/

BioStat 2024

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**1**

**“experience”** **2**

**“accident”** **,** **“experience”** **“experience”** **2**

**(incidence rate)** **,** **“experience”** **“experience”** **2**

.

- id -  ,
- experience -  (0 -  , 1 -  ),
- accident -  (0 -  , 1 -  ),
- start -  ,
- stop -  .

```
summary(data %>% select(!id))
```

```
##    experience       start             stop          accident
##  Min.   :0.00   Min.   :  1.00   Min.   : 12.0   Min.   :0.00
##  1st Qu.:0.00   1st Qu.: 68.75   1st Qu.:146.2   1st Qu.:0.00
##  Median :0.00   Median :158.00   Median :250.5   Median :0.00
##  Mean   :0.32   Mean   :166.74   Mean   :239.0   Mean   :0.22
##  3rd Qu.:1.00   3rd Qu.:258.75   3rd Qu.:356.5   3rd Qu.:0.00
##  Max.   :1.00   Max.   :360.00   Max.   :365.0   Max.   :1.00
```

```
head(data)
```

```
## # A tibble: 6 x 5
##      id experience start  stop accident
##   <dbl>      <dbl> <dbl> <dbl>    <dbl>
```

```
## 1     1          0   351   365        0
## 2     2          1   128   149        0
## 3     3          1    40    41        0
## 4     4          0    79   147        0
## 5     5          0    53   103        0
## 6     6          0    61    93        1
```

### “experience”

```
prevalance <- sum(data$experience) / length(data$experience)
```

```
## [1] "Prevalance = 0.32"
```

, 32% , , .

### “accident” , “experience” “experience”

```
exp <- data %>% filter(experience == 1)
noexp <- data %>% filter(experience == 0)
incidence_all <- sum(data$accident) / length(data$accident)
incidence_exp <- sum(exp$accident) / length(exp$accident)
incidence_noexp <- sum(noexp$accident) / length(noexp$accident)
```

```
## [1] "Incidence (1 year) = 0.22"
```

```
## [1] "Incidence in experienced group (1 year) = 0.09375"
```

```
## [1] "Incidence in unexperienced group (1 year) = 0.279411764705882"
```

$= 22\%$, $= 9.375\%$, $= 2.794\%$. ,
, .
( ) ( )
(1 ).

### (incidence rate) , “experience” “experience”

```
patient_time <- sum(data$stop - data$start)

incidence_rate_all <- sum(data$accident) / patient_time
incidence_rate_exp <- sum(exp$accident) / patient_time
incidence_rate_noexp <- sum(noexp$accident) / patient_time
```

```
## [1] "Incidence rate (1 day) = 0.00304624757684852"
```

```
## [1] "Incidence rate in experienced group (1 day) = 0.00041539739684298"
```

```
## [1] "Incidence rate in unexperienced group (1 day) = 0.00263085018000554"
```

, 0.3% , 0.04% 0.26%( 6.5 !) . , .