The Connection Between Diet and Mental Health

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When talking about mental health, nutrition is often a topic that is overlooked by many, even though diet directly influences mood and brain function. According to the World Health Organization (WHO), mental health is a state of mental well-being that allows people to usually cope with stress, their general routine, realize their abilities, learn well and work well while also contributing to the community. Mental health is crucial to someone's development and therefore the development of the community they are inserted in. If people are in a good state of mind this will reflect in the way they perceive the world and execute their jobs, for example. On the other hand, nutrition is defined as the process of obtaining the food necessary for health and growth, besides that, nutrition is crucial for energy and improving focus and a healthy mood, it can also help preventing diseases because it reduces the risks for many conditions, including heart diseases, immune system and mental health.

Although nutrition may not be the main reason for mental health issues, poor diet can increase the onset of mental health and also worsen it in many ways. Diet directly impacts mood and brain function. According to a research done by Harvard Health it is extremely important to eat high quality foods and to consume vitamins, minerals and antioxidants to keep and maintain a good brain health, like an expensive car, your brain functions best when it gets only premium fuel. The human brain keeps working all the time, it is the reason why humans think, move and live; therefore, the brain works just like a machine, it needs fuel to keep working the way it is supposed to, and the way the brain is fueled is by food and the nutrients consumed.

Besides that, growing research on the gut-brain relationship further demonstrates the reasoning why nutrition must be considered when discussing about mental health

outcomes. It is known that nearly 90% of the human body's serotonin is produced in the gut. Serotonin is a neurotransmitter that is responsible for regulating mood, sleep and emotional stability in humans. So, because it is mostly produced in the gut, diet directly impacts how these chemical signals will function. When individuals consume foods dense in nutrients, it will make the gut microbiome more balanced, which then will support a healthier communication between the brain and the digestive system. This comes in agreement with a research conducted by Chayil Champion for the UCLA Health page, that states that if humans struggle with mood changes and other issues, behavioral or mental, there is a high chance that the diet has something to do with it. Because of this connection between brain and gut, it is notable that diet can strengthen mental health treatment progress and improve long-term emotional wellbeing.

While nutrition supports the brain at a biological level, food insecurity highlights how access to healthy options also shapes mental health outcomes. For someone that is going through mental health problems, humans should pay attention to which fuel they are giving to their brains. Lacking key vitamins and nutrients can worsen the diagnosis and slow the recovery. Because of that, people will rely more on medication and other treatments, while still maintaining a poor diet. A study made by J. Douglas Bremner et. al on the relation between diet, stress and mental health shows that evidence for these specific dietary interventions still remain limited but are certain to prevent depression and anxiety, the authors also discuss about the benefits of combining diet with exercise and better lifestyle choices, by doing that humans can boost their results and overall wellness. While the researchers discuss this topics and intervention, it is emphasized the need of multi-disciplinary and integrated studies to better understand these relations.

The quality of the food we consume directly impacts brain function as well, more and more people rely on junk food and food with additives and very few nutrients. According to Fernando Gomez-Pinilla, in the article "Brain foods: the effects of nutrients on brain function," quality of food and brain function are indeed related: "food has classically been perceived as a means to provide energy and building material to the body, its ability to prevent and protect against diseases is starting to be recognized" (Gomez-Pinilla, 2008). Hence, without these nutrients, the brain can't function at peak performance.

Another important topic to highlight is food insecurity during early childhood and adolescence and why this increases the risk of both mental and physical health problems. "Research suggests that young people experiencing food insecurity during these life stages are more likely to experience health problems" (Larson et al., 2020). The health problems related to this food insecurity phenomenon include elevated blood pressure, prediabetes, heart disease, infections, and many others.

According to the same study, "national cross-sectional survey data indicate that food-insecure adolescents are more likely to report skipping breakfast, inadequate sleep, smoking cigarettes, and consuming alcohol" (Larson et al., 2020). This shows that it is not only adults who can be harmed by this habit; eating good quality food is crucial to the development of children and adolescents. It is during this early phase in life that many start developing bad habits and dealing with food insecurity, according to Larson et al., national data from 2018 indicate that 11% of US households were affected by food insecurity at some time during the previous year.

What this study highlights are that poor nutrition can have serious consequences on mental health and physical development during early years in life. Addressing food insecurity

and guaranteeing access to better nutrition is crucial for supporting good brain function and making sure that fewer children and adolescents develop mental health issues later in their lives.

In addition, Americans have reached an all-time high of obesity and a lack of exercise, relating to Gomez-Pinilla research, when diet is combined with other aspects of lifestyle like exercise, it has a crucial role in shaping cognitive capacity and brain evolution. Other critic would argue that increased obesity rates mean increased mental health issues. A study was made in Brazil with people older than 15 years old aiming to examine the relation between quality of diet and presence of depression and other mental health issues among Brazilians that are aged 15 years old or older using data from the Brazilian National Health Survey (PNS).

Within their findings they were able to conclude that individuals that reported depression had lower quality diets, low on vegetables, grains/roots and beans, more specifically. The same depression group scored higher on diets containing sweetened beverages, sweets and sugars, high fat, high sodium and other non-nutritional categories. The same data was observed in groups that reported other mental health disorders not only focused on depression, showcasing a pattern in the impact of nutrition and mental health.

Understanding this topic is important to consider the effects on mental health and the outcomes. Improving your diet is not only about physical health but also about maintaining a good mental well-being. On the other hand, research shows that diet should not be considered a solution by itself, but as a complementary approach that could boost other forms of treatment. Moreover, studies cited by Gomez-Pinilla (2008) and Hoffmann (2024) shows that nutrients like omega-3, antioxidants and vitamins support brain function and improve mood regulation while also enhancing cognitive performance, which could increase the effectiveness of these other forms of mental health treatment. By the same token, as highlighted by Larson et al. (2020), a

preventative measure that could reduce long-term risk factors for mental health conditions is to address food insecurity and access to healthy diets. A diet that is balanced and full of nutrients can serve as a tool for improving energy and focus, that supports mental health well-being and brain function, which demonstrates that nutrition could interact in synergy with genetic, environmental and psychological factors.

Maintaining a poor diet over time can have life lasting effects on human's health, both physical and mental, early intervention and sustained healthy habits are important to address these issues. Michael Hoffmann, in his book "Executive Brain Vitality," outlines five brain fitness rules that we must follow to maintain good brain health and function: physical exercise, cognitive exercises, brain food components, sleep hygiene, and socialization. The author also states, "Eating your food as medicine helps to avoid eating your medicines as food" (Hoffmann, 2024). More than ever, we need to raise awareness and educate ourselves on this matter. Eating ultra processed foods and low-quality ingredients may be more convenient and cheaper, but the long-term consequences are serious.

The way to nourish our brains is to maintain a nutritious and balanced diet, avoiding ultra-processed food and low-quality ingredients will have a huge impact in other's health. According to Hoffmann, on average, humans live in an unhealthy state of mind and body for about 20% of our lives. This number is alarming, many people lack curiosity about this topic and are not conscious that having a bad diet directly impacts their mood and mental health. As exposed, maintaining a nutritious diet, combined with healthy lifestyle habits, is essential not only for physical health but also for supporting mental well-being and cognitive development throughout your entire life.

Research on mental health and dietary habits has become essential to establishing methods that may improve wellbeing and reduce dependency on medication. Studies have shown that combining a healthy diet with therapy or medication can enhance treatment outcomes, as proper nutrients support brain function, mood regulation, and energy levels (Gomez-Pinilla, 2008; Hoffmann, 2024). These consequences emphasize that with nutrition, and adopting a balanced diet improves cognitive function and mood, while also reducing risks of chronic conditions, like heart diseases, that might also impact mental health over time. Raising awareness about the relation between nutrition and mental health is essential.

To understand better about the relationship between food, brain function and mental health and to conduct more research into this area in order to integrate nutritional education as well as diet as a primary intervention in mental health treatment and public health systems it is necessary to state that nutrient-rich diets and good eating habits can improve mood, reduce stress and even enhance the performance of the brain, and on the other hand, maintaining poor nutrition can worsen mental health issues and symptoms.

According to Gomez-Pinilla (2008) omega-3 fatty acids and antioxidants influence synaptic function and plasticity, which helps protect the brain from stress and aging. By the same token, Cook and Champion (2025) explain that incorporating nutritional psychology into treatment can optimize mental wellbeing by addressing the gut-brain connection and hormone regulation. Therefore, this integration could be implemented by clinical practices and education. Ridberg et al. (2025) expose that food is medicine, which emphasizes that nutritious food interventions should be part of healthcare, this way improving both mental and physical health. These types of programs could be inserted in community clinics, schools and even workplaces, in order to offer accessible nutritional counseling with mental health services. Besides that,

Hoffmann (2024) supports that combining diet with lifestyle practices such as exercise and social engagement is crucial to promote executive brain vitality. Because of that, encouraging better habits and focusing on integration between nutrition and mental health policies could strengthen public mental health outcomes in a global level. Unless humans begin to prioritize nutrition as a factor in mental health care, others will continue to struggle with preventable challenges that are linked to poor dietary habits.

In summary, nutrition is more important to support mental health issues than people know. It directly influences brain function, mood and overall well-being. Although is not a single factor that contributes to mental health issues, it is an accessible and simple resource that can be used as an ally when going through these problems. To maintain a diet rich in nutrients and balanced is to take care not only of your body or appearance, but also your brain. Evidence from Gomez-Pinilla (2008), Larson et al. (2020), and Hoffmann (2024) demonstrates that diet affects mental health at both the individual and population levels, it helps everyone's development to reduce long-term risks that are associated with a poor-quality diet and low nutritious ingredients. Besides that, raising awareness to healthy dietary habits is essential to inform about the consequences of food insecurity and poor choices in nutrition. Conducting research in this connection between food and mental health is necessary to understand more and inform interventions to develop strategies. Prioritizing nutrition when treating mental health issues may even weaken the necessity of strong medication and radical treatments, to promote a better and more productive life to the ones suffering from mental health problems.

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Project Analysis

1. Why did you pick your particular topic?

I picked my topic in the connection between food and mental health because for me it is such an underrated topic when thinking about treatments and better quality of life for those who suffer with mental health issues, generally most people look for medicine and alternate solutions rather than simply improving their dietary habits in order to nourish their bodies in the right way, this could have a huge and good impact on their treatments.

2. What is one specific fact about your project that you that you did not know before your research that you know now?

I did not know that more than 10% of the American population live in food insecurity conditions. I was looking to write about the relationship between nutrition and brain

function but it was inevitable to also talk about food insecurity and how to overcome this issue, since for me it is an alarming number of affected people already.

3. What was one element of your writing that you felt you needed to improve or frustrated you during this term?

I believe it was my ability to create counterclaims, it could be because of the topic I chose but for me there was not really a counter argument to what I was proposing since I was exposing a clear relation that is backed up by various researches. After some work and time dedicated into the essay I could understand some other points of view but I still don't think that someone would disagree with what I am claiming during the research.

4. Did you overcome that issue? How? If not, be honest.

Yes, in parts. I got to think about some counterclaims and research about it for a little bit but I still think my arguments are really strong, what I did was to look for some side effects that I might have been missing when talking about this topic and treat them as counterclaims.

5. What was one of your most useful resources during this project?

I believe one of my most useful resources was the UCF library website where I was able to search for specific peer reviewed articles and use key words to narrow my searches. Also, I got to use a platform where I could trust that the sources were valuable for my own work. Also, the Writing Center was really useful to crate a draft and think about how my work could be done.

6. What elements of writing did you learn in this class that you think you will be able to use once you graduate and are in your given career field?

I think that this course taught me how to organize better my writing to make it more logically accurate, which is gonna be useful for me to create documentation, reports and even professional emails. I think I am more comfortable now in revising my own work and have a critic eye to what I am writing. Overall, I believe now I am able to communicate more effectively.