

The Impact of Nutrition on the Mental Health of Young Adults

Emely Melendez, Siying Li, Venus Velasco

UC San Diego Herbert Wertheim School of Public Health and Longevity Science



Results

- Most participants were college students between 18-25 years old. Total participants were 83 individuals.
- No significant link between access to nutritious food and low energy, but a slight negative correlation existed
- Pearson correlation tested food variety (USDA categories) vs. energy depletion (N=51).
- Weak negative correlation: $r = -0.133$, $p = 0.353$ (>0.05).
- Eating more nutritious food shows a slight improvement in mental health
- Limited access to nutritious foods is linked to poorer sleep, food insecurity, and low energy.
- **45.8%** of young adults strongly believe diet affects mood and mental health.
- **17.6%** reported restricted access to nutritious food.

Objective

To examine the relationship between the nutrition of young adults ages 18-25 and their mental health.



Introduction/Background

- Young adults between the ages of 18-25 are susceptible to a crucial developmental stage characterized by educational, physical, and mental transitions.
- Food insecure young adults have higher odds of mental health issues.
- On average, the human brain consumes about 20% of a person's daily calories.
- Omega-3 fatty acids, a vital nutrient, are pivotal for neuronal cell membranes and are important for various functions in the central nervous system.
- A balanced diet rich in nutrients can deter the development of major depressive symptoms.
- These nutrient dense foods having a neuroprotective effect that helps regulate oxidative stress, which is linked to mood disorders.

Methodology



Anonymous online cross-sectional survey

-Distributed via social media and in-person through QR code and online link.

Participant Eligibility

- Youth population in San Diego ages 18-25
Exposure and Outcome Questions

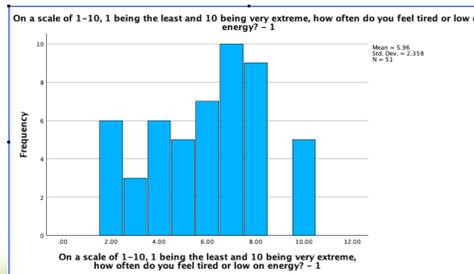
-Exposure: Daily Diet Nutritious vs. non- nutritious meals
-Outcome: Overall mental health, specifically anxiety, depression and mood being measured depending on diet.

Correlations

	On a scale of 1-10, 1 being the least and 10 being very extreme, how often do you feel tired or low on energy? - 1	How often are you able to eat at least three categories from the followings (Fruits, Vegetables, Grains, Protein foods, Dairy, and oils) on a weekly basis?
On a scale of 1-10, 1 being the least and 10 being very extreme, how often do you feel tired or low on energy? - 1	Pearson Correlation	1
	Sig. (2-tailed)	-.133
		.353
	N	51
How often are you able to eat at least three categories from the followings (Fruits, Vegetables, Grains, Protein foods, Dairy, and oils) on a weekly basis?	Pearson Correlation	-.133
	Sig. (2-tailed)	.353
	N	51

Does your diet have an impact on your mood or mental health?

	N	%
Yes, I strongly believe my mood and mental health is impacted by my diet.	38	45.8%
My diet somewhat impacts my mood and mental health.	12	14.5%
I am unsure	2	2.4%
No, my diet does not have an impact on my mood or mental health	2	2.4%
Missing System	29	34.9%



Conclusion

- Research highlights the role of nutrition in brain function (Chopra et al., 2021).
- No significant relationship found between nutritious food intake and mental health, but 50% of participants believe diet impacts their mental health outcomes.
- Slight negative correlation with observed daily eating pattern and trouble concentrating on day-to-day activities.

Policy Implications

- Intervention focused on accessible nutritional food for low-income students.
- Free access to mental health services on a larger scale on campus not based on health insurance.
- Education and public awareness



Acknowledgments

We would like to thank our professor, Dr Annie L. Nguyen, and our research participants for making this research possible.



References

1. Grajek, M., Krupa-Kotara, K., Bialek-Dratwa, A., Sobczyk, K., Grot, M., Kowalski, O., & Staśkiewicz, W. (2022a, July 20). *Nutrition and mental health: A review of current knowledge about the impact of Diet on Mental Health*. *Frontiers*. <https://www.frontiersin.org/journals/nutrition/articles/10.3389/fnut.2022.943998/full>
2. Nagata, J. M., Palar, K., Gooding, H. C., Garber, A. K., Whittle, H. J., Bibbins-Domingo, K., & Weiser, S. D. (2019). Food insecurity is associated with poorer mental health and sleep outcomes in young adults. *The Journal of Adolescent Health*, 65(6), 805-811. <https://doi.org/10.1016/j.jadohealth.2019.08.010>
3. Begdache, L., Sadeghzadeh, S., Derose, G., & Abrams, C. (2020). Diet, exercise, lifestyle, and mental distress among young and mature men and women: A repeated cross-sectional study. *Nutrients*, 13(1), 24. <https://doi.org/10.3390/nu13010024>
4. Lachance, L., & Ramsey, D. (2015). Food, mood, and brain health: Implications for the modern clinician. *Missouri Medicine*, 112(2), 111-115.
5. Chopra, C., Mandalika, S., & Kinger, N. (2021). Does diet play a role in the prevention and management of depression among adolescents? A narrative review. *Nutrition and health*, 27(2), 243-263. *Foods to Boost Your Mood*. (2024). Ivanhoe Broadcast News.,
6. Głabaska, D., Guzek, D., Groele, B., & Gutkowska, K. (2020). Fruit and vegetables intake in adolescents and mental health: A systematic review. *Roczniki Państwowego Zakładu Higieny*, 71(1).