lab-07-simpsons.Rmd

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19 March 2021

Packages

```
library(tidyverse)
library(mosaicData)
```

Exercises

1.

```
view(Whickham)
```

Your answer: Observational , because we just watching the people and write the notes also we didn't involving in any situation or controlling any variables.

2.

```
nrow(Whickham)
```

```
## [1] 1314
```

Your answer; 1314, represent recorded participants' age, smoking status at baseline.

3.

```
ncol(Whickham)
```

```
## [1] 3
```

Your answer:
3, age (Numerical), Smoker and the outcome are categorical age (integer) , smoker and outcome are (factor).

```
class(Whickham$age)
```

```
## [1] "integer"
```

```
class(Whickham$smoker)
```

```
## [1] "factor"
```

```
class(Whickham$outcome)
```

```
## [1] "factor"
```

Your answer: age (Numerical) , smoker and outcome are categorical age (integer) , smoker and outcome are (factor).

```
ggplot(Whickham, aes(x = outcome)) +
  geom_bar()
```

```
ggplot(Whickham, aes(x = smoker)) +
  geom_bar()
```
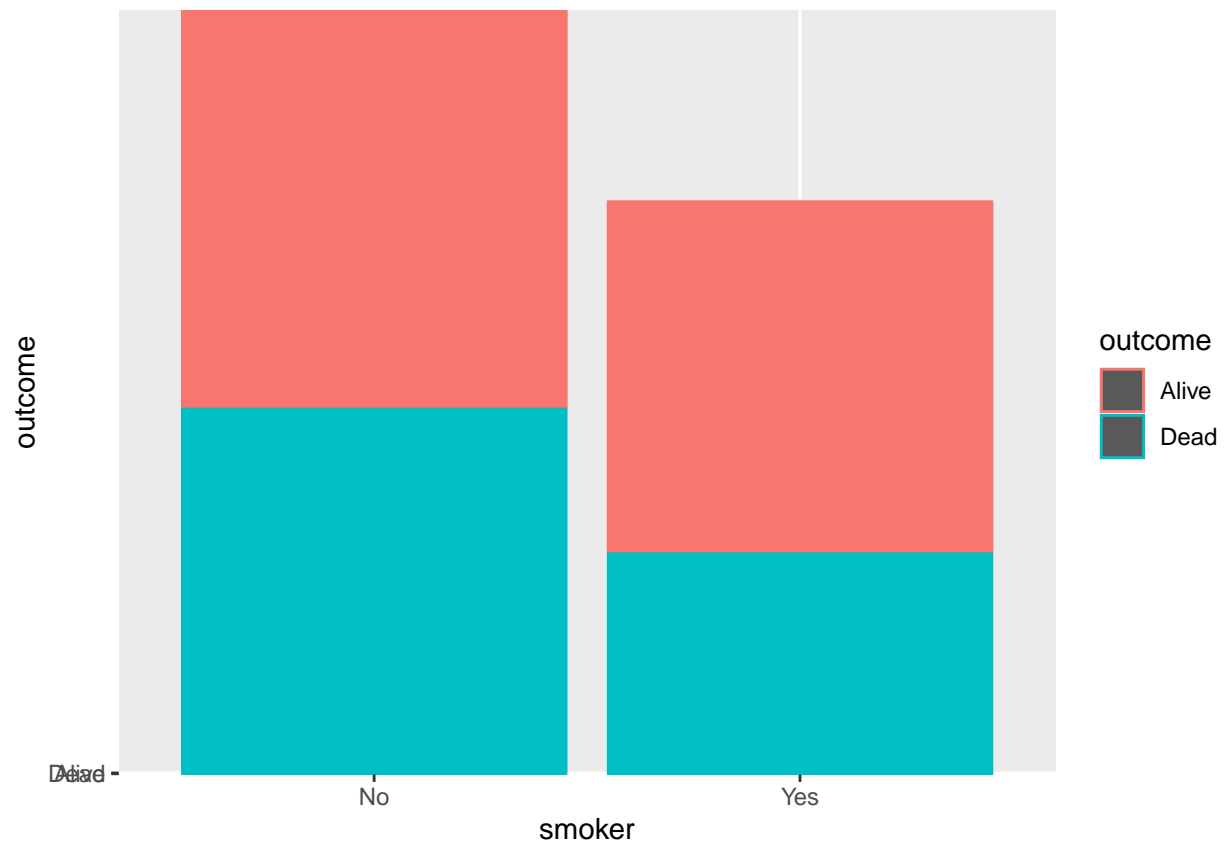
```
ggplot(Whickham, aes(x = age)) +
  geom_boxplot()
```

4. I expect the health will be worser and may be the person will be died after while, if he keeping smoke.

```
ggplot(data=Whickham, aes(x=smoker, y=outcome, color=outcome)) + geom_bar(stat="identity")
```

Knit, commit, and push to github.

5.

```
Whickham %>%
  count(smoker, outcome)
```

```
##   smoker outcome   n
## 1     No   Alive 502
## 2     No    Dead 230
## 3    Yes   Alive 443
## 4    Yes    Dead 139
```

6.

7.

Knit, commit, and push to github.