

# HEART DISEASE PREDICTION ANALYSIS: POWER BI DASHBOARD REPORT

DASHBOARD

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## Problem Statement

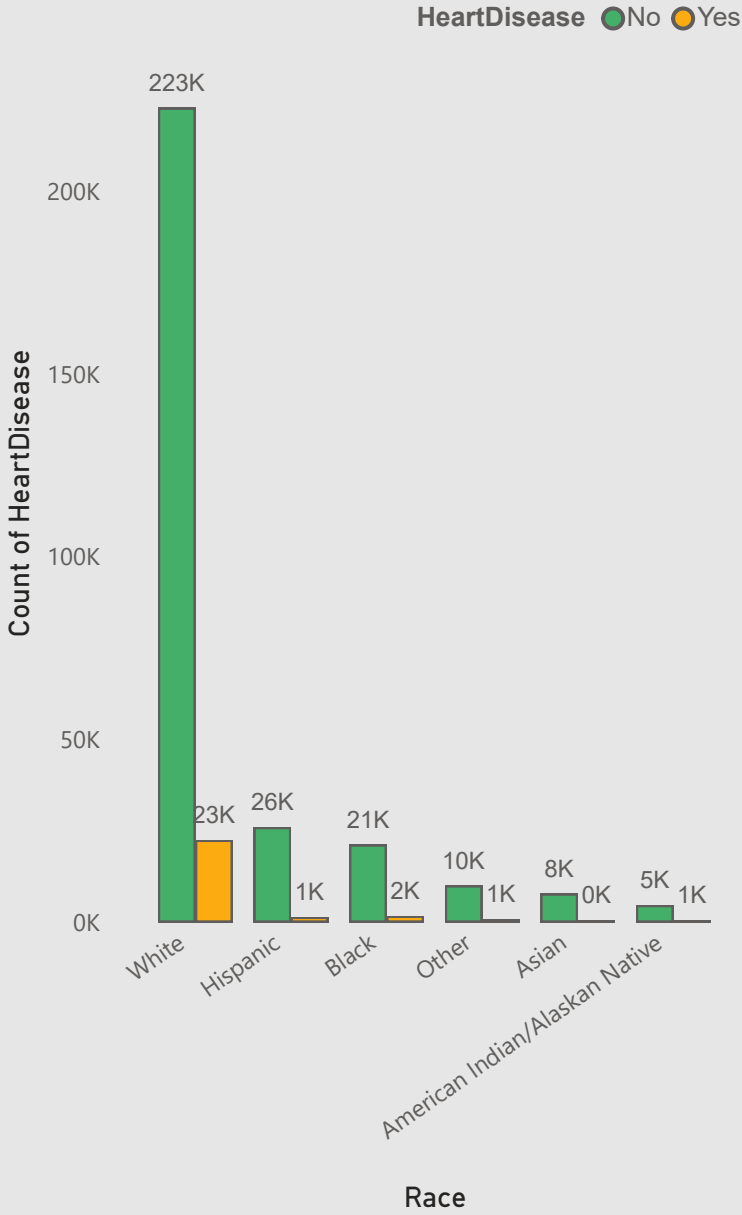
- **Objective:** To analyze health and demographic data in order to understand factors influencing heart disease. By examining trends and correlations between lifestyle habits, demographic information, and heart disease occurrence, the goal is to provide actionable insights via a Power BI dashboard.

## Dataset Overview

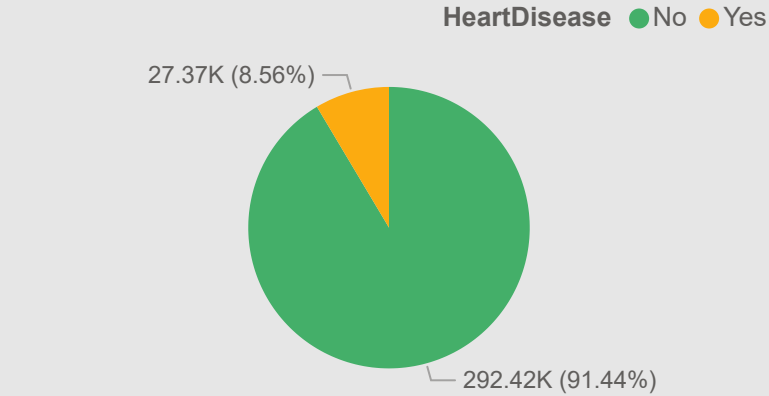
- **Dataset Description:** The dataset includes multiple health and demographic factors that may influence heart disease risk. Key attributes are as follows:
  - **Health and Lifestyle Factors:**
    - **BMI:** Body Mass Index, representing body fat levels.
    - **Smoking and Alcohol Drinking:** Indicators of lifestyle habits that may increase health risks.
    - **Physical Health and Mental Health:** Self-reported scores for physical and mental health, indicating recent health concerns.
    - **Physical Activity:** Indicates if the individual engages in regular physical activity.
    - **Sleep Time:** Average hours of sleep per night.
  - **Health Conditions:**
    - **Stroke, Diabetic, Asthma, Kidney Disease, Skin Cancer:** Medical conditions that may co-occur with or contribute to heart disease.

# HEART DISEASE DISTRIBUTION

Proportion by Race



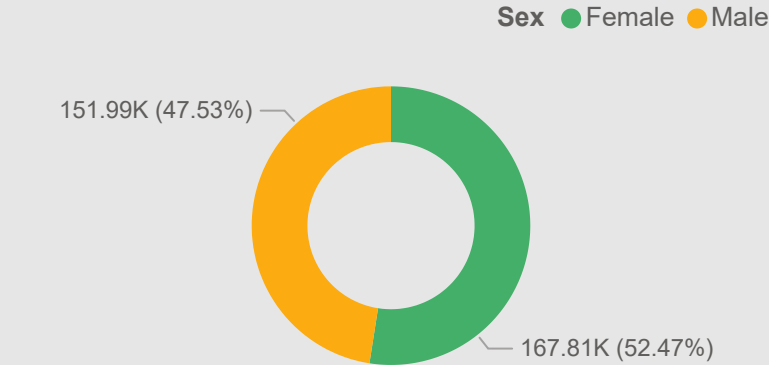
Heart Disease Distribution:



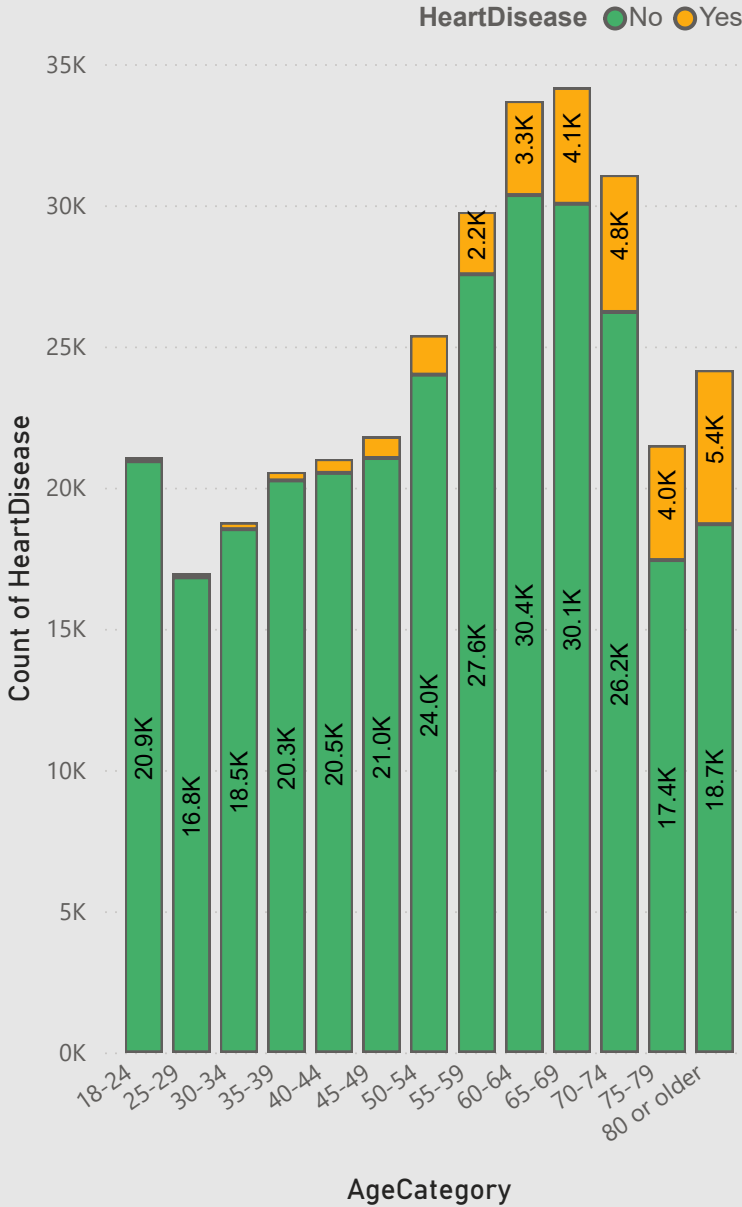
Female

Male

Proportion by Gender:



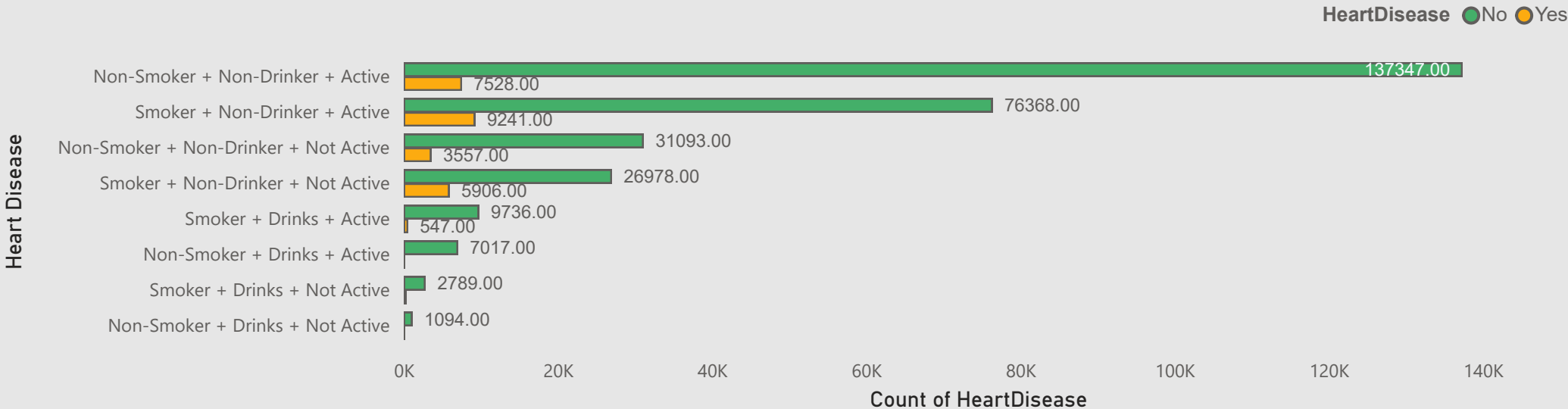
Proportion by Age Category



# HEALTH HABITS ANALYSIS

DASHBOARD

## Lifestyle Habits & Heart Disease



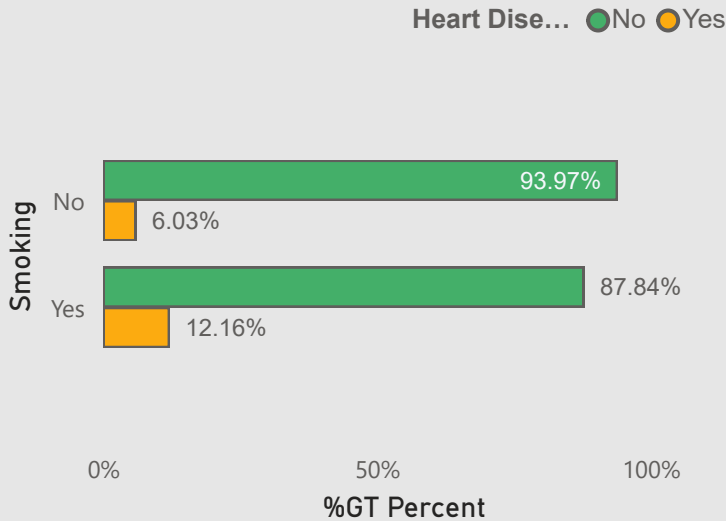
AgeCategory

All

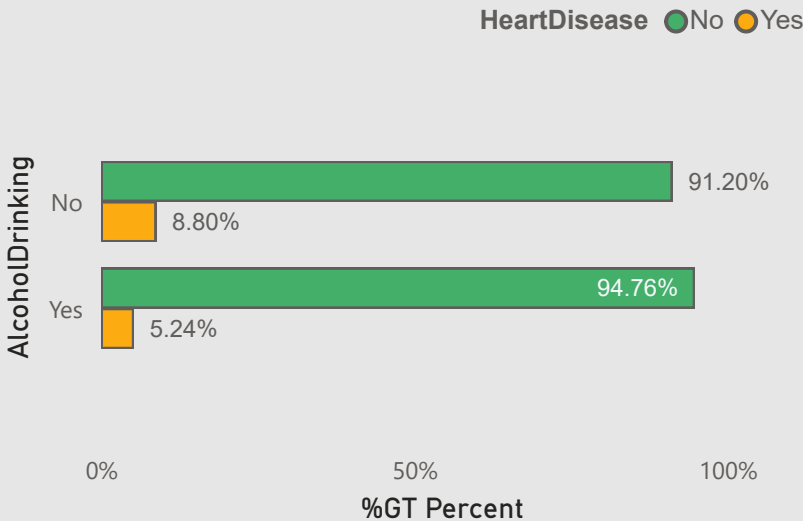
Female

Male

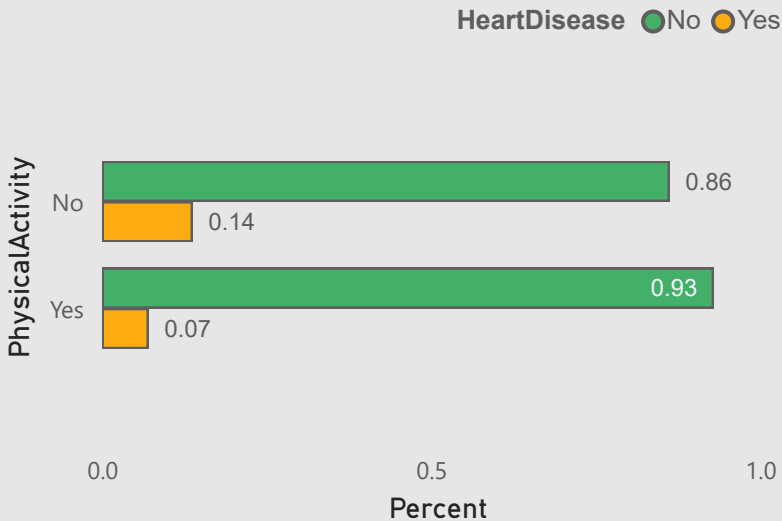
## Smoking and Heart Disease



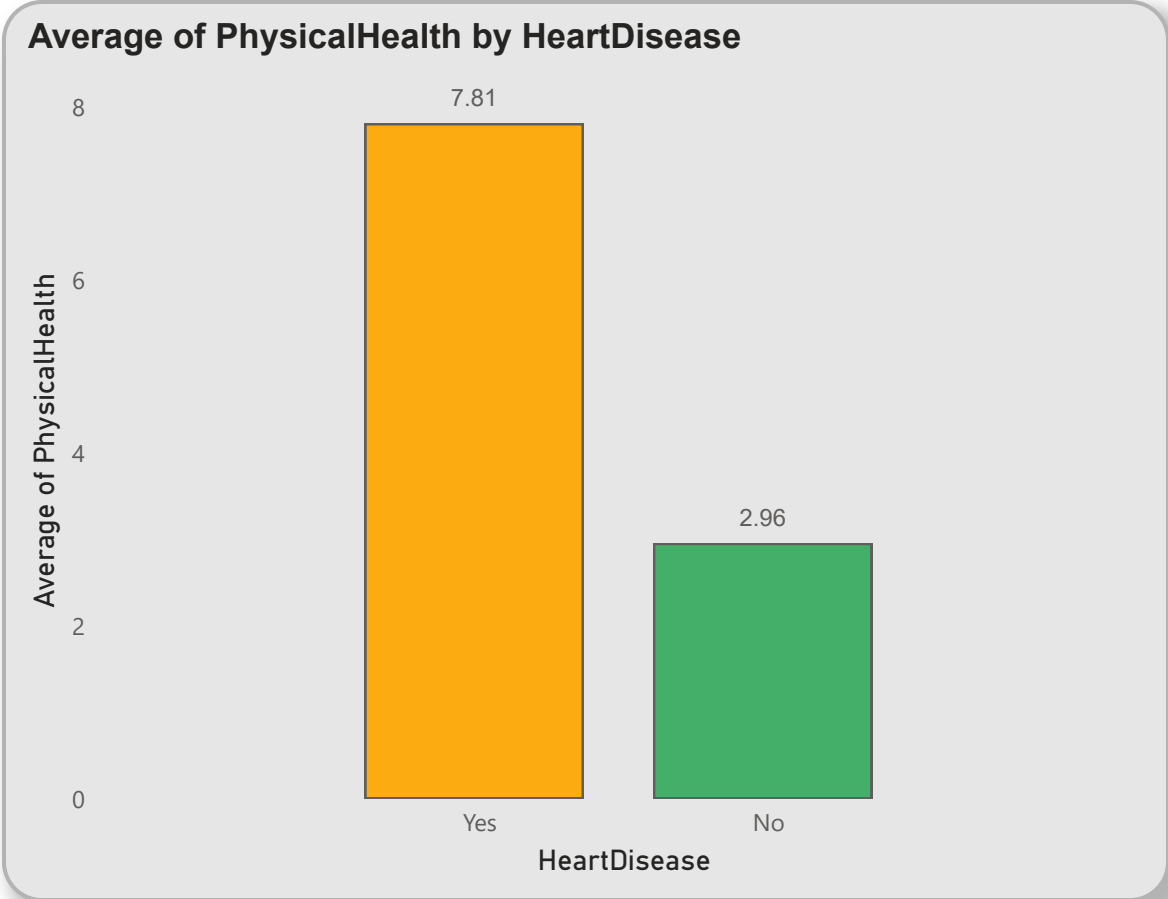
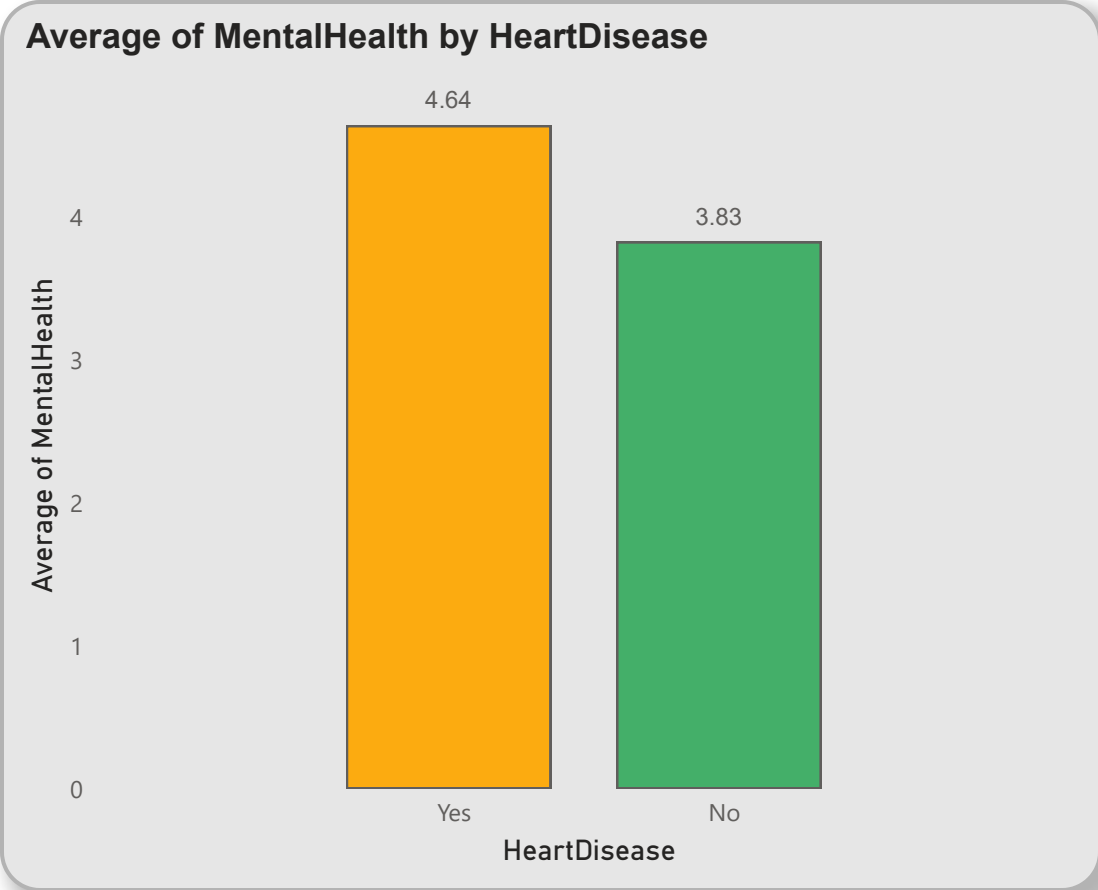
## Alcohol Consumption and Heart Disease



## Physical Activity and Heart Disease



# PHYSICAL AND MENTAL HEALTH IMPACT

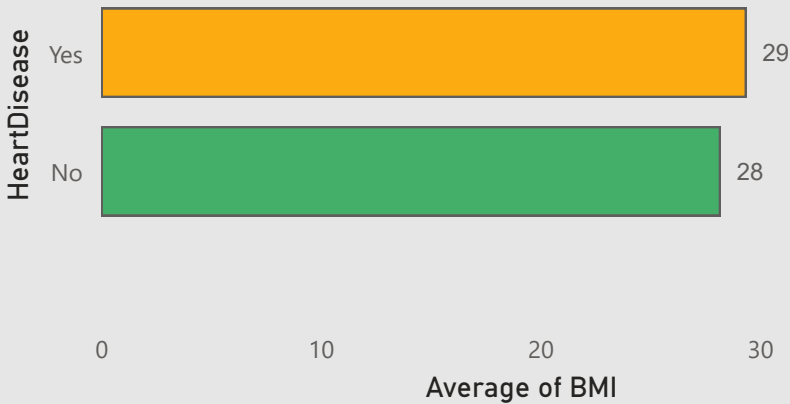


Female

Male

KEY HEALTH INDICATORS

Avg BMI Vs Heart Disease



Female

Male

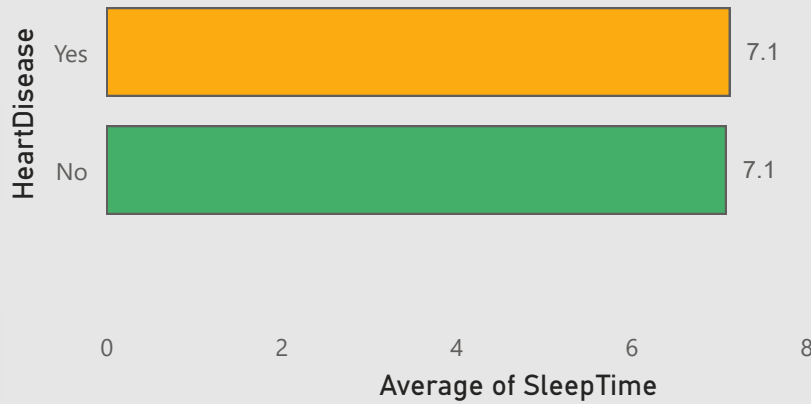
BMI Category

All

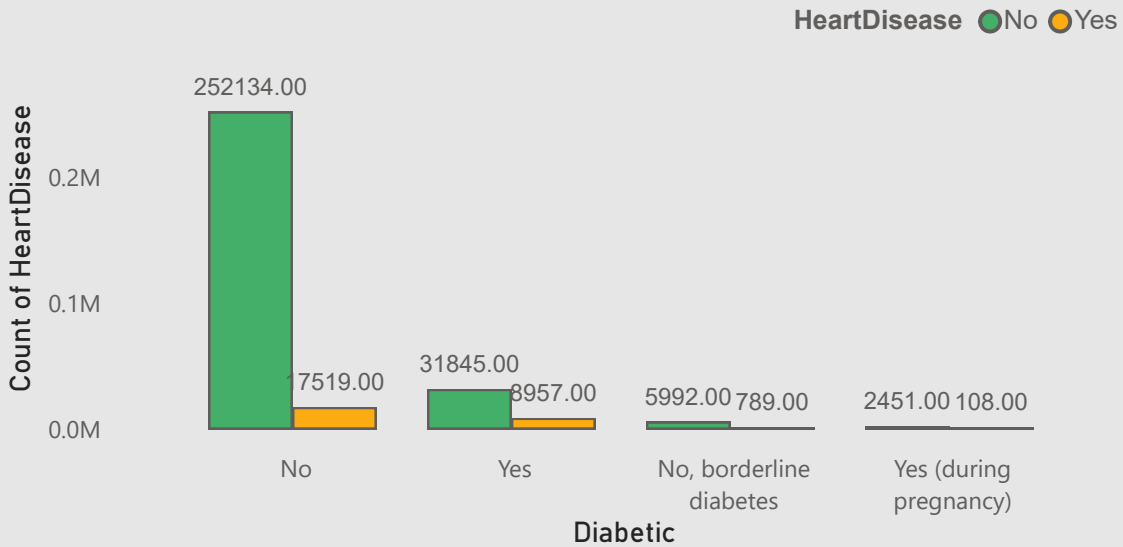
SleepTime Category

All

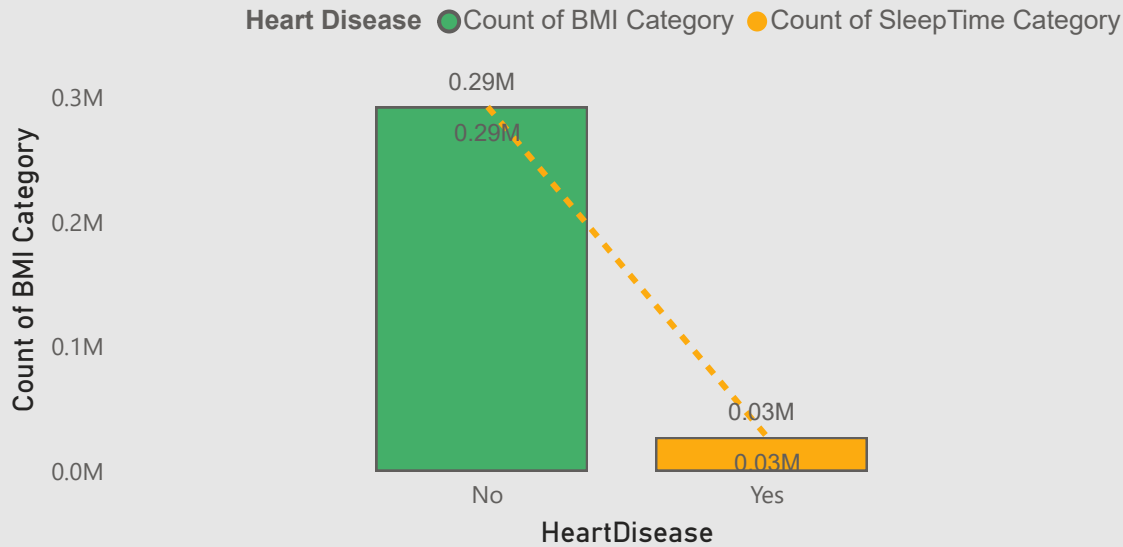
Avg SleepTime Vs Heart Disease



Diabetic Vs Heart Disease



BMI vs Sleep Time and Heart Disease



# HEART DISEASE PREDICTION DASHBOARD



KPI1

KPI2

KPI3

KPI4

KPI1 - Heart  
Disease  
Distribution

KPI2 - Health  
Habits  
Analysis

KPI3 - Physical  
and Mental  
Health Impact

KPI4 - Key  
Health  
Indicators

DASHBOARD

SUMMARY

BMI Category



All



SleepTime C...



All



Female

Male

7.10

Average of SleepTime

3.90

Average of MentalHealth

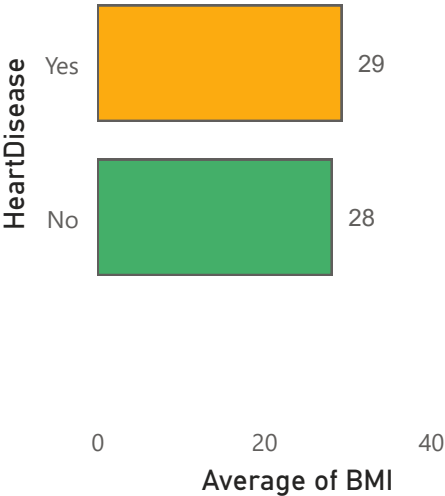
3.37

Average of PhysicalHealth

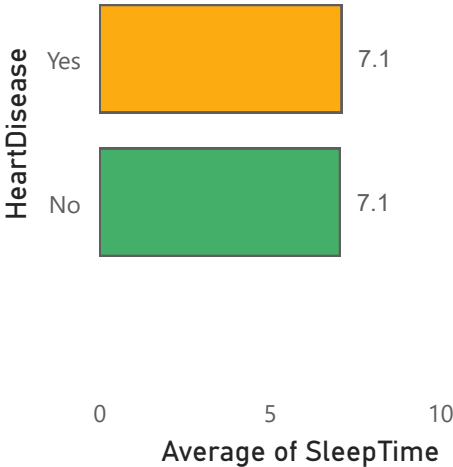
28.33

Average of BMI

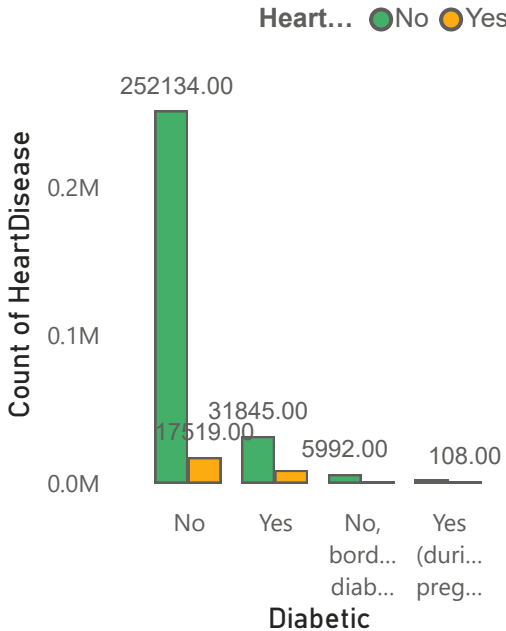
Avg BMI Vs Heart Disease



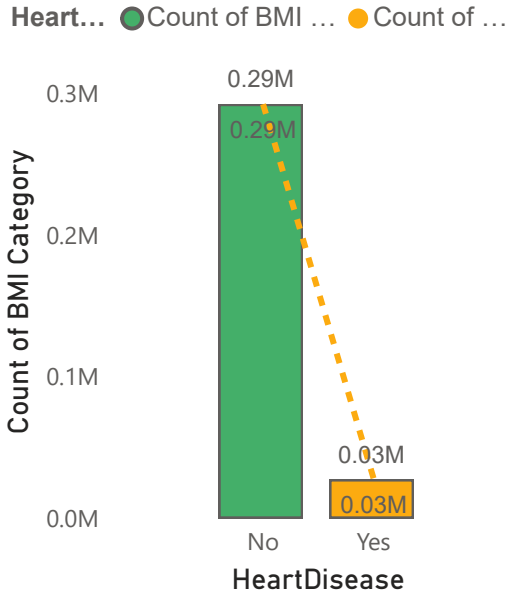
Avg SleepTime Vs Heart Disease



Diabetic Vs Heart Disease



BMI vs Sleep Time and Heart Disease



## HEART DISEASE PREDICTION DASHBOARD SUMMARY

### FACTORS CONTRIBUTING TO HEART DISEASE:

#### HEART DISEASE DISTRIBUTION:

- .91.44% of individuals do not have heart disease (292,422 cases), while 8.56% have heart disease (27,373 cases).
- .White individuals account for 69.64% of those without heart disease, with the largest gap seen among White individuals, where No cases outnumber Yes cases by 200,198.
- .On average, the "No" group has a significantly higher count (48,737) compared to the "Yes" group (4,562).

#### MENTAL HEALTH:

- .The average mental health score for individuals with heart disease (Yes) is 4.64, which is higher than the 3.83 average score for individuals without heart disease (No).
- .This indicates that individuals with heart disease report more mental health challenges compared to those without heart disease.
- .The findings suggest a potential correlation between poor mental health and the likelihood of having heart disease, implying that mental health struggles may increase the risk of heart disease, or that heart disease may worsen mental health.

#### PHYSICAL HEALTH:

- .The average physical health score for individuals with heart disease (Yes) is higher, indicating that they report more physical health challenges compared to those without heart disease (No).  
This suggests that individuals with heart disease tend to have worse physical health, as higher scores