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The Effects of Simple and Complex Carbohydrates on Mood

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HWS 332
CURE



REFERENCES

Abstract

- There are two kinds of carbohydrates, simple and complex and they both affect mood differently.
- To test how they affect mood we administered a survey that asked about food consumption and mood. Pearson Correlation Coefficient was used to analyze the data.
- Our results suggest an association between positive moods and higher consumption of complex carbohydrates, in addition to a limited consumption of simple carbohydrates.

Introduction

- Depression and anxiety accounts for 7.4% of all healthy years of life lost and 4.4% of the general population suffer from these depressive orders, and 3.6% from anxiety disorders (Ebrahimpour-Koujan et al., 2019).
- Diets play an important role in mental health. With various diets that vary its level of carbohydrates, there is an affect on one's mood and stress levels. A good healthy and balanced diet will help reduce risk of depression (Firth et al., 2020).
- Previous studies on the effect of carbohydrates on mental health do not have conclusive data as results vary with different methods used. More research is needed to draw a conclusive relationship (Saghafian et al., 2018).
- As there have been various diets that alter the amount of carbohydrates consumed, exploring the impact of consumption frequency of the different types of carbohydrates on mood and psychological disorders is imperative to improve and sustain mental wellbeing.
- Our hypothesis is that there is a negative correlation between the consumption of simple carbohydrates and mood.

Methods

Participants	Male and Female Adults, 18y+
# of Participants	251
Survey	A questionnaire to study the effect of the diet on mood
Deliverance	Word of mouth, social media, and group chats (GroupMe and texts)

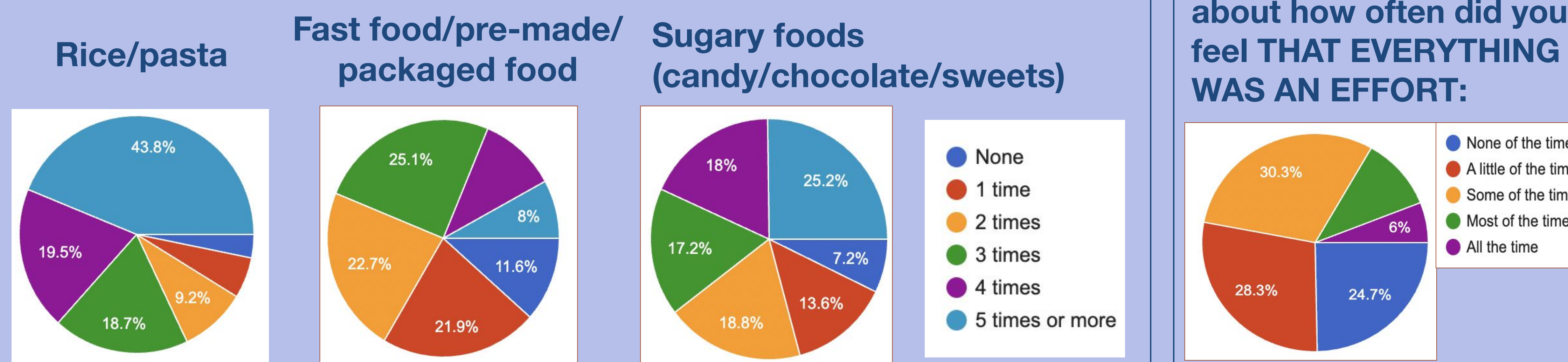
Discussion

Our findings include...

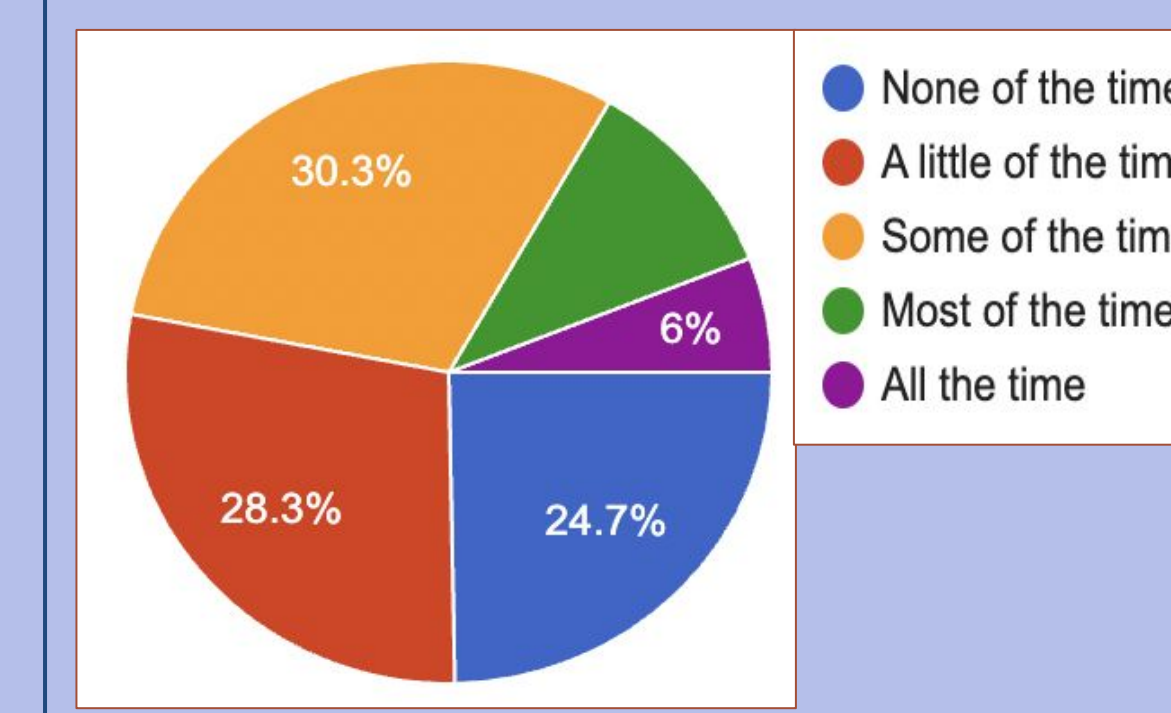
- A relationship between consumption of carbohydrates & negative moods
- A positive correlation between simple carbohydrates such as prepackaged, fast foods, and sugary foods and negative moods such as nervousness, hopelessness, restlessness.
- A negative correlation between complex carbohydrates such as fruits and beans and negative moods such as restlessness and everything was an effort, respectively.
- Our findings with carbohydrate consumption and negative moods may be consistent with studies that indicate simple carbohydrates have negative effects on mood (Amjad et al., 2021).
- Additionally, negative moods are influenced by the consumption of unhealthy foods that are rich in simple carbohydrates.
- Certain complex carbohydrates have a positive effect on mood as well.

Results

On an average week, how many times do you consume:



During the past month, about how often did you feel THAT EVERYTHING WAS AN EFFORT:



Consumption of fast food/prepackaged foods and negative moods

Positive correlation between high intake of fast and prepackaged food and high levels of feeling:

- Nervous: $r = 0.173$, $N = 250$; ($p = 0.006$)
- Hopeless: $r = 0.192$, $N = 251$; ($p = 0.002$)
- Restless/fidgety: $r = 0.192$, $N = 251$; ($p = 0.003$)
- Everything was an effort: $r = 0.184$, $N = 251$ ($p = 0.003$)

Consumption of sugary foods and negative moods

- Positive correlation** between high intake of sugary foods and high levels of feeling:
- Nervous: $r = 0.197$, $N = 249$; ($p = 0.002$)
 - Hopeless: $r = 0.193$, $N = 250$; ($p = 0.002$)
 - Restless/fidgety: $r = 0.218$, $N = 250$; ($p = 0.001$)
 - Everything was an effort: $r = 0.157$, $N = 250$; ($p = 0.013$)
 - So depressed that nothing could cheer them up: $r = 0.186$, $N = 250$; ($p = 0.003$)

Consumption of rice/pasta and negative moods

Positive correlation between higher rates of consumption of rice/pasta and feeling as though everything were an effort: $r = 0.141$, $N = 251$; ($p = 0.026$)

Consumption of fruit and negative moods

Negative correlation between higher consumption of fruits and feeling restless/fidgety: $r = -0.196$, $N = 250$; ($p = 0.002$)

Consumption of beans and negative moods

Negative correlation between higher consumption of beans and feeling as though everything was effort: $r = -0.126$, $N = 251$, ($p = 0.046$)

Conclusion

- People may be experiencing mood irritability and instability due to unbalanced and unhealthy diets
- People who consume more simple carbohydrates are more likely to have poorer moods
- Further research may be done on larger and broader demographics outside of the college population due to the fact that college students are typically already under several additional stressors and tend to eat more poorly due to restricted time

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