Stratification in R

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21 February 2019

library(readxl)

## Warning: package 'readxl' was built under R version 3.5.2

Stra\_Data <- read\_excel("C:/Users/Jeevan/Desktop/Christ University/Statistics/Stra\_Data.xlsx")  
View(Stra\_Data)  
library(dplyr)

## Warning: package 'dplyr' was built under R version 3.5.2

##   
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':  
##   
## filter, lag

## The following objects are masked from 'package:base':  
##   
## intersect, setdiff, setequal, union

male <- Stra\_Data %>% select(Age,Sex,`Pain score at first intervention`,`Time from End of surgery (mins)`) %>% filter(Sex=='M')

## Warning: package 'bindrcpp' was built under R version 3.5.1

female <- Stra\_Data %>% select(Age,Sex,`Pain score at first intervention`,`Time from End of surgery (mins)`) %>% filter(Sex=='F')  
strata1 <- Stra\_Data %>% select(Age,Sex,`Pain score at first intervention`,`Time from End of surgery (mins)`) %>% filter(Age>=16 & Age<=25)  
strata1

## # A tibble: 52 x 4  
## Age Sex `Pain score at first interven~ `Time from End of surgery (m~  
## <dbl> <chr> <dbl> <dbl>  
## 1 21 M 6 30  
## 2 25 M 3 60  
## 3 25 M 4 15  
## 4 23 M 5 210  
## 5 23 M 5 360  
## 6 21 M 4 30  
## 7 24 M 3 210  
## 8 22 M 5 120  
## 9 19 M 4 450  
## 10 24 M 3 240  
## # ... with 42 more rows

The Stra\_Data dataset has been imported into RStudio & the data has been split into male & female. The 1st stratum was created from the dataset which includes both male & female of the age group 16 to 25 years.

strata2 <- Stra\_Data %>% select(Age,Sex,`Pain score at first intervention`,`Time from End of surgery (mins)`) %>% filter(Age>=26 & Age<=40)  
strata2

## # A tibble: 71 x 4  
## Age Sex `Pain score at first interven~ `Time from End of surgery (m~  
## <dbl> <chr> <dbl> <dbl>  
## 1 26 M 3 360  
## 2 37 F 4 360  
## 3 40 F 3 480  
## 4 40 M 4 240  
## 5 29 M 3 135  
## 6 30 M 7 60  
## 7 33 M 7 10  
## 8 38 M 3 120  
## 9 37 M 3 180  
## 10 39 M 8 240  
## # ... with 61 more rows

The 2nd stratum was created from the dataset which includes both male & female of the age group 26 to 40 years.

strata3 <- Stra\_Data %>% select(Age,Sex,`Pain score at first intervention`,`Time from End of surgery (mins)`) %>% filter(Age>=41 & Age<=60)  
strata3

## # A tibble: 27 x 4  
## Age Sex `Pain score at first interven~ `Time from End of surgery (m~  
## <dbl> <chr> <dbl> <dbl>  
## 1 47 F 3 120  
## 2 55 F 6 210  
## 3 45 M 5 390  
## 4 47 M 3 600  
## 5 45 M 3 240  
## 6 45 M 4 420  
## 7 43 M 4 390  
## 8 48 M 5 15  
## 9 48 M 4 60  
## 10 43 M 5 330  
## # ... with 17 more rows

The 3rd stratum was created from the dataset which includes both male & female of the age group 41 to 60 years.

CONCLUSION The dataset was divided into 3 different stratums; Stratum1(16 to 25), Stratum2(26 to 40), Stratum3(41 to 60). The stratums were grouped based on the age of the population. (i)Stratum1 consists of 52 datapoints i.e there are 52 people between the ages 16 & 25. (ii)Stratum1 consists of 71 datapoints i.e there are 71 people between the ages 26 & 40. (iii)Stratum1 consists of 27 datapoints i.e there are 27 people between the ages 41 & 60.