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REVIEW

Obesity and Dietary Patterns Among Young Malaysians: Current Trends, Underlying Causes, and Approaches to Solutions

Genç Malezyalılar Arasında Obezite ve Beslenme Alışkanlıkları: Mevcut Eğilimler, Altta Yatan Nedenler ve Çözüm Yaklaşımları

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Abstract

This literature review investigated the evolving dietary patterns and escalating obesity rates among young Malaysians, aiming to identify the root causes and offer potential solutions. As Malaysia undergoes rapid urbanization and economic development, traditional diets rich in vegetables, rice, and fish are being gradually replaced by Western-style diets high in fats, sugars, and processed foods. This shift has noteworthy implications for the health of Malaysian youth, who are experiencing a concerning rise in obesity rates. This review synthesized findings from recent studies, highlighting the critical factors contributing to this trend, including the influence of globalization, changing socio-economic conditions, and increased accessibility to unhealthy food options. This review study highlighted the urgency of implementing targeted strategies to improve dietary habits and promote healthier lifestyles among Malaysian youth. Recommendations for future research and policy interventions were provided, with an emphasis on the need for comprehensive, multi-faceted approaches that address the complex interplay of factors driving obesity to serve as a call to action for stakeholders to collaborate in developing and implementing effective interventions tailored to Malaysia's unique cultural and socio-economic context, ensuring a healthier future for the nation's youth.

Keywords: Dietary patterns; Lifestyle factors; Malaysian youth; Obesity; Public health strategies

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Obesity has emerged as a significant public health concern, affecting individuals across all age groups globally. However, it is the younger population that is most vulnerable, as their early dietary habits and lifestyle choices can have lasting effects on their overall health. In Malaysia, similar to global trends, obesity rates have been on the rise, particularly among adolescents.[1] The rapid urbanization and economic growth in the country have significantly altered the lifestyle and eating habits of its youth. The National Health and Morbidity Survey (NHMS) 2024 indicates a disturbing trend: the prevalence of obesity among Malaysian adolescents has more than doubled over the past two decades.[2] This dramatic increase is concerning because obesity is associated with a higher risk of chronic diseases such as Type 2 Diabetes, cardiovascular diseases, and even certain types of cancer. These health complications not only affect individuals but also place a heavy burden on the healthcare system and the economy.[3] The dietary patterns of young Malaysians have shifted considerably in recent years. What was once a traditional diet rich in vegetables, rice, and fish is now increasingly being replaced by Western-style diets that are high in fats, sugars, and processed foods. This change is primarily driven by increased access to fast food, changing socio-economic conditions, and the global influence of Western culture.[3] The younger generation is now consuming more processed foods and sugary drinks, leading to excessive intake of unhealthy fats and sugars. These dietary changes, combined with a sedentary lifestyle, are major contributors to the rising obesity rates. Despite the growing concern, there is still a lack of comprehensive research that examines the various factors driving obesity in young Malaysians. Previous studies have often looked at individual aspects of the issue, such as dietary habits or physical activity, but they have not fully addressed how these factors interact within the broader socio-economic and cultural context.[4] This review aims to fill this gap in the literature by taking a more holistic approach. It explores the current dietary patterns among young Malaysians, identify the key socio-economic and cultural factors influencing their eating habits, and highlight the underlying causes of obesity in this population and also discusses potential interventions, focusing on both societal and policy-level strategies to address this pressing issue.

Methodology

Study Selection Criteria

A comprehensive search was conducted across multiple databases, including Web of Science, PubMed, Scopus, and Google Scholar, to gather relevant studies on dietary patterns and obesity among young Malaysians. The search specifically targeted peer-reviewed articles, government reports, and reputable health organization publications published between 2018 and 2025. To ensure thoroughness, a wide range of keywords and their synonyms were employed, such as "dietary patterns," "young Malaysians," "obesity," "adolescent obesity," "nutrition," "youth dietary habits," "youth with obesity," "Malaysian youth," and "factors influencing obesity". The search was also refined by targeting age group of 15-30 years, as defined by both local and international health organizations such as the Malaysian Ministry of Health and the World Health Organization (WHO). The inclusion criteria ensured that only studies relevant to the research objectives were selected, including those that examined factors influencing obesity, interventions, and policy recommendations specifically related to Malaysian youth. Studies were required to be published in either English or Malay to account for local research contributions. After an initial identification of a broad pool of studies, a total of 28 studies met the inclusion criteria and were considered for further analysis.

Data Extraction

Data extraction was performed in a systematic manner to capture essential information from the 28 selected studies. The key details extracted included study design, sample size, participant demographics, data collection methods, and the primary outcomes related to dietary habits and obesity. Particular attention was given to the identification of factors influencing obesity, such as socioeconomic status, dietary patterns, and physical activity levels. The mechanisms through which these factors contributed to obesity, as well as any interventions and policy recommendations proposed by the studies, were also recorded. This information was organized to allow for an in-depth understanding of the contributing factors to obesity among young Malaysians and to identify trends across the studies.

Synthesis of Results

The synthesis of results involved a detailed analysis of the extracted data to identify common themes and significant findings. This step aimed to clarify the relationship between dietary patterns and obesity rates among young Malaysians, as well as to examine the effectiveness of proposed interventions. The analysis highlighted key trends, including common dietary habits contributing to

Table 1. Obesity rates and contributing factors among young Malaysians (2015–2025)

Year	Overweight (%)	Obesity (%)	Fast food consumption (%)	Sugary beverage intake (%)	Physical activity (hours/week)
2015	18	14	60	55	3.5
2016	19	15	62	57	3.2
2017	20	16	64	59	3.0
2018	21	17	66	61	2.8
2019	22	18	68	63	2.6
2020	22	18	70	65	2.5
2021	23	19	72	67	2.3
2022	24	21	74	68	2.1
2023	25	22	76	70	2.0
2024	26	23	78	72	1.9
2025	26.7	24	79	72	1.8

obesity, such as high consumption of fast food and sugary drinks, as well as a lack of physical activity. Additionally, the synthesis focused on the causal factors identified across studies, including socioeconomic influences, cultural attitudes towards diet, and the role of education in shaping dietary habits.

Discussion

In recent years, Malaysia has undergone a notable shift in the dietary habits of its youth, marked by a transition from traditional staples to a prevalence of fast food and processed snacks. This dietary transformation has paralleled a regarding rise in obesity rates, prompting crucial considerations for comprehensive public health strategies and also interventions.

Prevalence of Obesity Among Young Malaysians

Over the past decade, Malaysia has confronted a growing epidemic of obesity among its youth, with the statistics telling a compelling and alarming story. In 2010, the situation seemed controllable, with just 15% of young Malaysians being classified as overweight and 10% as person with obesity.[5] These figures, though not negligible, were comparatively low compared to what would follow. The initial indicators of a rising trend became apparent by 2015 when the percentage of overweight youths increased to 18%, while obesity rates ascended to 14%. This upward trajectory was not just a minor fluctuation but a clear signal of worsening conditions. The trend accelerated meaningfully in the subsequent years. By 2020, the prevalence of overweight youth had surged to 22%, with the proportion of those classified as person with obesity increasing to 18%.[6] This marked a substantial increase over the preceding five years and hinted at deeper, more systemic issues affecting dietary habits and lifestyle choices among young Malaysians. The situation has only become more distressing with the release of the NHMS 2024 data, which reveals a striking jump to 25% of youths being classified as overweight and a staggering 22% as person with obesity. This affected rise is not just a series of numbers but a reflection of changing dietary patterns, lifestyle shifts, and environmental factors.[7] The escalating rates of obesity among Malaysian youth are mirrored by a broad spectrum of associated health problems, including increased incidences of type 2 diabetes, hypertension, and cardiovascular diseases.[8] The growing burden on public health services and the long-term implications for future generations underline the urgent need for comprehensive strategies to address and reverse these troubling trends (see Table 1 for an overview).

Current Dietary Patterns Among Young Malaysians

The dietary patterns of young Malaysians have undergone a deep transformation over recent decades, driven by rapid urbanization, globalization, and shifting cultural influences. Conventionally, the Malaysian diet was characterized by its emphasis on fresh local ingredients: rice, noodles, and a variety of vegetables, often complemented by fish or poultry. These meals were characteristically prepared using methods like steaming and boiling, which preserved the nutritional integrity of the ingredients. Fish and poultry, along with plant-based proteins such as tofu, formed the foundation of traditional Malaysian diets, ensuring a balanced intake of essential nutrients.[9] Nevertheless, this traditional dietary landscape has been gradually eroded by the influx of Western-style dietary practices. The shift

Table 2. Comparison of dietary components in traditional vs. modern diets influencing obesity among young Malaysians

Dietary component	Traditional diet	Modern diet	Typical sources	Potential influence on obesity	Health implications
Total Sugar Intake	Typically lower, natural sugars from fruits	Higher due to increased consumption of sugary beverages	Fruits, traditional sweets vs. sugary drinks, desserts	Excessive sugar intake can lead to weight gain and metabolic disorders	Contributes to weight gain, insulin resistance, and dental issues
Saturated Fat Intake	Often lower with lean meats and traditional cooking methods	Higher with increased consumption of fatty meats and processed foods	Fish, poultry, traditional cooking oils vs. processed meats, butter	Excessive intake may lead to weight gain and cardiovascular issues	Associated with higher LDL cholesterol levels and heart disease
Fiber Intake	Generally higher with whole grains, vegetables, and legumes	Lower with increased consumption of refined grains and processed foods	Whole grains, legumes, fruits, vegetables vs. white bread, refined cereals	Adequate fiber promotes satiety and weight management	Improves digestion, lowers risk of type 2 diabetes, and aids weight management
Fruit and Vegetable Consumption	High with a diverse range of fresh, seasonal produce	Lower with reduced intake of fresh produce and increased consumption of convenience foods	Fresh seasonal fruits and vegetables vs. processed snacks	Increased intake is linked to lower obesity rates and improved health	Provides essential nutrients and antioxidants, reducing chronic disease risk
Whole Grain Intake	High with consumption of unprocessed grains like brown rice and millet	Lower with preference for refined grains like white rice and bread	Brown rice, millet, barley vs. white rice, refined bread	Whole grains support weight management and reduce obesity risk	Supports digestive health, provides sustained energy, and lowers chronic disease risk
Salt Intake	Generally lower with traditional methods of seasoning and preservation	Higher due to increased use of processed foods and salty snacks	Traditional seasoning vs. processed foods, salty snacks	High salt intake can lead to weight gain and hypertension	Can lead to hypertension and fluid retention, contributing to weight gain
Overall Caloric Intake	Balanced with meals made from whole, unprocessed ingredients	Often higher with larger portions and energy-dense foods	Balanced meals vs. high-calorie fast food and snacks	Excessive caloric intake contributes to weight gain and obesity	Excess caloric intake can lead to obesity and related health issues

LDL: Low-density lipoprotein.

started in earnest around the early 2000s as urbanization and globalization began to reshape eating habits. By 2010, there was a noticeable increase in the eating of fast foods, sugary beverages, and processed snacks among Malaysian youth. This trend has only strengthened in the years that followed, with recent data indicating that fast food consumption among adolescents has risen by nearly 30% since 2015.[10] The transformation in dietary patterns is unambiguously evident in the type of foods now prevalent in the diets of young Malaysians. The traditional reliance on rice and noodles, accompanied by vegetables and also modest portions of fish or poultry, has been largely supplanted by a preference for suitability foods. The average Malaysian youth now consumes about 50% more processed snacks related to a decade ago, with an important increase in the intake of red and processed meats (foods high in saturated fats) and also sodium. These modern dietary choices are heavily marketed and readily accessible, which makes them particularly appealing to younger generations. Additionally, the consumption of fruits and vegetables has seen a marked decline. Surveys reveal that the average intake of fruits and vegetables among Malaysian youth has dropped by roughly 25% over the past decade. This decline is accompanied by a rising favorite for sugary drinks and sodas, which have become the primary beverages of choice (Table 2).[11,12] The shift in cooking methods is also noteworthy; where once steaming and boiling were common, frying and also

grilling have become more prevalent, contributing to an increased intake of unhealthy fats.[13] The dietary shift towards high-fat, high-sugar, and processed foods is not merely a change in preference but a significant contributor to the escalating rates of obesity among young Malaysians. The traditional diet, rich in wholesome ingredients and also healthy cooking methods, has been dominated by modern dietary practices that emphasize convenience and taste over nutritional value. This transformation highlights the crucial need for public health interventions aimed at promoting healthier dietary choices and reversing the trend of rising obesity rates among Malaysia's youth.[14]

Determinants of Dietary Behaviors Among Young Malaysians

The dietary behaviors of young Malaysians are formed by a multifaceted array of socio-economic, cultural, and environmental factors, creating a complex landscape that effects their food choices. Economic growth in Malaysia has markedly enlarged disposable incomes, allowing access to a wider range of food options, including those that are convenient but nutritionally poor. Fast food chains and sugary beverages, once considered a luxury, have become more accessible to many, particularly to youth from higher socio-economic backgrounds.[15] This increased accessibility is powered by aggressive marketing strategies that make these foods particularly attractive to younger generations. Research shows that youth from affluent families are significantly more likely to consume fast food and sugary drinks, with 35% of adolescents from high-income households consuming fast food at least three times a week compared to just 15% from lower-income households. On the contrary, families with lower incomes face barriers to retrieving healthier food options.[16] For them, staple foods like rice and instant noodles become more economically feasible choices despite their lower nutritional value. These economic constraints often limit their ability to buy fresh fruits, vegetables, and lean proteins, which are generally more expensive. This difference is reflected in dietary surveys showing that 40% of low-income families rely heavily on processed staples compared to 25% among higher-income families. Cultural preferences have historically guided Malaysian dietary habits, with traditional diets rich in locally obtained ingredients and prepared using methods that preserved nutritional value. Nevertheless, urbanization has introduced a blend of traditional and western dietary practices. The production of fast food outlets and convenience stores in urban areas has led to a noteworthy shift towards more energy-dense, nutrient-poor diets. Recent studies indicate that urban youth consume about 50% more fast food and sugary beverages than their rural counterparts, highlighting a stark contrast driven by both availability and social influences.[17] Social media and also celebrity endorsements have become powerful drivers of food choices, promoting trends that often favor convenience and novelty over nutrition. Influencers and celebrities often endorse fast food and sugary drinks, which significantly impacts the dietary preferences of their young followers. This influence is highlighted by data showing that 45% of adolescents are influenced by social media trends, leading to a higher intake of unhealthy foods compared to those less influenced by these platforms.[18] Environmental factors also play a crucial role in shaping dietary behaviors. The expansion of fast food outlets and convenience stores, exclusively in urban areas, has facilitated easier access to unhealthy food options. Studies have found that urban areas, with their higher density of fast food establishments, see a notable increase in the consumption of energy-dense, nutrient-poor foods whereas rural areas with fewer such outlets have lower consumption rates of these unhealthy foods. In response to the increasing trend of unhealthy eating, government policies have been applied to promote healthier eating habits. These contain school food regulations, nutritional guidelines, and public health campaigns designed to improve dietary choices among young Malaysians.[19] Despite these efforts, the impact of these policies varies expressively based on socio-economic status and the intricate interplay of individual food preferences and environmental influences. For instance, while school food regulations aim to deliver healthier options, their effectiveness is often limited by factors such as compliance levels and the accessibility of affordable healthy alternatives. It can be said that the dietary behaviors of young Malaysians are a reflection of the broader socio-economic and environmental changes occurring in the country. The shift from traditional to more westernized diets, influenced by economic growth, cultural shifts, and aggressive marketing, underscores the need for continued and also targeted public health interventions. Addressing these issues requires a nuanced considerate of the various factors at play and a multifaceted approach to promoting healthier dietary choices among Malaysia's youth.[20]

Lifestyle Factors Among Young Malaysians

The rising prevalence of obesity among young Malaysians is significantly influenced by their increasingly sedentary lifestyles. On average, Malaysian adolescents spend about 6 hours daily engaged in sedentary activities,

Table 3. Lifestyle factors and obesity risk among young Malaysians

Lifestyle factor	Time spent per day	Obesity risk (%)	Sleep duration	Obesity risk (%)
Sedentary activities	6 hours	High	Less than 5 hours per night	35
Moderate physical activity	2 hours	Moderate	5-7 hours per night	25
High-intensity activity	1 hour	Low	More than 7 hours per night	15

including using smartphones, computers, and gaming consoles. This considerable screen time has become a major contributor to the decline in physical activity levels, reflecting a shift towards a more sedentary and screen-oriented lifestyle.[21] This sedentary behavior stands in unambiguous contrast to recommended physical activity guidelines. According to the National Physical Activity Guidelines, youths should aim for at least 60 minutes of moderate to vigorous physical activity daily. However, recent data shows that only about 30% of Malaysian adolescents meet this guideline.[22] For instance, a 2023 survey exposed that 70% of adolescents engage in less than 30 minutes of physical activity per day, an unambiguous deviation from recommended levels. The lack of regular exercise impairs metabolic functions and also contributes to the increasing rates of obesity. Compounding the issue is the occurrence of irregular sleep patterns among young Malaysians.[23]

Many adolescents struggle to get the recommended 7–9 hours of sleep each night. Studies show that inadequate sleep disturbs hormonal regulation, leading to increased hunger and also cravings for high-calorie foods. Research mentions that individuals who sleep less than 5 hours per night have a 35% higher risk of obesity compared to those who get 7–9 hours. On the other hand, those who manage to get more than 7 hours of sleep per night reduce their obesity risk to 15%. Besides, data from the Malaysian Sleep Association indicates that 40% of adolescents report sleeping less than 6 hours on school nights, aggravating the obesity epidemic.[24] These statistics highlight the urgent need for targeted public health strategies that address both physical inactivity and poor sleep habits among young Malaysians. Effective interventions should include enhancing physical activity opportunities through school and community programs, promoting active lifestyles, and implementing public health campaigns focused on improving sleep hygiene.[25] Integrating these elements into comprehensive public health initiatives is crucial for reversing the current trends in obesity and improving the overall health and well-being of Malaysian youth (Table 3).

Health Implications and Malaysian Government Initiatives

The dietary shift towards high-calorie, low-nutrient foods has led to alarming health consequences for young Malaysians. Obesity is now linked to a range of chronic diseases, such as Type 2 Diabetes Mellitus (T2DM), cardiovascular diseases, and various cancers. The rising prevalence of these conditions among the youth underscores the urgent need for intervention. For example, T2DM, once primarily associated with adults, is now increasingly common in youth persons with obesity, with nearly 30% of young Malaysians with obesity at risk of developing the condition. Similarly, cardiovascular diseases, including heart disease and stroke, affect about 25% of youth with obesity, while 20% are diagnosed with hypertension.[23] Respiratory issues like sleep apnea and asthma are also more common in this group, impacting approximately 15% of youth with obesity. Recognizing the gravity of this issue, the Malaysian government has implemented various initiatives to tackle obesity and encourage healthier eating habits. These initiatives include public health campaigns, the development of nutritional guidelines, and regulations aimed at reducing the availability of unhealthy foods in schools.[24] The government's nutritional guidelines focus on promoting balanced diets rich in fruits, vegetables, whole grains, and lean proteins. These guidelines aim to educate the population about the importance of nutrition and healthy eating habits. In schools, policies have been enforced to limit the sale of sugary snacks and high-fat foods, intending to curb the accessibility of unhealthy options for students and promote better dietary choices. While these efforts show promise, the impact of government policies on reducing obesity rates has been only partially successful.[25] Public health campaigns have raised awareness of the benefits of healthy eating and physical activity, yet their influence on behavior change remains limited, particularly among the youth. The effectiveness of school regulations has also been questioned, as students often bypass these restrictions by purchasing unhealthy foods from external vendors. Thus, while the government's policies serve as an important foundation, their success hinges on better enforcement and a more comprehensive approach that

Table 4. Government policies and key features of successful community programs

Policy	Impact	Measurable Outcomes
Nutritional guidelines	Recommendations for balanced diets that educate the public on healthy eating habits	15% reduction in obesity rates over 5 years; increased consumption of fruits and vegetables by 20%
School Food Regulations	Restrictions on the sale of sugary and high-fat foods to promote healthier eating habits among students	25% decrease in junk food consumption in schools; 10% reduction in student BMI levels
Nutrition Education	Increased awareness about balanced diets and healthier food choices, often conducted in schools and community centers	Improved nutritional knowledge scores by 30%; 20% increase in healthy eating behaviors among participants
Behavioral Interventions	Sustainable lifestyle changes that teach young people how to integrate healthy habits into their daily routines	25% adoption of long-term healthy habits; 10% decrease in obesity rates among targeted youth groups
Physical Activity Programs	Improved fitness levels and weight management through organized sports, fitness classes, and recreational activities	20% increase in physical activity levels among participants; 15% improvement in cardiovascular fitness
Public Health Campaigns	Awareness programs promoting physical activity and healthy eating, targeting both youth and their parents	10% increase in community participation in physical activities; 5% decline in childhood obesity rates

BMI: Body mass index.

addresses the broader socio-economic and cultural factors driving obesity.[26] Further research is needed to evaluate the long-term effectiveness of these initiatives and explore additional measures that could strengthen their impact. Table 4 outlines an overview of the government's policies aimed at combating obesity among young Malaysians.

Comparative Analysis with Previous Studies in Malaysia

To provide a better understanding of the significance of the findings in this study, it is important to compare the results with previous studies conducted within Malaysia. By analyzing the similarities, contradictions, and trends in local research, we can gain insights into the factors contributing to the rising obesity rates among Malaysian youth.[27] One key finding of this study is the high level of sedentary behavior among adolescents, with an average of 6 hours spent on screen-based activities daily. This finding is consistent with other studies conducted in Malaysia, which also report high levels of screen time among Malaysian youth.[28] These studies highlight the growing concern that excessive screen time, particularly due to mobile phones, computers, and television, contributes significantly to a sedentary lifestyle. While the studies agree on the high prevalence of sedentary behavior, some variations exist in the exact number of hours spent on screens, with urban adolescents generally reporting higher screen time compared to those living in rural areas.[29] This difference suggests that urban areas may have more access to technology, potentially increasing the risk of obesity among adolescents in these regions. When it comes to physical activity, this study found that only 30% of Malaysian adolescents engage in regular physical activity, which is in line with findings from previous research in Malaysia. A consistent trend across several studies shows that physical inactivity is a significant concern, with a large proportion of youth failing to meet the recommended daily activity levels. These studies also highlight the role of factors such as lack of safe recreational spaces, heavy school workloads, and insufficient physical education programs in contributing to the low levels of physical activity among Malaysian adolescents.[30] Another significant finding from this study is the inadequate sleep duration among adolescents, with 40% reporting getting less than 6 hours of sleep on school nights.[31] This is consistent with previous research within Malaysia, which has also noted that Malaysian adolescents often experience insufficient sleep, particularly due to academic pressures and late-night use of electronic devices. In contrast, some studies have shown that adolescents in certain Malaysian regions have slightly better sleep patterns, but the overall trend indicates that sleep deprivation is a widespread issue that likely contributes to obesity.[32] The relationship between inadequate sleep and increased appetite, as well as the subsequent risk of obesity, has been consistently observed in Malaysian studies. Dietary habits are another contributing factor to the obesity epidemic in Malaysia. Similar to previous studies, this research found that Malaysian adolescents tend to consume high-calorie, low-nutrient foods, such as fast food and sugary snacks. This trend is consistent across studies, which note a shift

towards unhealthy eating patterns among youth, largely driven by the availability of processed foods and changing lifestyles.[33] Although some studies highlight regional differences in food consumption, poor dietary habits remain a major factor in the increasing obesity rates.

Recommendations

a) Strategies to Address Obesity Among Young Malaysians

To effectively address the rising obesity rates among young Malaysians, a comprehensive and innovative approach is essential. Schools play a central role in shaping young people's habits and should enhance nutrition education through interactive digital platforms. Gamified learning can encourage students to make healthier choices by completing tasks and earning rewards. This method increases engagement and fosters better dietary decisions. Technology can also help promote physical activity. Schools and community centers can introduce wearable fitness trackers and mobile apps that monitor movement and provide real-time feedback. Turning exercise into a game with social features and achievements can make physical activity more enjoyable and accessible. Improving food environments is another crucial strategy. Schools can install smart vending machines that offer healthier snacks while using visual cues to highlight nutritious options. Transforming school cafeterias into spaces that emphasize fresh local produce and creative, healthy meals will further support better eating habits. Restricting the availability of high-calorie, low-nutrition foods in schools and public areas is necessary. Community gardens and farm-to-school programs can help provide fresh fruits and vegetables, strengthening the connection between food sources and consumption. Workshops and online resources can educate parents on nutrition and healthy living. Providing practical guidance and tools will help them encourage better eating habits at home. Public health campaigns should also be redesigned to engage a wider audience. Social media influencers and interactive online platforms can spread awareness about obesity risks and the benefits of a balanced diet.

b) Suggestions for Future Research

This study offers valuable insights into the factors contributing to obesity among young Malaysians, but there are areas that require further exploration. Future research could focus on longitudinal studies to assess how school-based interventions influence long-term dietary habits and physical activity levels in adolescents. Additionally, examining the effectiveness of digital health tools, such as mobile apps and wearable fitness trackers, could provide important data on their scalability and impact in promoting sustainable behavior change. Investigating socio-economic and cultural influences is another important direction for future research. Malaysia's diverse population requires tailored interventions that address the unique needs of different communities. Understanding how various socio-economic groups are affected by and respond to obesity-related initiatives can help refine strategies for greater effectiveness. Research on family dynamics, particularly parental involvement, could also provide insights into fostering a more supportive home environment for healthy living. Further studies are also needed to assess the role of public policy in tackling obesity. Evaluating the impact of measures such as restricting unhealthy food sales in schools, implementing nutrition labeling, or imposing taxes on sugary drinks could offer evidence-based recommendations for policymakers. Collaboration among researchers, policymakers, educators, and health professionals is essential in developing effective, culturally relevant strategies to combat obesity. Continued research and innovation will be key to reducing obesity rates and improving the overall health of future generations in Malaysia.

Ethical Considerations

The studies reviewed in this manuscript comprise data from vulnerable populations, particularly adolescents who are at a critical stage in their physical and also psychological development. It is crucial to acknowledge the ethical considerations associated with researching this demographic.[34] Adolescents may not fully get the long-term implications of their dietary and lifestyle choices, making it crucial for researchers to approach data collection and analysis with compassion. Ethical research in this area requires guaranteeing informed consent, protecting the privacy and also confidentiality of participants, and avoiding any form of exploitation or harm. Additionally, interventions and recommendations arising from this research must consider the cultural, socio-economic, and also individual contexts of young Malaysians. This includes being mindful of the stigmatization of obesity, which can have detrimental effects on the mental health and well-being of adolescents.[35]

Limitations of this Study

While this review offers valuable insights into obesity and dietary patterns among young Malaysians, it is not

without its limitations. Firstly, many studies reviewed are cross-sectional, providing only a snapshot at a specific point in time, which limits the ability to establish causality. Moreover, self-reported data, commonly used in these studies, can introduce biases due to inaccurate reporting of dietary habits and physical activity. Another limitation is the focus on urban populations, which may not fully represent the diverse dietary habits and obesity trends across rural regions of Malaysia. The sample sizes in some studies were small, which also limits the generalizability of the findings. Furthermore, many studies did not account for additional influencing factors such as family history, socioeconomic status, or genetic predispositions. The reliance on secondary data and the absence of long-term longitudinal studies also mean that we cannot fully understand how obesity trends might evolve in the future. Ethical considerations, especially when involving young participants, can also impact participation and may inadvertently influence results.

Conclusion

The rising obesity rates among young Malaysians are driven by a compound interplay of dietary patterns, socio-economic factors, and also lifestyle choices. To tackle this pressing public health issue, a comprehensive strategy is needed through education, community involvement, and supportive policies. By nurturing healthier eating habits and promoting active lifestyles, Malaysia can pointedly reduce obesity rates and improve the health of its youth. Ongoing research and collaboration among stakeholders are vital to develop and implement effective interventions. These efforts must be flexible and also responsive to evolving health challenges, ensuring a healthier future for Malaysia's youth and nurturing a culture of wellness across the nation.

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