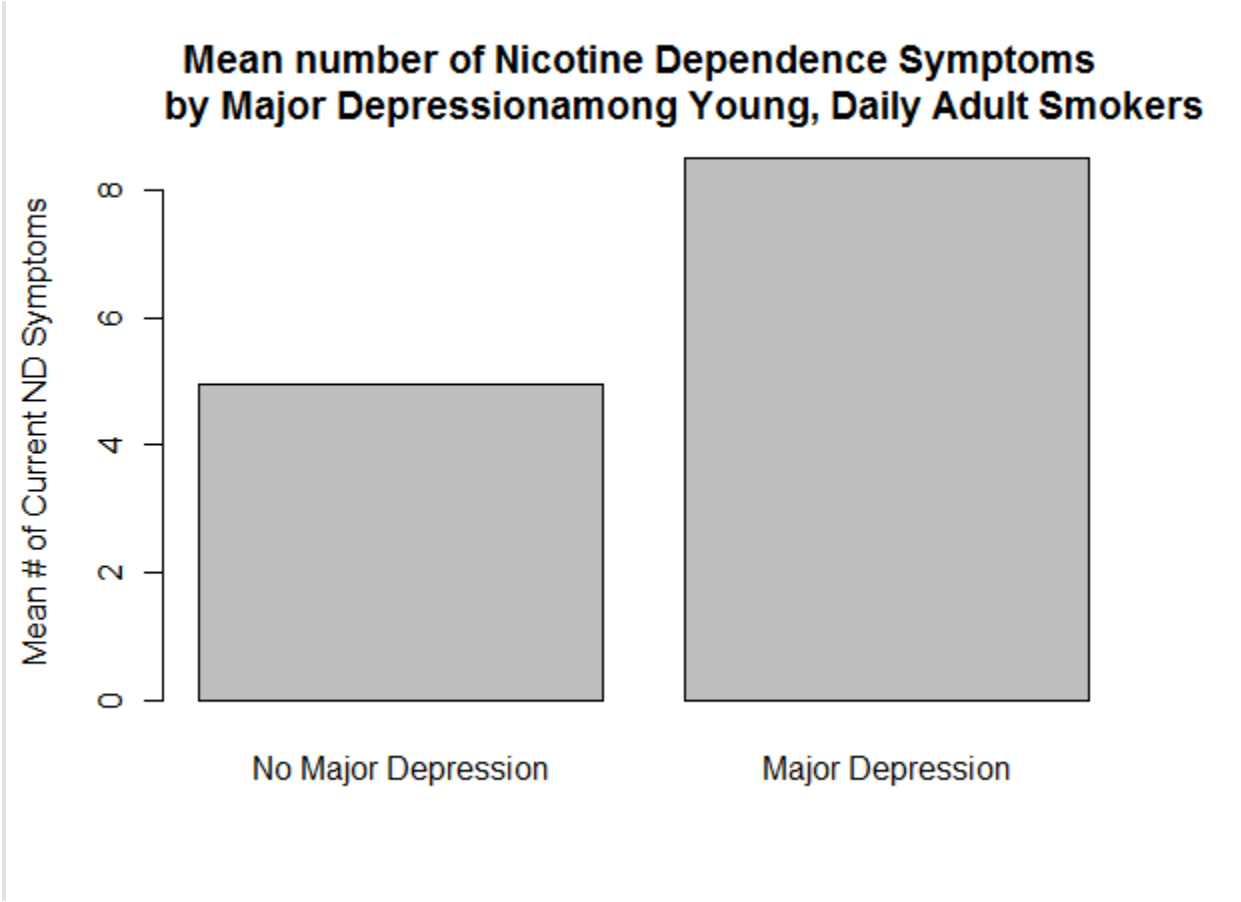
by(DV, IV, mean, na.rm=T), e.g.

```
> NDmeans <- by(nesarc.data$NDcount, nesarc.data$MAJORDEPLIFE, mean,
na.rm=T)
> NDmeans
nesarc.data$MAJORDEPLIFE: 0
[1] 4.943005
------------------------------------------------------------
nesarc.data$MAJORDEPLIFE: 1
[1] 8.487324
```

Can plot highlighted values in Excel, or

barplot(by(…), options), e.g.

```
> barplot(NDmeans, names=c("No Major Depression", "Major Depression"),
  ylab="Mean # of Current ND Symptoms",
  main="Mean number of Nicotine Dependence Symptoms \n
  by Major Depressionamong Young, Daily Adult Smokers")
```



Quantitative(IV) → Quantitative(DV)

plot(IV, DV, options), e.g.

```
> plot(mtcars$wt, mtcars$mpg, ylab="Miles per Gallon", xlab="Weight
(lbs)", main = "Cars' MPG by Weight")
```