Tracking Mental Health Trends in Adults

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Introduction

In 2025, The "Student Depression Dataset", obtained from OpenML #46753, explores depression in 27 901 adults, mainly students, in India. It provides 17 different variables ranging from Cumulative Grade Point Average (CGPA), financial stress to lifestyle habits. See [1].

Understanding depression patterns can inform schools and policymakers to address the growing concerns of mental health.

Key Motives :
- Academic pressure may contribute to suicidal thoughts.
- Depression rates may differ by gender.
- Family history may influence depression.
- Certain professions may show different depression trends.
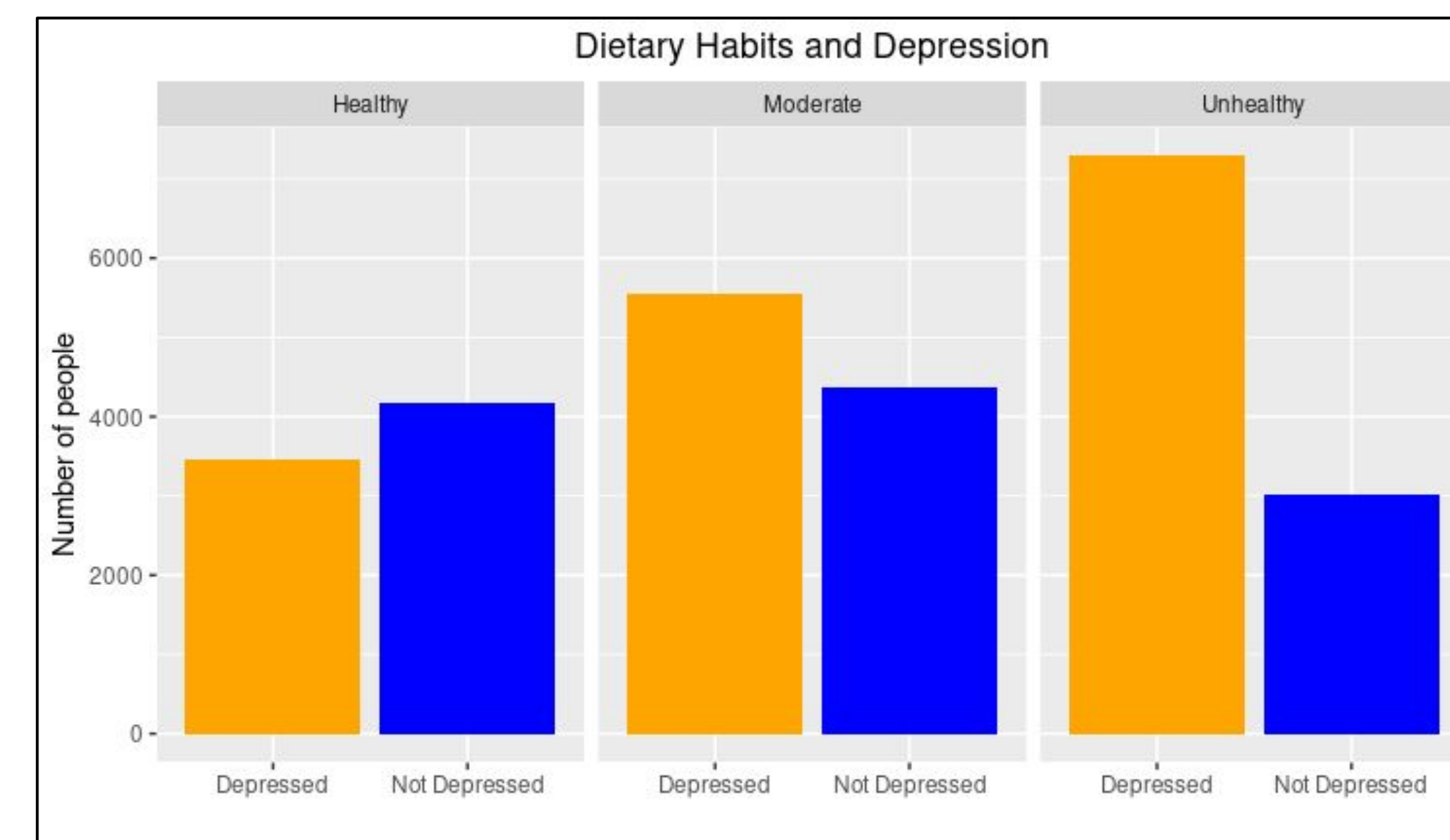- Dietary habits may correlate with depression levels.
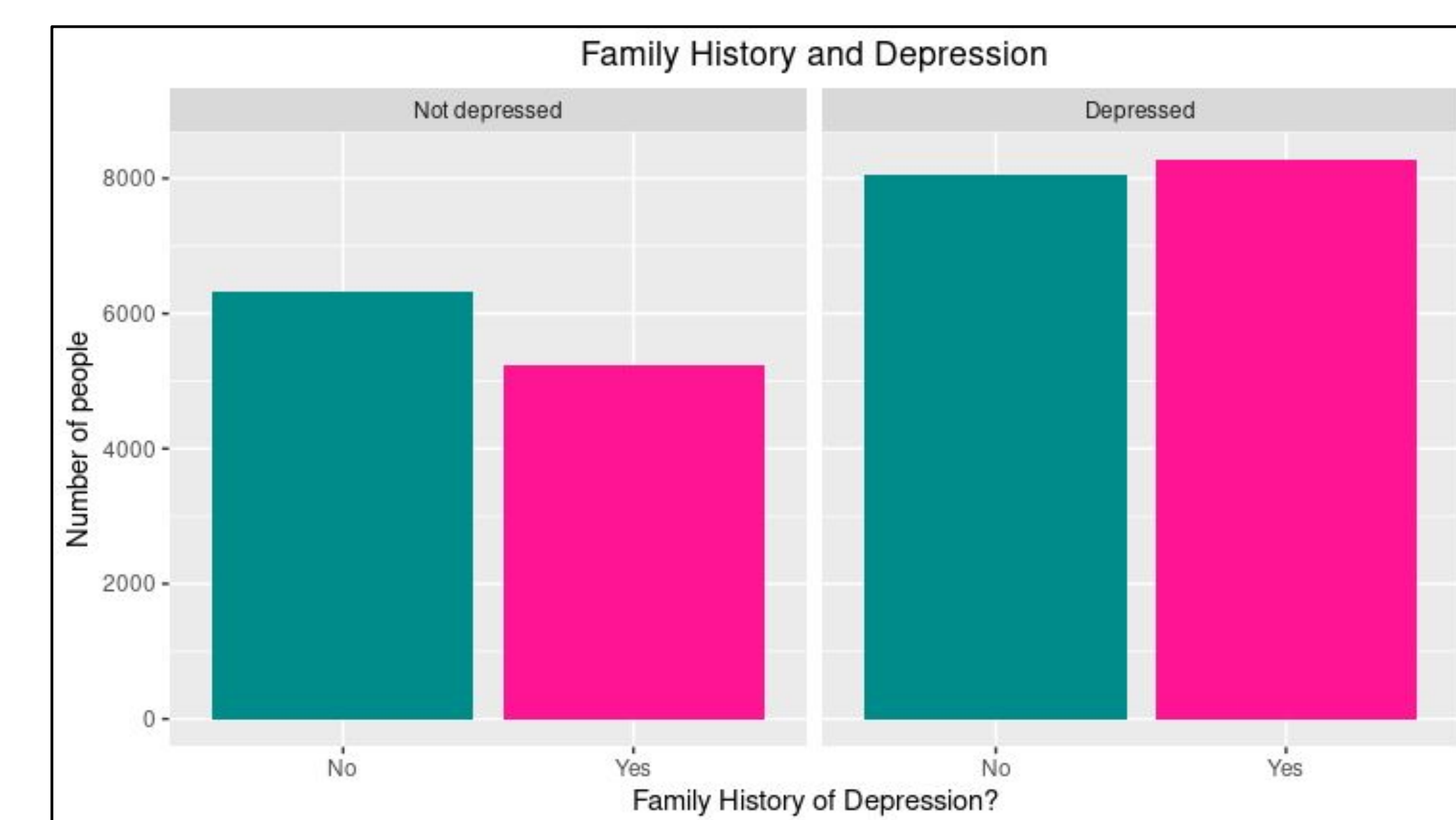
Methods

Data cleaning using RStudio :
- Cleaned and changed variables (e.g. "Depression" , "Sleep Duration") to desired format.
- Removed null values and columns not used (e.g. id, city, job satisfaction, degree).
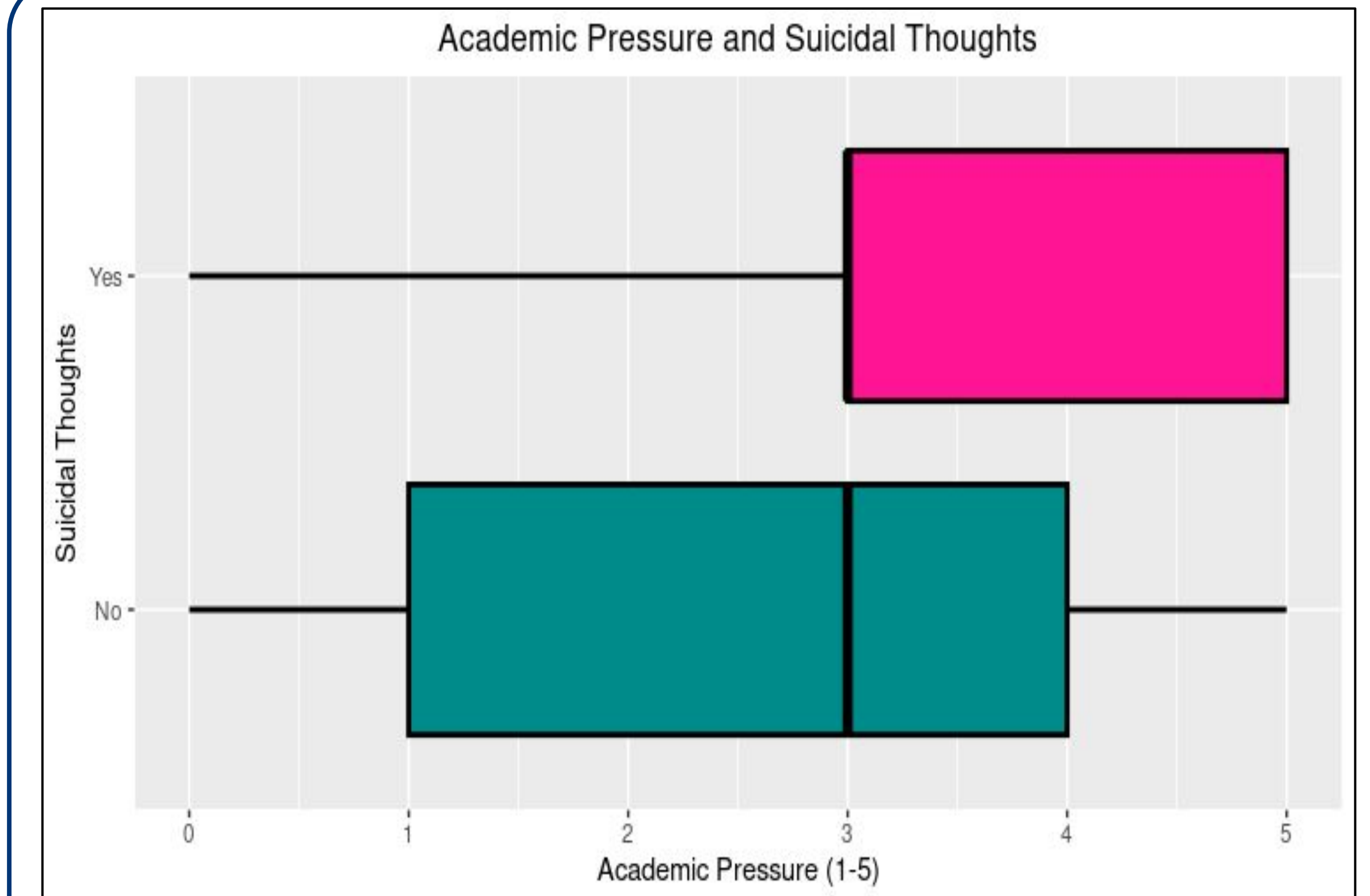
Data visualization :
- Various kinds of graphs (e.g. bar graphs, histograms, box plots) were fitted according to the variable types and distribution.
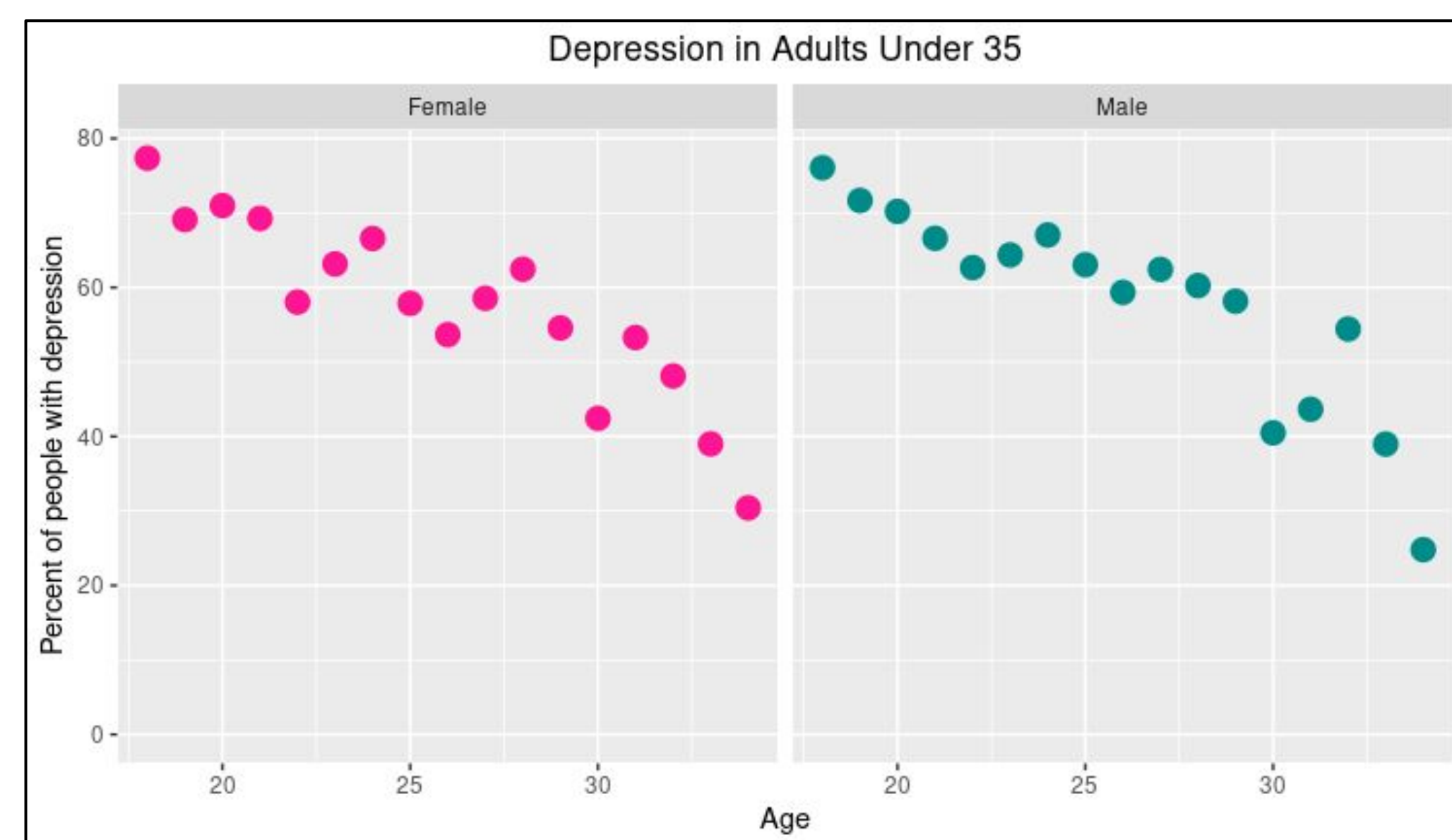

Depression in Adults Under 35

The graph suggests that depression rates are higher among younger individuals and tend to decrease with age.

Depression Counts by Genders

This graph shows that the sample includes more males than females, and overall, a majority of the population reports experiencing depression.

Dietary Habits and Depression

This graph shows that the individual's with unhealthy dietary habits experience more depression in comparison to people with healthy dietary habits.
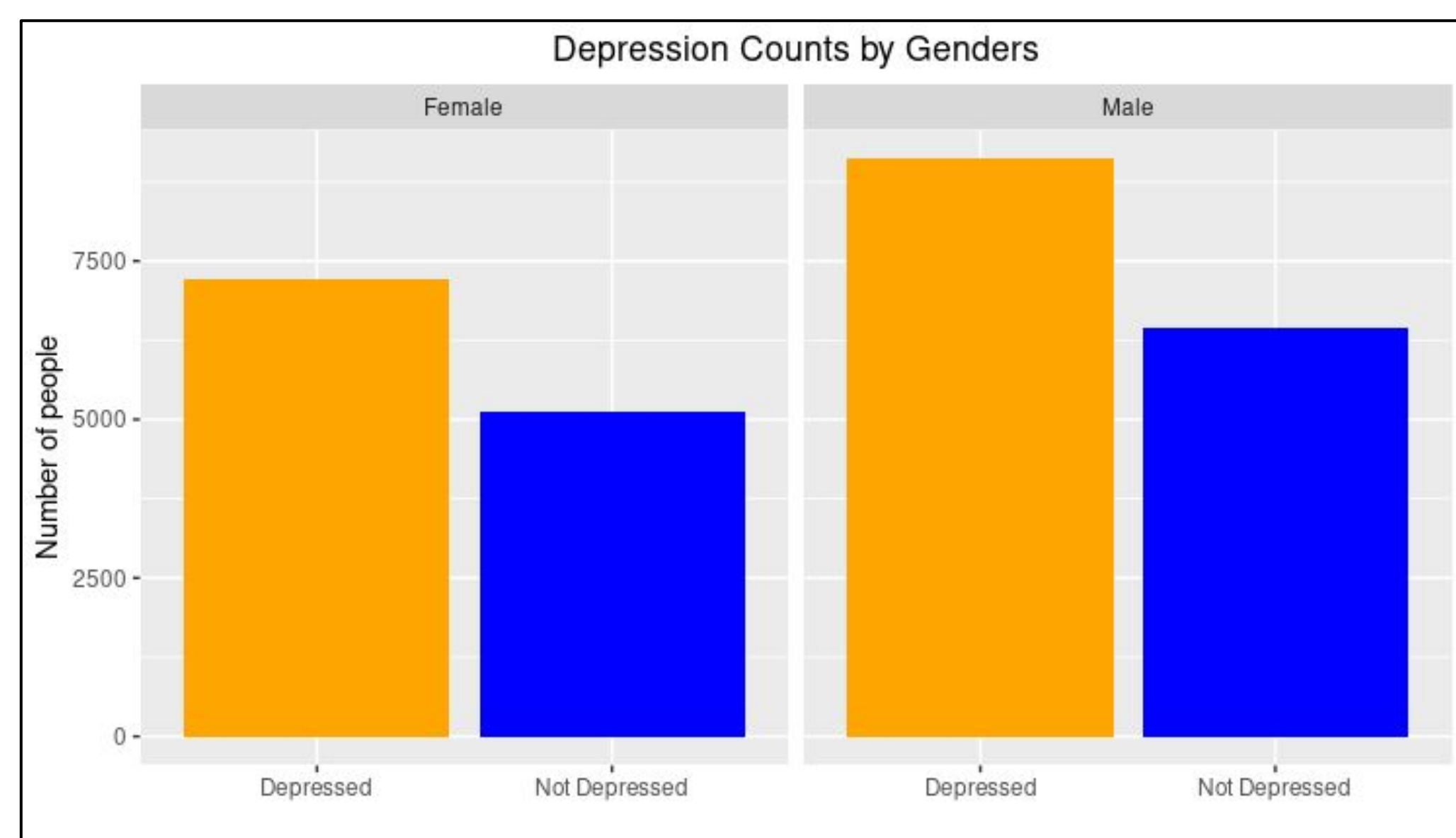

Family History and Depression

This graph shows that people with family history of depression were more prone to depression than people without it and vice-versa.

Professions Part 1

This graph shows that a majority of the students reported being depressed.

Professions Part 2

While digital marketers, architects, and teachers showed a mix of depressed and non-depressed responses, all other professions in this graph reported only being depressed.
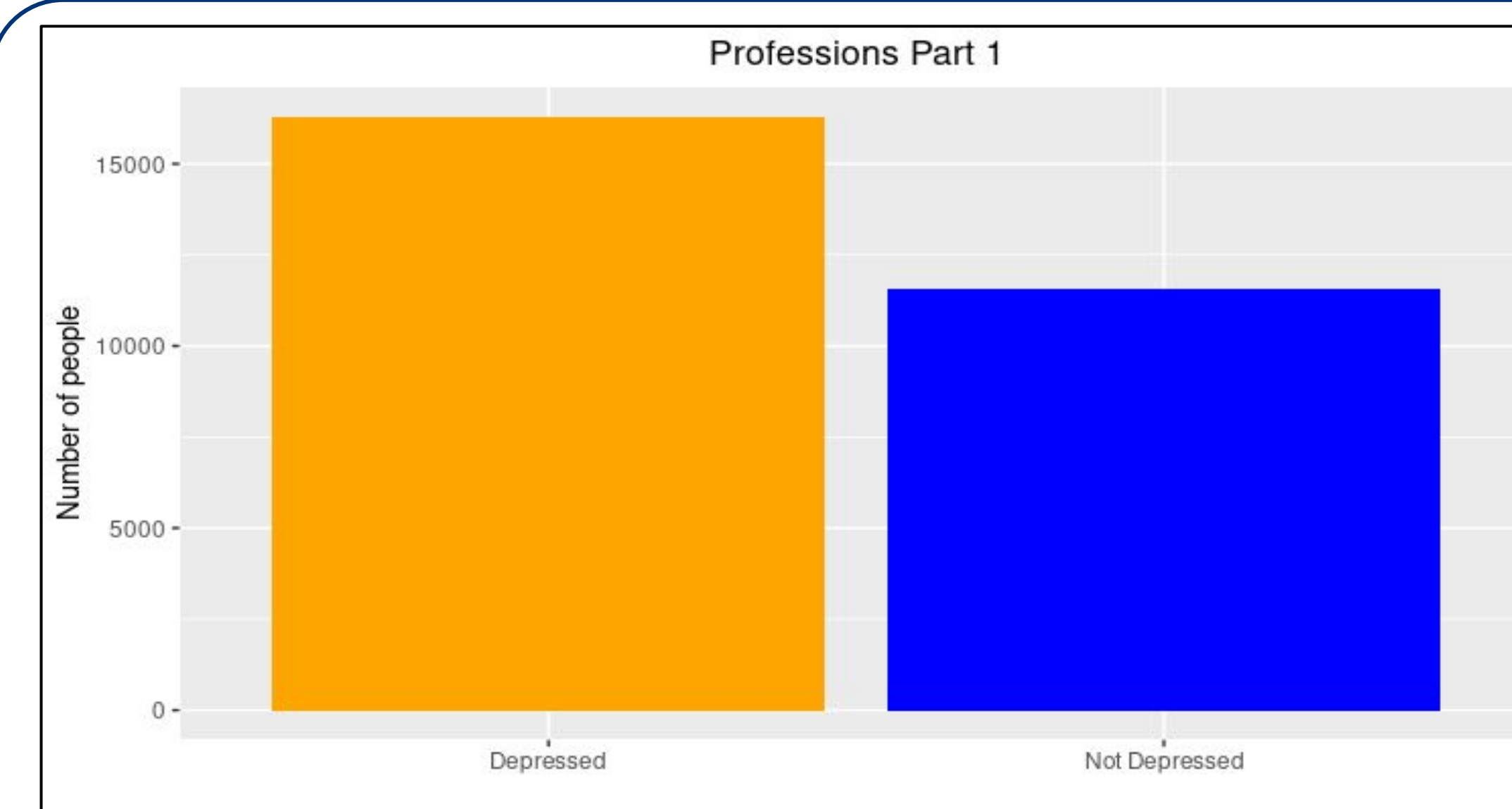

Academic Pressure and Suicidal Thoughts

This graph shows that the people who experienced higher academic pressure were more prone to having suicidal thoughts. The median line overlapping the edge of the magenta box indicates that 3 was the most chosen number in both categories.
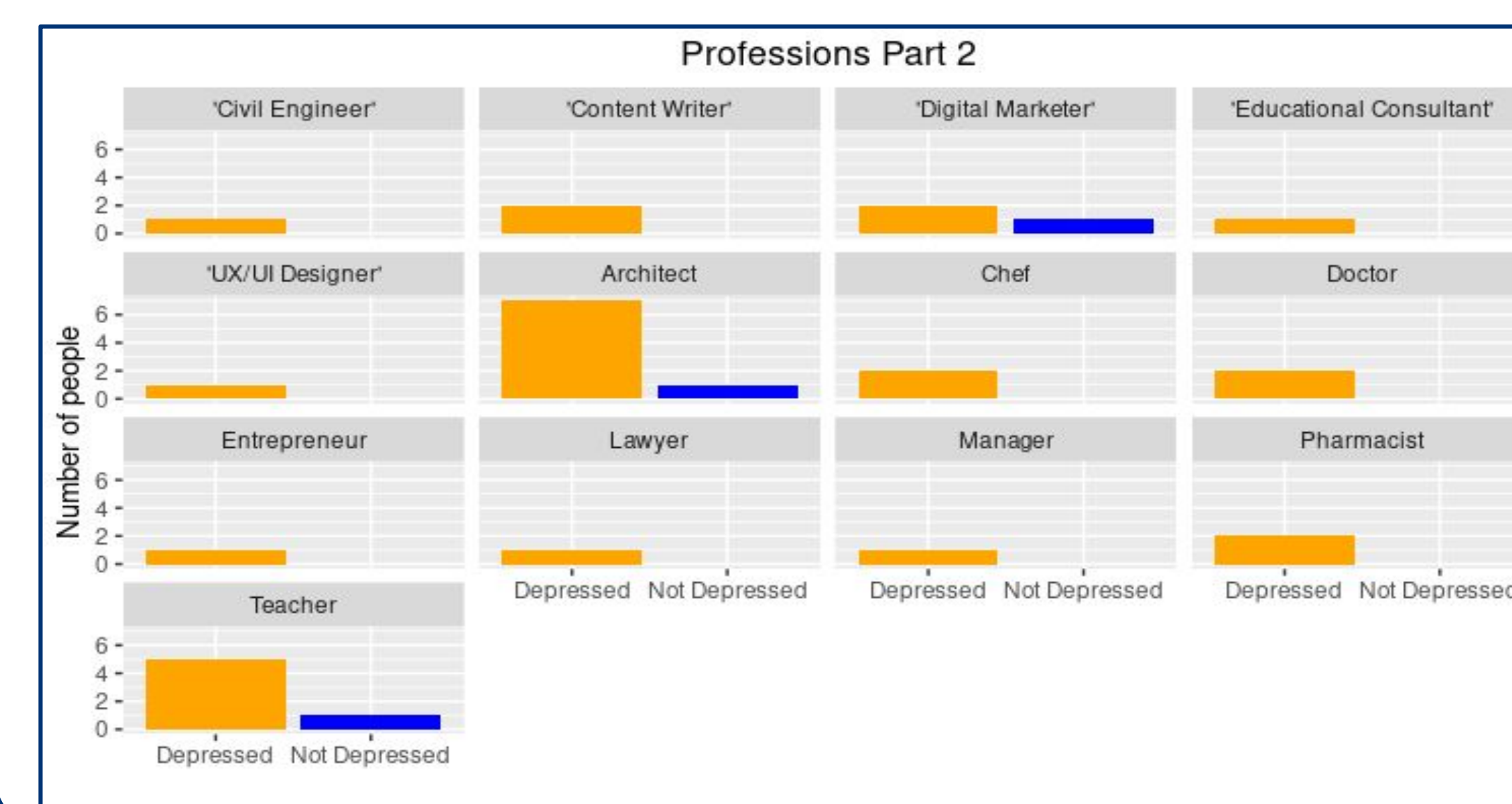
Conclusion

Main factors linked to higher depression rates are:
- Academic pressure
- Family history of depression
- Poor dietary habits
- Certain job types

Some factors like gender and sleep duration did not show a strong correlation with depression.

Future Questions:
- Is there any improvement that could be made in the workspace for the professions in which all participants reported being depressed?
- Why are younger people experiencing more depression compared to older people?

References

1. Student Depression Dataset | Kaggle :
   https://www.kaggle.com/datasets/adilshamim8/student-depression-dataset

Acknowledgments