Final Project

S. McGowan

2025-07-28

Ideal Cardiovascular Health: An Analysis of Survey Data from Myanmar, 2021

R Coding Final Project

Simone McGowan

Georgia Tech, Summer 2025

These data were obtained from the distributor, the **Inter-university Consortium for Political and Social Research**. It was used to evaluate presence of, and factors contributing to, Metabolic Syndrome. Metabolic syndrome is a reversible state comprised of having 3 of the 5 health conditions that puts a person at risk of cardiovascular disease (CD), stroke, and type 2 diabetes (Cleveland Clinic, 2023). The information file about factor variables from source. The raw data is survey responses and in this report will be used to assess specifically "ideal cardiovascular health" status based on metrics from the American Heart Association. These metrics include: BMI, total cholesterol, smoking status, physical activity, healthy diet, fasting plasma glucose, and blood pressure, with age determining cutoff values (Lloyd-Jones et al., 2010).

Table of Contents

1. Literature Review
2. Data Description

-Cleaning Data +Midterm plans that were completed +Midterm plans that were not completed -Analysis Goals +Tables +Visualizations

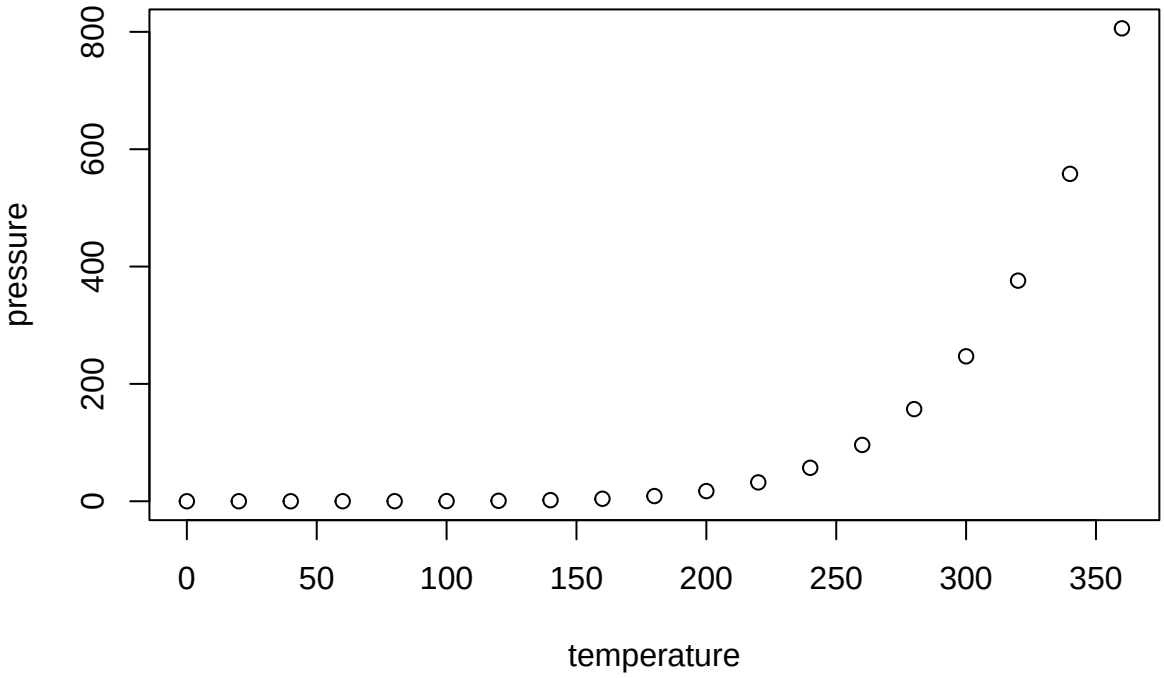
Summary Statistics for numeric variables of interest

```
library(readr)
setwd('C:/Users/smdot/OneDrive/Desktop/R-Summer25/Data/raw')
mydata=read.csv("MetS data to upload.csv")
summary_stats=summary(mydata[,c(5,7,9,17,18,21,22,23,24,25,26,29,30,31,32,33)])
summary_stats
```

```
##   EducationYrs        Income        FamilymembersNo       Age
##  Min.   : 0.000   Min.   :      0   Min.   : 0.000   Min.   :18.00
##  1st Qu.: 4.000   1st Qu.:      0   1st Qu.: 3.000   1st Qu.:33.00
##  Median : 5.000   Median :  95000   Median : 4.000   Median :43.00
##  Mean   : 5.997   Mean   : 122722   Mean   : 3.954   Mean   :44.07
##  3rd Qu.: 9.000   3rd Qu.: 200000   3rd Qu.: 5.000   3rd Qu.:55.00
##  Max.   :16.000   Max.   :1500000   Max.   :12.000   Max.   :83.00
##    ChildrenNo        HbA1c             FBS        TotalCholesterol
##  Min.   : 0.00   Min.   : 4.600   Min.   : 66.0   Min.   : 96.0
##  1st Qu.: 1.00   1st Qu.: 5.500   1st Qu.: 87.0   1st Qu.:165.2
##  Median : 2.00   Median : 5.900   Median : 97.0   Median :191.5
##  Mean   : 1.95   Mean   : 6.124   Mean   :107.5   Mean   :193.9
##  3rd Qu.: 3.00   3rd Qu.: 6.400   3rd Qu.:108.0   3rd Qu.:222.8
##  Max.   :14.00   Max.   :12.900   Max.   :389.0   Max.   :303.0
##  Triglycerides        HDL              LDL             BMI
##  Min.   : 36.0   Min.   : 28.00   Min.   : 28.0   Min.   :15.13
##  1st Qu.: 88.0   1st Qu.: 48.00   1st Qu.: 84.5   1st Qu.:22.02
##  Median :120.5   Median : 57.00   Median :107.0   Median :25.20
##  Mean   :142.2   Mean   : 57.88   Mean   :108.4   Mean   :25.54
##  3rd Qu.:167.0   3rd Qu.: 64.00   3rd Qu.:130.0   3rd Qu.:28.95
##  Max.   :593.0   Max.   :252.00   Max.   :240.0   Max.   :40.57
##  Waistcircumference   SystolicBP     DiastolicBP     Sleepduration
##  Min.   : 58.00     Min.   : 95.0   Min.   : 49.00   Min.   : 4.000
##  1st Qu.: 74.00     1st Qu.:116.0   1st Qu.: 75.00   1st Qu.: 7.000
##  Median : 82.00     Median :127.0   Median : 82.00   Median : 8.000
##  Mean   : 82.32     Mean   :128.4   Mean   : 82.58   Mean   : 7.912
##  3rd Qu.: 90.00     3rd Qu.:138.8   3rd Qu.: 89.00   3rd Qu.: 9.000
##  Max.   :116.00     Max.   :192.0   Max.   :125.00   Max.   :12.000
```

Including Plots

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.