

WRITE UP

Project 1

Risk of Heart Disease and Attack based on Health, Wealth and Education.

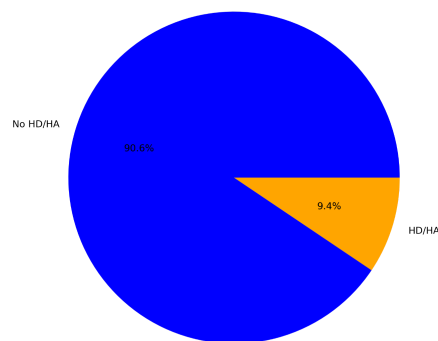
GROUP1

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Prevalence of Heart Disease/Heart Attack in Sampled American Population - BSS 2015 Survey

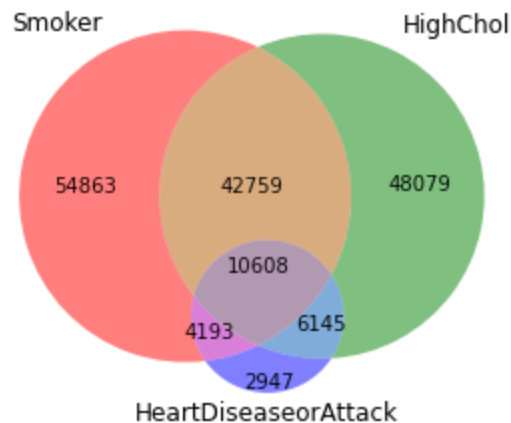


Section 1: Health Metrics

How common are overlaps among sampled populations with HD/HA, smoking, high Cholesterol?

We are interested in seeing whether individuals who have HD/HA are more likely to have two risk factors

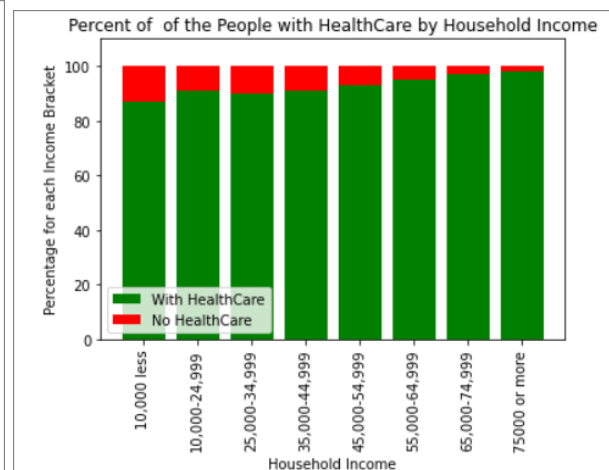
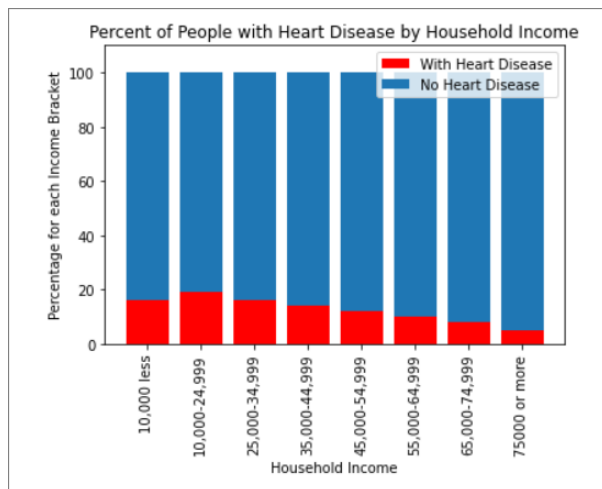
Overlaps can be seen among the three, with - Most people with HD/HA (44%) have 2 risk factors (smoking cigarettes & High Cholesterol), while 17% are smokers without high cholesterol, and 26% are people with high cholesterol who are not smokers



We recommend developing a program alerting HCP when their patients possess the two risk factors, so that a plan aimed at eliminating or reducing at least one of the two metrics can be initiated.

Section 2: Income and Health care

- Ho: The level of income in a household does not impact a person's risk to having a heart disease/ heart attack
- Ha: As the person's income goes up, it reduces the risk or exposure to having a heart disease / heart attack
- From \$10,000 onwards we see a steady decrease in the proportion of people with HD/HA over the total population for each income bracket
- This could have an interaction with accessibility to medical care and other fitness and lifestyle facilities.
- We see an increase to the percentage of people having access to HealthCare as their income increases



Yearly wage influences HA/HD occurrence. Although this may not be a direct influence the trend is present. A majority of the population has a health care plan however, we see a slight increase in proportion as income increases.

Recommendation: Raising the minimum wage may reduce the occurrence of HA/HD. Furthermore, introduction of more comprehensive health care plans may be adequate. However, further research is required to assess which factors should be addressed in this plan.

Section 3: Education ~ Physical and Mental health

Overall:

Ho: There is no relationship between education level , mental/physical health and heart attack/ disease occurrence.

Ha: Education level, mental/ Physical health influence the likelihood of Heart attack/ disease occurrence.

Chi-Squared:

Ho: Education and heart disease/attack are independent from each other.

Ha: Education and heart disease/attack are dependent on one another.

Education and HD/HA are dependent variables ($p < 0.01$). As education level increases we see a drop in HD/HA. Furthermore, as education levels increased the number of bad days in the last 30 days dropped. Education may give individuals the ability to cope with hardships and manage physical health.

We recommend government intervention to increase accessibility to higher education. Addition to the Education budget could reduce costs associated with medical facilities to house patients with HA/HD as well as facilitate economic growth.

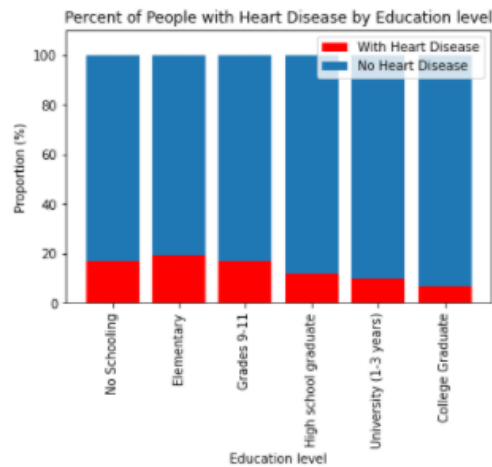


Figure 6. Proportion of people with HA/HD for each education level.

Mean Physical health at increasing education levels for individuals with (1) and without (0) heart disease/attack Mean Mental health at increasing education levels for individuals with (1) and without (0) heart disease/atta

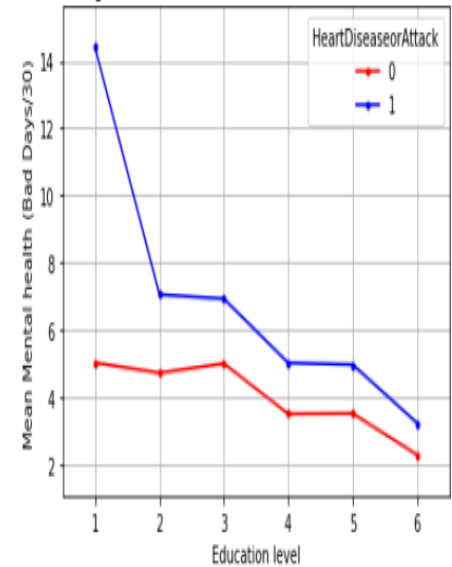
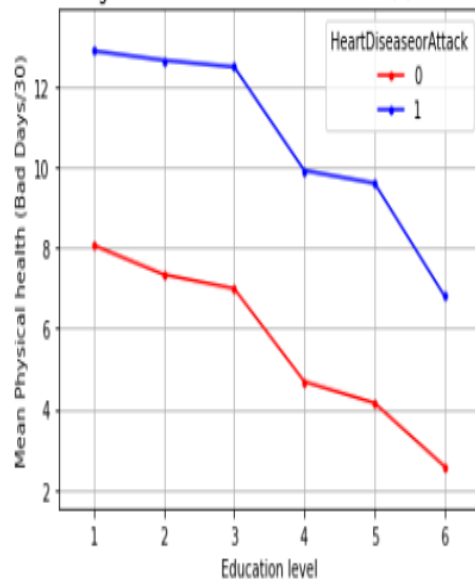


Figure 7&8. Mean mental and physical and mental health metrics as education level increases for population with and without HA/HD.