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ISM II

Research Assessment #1

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As of 2024, anxiety and depressive disorders have grown increasingly widespread, with the CDC noting that in 2023, 57.2 million visits to physician offices resulted in a mental health disorder as the primary diagnosis (FastStats - Mental Health, n.d.). Some even refer to this alarming increase as an ongoing 'mental health epidemic' in the United States, and this trend is unfortunately projected to increase in upcoming years. And while the social awareness about these conditions has drastically improved relative to previous years, there are few effective means of treatment for conditions such as depression and anxiety. Anxiety, in particular, is usually either treated through therapy or medicine – the former often having financial repercussions on lower-income patients and the latter often having major side effects contributing to other potential health issues.

Recently, I developed an interest in the link between diseases with dietary restrictions (such as type 2 diabetes) and the development of mental health issues such as anxiety. We often hear about the linkage between diet and mental health, but there is seldom discussion surrounding physical conditions like food allergies and their psychosocial impacts on today's adults, especially given their large influence over an individual's day-to-day interactions with food. This interest led me to consult a few sources to gain some broader insights on this linkage, including one of interest: Raedeh Basiri, Blessing Seidu, and Mark Rudich's 2023 literature review of the multi-directional interactions between anxiety, depression, and type 2 diabetes.

Overall, Basiri et al.'s comprehensive breakdown of the reciprocal interlinkage between mental health disorders and type 2 diabetes provided an insightful overview of potential areas of interest I may consider addressing with my final product. However, sections 3.1 and 3.2 of the publication, which cover the two-sided relationship between a diagnosis of diabetes and mental health disorders such as depression or anxiety, intrigued me in particular, since I was looking for discussion about the link between the two conditions. I initially approached this literature review understanding that having a disease like type 2 diabetes, with its dietary restrictions, can elevate a patient's anxiety around food intake – in fact, this fact has been established for well over a decade. As Chris Garrett and Ann Doherty wrote in a broad overview published by the National Institute of Health in 2014, recently-diagnosed individuals reported struggling to adjust to being diagnosed with "a long-term condition that requires constant self-management" (2014), including navigating treatment and diet plans to mitigate their symptoms.

So naturally, I wasn't surprised when Basiri et al. also confirmed this in their literature review, stating that depressive tendencies are "two to three times" (2023, Section 3.1) more likely to present themselves in diabetic patients than they are in individuals with normal blood glucose levels. A diagnosis of diabetes can overwhelm a patient, given the condition's "debilitating complications" (Basiri et al., 2023, Section 3.1) and a higher mortality rate than those without the condition. Reading this led me to wonder whether I may be able to address the onset of depressive signs and symptoms with a project helping diabetics navigate the complexities of strict diet management, particularly given the rising cost of food in our country and due to the prevalence of restaurants where I live.

The biggest takeaway that struck me while reviewing this literature review was the elevated risk of type 2 diabetes that poor mental health set a person up for. While the notion itself wasn't surprising – poor mental health undoubtedly corresponds with poor physical health, after all – it did not strike me that this was a two-sided issue. Section 3.2 of Basiri et al.'s publication stated that there "is a 60% increased risk of developing diabetes ... when also diagnosed with depression" (2023), highlighting the mutualistic relationship between mental health and physical health. Perhaps if someone finds that they are struggling with a physical health condition that requires strict dietary management, such as type 2 diabetes, then increased poor mental health tendencies may worsen their physical symptoms.

So, while I could build a product addressing the navigation of the complex treatment plans involved in a diabetes diagnosis (subsequently mitigating potential depressive symptoms), I could also build a product addressing ongoing mental health struggles in individuals to prevent their physical health from deteriorating as well. This is a new branch of research that I may consider looking into: current treatments of conditions such as depression and anxiety in adults and their limitations – and this will bring me closer to developing a fully-planned final product.

APA citation(s):

Basiri, R., Seidu, B., & Rudich, M. (2023). Exploring the Interrelationships between Diabetes,
Nutrition, Anxiety, and Depression: Implications for Treatment and Prevention
Strategies. *Nutrients*, 15(19), 4226. https://doi.org/10.3390/nu15194226
FastStats - Mental Health. (n.d.). https://www.cdc.gov/nchs/fastats/mental-health.htm
Garrett, C., & Doherty, A. (2014). Diabetes and mental health. *Clinical Medicine*, 14(6),
669–672. https://doi.org/10.7861/clinmedicine.14-6-669