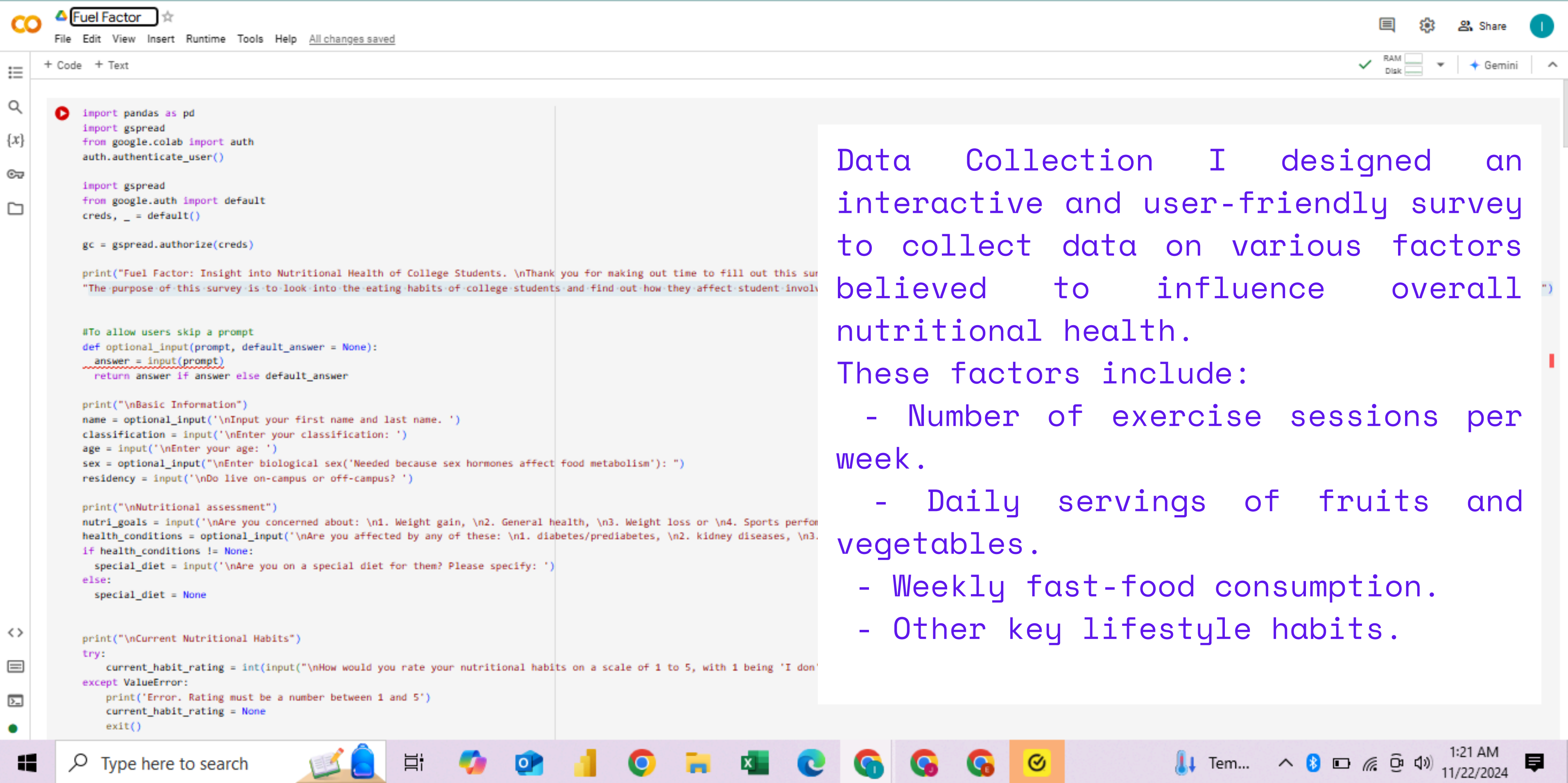# CSCI 100:
FUEL FACTOR PROJECT

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01 - Introduction

The Fuel Factor Python Project is a simple project that investigates the nutritional health of college students, with Fisk University students being the primary contributors to data collection.

The purpose of this survey is to explore the eating habits of college students and analyze their effects on daily student performance, particularly in terms of energy levels and nutritional goals. By identifying trends in the data collected, the project provides insights into the feeding habits of students at Fisk University.

Fuel Factor

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```python
import pandas as pd
import gspread
from google.colab import auth
auth.authenticate_user()

import gspread
from google.auth import default
creds, _ = default()

gc = gspread.authorize(creds)

print("Fuel Factor: Insight into Nutritional Health of College Students. \nThank you for making out time to fill out this sur
"The purpose of this survey is to look into the eating habits of college students and find out how they affect student invol


#To allow users skip a prompt
def optional_input(prompt, default_answer = None):
  answer = input(prompt)
  return answer if answer else default_answer

print("\nBasic Information")
name = optional_input('\nInput your first name and last name. ')
classification = input('\nEnter your classification: ')
age = input('\nEnter your age: ')
sex = optional_input("\nEnter biological sex('Needed because sex hormones affect food metabolism'): ")
residency = input('\nDo live on-campus or off-campus? ')

print("\nNutritional assessment")
nutri_goals = input('\nAre you concerned about: \n1. Weight gain, \n2. General health, \n3. Weight loss or \n4. Sports perfor
health_conditions = optional_input('\nAre you affected by any of these: \n1. diabetes/prediabetes, \n2. kidney diseases, \n3.
if health_conditions != None:
  special_diet = input('\nAre you on a special diet for them? Please specify: ')
else:
  special_diet = None

print("\nCurrent Nutritional Habits")
try:
  current_habit_rating = int(input("\nHow would you rate your nutritional habits on a scale of 1 to 5, with 1 being 'I don'
except ValueError:
  print('Error. Rating must be a number between 1 and 5')
  current_habit_rating = None
  exit()
```

Data Collection I designed an interactive and user-friendly survey to collect data on various factors believed to influence overall nutritional health.
These factors include:
  - Number of exercise sessions per week.
  - Daily servings of fruits and vegetables.
  - Weekly fast-food consumption.
  - Other key lifestyle habits.

03 - Data Visualization

Average of weekly excercise vs. energy levels
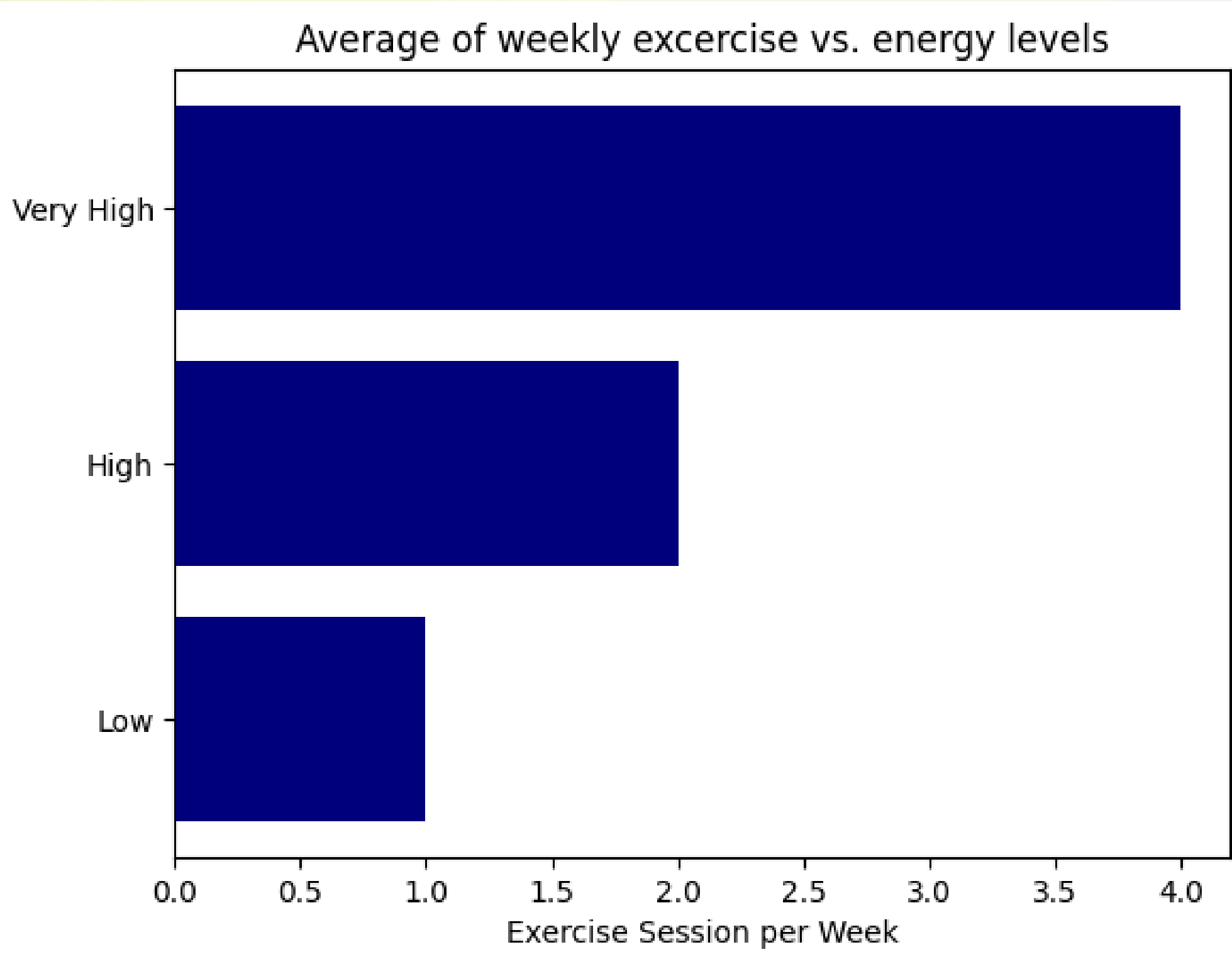
The analysis of the average number of times that Fisk Students exercise was seen to vary directly with the overall energy level.

Therefore, it can be inferred that encouraging students to exercise often by renovating the school's gym will help improve energy levels needed for better student performance

03 - Distribution of Student's Average Energy Levels

**Percentage of Students with Different Energy Levels**
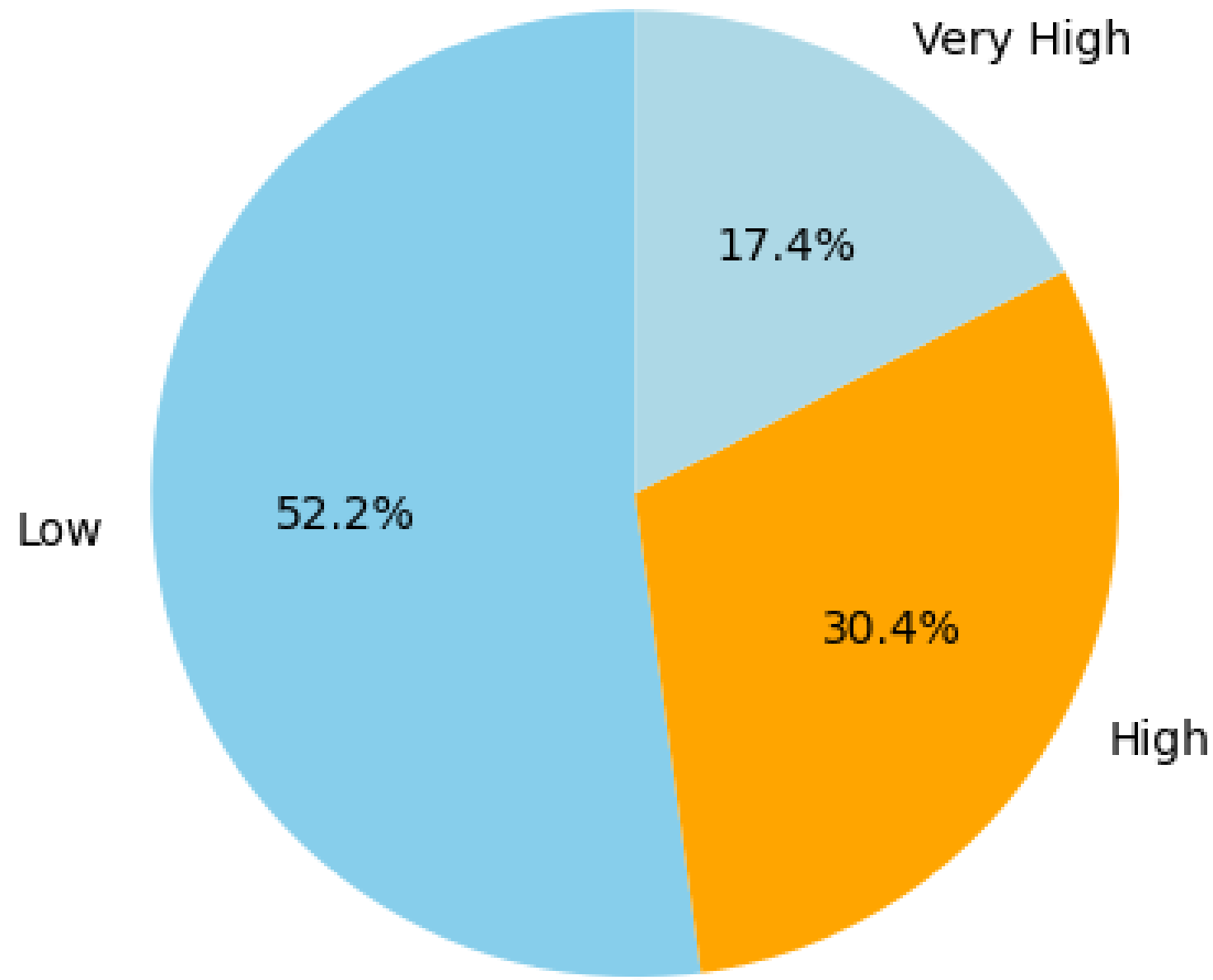
The percentage of students show to have low energy levels is more than those that have high and very high energy levels put together.
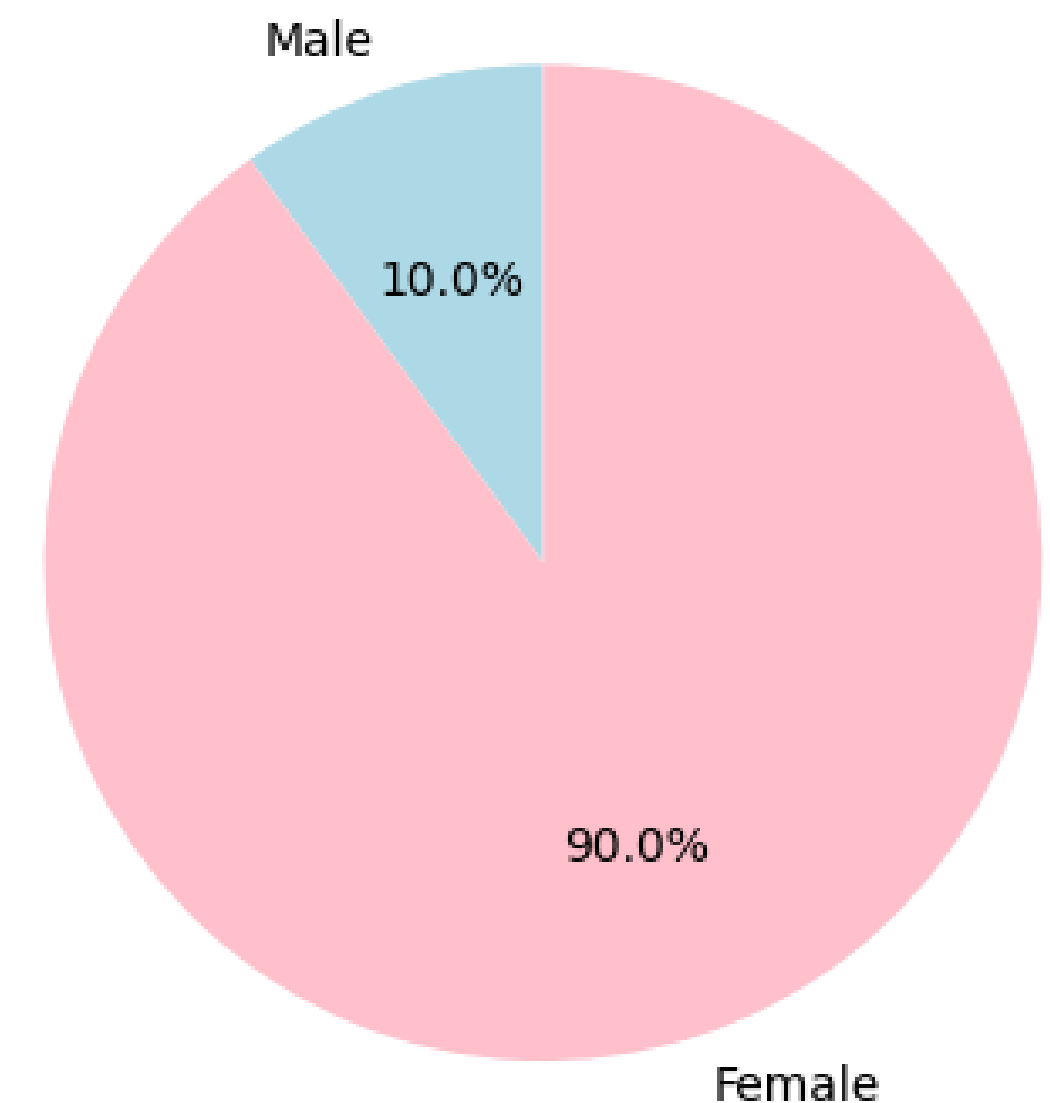
Efforts to improve energy levels such as encouraging frequent exercise and emphasizing extra-curricular activities would help improve student's overall energy level.

03 - Nutritional Goals vs. Gender

## Number of Boys and Girls that desire Sports Performance

Female
12.5%

87.5%

Male
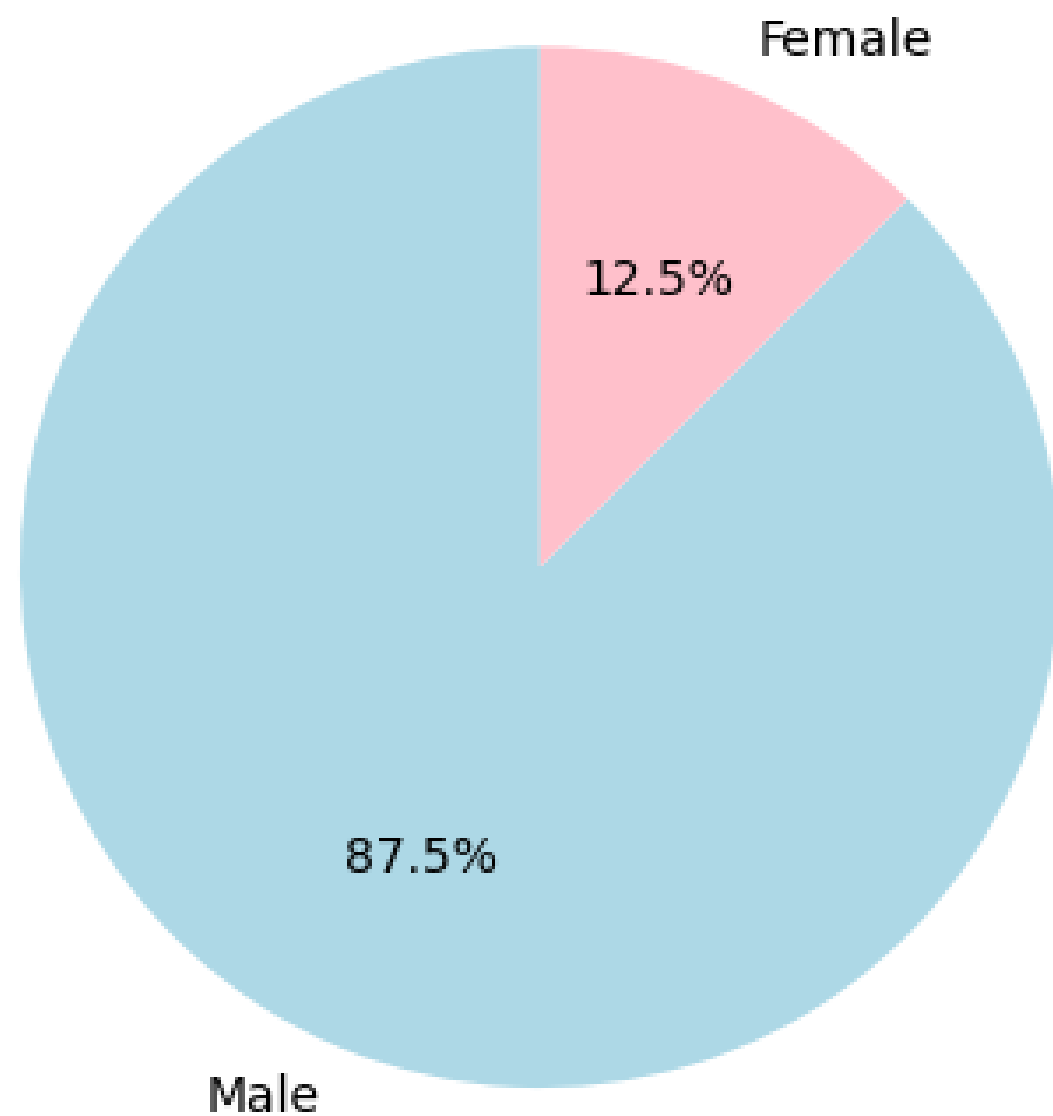
Number of Boys and Girls that desire Weight Loss

Male
10.0%

90.0%

Female

There was interesting trend noticed during analysis. Most girls who participated the survey indicated a desire to lose weight, while most boys opted for Sports performance.

03 - Dietician Service Awareness

Number of Students with Health Conditions that have met the Dietician.
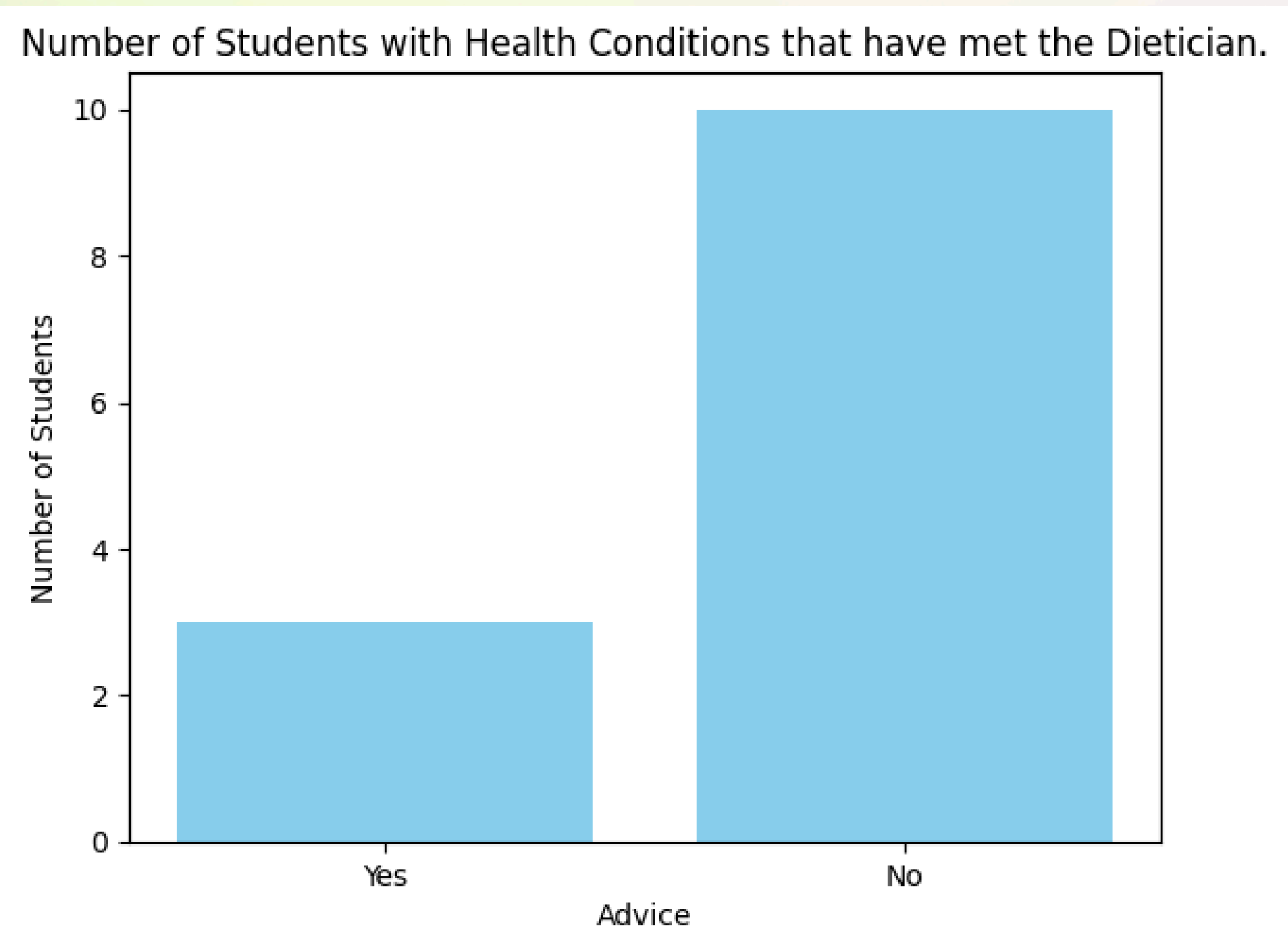
The data analysis results revealed that most students that have a health condition and require a special diet have not met the school's dietician to make necessary arrangements in the cafeteria.

This could have adverse effects on student's health if foods that trigger allergic reactions are mistakenly consumed.

Fisk University has a Dietician that takes appointments to discuss nutrition options, regardless of health condition status.

This service should be more publicized in the cafeteria for more students be aware and utilize it.

04 - Conclusions

Due to the limited number of survey responses, additional data was manually added to ensure sufficient sample size for meaningful analysis.
However, the data analysis was able to give insight to the relationship between different variables that affect the nutritional health of college students.

Thank You!