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### Analysis of the Relationship Between Exercise, Diet, and Motivation

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## Abstract

- Studied the relationship between exercise, motivation and diet, and their association with one another
- Research was further specified by studying the relationship between frequent exercise (4x per week or more) and the motivation to consume a nutrient-rich diet.
- Results supported the hypothesis that those who exercise frequently are more motivated to eat a healthier diet overall and have increased motivation to accomplish goals and enforce change in one's life

## Introduction

- A longer duration of exercise provides a motive for restraining dietary preferences in the Snacking and Western patterns (Joo, 2019).
- Beneficial effects of physical activity on mood:
  - 1) distraction
  - 2) self-efficacy
  - 3) social interaction
 (Peluso, 2005)
- When individuals choose a snack before exercise, 73.7% of individuals chose a healthy snack (apple), 12.4% choose to abstain from a snack, and 13.9% choose a unhealthy snack (brownie)
  - After exercise → 54.6% healthy (20% decrease), 25.2% abstained, 20.2% unhealthy (Gustafson, 2018)

## Acknowledgement

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## Methods

<b>Demographics:</b>	<b>Males and females; 18+ older</b> 21% Males, 79% Females
<b>Number of Participants</b>	<b>134</b>
<b>Survey</b>	<b>A questionnaire to study the effect of diet, exercise frequency, and motivation</b>
<b>Deliverence</b>	<b>Word of mouth, social media and group chats</b>

## Results

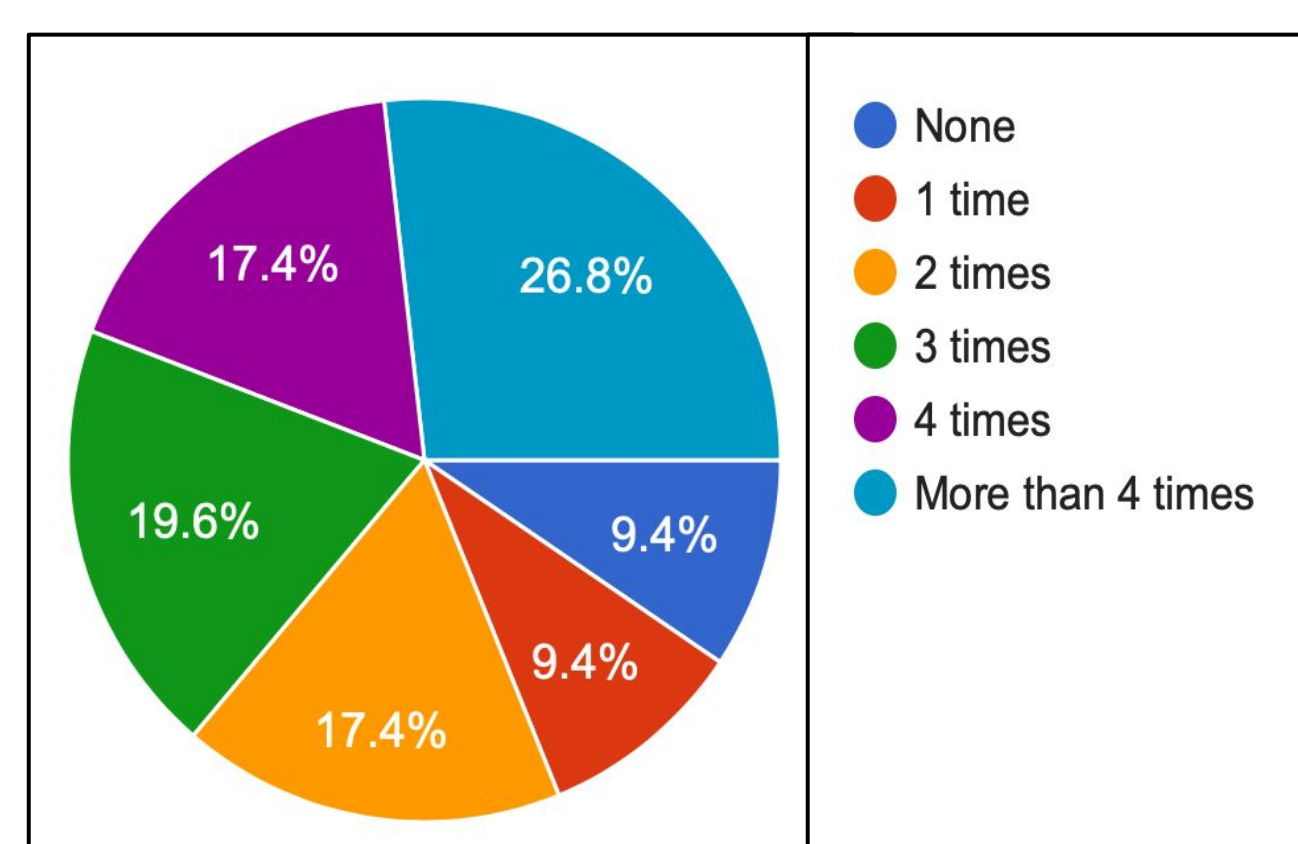


Figure 1. Reports of frequency of exercise for at least 20 minutes a day per week. 44.2% report exercise 4 or more times and 55.8% reported less than 4 times a week.

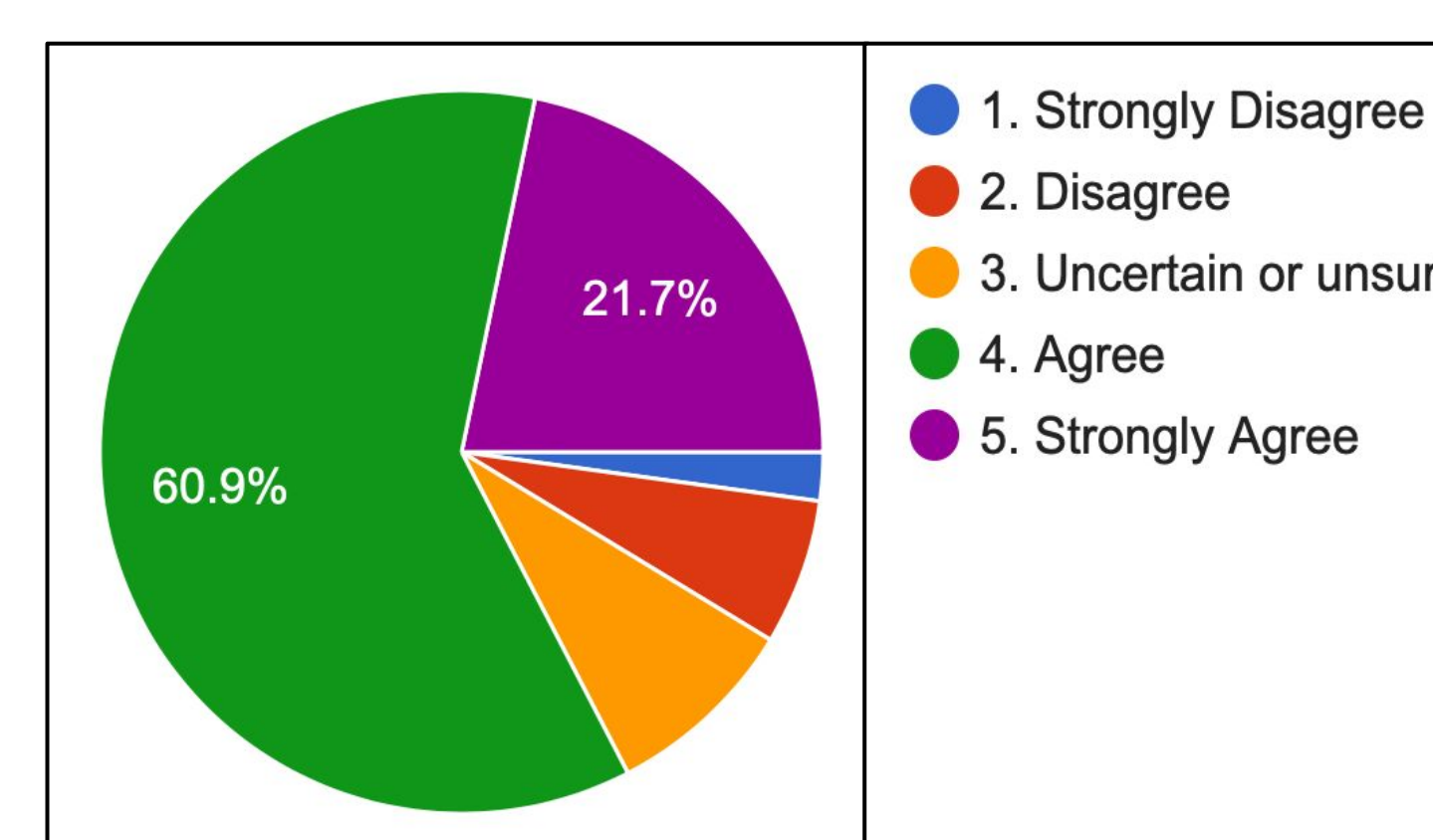


Figure 2. Reports of being able to accomplish self set goals. 82.6% report accomplishing their goals and 8.7% report not achieving them. 8.7% report uncertainty.

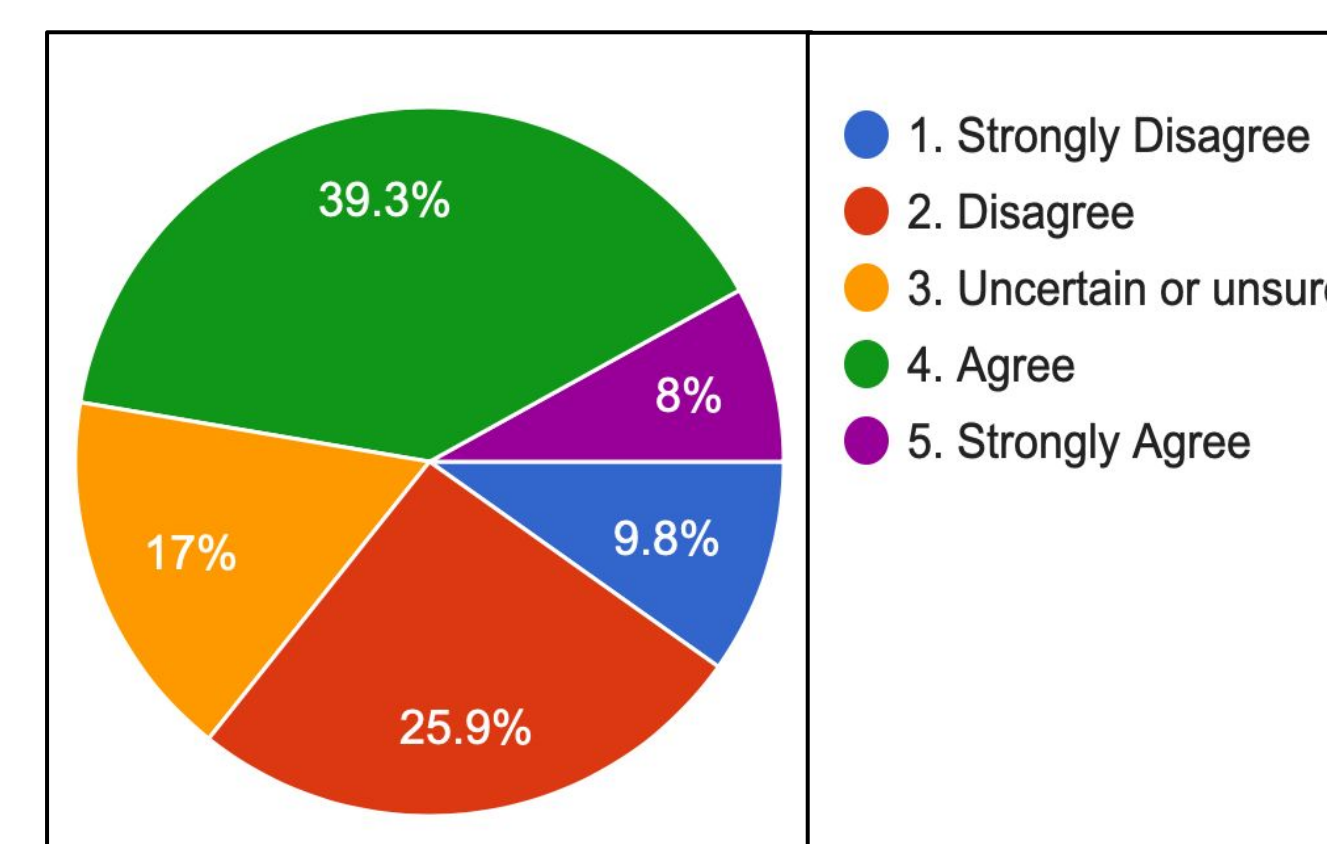


Figure 3. Reports individual's feeling of consuming a balanced diet. 49.1% report a feeling of maintaining a balanced and 33.9% report feeling of a unbalanced diet. 17% report uncertainty.

<b>Diet and Motivation</b>	Consuming fruits and vegetables was positively correlated with one's planning on how to accomplish goals. $r = .273^{**}$
<b>Diet and Exercise</b>	Exercising for at least 20 minutes was positively correlated with consumption of whole grain products. $r = .291^{**}$
<b>Exercise and Motivation</b>	Exercising for at least 20 minutes was positively correlated with accomplishing goals one sets for themselves. $r = 0.228^*$

\*\* indicates a statistical significance of 0.01 in our data

## Discussion

Our findings include...

- Those who exercised for  $\geq 20$  minutes a day for 4 times a week were more likely to consume whole grain products, fruits, and flaxseed products regularly
- Those who exercised for  $\geq 20$  minutes a day for 4 times a week were more likely to keep track of and accomplish goals they set for themselves
- Exercise is also correlated with one's willpower and their ability to enforce change in their own life.

What does this mean?

- The amount of exercise had many significant correlations with types of foods consumed, meaning that exercise has a largely have a positive impact on people eating habits
  - All of the significant correlations between balanced food and exercise were positive
  - No significant finding were found in relation to caffeine consumption or intake of sugary foods in relation to exercise

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