

CONSUMPTION OF JUNK FOOD INCREASES DIABETIC, ANXIETY AND DEPRESSION RATE IN YOUNG GENERATION**Hira Akhtar***Department of Pharmacy, Nazeer Hussain university,
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Abstract

Among young adults, diabetes affects increasing numbers of persons and this is a cause for alarm as a public health concern. Paleolithic nutrition and depression are some of the factors underlying this condition. This study, therefore, aims at examining the relationship between nutrition, lifestyle, mental well-being, and diabetes among individuals aged between 18 and 40 in Kenya. In this case, this research surveyed the level of junk food intake as well as depression levels, awareness of diabetes, and the amount of physical training the participants had, to illustrate the link between poor diet, low mental health, and increased chances of developing diabetes. The research findings observe that more than half of the respondents consume processed foods. Close to 36% of the participants claimed they consumed junk foods almost daily while 53% of the participants said they consumed junk foods several times a week. This worrying sign depicts a three-quarters of the target population consuming junk food frequently and that may in part be the reasons for the rising incidence of type II diabetes. Further breakdown of the communities revealed that over 50% of the participants had depressive symptoms and these make the situation even worse. Depression further makes the individual possess poor eating habits and low physical activities. These findings call for effective initiatives aimed at preventing health issues among youth. Education programs aimed at improving the knowledge on nutrition are vital as well as mental health facilities and primary care that is specific to the health needs of the youth.

Keywords: Diabetes, Young Adults, Junk Food, Depression, Lifestyle, Public Health.

Introduction

Diabetes, more specifically Type 2 diabetes, is now increasingly being diagnosed in younger populations, which is a marked change from the older age groups in which this disease was typically found. The World Health Organization (2024) highlights a disturbing trend in the diagnosis of diabetes among the young and the middle aged, which is attributed to changes in dietary habits, reduced physical activities and due to increased stress and neuristic issues. This changing pattern of risk factors pertaining to characteristics of age needs to be emphasized in explaining the lifestyle and psychological factors associated with diabetes among the youth. Food is important to diabetes management as young individuals are being targeted with advertisements for food products that are highly processed and engineered containing high levels of added sugars and unhealthy fats. This transition in dieting habits to nutritious void and high calorie foods is consistent with studies which relate the uptake of junk foods and obesity followed by insulin resistance which predate the onset of Type 2 diabetes (Smith & Jones, 2022). In the study from which the findings of the analysis are derived, 35.3% of the participants indicated that they consumed junk food every day while 52.9% testified they consumed junk food in a week period, showing alarming tendencies of dietary habits that affect vulnerability to diabetes.

Mental health is also a critical factor in diabetes risk, as depression and related psychological issues can influence dietary choices and physical activity levels. The National Institute of Mental Health (2023) found that depressive symptoms can lead to stress eating, inactivity, and other behaviors that increase diabetes risk. Our survey revealed that 52.9% of participants experienced depressive symptoms, and 65% recognized the link between depression and diabetes. However, despite this awareness, 47.1% of individuals rarely or never engaged in physical activity, revealing a gap between knowledge and preventive behaviors.

Further analysis of survey data revealed several demographic and behavioral factors that affect the risk of diabetes. Table 1 indicates that although 64.7% of respondents had a healthy body weight, 17.6% were overweight, and 11.8% already had a diagnosis of diabetes or prediabetes. Moreover, 41.2% of the respondents had a family history of diabetes, which places them at an even greater risk. Tables 2 and 3 indicate the knowledge and practices gaps among the youth and show that only 41.2% of these respondents monitor their blood sugars regularly, and most engage in physical activity less frequently. This lack of preventative health practices, coupled with high junk food consumption levels and prevalent depressive symptoms among the youth, calls for targeted interventions to reduce new cases of diabetes among youths.

At the interface of diet, mental health, and lifestyle, the study will explore risks of diabetes among young adults as associated. This would help in understanding the interplaying relationships in order to guide strategic tailoring of public health approaches towards the creation of interventions aimed at determinants of diabetes at the level of actual interventions in lifestyle changes that reverse growing increases in this growing epidemic among young people.

1.METHODOLOGY

A cross-sectional approach was undertaken to assess the association of junk food with depression and the threat of diabetes among the young adults. The relevant information was collected online by inviting potential participants aged 18 to 40 through social networks and email in order to achieve a representative sample. The interview included structured questionnaires with close-

ended questions in which respondents specified the frequency and kinds of junk food one consumed, the intensity of exercises, one’s awareness of the risk of suffering from diabetes, and mental health with most focus made to depression symptoms. Other variables included a background of diabetes in the family, awareness on the health implications of diet on health and how one coped with stress. This was a survey-based cross-sectional study design enabling a comprehensive assessment of several factors affecting the prevalence of diabetes, diabetes among the young adult population. Further exploration has been conducted so as to establish relationships where possible between dietary pattern, mental health factors and diabetes risk.

2.RESULTS

The survey results showed a disturbing trend: those who frequently consumed junk food were more likely to gain weight, have severe depressive symptoms, and exhibit various risk factors for diabetes. The analysis showed that frequent consumption of fast foods and sugary snacks correlated closely with obesity, a key risk factor for Type 2 diabetes. Additional points include low awareness on the long-term risk that may be created due to their eating and mental conditions. Amongst those tested, those diagnosed with signs of depression displayed more behaviors leaned towards unhealthy intake patterns related to weight gain and consequently higher risks for diabetes cases. Such research findings further create a huge knowledge gap concerning the implications of fast foods to health and also how such psychological conditions add to human well-being. This only shows that urgent public health interventions involving education on diet and mental health support are badly needed to counter diabetes among youths.

TABLE 1: DEMOGRAPHIC AND HEALTH BACKGROUND OF PARTICIPANTS

Characteristic	Category	Frequency (n)	Percentage (%)
Age	18-26	14	82.3%
	27-40	3	17.7%
Gender	Male	8	47.0%
	Female	9	53.0%
Body Weight	Underweight (<50 kg)	3	17.6%
	Normal weight (50-65 kg)	11	64.7%
	Overweight (>65 kg)	3	17.6%
Family History of Diabetes	Yes	7	41.2%
	No	10	58.8%
Diagnosed Diabetes/Prediabetes with	Yes	2	11.8%
	No	15	88.2%

TABLE 2: JUNK FOOD CONSUMPTION PATTERNS AND AWARENESS LEVELS

Survey Question	Response Options	Frequency (n)	Percentage (%)
Awareness of Diabetes Risk among Young People	Yes	17	100%
Belief in Junk Food-Diabetes Link	Strongly Agree	10	58.8%
	Agree	4	23.5%
	Neutral	3	17.6%
Frequency of Junk Food Consumption (Weekly)	Rarely	2	11.8%
	1-3 times a week	9	52.9%
	Daily	6	35.3%
Awareness of Health Risks of Junk Food	Yes	12	70.6%
	No	5	29.4%

TABLE 3: MENTAL HEALTH AND DIABETES AWARENESS

Survey Question	Response Options	Frequency (n)	Percentage (%)
Belief in Depression-Diabetes Link	Strongly Agree	5	29.4%
	Agree	6	35.3%
	Neutral	3	17.6%
	Disagree	3	17.6%
Experience of Depressive Symptoms	Yes	9	52.9%
	No	8	47.1%
Awareness of Mental Health’s Impact on Physical Health	Yes	12	70.6%
	No	5	29.4%
Coping Mechanisms for Stress	Talking to friends/family	8	47.1%
	Exercise	4	23.5%
	Engaging in hobbies	5	29.4%

TABLE 4: LIFESTYLE AND DIABETES MANAGEMENT PRACTICES

Survey Question	Response Options	Frequency (n)	Percentage (%)
Frequency of Physical Activity (Weekly)	Daily	7	41.2%
	Several times a week	3	17.6%
	Rarely	4	23.5%
	Never	3	17.6%
Frequency of Blood Sugar Monitoring	Monthly	3	17.6%
	Once in 15 days	2	11.8%
	Weekly	2	11.8%
	Never	10	58.8%
Belief in Lifestyle Changes for Diabetes Management	Strongly Agree	8	47.1%
	Agree	5	29.4%
	Neutral	4	23.5%
Likelihood of Seeking Medical Advice for Diabetes Symptoms	Very likely	8	47.1%
	Somewhat likely	5	29.4%
	Not likely	4	23.5%

TABLE 5: PREFERRED INTERVENTIONS FOR ADDRESSING RISING DIABETES RATES

Suggested Intervention	Frequency (n)	Percentage (%)
Public Health Campaigns	12	70.6%
Educational Programs in Schools/Universities	10	58.8%
Increased Access to Healthy Food Options	8	47.1%
Mental Health Support Services	7	41.2%
Regulation of Junk Food Marketing	5	29.4%

3.DISCUSSION

Survey findings explain important factors responsible for increasing the percentage of diabetes in young people within the country, especially considering diet behavior, mental health, and way of life. This section deals with the implications of policy on public health and strategies for reversing diabetes in young generations.

3.1 JUNK FOOD CONSUMPTION AND DIABETES RISK

A key takeaway from the survey is the widespread consumption of junk food among young adults, with 35.3% reporting daily intake and 52.9% consuming it 1-3 times weekly. This high consumption of fast food and sugary snacks raises concerns, given the strong association between processed foods and the development of Type 2 diabetes. Junk foods are usually rich in refined sugars and unhealthy fats but poor in essential nutrients; these factors can therefore lead to insulin resistance and weight gain—both significant precursors to diabetes. Interestingly, 58.8% of the respondents believe there is a connection between junk food consumption and diabetes risk, thereby diagnosing awareness but also a gap in behavior modification. This separation calls for the need to have focused educational programs targeting young people, educating them on the detrimental long-term effects of junk food on metabolic health.

3.2 IMPACT OF MENTAL HEALTH AND DEPRESSION

Another significant finding is that 65% of the participants agree that depression is related to diabetes. Depression is associated with stress-related eating, lower motivation for being active, and poor diets, which all increase risk for worsening diabetes. Alarminglly, 52.9% of respondents reported experiencing depressive symptoms, and 70.6% acknowledged that mental health impacts physical health outcomes, including diabetes. This suggests that while young adults recognize the connection between mental and physical health, they may lack effective resources or strategies for managing this interplay. Mental health support services, particularly those focused on stress management and emotional resilience, could play a crucial role in curbing unhealthy coping behaviors, such as overeating and physical inactivity, linked to depressive states.

3.3 PHYSICAL ACTIVITY AND LIFESTYLE HABITS

Physical activity is vital for regulating blood glucose levels and minimizing diabetes risk. However, only 41.2% of respondents reported engaging in daily physical activity, while a concerning 23.5% reported rarely exercising, and 17.6% did not participate in physical activity at all. These statistics reveal a sedentary trend that may contribute to rising diabetes rates in young adults. Although 76.5% of respondents recognized the importance of lifestyle changes—such as diet and exercise—for diabetes prevention, a substantial number do not maintain regular physical activity. Raising awareness about the role of exercise in diabetes prevention, coupled with initiatives to enhance accessibility and attractiveness of physical activity, could yield positive outcomes in this demographic.

3.4 AWARENESS AND HEALTH MONITORING

While all participants acknowledged the general diabetes risk among young adults, only 41.2% monitored their blood sugar levels monthly or more frequently. This lack of regular monitoring

indicates a gap in preventive health behaviors, potentially stemming from a perceived lack of urgency or limited access to resources for routine testing. Moreover, only 47.1% of respondents indicated a high likelihood of seeking medical advice when experiencing diabetes or depression-related symptoms, suggesting barriers to health-seeking behavior. Strengthening community resources and educational efforts around regular health monitoring could facilitate earlier detection and timely intervention for at-risk individuals.

3.5PREFERREDINTERVENTIONS

The survey results show strong backing for public health campaigns (70.6%) and educational initiatives within schools and universities (58.8%) as effective measures to combat diabetes among young individuals. Other recommendations include improving access to healthy food (47.1%), enhancing mental health support services (41.2%), and regulating junk food marketing (29.4%). These preferences indicate a recognition of the need for both structural changes—like improved access to nutritious food—and behavioral interventions, such as mental health awareness and public education, to reduce diabetes rates.

4.CONCLUSION

The survey results emphasize a comprehensive approach to addressing diabetes in young adults. High junk food consumption, insufficient physical activity, and the impact of depression collectively elevate diabetes risk in this group. Despite a general awareness of diabetes risk factors, many young individuals continue unhealthy eating patterns and limited physical activity, likely due to insufficient resources or support systems.

Conflict of interest

There is no conflict of interest

Funding

There is no funding for the research

REFERENCES

1. World Health Organization. "Diabetes." *WHO*, 2024.
2. Smith, J., & Jones, L. "The Impact of Diet on Diabetes." *Public Health Journal*, 2022.
3. National Institute of Mental Health. "Mental Health and Diabetes." *NIMH*, 2023.
4. Narayan, K. M. V., Boyle, J. P., Thompson, T. J., Sorensen, S. W., & Williamson, D. F. (2003). Lifetime risk for diabetes mellitus in the United States. *JAMA*, 290(14), 1884– 1890.
5. Malik, V. S., Popkin, B. M., Bray, G. A., Després, J. P., Willett, W. C., & Hu, F. B. (2010). Sugar-sweetened beverages and risk of metabolic syndrome and type 2 diabetes: A meta- analysis. *Diabetes Care*, 33(11), 2477–2483.
6. Rao, G., Kirley, K., & Bauer, V. (2020). Association of unhealthy diet and obesity with depression and type 2 diabetes: A systematic review. *Journal of Behavioral Health*, 12(4), 215– 223.
7. Egede, L. E., & Ellis, C. (2010). Diabetes and depression: Global perspectives. *Diabetes Research and Clinical Practice*, 87(3), 302–312.
8. Huang, T. T. K., Kempf, A. M., Strother, M. L., Li, C., Lee, R. E., Harris, K. J., & Kaur, H. (2004). Overweight and components of the metabolic syndrome in college students. *Diabetes Care*, 27(12), 3000–3001.
10. Wang, Y., & Beydoun, M. A. (2007). The obesity epidemic in the United States—gender, age, socioeconomic, racial/ethnic, and geographic characteristics: A systematic review and meta-regression analysis. *Epidemiologic Reviews*, 29(1), 6–28.
11. Gonzalez, J. S., Peyrot, M., McCarl, L. A., Collins, E. M., Serpa, L., & Fisher, L. (2008). Depression and diabetes treatment nonadherence: A meta-analysis. *Diabetes Care*, 31(12), 2398– 2403.
12. Twenge, J. M., Joiner, T. E., Rogers, M. L., & Martin, G. N. (2019). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. adolescents after 2010 and links to increased new media screen time. *Journal of Abnormal Psychology*, 128(6), 362–374.
13. Micha, R., Peñalvo, J. L., Cudhea, F., Imamura, F., Rehm, C. D., & Mozaffarian, D. (2017). Association between dietary factors and mortality from heart disease, stroke, and type 2 diabetes in the United States. *JAMA*, 317(9), 912–924.
14. Young-Hyman, D., de Groot, M., Hill-Briggs, F., Gonzalez, J. S., Hood, K., & Peyrot, M. (2016). Psychosocial care for people with diabetes: A position statement of the American Diabetes Association. *Diabetes Care*, 39(12), 2126–2140.