



SAINT JAMES
SCHOOL OF MEDICINE

ANGUILLA • ST. VINCENT



**CHANGES IN EATING HABITS AMONG MEDICAL STUDENTS BEFORE AND AFTER ENROLLING INTO
MEDICAL SCHOOL:A Cross Sectional Observational Survey Study**

BY

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OBJECTIVE

To analyse differences in eating habits among medical students at different academic levels before and after being enrolled into medical school.

Hypothesis

Students will record a change/difference in eating habits after enrolling into medical school.

INTRODUCTION

- Food is the main source of nutrients and energy for body maintenance, growth, physiological-physical-mental status and protection against infection, therefore food quality is important and healthy eating is one of the most substantial means of enhancing health.
- Medical students often experience a great amount of stress from a variety of sources; In addition to educational demands, meal preparation is counted too, and this can influence the student's eating habits which could in turn affect academic performance and overall well-being .
- Most of the difficulties students experience while adhering to healthy eating habits are due to lack of time and stressors, so instead, they skip meals, eat unhealthy snacks, dine out, and consume fast food.



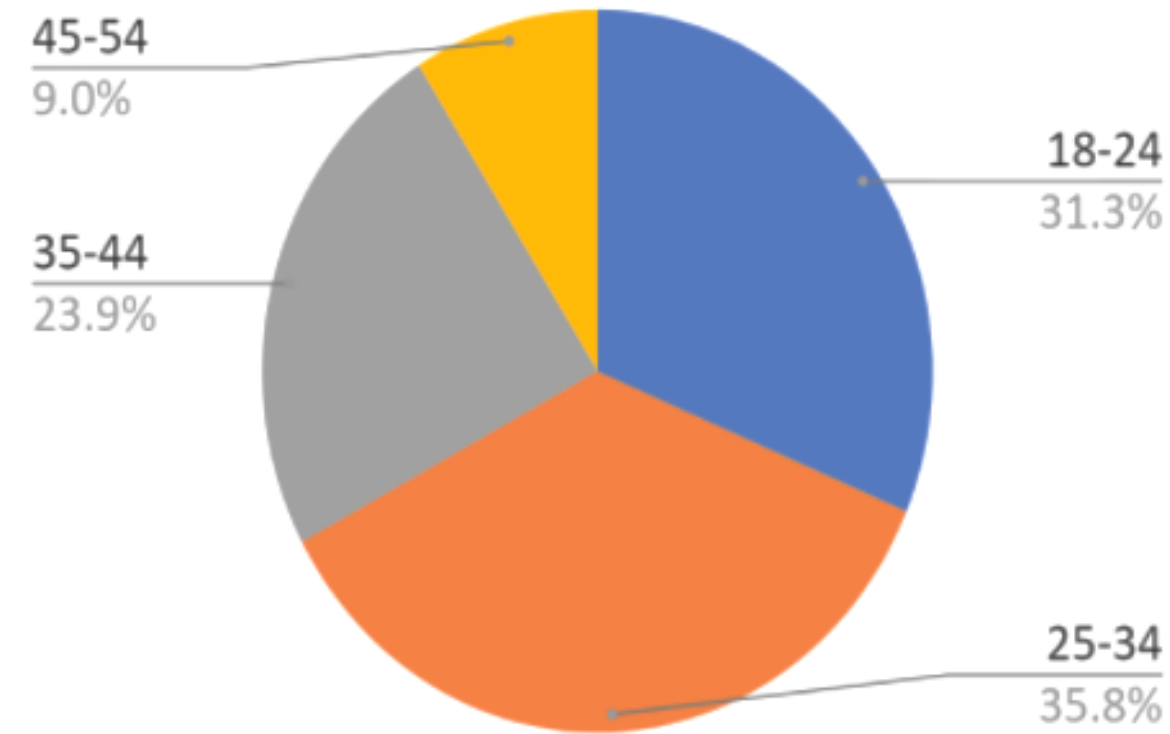
DESIGN

A cross-sectional observational study by means of a questionnaire.

Methods & Statistical studies

- A **cross-sectional observational** study was made available for all medical students in different levels in the United States of America, Canada and Caribbean universities via **Survey-Monkey services** and distributed via different social media platforms.
- The questionnaire used in this study consisted of two parts which included:
 - Socio demographic questions
 - Questions regarding eating habits before and after enrolment in medical school
- A total of **68 responses** were collected anonymously, and no personal identifiers were obtained. Data were analyzed to determine statistical significance using the **two paired t-tests for calculation of p-value ≤ 0.05** .
- Statistical significance before and after enrolment was analysed using the following domains:
 - Smoking and alcohol consumption
 - Sugary drinks
 - Number of meals per day and skipped meals
 - Time spent preparing food
 - How often they eat out and their food choices such as snacks, carbs or junk food



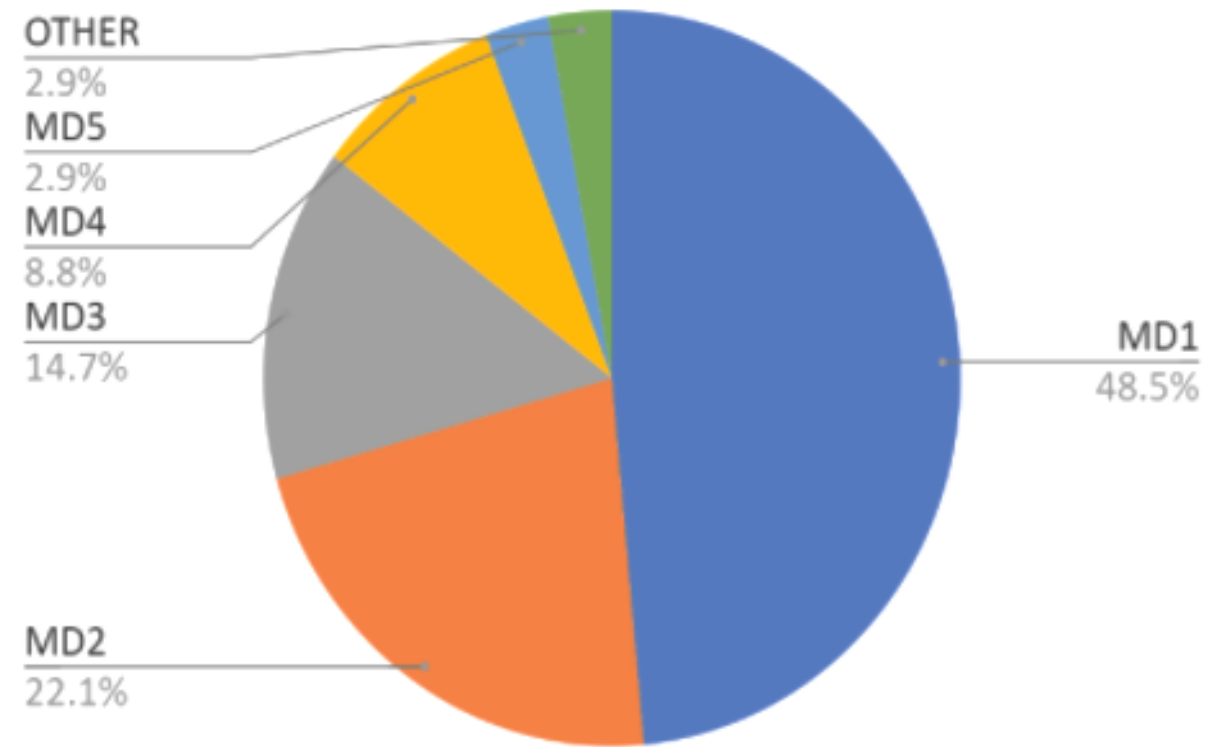


Distribution of participants according to age group.

68 Participants

Average age 24.6 years

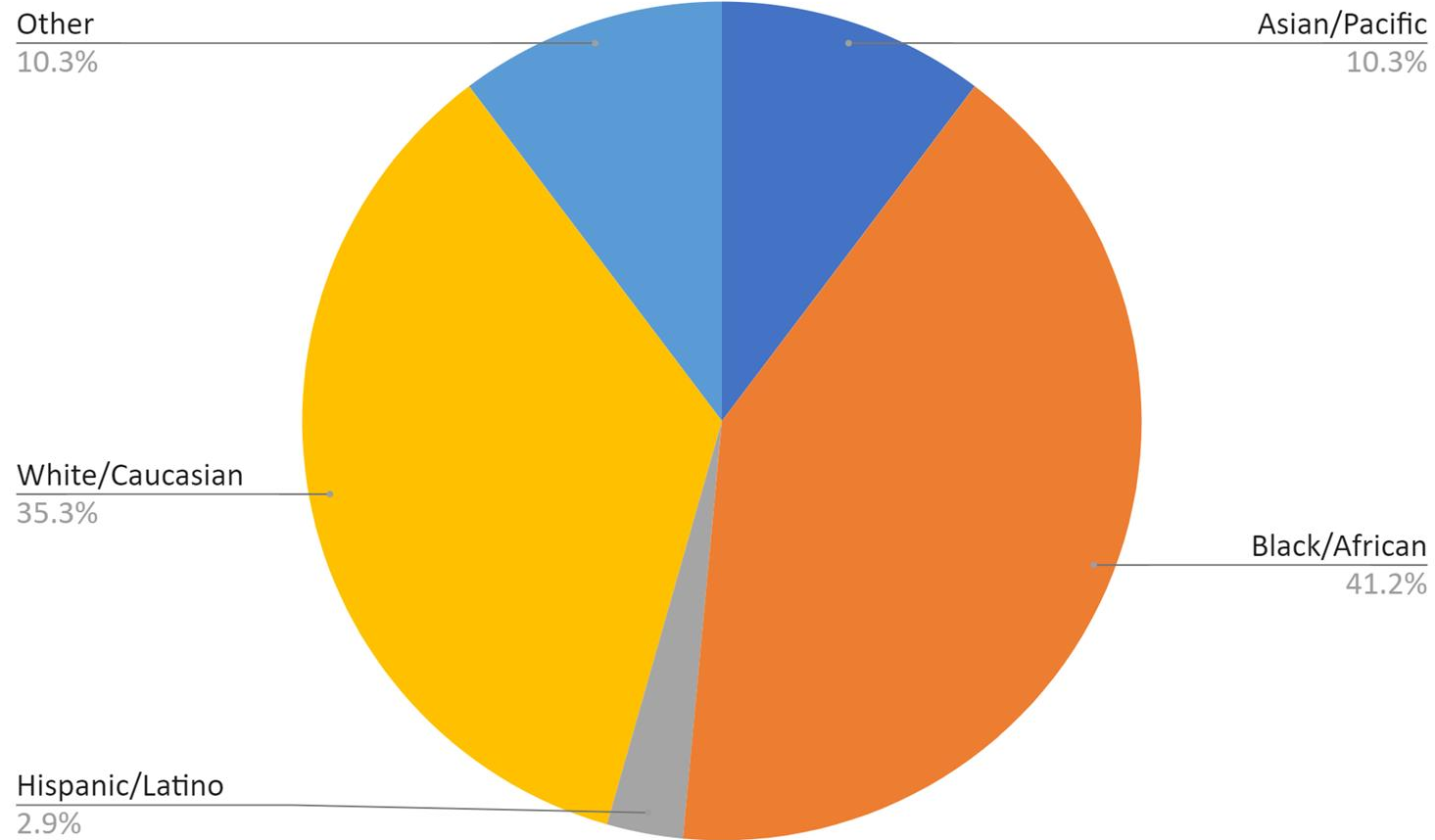
Mode age 25 - 34



Distribution of participants according to MD Level.

The majority of participants were in MD 1

DEMOGRAPHICS

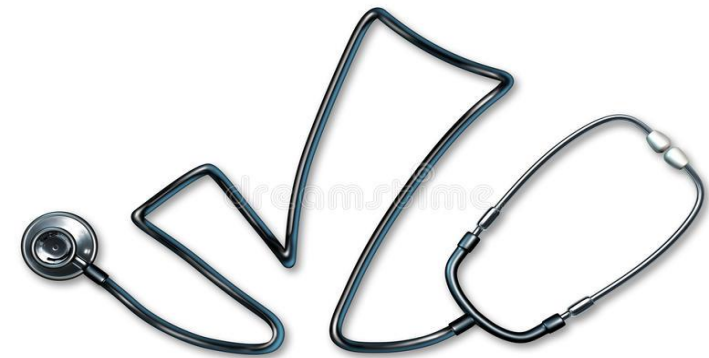


Distribution of participants according to ethnic group
Majority of participants identified as African American, followed by Caucasian

DEMOGRAPHICS

RESULTS

"Health Evaluation"



The result showed that most students changed their eating habits after starting medical school.

- Eating snacks or store bought foods were reported to be a common occurrence amongst students as **18.2% reported eating them often before** starting medical school while **25.8% reported eating them often after** starting medical school.

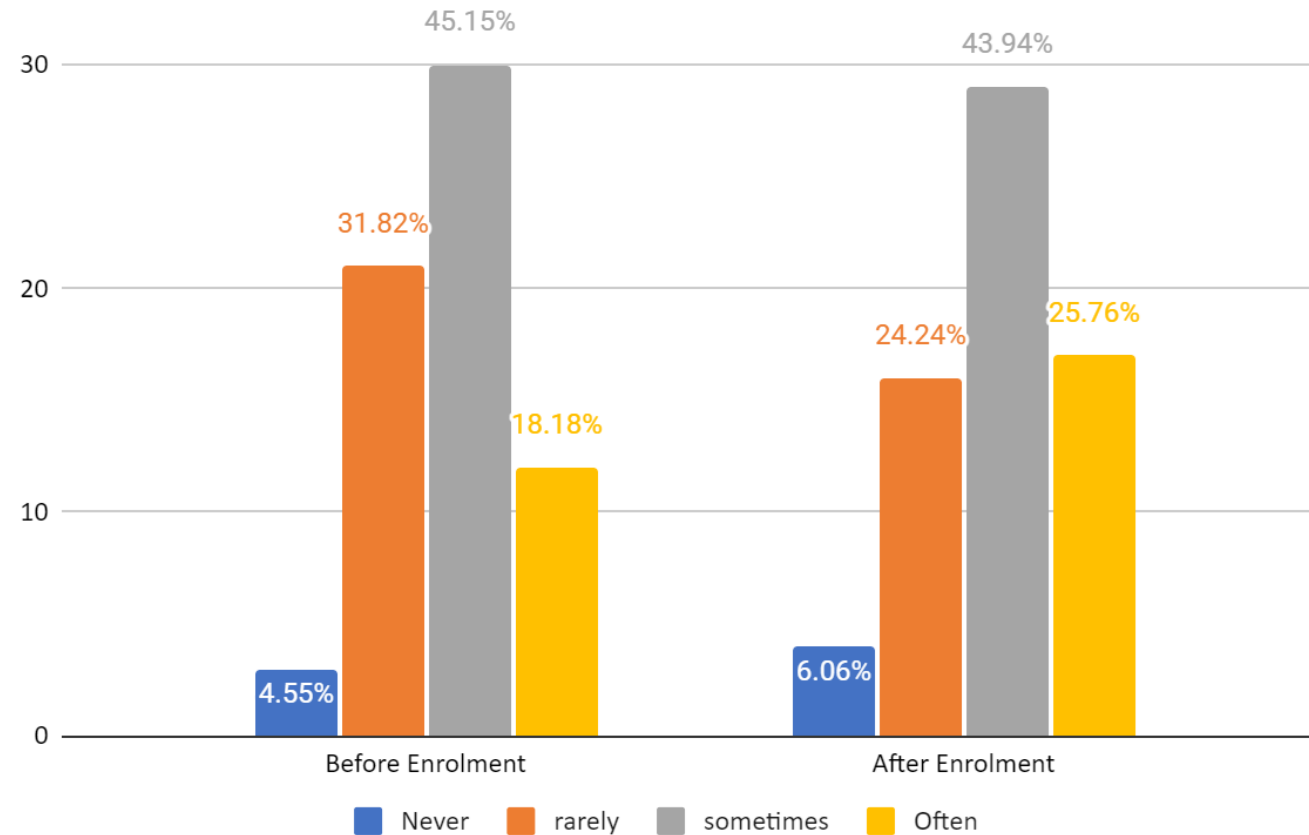
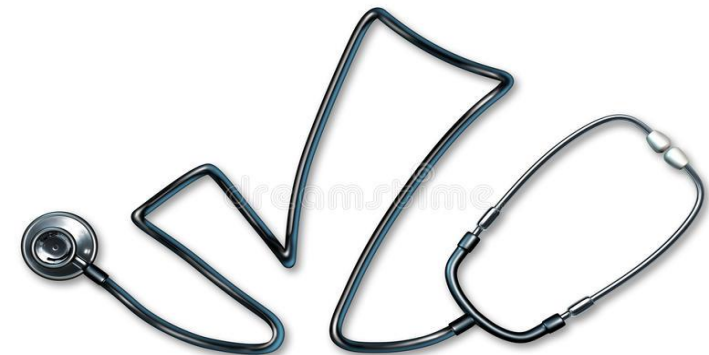


Figure 1.7 Response to Question 15 "How often do you eat store bought foods (e.g., cake, donuts, chips, popcorn etc.) with a p-value of 0.05

RESULTS

"Health Evaluation"



- More students rated their **health** before medical school to be **very good** but after enrolment more students rated their health as **good** and **3%** of students even rated their health as poor compared

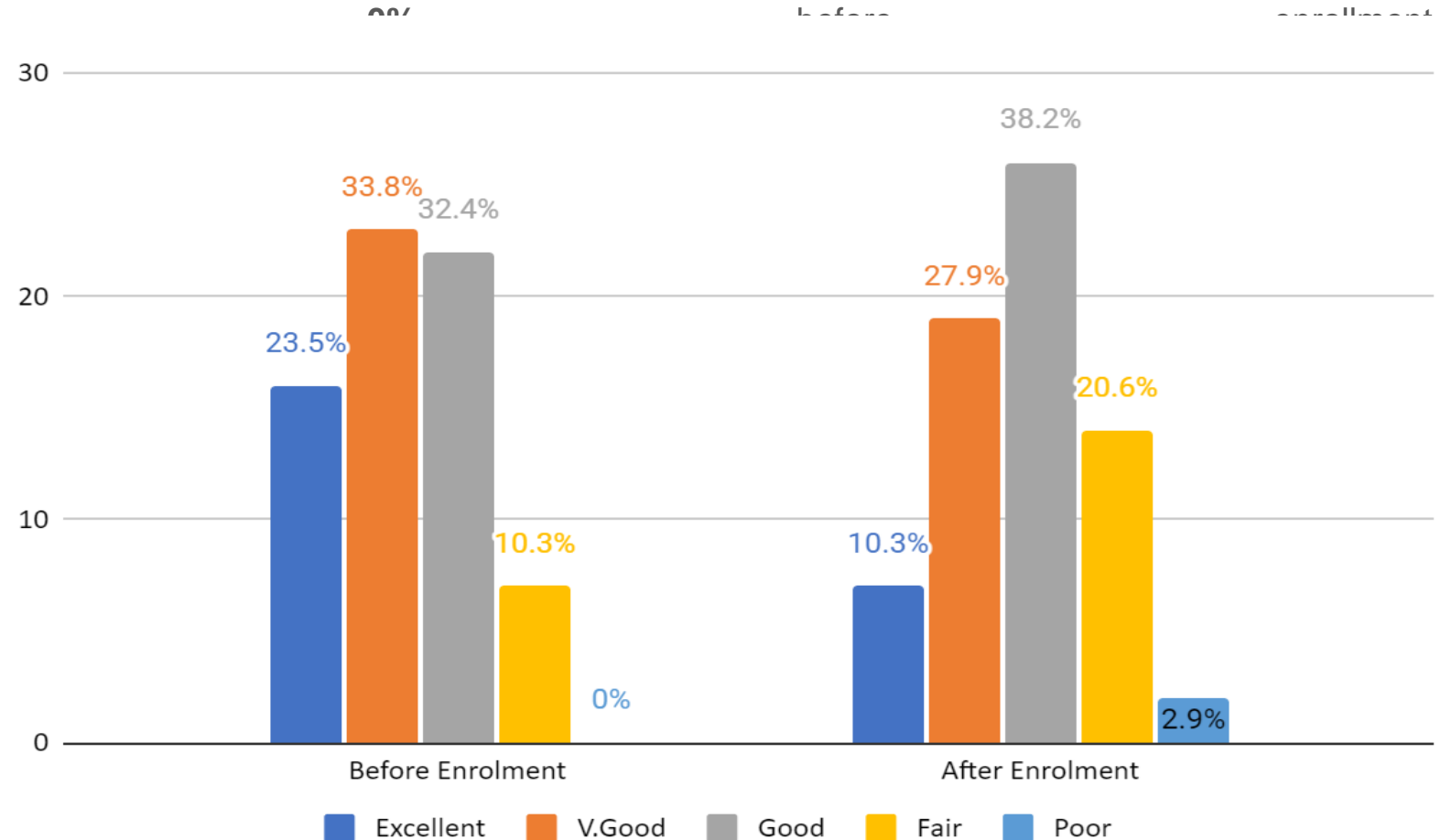


Figure 1.2 Response to Question #6 "How would you describe your own health in general?" p-value is 0.044.

RESULTS

“Balanced Diet”

Balance Diet &
Healthy Living



- The rate at which students ate a balanced diet reduced from often eating a balanced diet to eating it sometimes. Notably, students **recorded skipping meals more often after starting medical school.**
- The P value obtained from the question concerning balanced diet was ($P=0.02$)

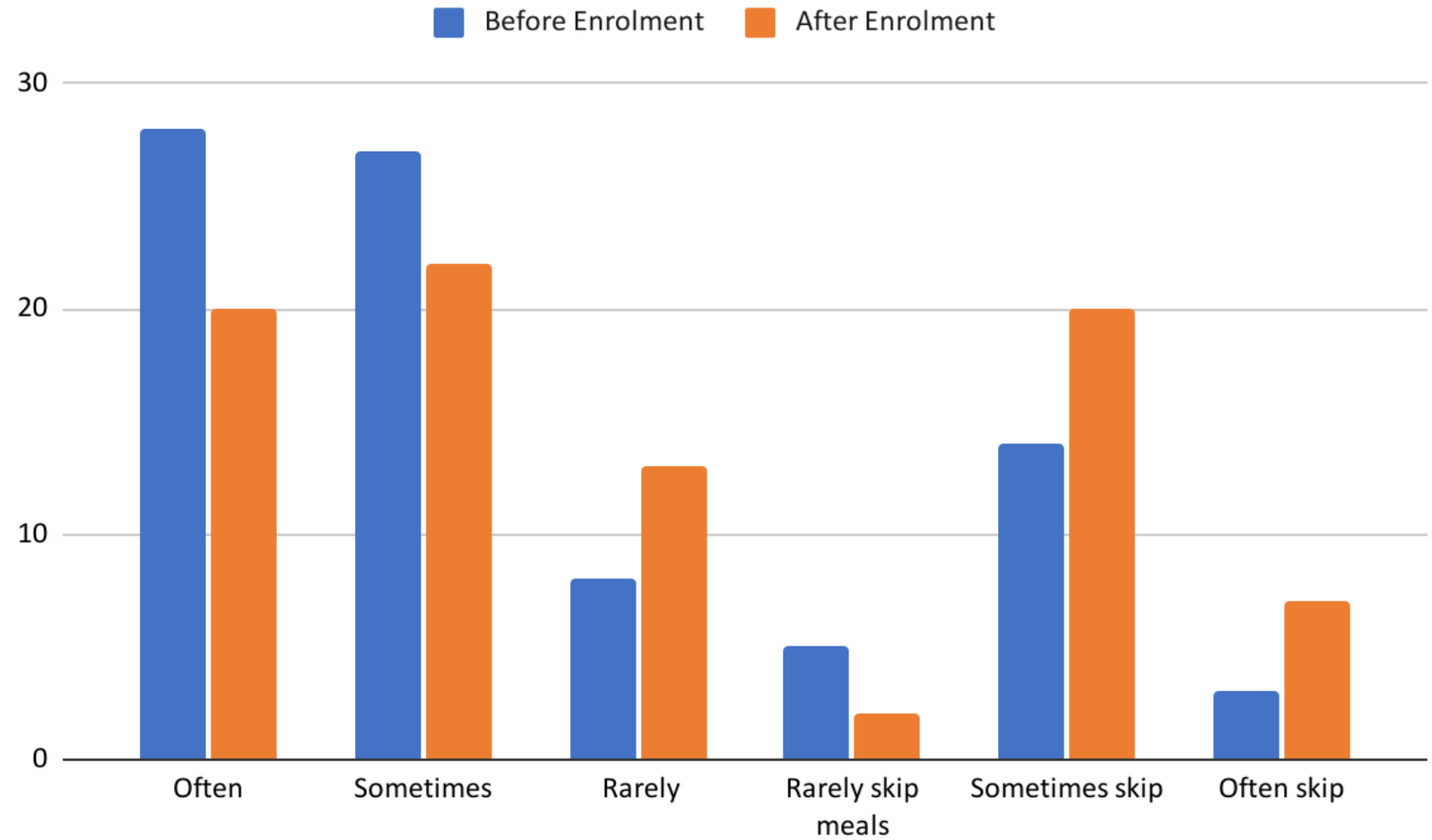
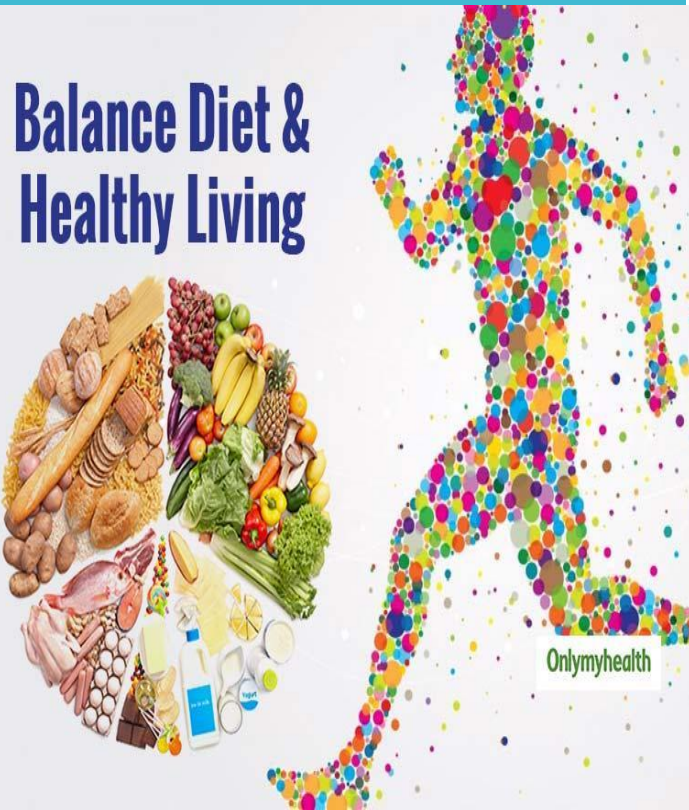


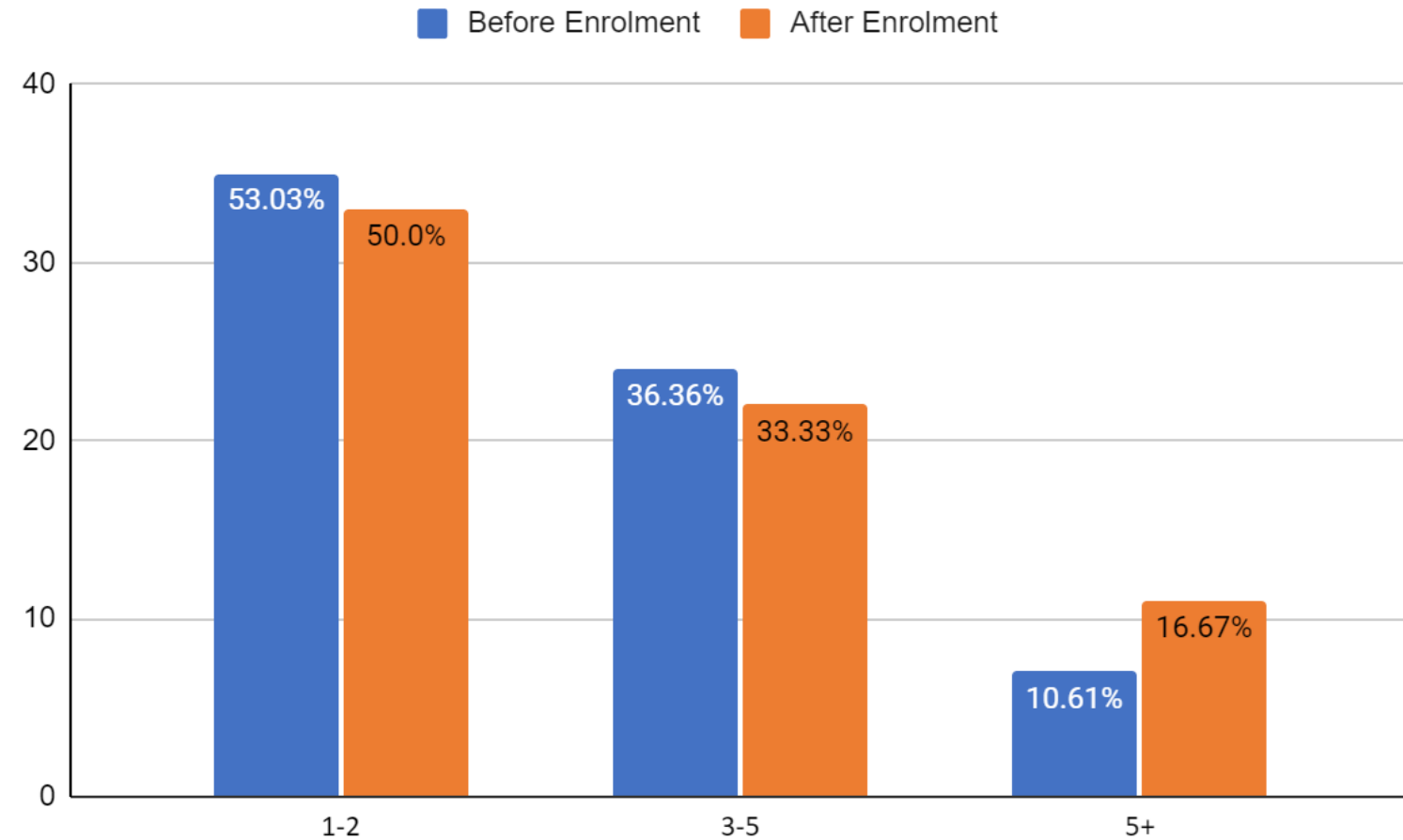
Figure 1.3 Response to Question #9 “Do you consider yourself to eat a balanced diet?”, p-value is 0.02.

RESULTS

“Balanced Diet”



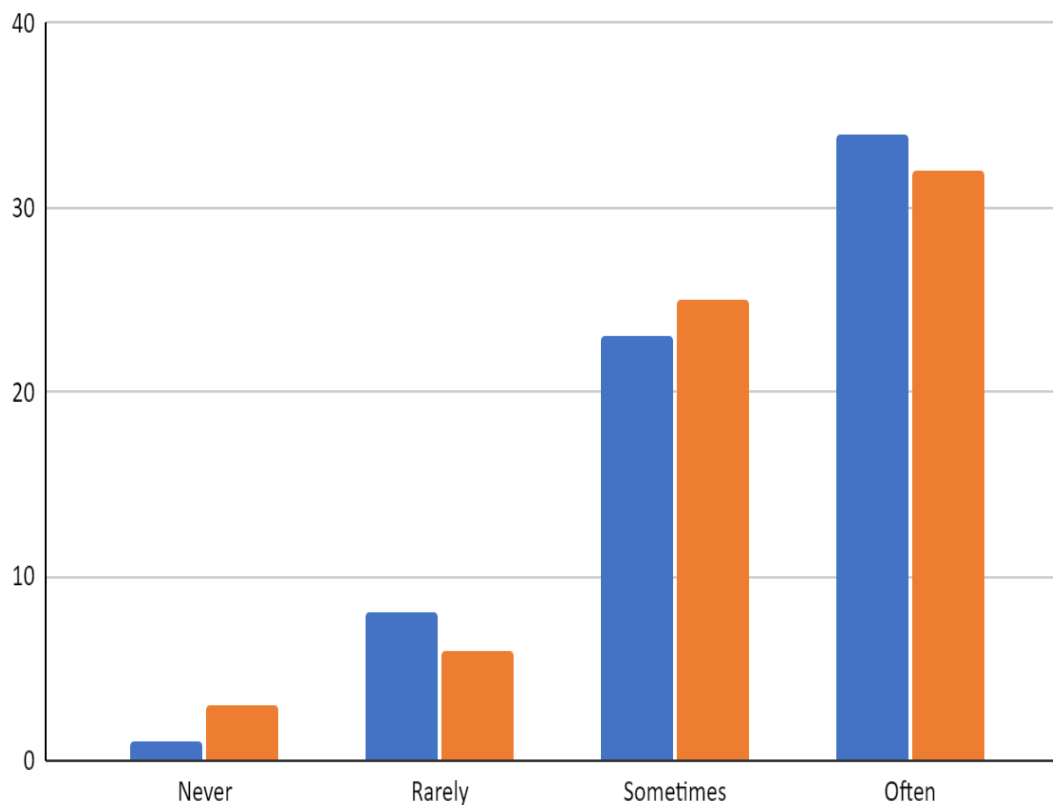
- There was an increase in the amount of carbohydrates consumed by students in a day, 10.6% recorded eating **carbohydrates** over five times a day but 16.7% recorded eating carbohydrates more than 5 times in a day after enrolment. However the change is **not significant**.



RESULTS

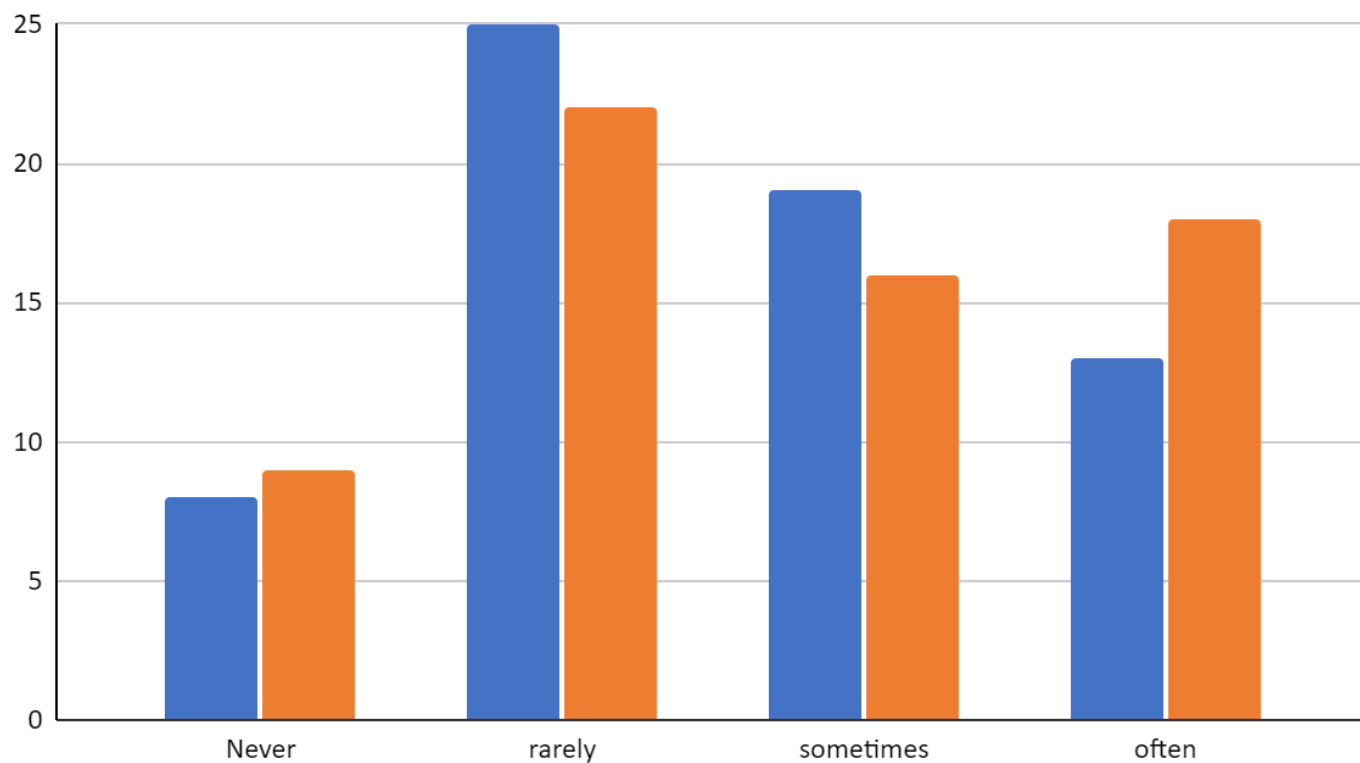
“Balanced Diet”

Before Enrolment After Enrolment



Response to Question #16 “How often do you eat fruit any raw vegetables/salads?” p-value is 0.045

Before Enrolment After Enrolment



Response to Question #6 “How often do you drink sugar-sweetened beverages? (e.g. soda, sports drinks, fruit punch)” p-value is 0.054

RESULTS

- 45% of students reported eating out once a week before enrollment however a significant amount of students (30%) reported eating out once a month and another 30% said they ate out several times a week $P = 0.05$.

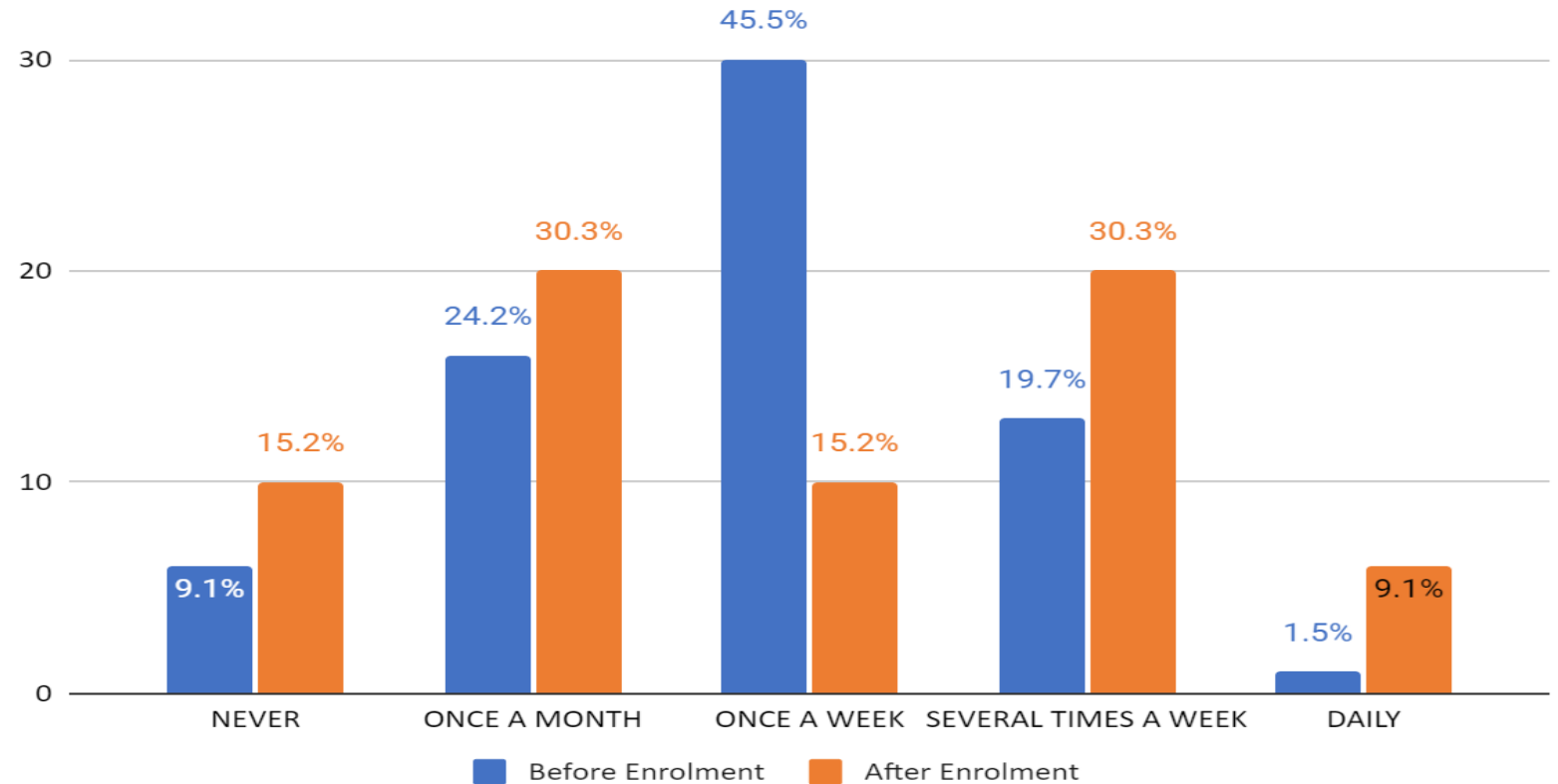


Figure 1.5 Response to Question 11 “How often do you eat out? (e.g. restaurants, food trucks, cafeteria, fast foods, food delivery)” with a p-value of 0.05.

RESULTS



- A major change in habits noticed was how often students drank caffeinated beverages,
- There was a **21.2%** reported increase in the number of times students drank caffeinated drinks in a week. We believe that this might be due to an **increase in school workload, expectations, students studying more, and also perhaps sleeping less.**

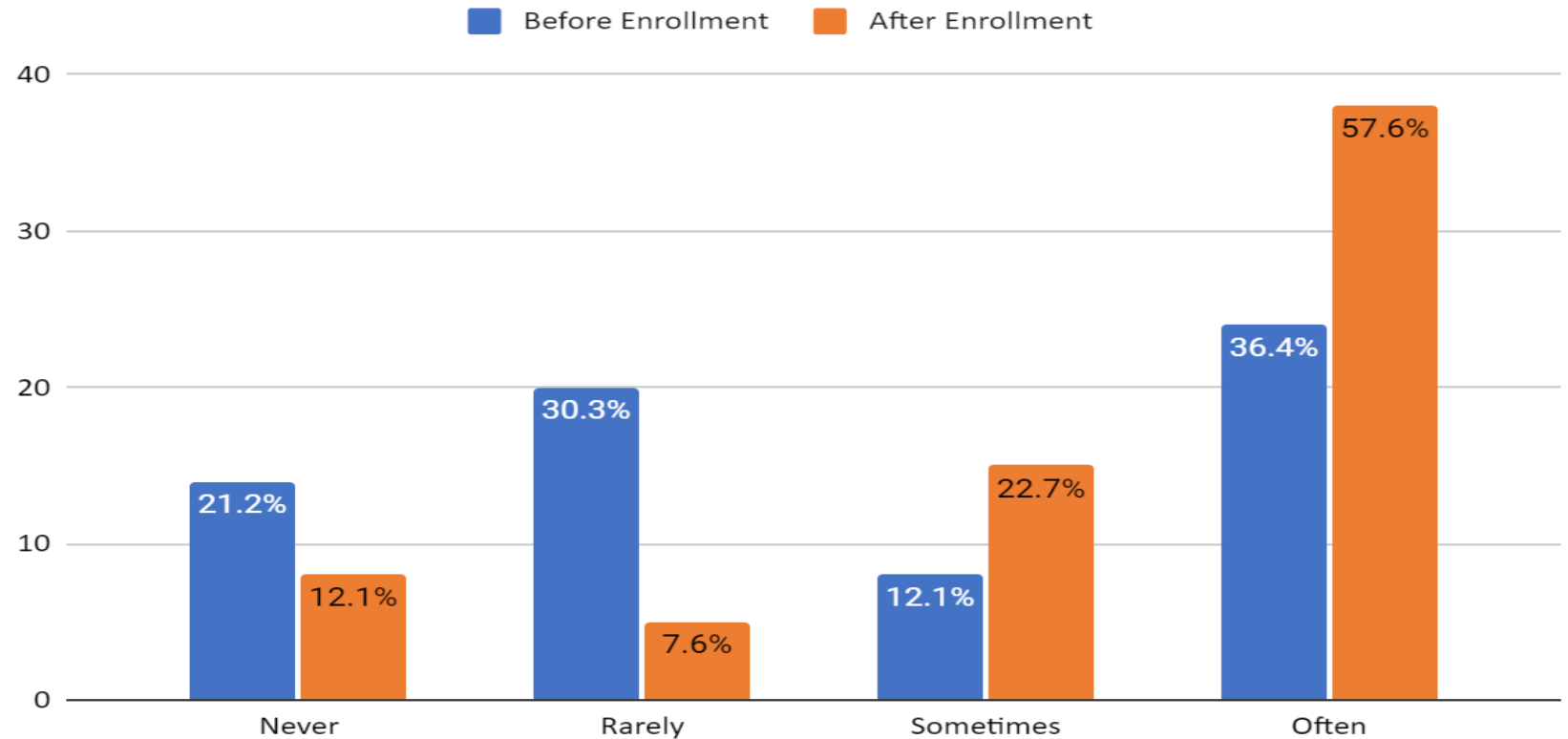


Figure 1.6 Response to Question 18 “How much caffeine do you drink in a week? (includes ALL caffeinated drinks)” with a p-value of 0.025.

RESULTS

- 39.4% of students reported cooking several times a week before enrolment while only a significantly lower portion of students 28.8% reported cooking several times a week.

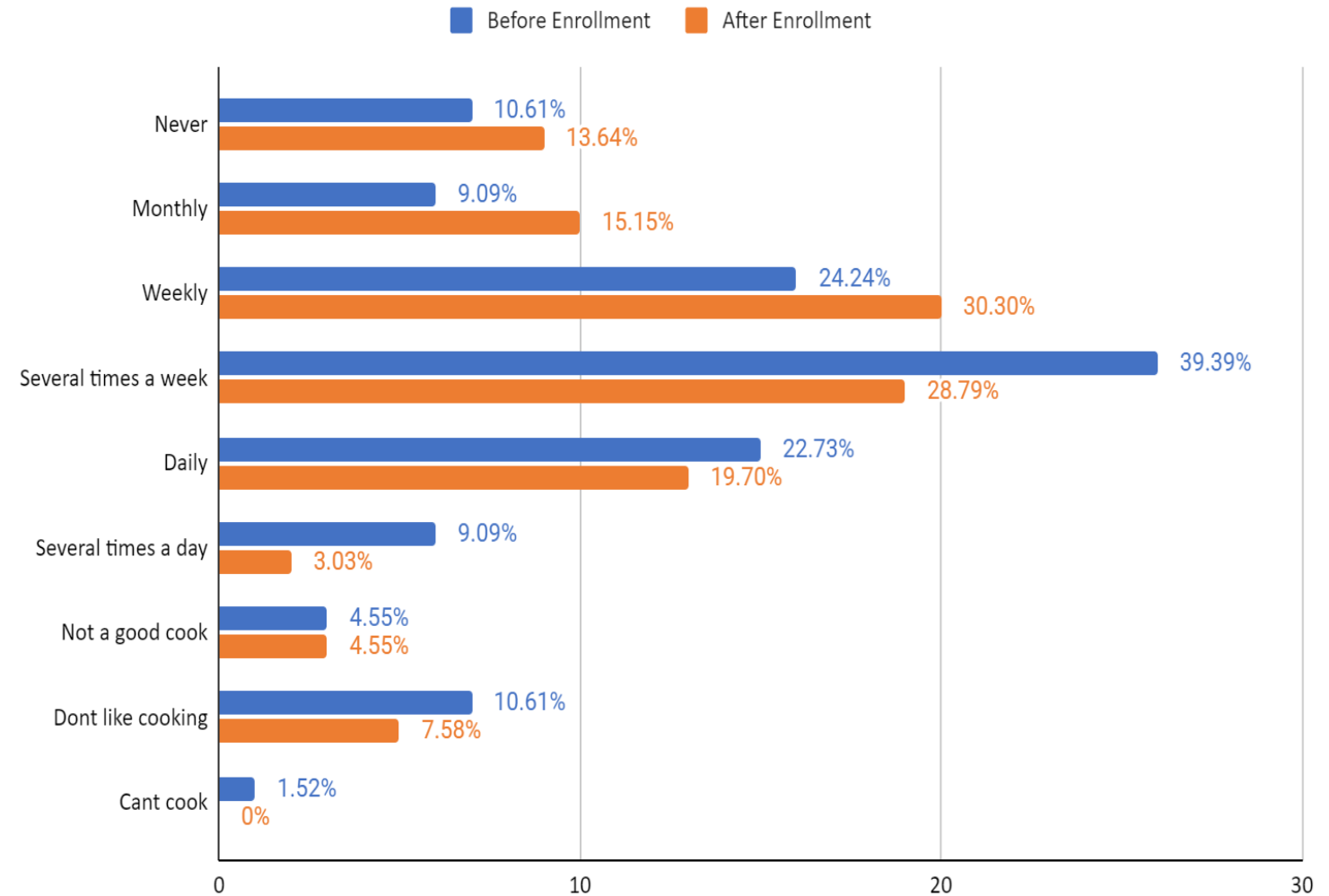


Figure 1.4 Response to Question 10 “How often do you cook?” with a p-value of 0.04.



DISCUSSION

- This survey was done during the **covid 19 pandemic**, most students were using the online platform for schooling and stayed at home.
- Depending on where home was to them, the divergent guidelines in their country or state affected their ability to go out to restaurants, convenience stores and other readily available facilities. This meant that some of their habits did not change because there **was availability** of resources to an extent such as **parents cooking for them, their favorite restaurant in town, accessibility to cigarettes**, etc.
- Due to these conditions, their stress level might have not been at an all time high but at moderate to low level due to having the comfort of their homes.
- The result of the study showed that **most students made unhealthy changes to their eating habits after starting medical school** and this as a result to stressful environment.



DISCUSSION

- The rate at which students ate a balanced diet reduced from often eating a balanced diet to eating a balanced diet sometimes, and students also recorded **skipping meals more often**.
- No changes in smoking was noticed among medical students, this can be attributed to learning about the disease caused by smoking.
- Students did not change their label reading habits because they probably needed to read labels due to health conditions such as **Celiac disease**.
- As mentioned in the result, another major change in habits was how often students drank caffeinated beverages, there was a **21.2% increase** in the number of times students drank caffeinated drinks in a week. We believe that this might be due to an increase in school workload, expectations, and students studying more.

CONCLUSION



- Medical students value lifestyle medical knowledge and try to put their knowledge into use, however, putting this knowledge into practice is hard when faced with a stressful situation.
- Our study recorded that a lot of changes are made in Students' overall lifestyle and that includes changes in their eating habits which **predominantly becomes unhealthy after starting medical school.**
- In order to help students adapt to healthy habits while in medical school we think that medical schools should encourage healthy eating by making healthy foods accessible through **cafeterias**, healthy choices in **vending machines**, reduce smoking areas or make them far from the school entrance, and a **market** close by to **encourage cooking** with **fresh vegetables.**
- We hope that medical schools can help encourage good health behaviours of future physicians to improve the health of student doctors which in turn will help these physicians in their future roles as physicians who **promote good health choices.**

LIMITATIONS



- We had a satisfactory response rate, however, a larger sample size might have shown more changes. Therefore, another study with a bigger sample size is recommended.
- The study relied on **self reported** behavioral or habit change, therefore, **Recall bias and response bias** could not be ruled out completely.
- The effects that the pandemic had on each student while they studied from home could explain the low P value changes. Therefore, a study should be conducted after the pandemic.

ACKNOWLEDGMENTS

- This presentation is based on a research conducted by **MD4 students** at Saint James School of Medicine in Saint Vincent and the Grenadines. We would like to extend our utmost gratitude to our Mentor, **Dr. Victoria Minakova** for her support in completing this research .



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