

The Effects of Diversity Within Diet on Productivity

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Abstract

This study focused on diversity within diet and its impact on productivity. Food variety ensures that the proper balance of nutrients is achieved. Different nutrients have various impacts on the body, influencing motivation and energy levels, the extent of which is currently unknown. A total of 304 participants completed an anonymous online survey administered through Google Forms. The survey inquired about demographics and the connection between diet, mental distress, and neurobehavioral issues. Data were analyzed using SPSS version 28.0. Consuming green leafy vegetables was negatively correlated with both feeling depressed ($p<.01$) and that everything is an effort ($p<.01$), which can lead to decreased productivity. Intake of fish was positively associated with setting and completing goals ($p<.01$). Results indicate that a diverse diet is positively associated with improved mental well-being, highlighting the role of dietary habits in enhancing daily performance and reducing stress.

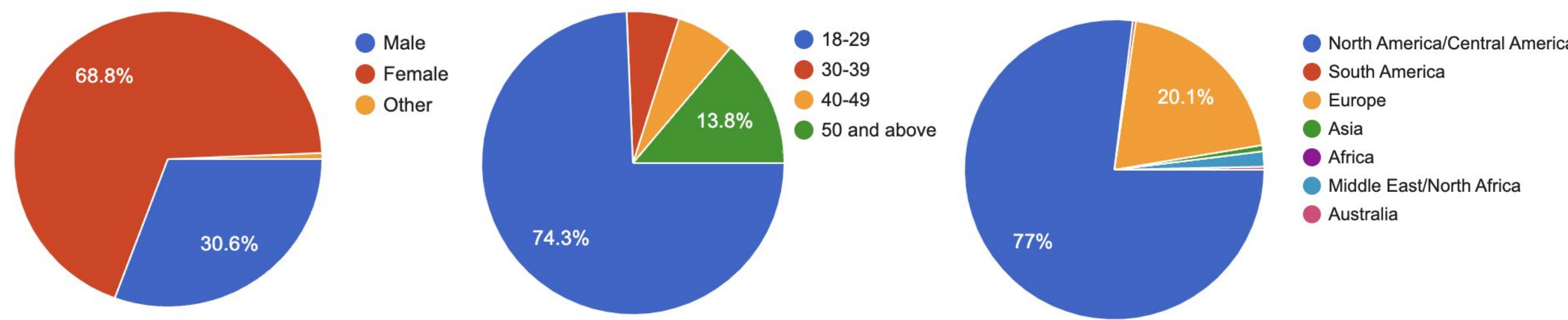
Introduction

- Nutritional intake has been shown to impact both mental and physical health (Zavitsanou et al., 2021).
- Diets rich in nutrients can reduce risks of depression and anxiety (Grajek et al., 2022).
- Diets high in refined sugars have been linked to depression (Selhub, 2022).
- Poor diet is associated with reduced academic performance (Florence et al., 2008).
- Given the growing research on impacts of diet on mental health, the goal of this study was to determine the impact of dietary diversity on productivity.
- It is hypothesized that as dietary diversity increases, overall productivity will increase.

Methods and Demographic



Our survey *Diet, Exercise and Motivation* had a series of 40+ qualitative and quantitative questions. The distribution was made using social medias. The statistical analysis was done using *Pearson Correlation Analysis*.



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Results

The results suggest that eating a healthy variety of foods promotes mood and factors that contribute to productivity whereas unhealthy foods are correlated with negative mental health symptoms which can cause people to lose motivation.

Table 1: Relationship between Fast Food and Mood

Relationship	Pearson Coefficient
Consuming fast food and feeling nervous	0.243**
Consuming fast food and feeling restless	0.324**
Consuming fast food and having willpower	-0.133*
Consuming fast food and looking for solution	-0.162**

Table 2: Relationship between Sugary Food and Mood

Relationship	Pearson Coefficient
Consuming sugary food and feeling nervous	0.179**
Consuming sugary food and feeling restless	0.117*
Consuming sugary food and having willpower	-0.119*
Consuming sugary food and feeling confident	-0.115*

Table 3: Relationship between Green Vegetables and Mood

Relationship	Pearson Coefficient
Consuming green leafy vegetables and feeling like everything was an effort	-0.179**
Consuming green leafy vegetables and feeling restless	-0.133*
Consuming green leafy vegetables and confidence in making a change	0.189**
Consuming green leafy vegetables and setting goals and keeping progress	0.137*

Table 4: Relationship between Fish and Mood

Relationship	Pearson Coefficient
Consuming fish and feeling nervous	-0.138*
Consuming fish and feeling restless	-0.161**
Consuming fish and paying attention to resolution progression	0.145*
Consuming fish and keeping track of goal progress	0.173**

Discussion

- Eating a healthy variety of foods was found to increase productive actions while playing an important role in feelings associated to motivation.
- A positive correlation was found between dark green leafy vegetables and fish consumption and setting and keeping track of goals.
- It was found that the intake of fast food was negatively correlated with willpower ($p<0.05$) and looking for a solution ($p<0.01$).
- A positive association was found between consuming sugary foods and feeling nervous ($p<0.01$) and restless ($p<0.01$).
- These findings suggest that:
 - Fast food consumption was associated with increased depressive and stress symptoms (Sangsefidi et al., 2020).
 - Fish incorporation into the diet, which is high in Omega-3 fatty acids, can alleviate or prevent certain psychiatric conditions, such as schizophrenia, BPD, OCD, and ADD (Mischoulon, 2020).
 - There is an association between junk food consumption and mental health problems in adults (Ejtahed, Hanieh-Sadat, et al., 2024).
 - Green leafy vegetables contain micronutrients like folate and antioxidants which prevent inflammation, helping prevent against depression (Oddy et al., 2009).
- Mental health is closely related to productivity since depressed states can cause individuals to lose motivation to start and complete tasks. This is why it is vital to consume a healthy variety of food groups, as it improves physical health as well a person's mental health.

Future Work and Limitations

Future Work:

- Differentiate between fast foods and pre-made foods, as some pre-made foods can be healthy and nutritional
- Narrow down questions, leading to more specific responses to get a more accurate representation of the study
- Take into account external factors, such as exercise, genetics, environment, etc

Limitations:

- The distribution could be more equal: only 30.6% of respondents were male, and 68.8% were female.
- Parameters were not limited to a certain age group, so limiting survey responses to one group (eg college students) could provide more accurate results.

References

