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### Influence of Diet Quality and Mental Well-Being

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# The Effects of Different Dietary Patterns on Mental Distress

## Abstract

- Increasing evidence suggests that the average American diet is contributing to the increase in mental health issues, with 8.4% of all American adults having experienced at least one depressive episode.
- Our research study explores the relationship between the food consumed and mental wellbeing.
- An anonymous online survey was conducted through Google form and shared through social media apps such as Facebook, Instagram, and GroupMe.
- There is a positive correlation between mental wellbeing and consumption of components of the Mediterranean diet such as a variety of fruits and vegetables.
- Inclusion of nutrient dense food may significantly increase mental well-being.

## Introduction

- Emerging research indicates plant-based diets may have a positive impact on mental health
- Diets can be a useful intervention for those suffering with common mental health conditions (Pye, 2022)
- The Mediterranean diet is rich in fruits and vegetables, wholegrains, legumes, nuts, fish, white meats and olive oil which is considered to be one of the most important dietary models (Ma et al., 2023)
- Unhealthy diet patterns such as food addiction symptoms or low nutrition knowledge were observed in early stages of mental illness and likely leads to poor physical health in the future (Teasdale et al., 2020)
- Diet quality in plant-based diets possibility lower risks for chronic diseases by including healthy foods (Jadhav, 2023)
- The Mediterranean diet is seen as the gold standard for both physical and mental health with the Western (American) diet considered to be the inverse of it (Zielińska et al., 2022)

## Limitations

- More females than males in the cohort
- The Western diet was mostly followed than any other diet

## Methods and Results

Demographics	85.5% were 18-25 while 62.5% had 2 or 4 years of college degree and 61% followed a Western diet
Number of participants	200 responses were collected; 40.7% male and 59.3% female
Survey	Food-Mood Questionnaire
Deliverance	Shared through social media apps such as Facebook, Instagram, and GroupMe. Word of mouth/text message
Statistical Analysis	Pearson Correlation Coefficient in SPSS version 25.0. Figure 2. was produced via 2 sample t-tests.

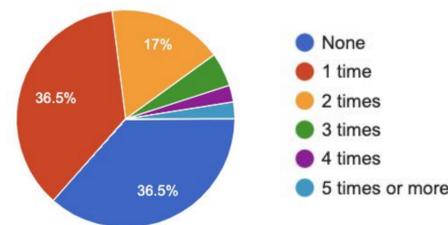


Figure 1. Reports of frequency of fish consumption. 36.5% reported none, 36.5% reported 1 time, and 17% reported 2 times

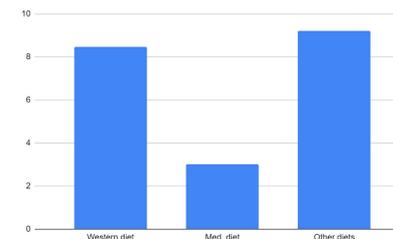


Figure 2. Differences in dietary pattern among respondents

Consumption of breakfast and depressive symptoms	The consumption of breakfast was associated with less depressive symptoms, especially feeling that everything was an effort. $r = -.352^{**}$
Consumption of fish/shellfish and depressive symptoms	The consumption of fish and/or shellfish was associated with less depressive symptoms, especially feeling that everything was an effort. $r = -.207^{**}$
Consumption of pre-packaged food and depressive symptoms	The consumption of pre-packaged foods was associated with more depressive symptoms, especially feeling that everything was an effort. $r = .345^{**}$
Exercise and depressive symptoms	Regular exercise was associated with less depressive symptoms, especially feeling that everything was an effort. $r = -.335^{**}$

\* =  $p < 0.05$ , \*\* =  $p < 0.01$

Table 1. Points of significance between the consumption of breakfast, fish and/or shellfish, pre-packaged food, exercising, and depressive symptoms.

## Discussion

- The consumption of fish resulted in a significant negative association of feeling that everything was an effort. Based on Ma et al., (2023) healthy plant based diets particularly Mediterranean diets have been associated with positive mood and prevent age related decline
- The study by Wilson et al. (2020), about Australian adults could potentially explain the findings our study had on the significant relationship between eating breakfast and the depressive symptoms. It was a negative correlation which showed the same findings as the Wilson study, The more often people ate breakfast, the less they found that everything was an effort mainly.
- Based off of our findings from analysis of our statistics, we found that consumption sugary foods and fast food/processed foods are significantly associated with reports of fidgety feelings and high effort for daily tasks. These findings support the findings of Nadarajah et al., (2021) from the literature review

## Conclusion

- Based on our results, the consumption of unhealthy foods is associated with poorer mental health and the consumption of food seen as healthier and a higher frequency of eating breakfast are associated with better mental health.
- If you feel low energy frequently throughout the day, try thinking about your eating schedule/habits and plan to have time to eat breakfast on long, busy days.
- Due to the consumption of fish being significant, for this study the Mediterranean diet is suggested to propose positive effect on mood while also preventing cognitive decline
- Although the main focus is diet and mental health, and it is widely accepted currently that diet has a significant impact, it is important to acknowledge the effects of exercise, and in the same way diet affects mental health, exercise corresponds with a more positive mood.

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