

The Impact of Diet on Adolescent Mental Health in Big Cities

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Adolescents.

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Citation:

Gracen, Liora. (2024). The Impact of Diet on Adolescent Mental Health in Big Cities. Journal of the American Institute. 1(1), 11-15

Abstract

Adolescent mental health is a health problem that is increasingly gaining global attention. In big cities, teens are often exposed to stress and social pressures that can affect their mental well-being. One of the factors that is believed to affect mental health is diet. An unhealthy diet, e.g. malnutrition, fast food consumption, or irregular diet, can affect the chemical balance in the brain, which in turn can affect mood and anxiety. This study aims to explore the impact of diet on the mental health of adolescents in big cities. The method used in this study is a qualitative approach with literature study. Researchers reviewed a variety of relevant literature sources, including journal articles, books, and research reports related to adolescent diet and mental health. The data collected were analyzed thematically to identify the relationship between diet and mental health conditions in adolescents in urban settings. The results of the study suggest that unhealthy diets, such as high consumption of processed foods and low intake of nutritious foods, can contribute to increased symptoms of anxiety, depression, and sleep disorders in adolescents. Conversely, a healthy diet, which is rich in fruits, vegetables, and other essential nutrients, can support better mental health. This study confirms the importance of better interventions in nutrition education for adolescents, especially in big cities, to improve the quality of their mental health. These results also encourage the need for public policies that support healthy diets as part of efforts to prevent mental disorders in adolescents.

INTRODUCTION

Adolescent mental health is an increasingly urgent issue to be addressed around the world, especially in urban environments. Adolescents in big cities are often faced with significant social pressures, such as academic competition, expectations from families, and social media demands, which can affect their mental well-being (Gonzalez et al., 2021). In addition to psychosocial factors, diet is also believed to play a very important role in influencing adolescent mental health (Lange et al., 2020). Poor diets, which are often seen in adolescents in big cities, such as the consumption of fast food and high-sugar foods, can increase the risk of mental disorders, including anxiety and depression (Jacka et al., 2019).

A number of studies show that a diet rich in processed foods, which are low in fiber and nutrients, can negatively impact the brain's chemical balance, which is directly related to mental health (Stevens et al., 2018). In contrast, a diet rich in nutrients, such as vegetables, fruits, and healthy protein, is associated with a decrease in symptoms of mental disorders (Almeida et al., 2020). This condition becomes more complex in large cities, where socioeconomic and lifestyle factors often affect the food choices available to adolescents (Miller et al., 2020). Research by Wu et al. (2021) also states that limited access to healthy food in urban areas further exacerbates this problem.

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Poor diet among adolescents in big cities can have a long-term impact, affecting not only their physical condition but also their mental state (Patterson et al., 2018). Adolescents who do not get enough nutrition often experience higher emotional disorders, such as anxiety and depression, which can interfere with their development (Beydoun et al., 2020). In addition, environmental factors such as poverty, social stress, and lack of nutrition education also contribute to poor diets followed by adolescents (Micha et al., 2019).

The urgency of this research lies in the fact that adolescents are an age group that is vulnerable to mental health problems, which, if not treated properly, can continue into adulthood. According to WHO (2020), mental health problems in adolescents can affect their ability to function socially, academically, and emotionally. Therefore, understanding the relationship between diet and adolescent mental health in large cities is essential in order to design appropriate intervention strategies (Firth et al., 2020). This study aims to delve deeper into the impact of diet on the mental health of adolescents living in urban environments, where social and economic factors affect their diet.

The purpose of this study is to analyze in depth how unhealthy diets affect the mental health of adolescents in big cities, as well as to identify the factors that contribute to these diets. This study also aims to provide insight into the importance of dietary changes in improving the mental health of adolescents in urban areas. By understanding this relationship, it is hoped that there will be more intensive efforts in nutrition education for adolescents, especially in urban communities that are more susceptible to unhealthy eating habits (Müller et al., 2020).

The benefits of this research are enormous, both from an academic and practical perspective. Academically, the results of this study will contribute to the understanding of factors that affect adolescent mental health, especially through dietary aspects. Practically, this research can be used by policymakers and medical personnel to design nutrition education programs that can support the mental health of adolescents in big cities. Thus, this research not only contributes to the theory of the relationship between diet and mental health, but can also be used to develop more effective interventions in the field (Pereira et al., 2021).

METHOD

This research employed a qualitative approach with a literature review design, aimed at analyzing existing studies on the relationship between dietary patterns and adolescent mental health in urban environments. Literature reviews are a valuable method for synthesizing the findings of previous research to build a comprehensive understanding of a specific phenomenon, in this case, the impact of eating habits on mental health (Cooper, 2017). The primary data sources for this study were peer-reviewed journal articles, books, and relevant research reports published over the last decade. These sources were selected for their relevance to the topic and their rigorous academic quality. The literature was accessed through academic databases such as Google Scholar, PubMed, Scopus, and ScienceDirect, using keywords such as "diet," "mental health," "adolescents," and "urban environments" to identify appropriate articles.

The data collection process involved a systematic search of the literature, focusing on studies that specifically explored the dietary habits of adolescents in urban areas and their impact on mental health outcomes. Only articles published in reputable academic journals were included, ensuring the credibility and reliability of the sources (Higgins & Green, 2011). A total of 25 articles met the inclusion criteria, with a particular focus on studies that explored correlations between diet quality and mental health issues such as anxiety, depression, and stress among adolescents (Jacka et al., 2019; Miller et

al., 2020). Additionally, some studies that evaluated the role of nutrition interventions in improving mental well-being were considered (Firth et al., 2020).

Data analysis in this study was conducted through thematic analysis, a widely used method in qualitative research that involves identifying, analyzing, and reporting patterns (themes) within the data (Braun & Clarke, 2006). Thematic analysis was chosen as it allows for flexibility and depth in exploring complex relationships between dietary patterns and mental health. The data were coded into themes related to dietary patterns (e.g., high sugar intake, processed foods, and nutrient-rich diets) and mental health outcomes (e.g., anxiety, depression, and emotional well-being). These themes were then analyzed to understand how different dietary factors contribute to adolescent mental health in urban contexts. Finally, the results were synthesized to identify common trends and gaps in the existing literature.

RESULT AND DISCUSSION

Dietary Patterns and Mental Health Outcomes

Several studies indicate that unhealthy dietary habits, such as high consumption of processed foods, sugary snacks, and fast food, are closely linked with the development of mental health issues in adolescents. Research by Jacka et al. (2019) demonstrates that diets high in sugar and refined carbohydrates are associated with increased risks of depression and anxiety in adolescents. These foods can lead to blood sugar fluctuations, which, in turn, affect mood regulation and stress responses. Additionally, the consumption of processed foods is linked to the depletion of essential nutrients, which are critical for cognitive and emotional well-being (Almeida et al., 2020). In urban environments, where these types of foods are more accessible and affordable, adolescents are at a greater risk of poor mental health due to inadequate nutrition (Micha et al., 2019).

Conversely, studies also highlight the positive impact of a balanced diet on mental health. Diets rich in omega-3 fatty acids, fruits, vegetables, and whole grains have been shown to support cognitive function and emotional stability. According to Firth et al. (2020), adolescents who consume nutrient-dense diets experience lower levels of depression and anxiety. These nutrients play a vital role in brain health by supporting the production of neurotransmitters that regulate mood, such as serotonin and dopamine (Stevens et al., 2018). In urban areas, where the availability of healthy food might be limited, promoting a balanced diet becomes crucial for supporting the mental well-being of adolescents.

Environmental and Socioeconomic Influences on Diet and Mental Health

Another significant finding from the literature is the impact of environmental and socioeconomic factors on both diet and mental health in urban settings. Adolescents in low-income urban areas often face limited access to healthy foods due to financial constraints and the prevalence of food deserts (Beydoun et al., 2020). The lack of access to fresh produce and other nutritious food options exacerbates the risk of adopting poor dietary patterns, which in turn affects their mental health. Studies also indicate that stressful urban environments, characterized by noise, pollution, and high levels of social pressure, further contribute to the mental health challenges faced by these adolescents (Gonzalez et al., 2021). The combined effect of a poor diet and a stressful urban environment can lead to heightened anxiety, depression, and other mental health issues (Müller et al., 2020).

On the other hand, urban areas that have made efforts to increase access to healthy food through community initiatives and nutrition education have shown positive results in improving

adolescent mental health. These interventions have helped reduce the consumption of unhealthy foods and encouraged better dietary choices, which in turn support mental health improvement (Miller et al., 2020). Programs that promote healthier food options in schools and local communities are essential in mitigating the negative effects of urban living on adolescents' mental health.

The Role of Nutrition Education and Public Health Policies

The literature also underscores the importance of nutrition education and public health policies in promoting healthier eating habits among adolescents. Studies suggest that schools and community centers play a pivotal role in influencing adolescent dietary choices. In urban settings, where social pressures and unhealthy food marketing are prevalent, it is essential to implement educational programs that teach adolescents about the benefits of a balanced diet for mental health (Patterson et al., 2018). Public health campaigns that target both parents and adolescents have been shown to be effective in increasing awareness and encouraging healthier eating habits (Lange et al., 2020).

Moreover, policy interventions that address the affordability and availability of healthy food in urban areas are crucial. Food policies that subsidize healthy foods or incentivize their availability in local markets can make nutritious food more accessible to low-income families, thereby improving both dietary habits and mental health outcomes for adolescents (Wu et al., 2021). These interventions can help reduce the gap in mental health disparities between adolescents in different socioeconomic groups, particularly in urban areas.

CONCLUSION

The findings of this literature review clearly suggest that dietary patterns have a significant impact on adolescent mental health in urban settings. A diet rich in processed foods and low in essential nutrients is linked to higher rates of anxiety, depression, and other mental health issues, while a balanced, nutrient-dense diet has protective effects on mental well-being. The environmental and socioeconomic challenges faced by adolescents in cities exacerbate the risks associated with poor diet and mental health. Therefore, interventions focused on improving dietary habits and increasing access to healthy foods are crucial in promoting mental health among adolescents in urban environments. The review highlights the need for integrated approaches that combine education, policy, and community efforts to address both the dietary and mental health needs of urban adolescents.

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