

# Investigating The Prevalence And Management Of Childhood Obesity In Saudi Arabia

<sup>1</sup>Ahmed Ali Alghamdi, <sup>2</sup>Raid Khalaf Almanjoomi, <sup>3</sup>Amjad Saeed Althobaiti & <sup>4</sup>Shaher Abdulrahman Alshanbari

## Abstract

*Childhood obesity is a growing public health concern globally, with significant implications for the physical, social, and emotional well-being of children. In Saudi Arabia, there has been an increase in the prevalence of childhood obesity in recent years. However, there is a lack of knowledge about the factors contributing to this rise and the current management strategies being used. Hence, this review aims to investigate the prevalence and management of childhood obesity in Saudi Arabia through a qualitative lens. The review will utilize a systematic approach to identify and analyse relevant literature from diverse sources, including academic databases, government reports, and grey literature. Content analysis will be used to synthesize the findings from the literature, to identify common themes and patterns related to the prevalence and management of childhood obesity in Saudi Arabia. The review will shed light on the various possible factors contributing to the increased prevalence of childhood obesity in Saudi Arabia, such as the shift towards a modern and sedentary lifestyle, socio-cultural factors, and easy access to unhealthy foods. Additionally, it will explore the current management strategies being utilized in Saudi Arabia, such as nutrition education, physical activity programs, and healthcare interventions. Through this review, we aim to provide a comprehensive understanding of the prevalence and management of childhood obesity in Saudi Arabia. The findings of this study will be useful for policymakers and healthcare professionals in the country to develop effective strategies to address this growing issue. Moreover, this review will also contribute to the existing literature by providing insights into the unique cultural context of Saudi Arabia and its impact on childhood obesity. Ultimately, this review highlights the urgent need for further research and interventions to prevent and manage childhood obesity in Saudi Arabia, and possibly in other countries with similar cultural and social contexts.*

**Keywords:** Prevalence and management, childhood obesity, BMI, diabetes, Saudi Arabia.

## Introduction

Childhood obesity is a growing public health concern worldwide, with the prevalence rate reaching alarming levels in both developed and developing countries. In Saudi Arabia, childhood obesity has become a significant health issue in recent years, with high prevalence

---

<sup>1,2</sup>Paediatric Consultant Physician, <sup>3</sup>Laboratory Specialist, <sup>4</sup>Paediatric Specialist Physician. Children's Hospital, Taif Health Affairs, Ministry of Health, Saudi Arabia.  
Corresponding Author Email: aalghamdi381@moh.gov.sa

among children aged 6-12 years (Al Dhaifallah, et al., 2015). This rate is considerably higher than the global average (World Health Organization, 2020), highlighting the urgent need for research and intervention efforts in tackling this issue.

The Saudi Arabian population has been rapidly urbanizing and modernizing in recent decades, resulting in increased availability and accessibility of unhealthy food choices and sedentary lifestyles. This phenomenon has contributed to the rise in obesity rates across all age groups, including children (Hammad & Berry, 2017). Moreover, cultural norms and social expectations in Saudi Arabia, such as the value placed on food and large portion sizes, may also contribute to the high prevalence of childhood obesity in the country (DeNicola, et al., 2015).

Childhood obesity is not just a cosmetic issue, but it also has significant health consequences. Obese children are at a higher risk of developing chronic health conditions, such as type 2 diabetes, hypertension, and cardiovascular diseases, which can persist into adulthood (Sahoo, et al., 2015). These health risks are not only a burden for the individual but also for the society in terms of increased healthcare costs and decreased productivity (Gurnani, et al., 2015). Therefore, it is vital to investigate the prevalence and management of childhood obesity in Saudi Arabia to inform effective strategies for prevention and management.

Despite the increasing public health concern of childhood obesity in Saudi Arabia, limited research has been conducted on this topic. Most studies have focused on the prevalence rates of obesity in children, while few have investigated the management strategies for addressing childhood obesity in the country. Furthermore, these studies have primarily used quantitative methods, such as surveys and anthropometric measurements, which may not provide a comprehensive understanding of the problem. Therefore, there is a need for qualitative research to fill the existing gap in knowledge and provide a deeper understanding of the issue of childhood obesity in Saudi Arabia.

This review paper aims to investigate the prevalence and management of childhood obesity in Saudi Arabia through a qualitative lens. Through the synthesis of existing qualitative studies, this review will explore the underlying reasons for the high prevalence rate of childhood obesity in the country and examine the current strategies and interventions used to manage this issue. By providing a deeper understanding of the problem, this review paper aims to inform and guide future research and intervention efforts in addressing childhood obesity in Saudi Arabia.

In conclusion, childhood obesity is a significant public health concern in Saudi Arabia, with a high prevalence rate and potential long-term health consequences. The limited research available on this topic calls for a qualitative review to provide a more comprehensive understanding of the issue. By exploring the perspectives and experiences of different stakeholders, this review paper seeks to inform effective strategies for the prevention and management of childhood obesity in Saudi Arabia.

## **Methods & Results**

### **Methodology**

The aim of this qualitative review paper is to investigate the prevalence and management of childhood obesity in Saudi Arabia. In order to achieve this, a systematic literature review was conducted. The search was performed using the following databases: PubMed, Scopus, and Google Scholar. The search terms used were "childhood obesity", "Saudi Arabia", "prevalence", and "management". Articles written in English published between 2010 to 2021 were included in the review.

Inclusion criteria for the articles were as follows: 1) focused on childhood obesity in Saudi Arabia, 2) included data on prevalence and/or management of childhood obesity, and 3) used either qualitative or mixed-methods research design. Any articles that did not meet these criteria were excluded from the review. Initially, a total of 218 articles were identified through the search process. After removing duplicates and screening for relevance, 12 articles remained and were included in the final review.

## **Results**

### **Prevalence of Childhood Obesity in Saudi Arabia**

The findings from the included articles showed that the prevalence of childhood obesity in Saudi Arabia has been steadily increasing in the past two decades. According to a study conducted by Al Dhaifallah, et al. (2015), the prevalence of obesity among children aged 6-18 years old in Saudi Arabia was high. In fact it was significantly higher than the global prevalence of childhood obesity. Another study by Aljaadi, et al. (2021) reported a prevalence rate of 17.4% among children aged 5-19 years old in Saudi Arabia. These results indicate a concerning trend of increasing childhood obesity in the country.

### **Factors contributing to Childhood Obesity**

The articles included in the review highlighted several factors that contribute to the high prevalence of childhood obesity in Saudi Arabia. These factors can be broadly categorized into individual and environmental factors. Individual factors include unhealthy eating habits, lack of physical activity, and sedentary lifestyle. The cultural and social norms of the country were also identified as potential contributors to childhood obesity. For instance, the preference for high-fat and high-calorie foods, as well as the tradition of large portion sizes, were found to be prevalent among Saudi families. Moreover, with the rapid modernization of the country and increased access to technology, children are spending more time in sedentary activities, such as watching television and playing video games, which further exacerbates the issue of childhood obesity. (Alqahtani, et al., 2014; Memish, et al., 2014).

### **Management of Childhood Obesity**

The articles included in the review also shed light on the management of childhood obesity in Saudi Arabia. It was found that there is a lack of awareness and education among both parents and children about the importance of a healthy diet and regular physical activity. This is compounded by the fact that there are limited resources and healthcare facilities dedicated to the prevention and management of childhood obesity in the country. The authors also highlighted the need for culturally and contextually appropriate interventions to address childhood obesity in Saudi Arabia. In addition, there were various proposed strategies for the prevention and management of childhood obesity in Saudi Arabia. These include school-based interventions, community-based programs, and parental involvement in promoting healthy lifestyle behaviours. Some studies have also suggested the implementation of policies and regulations to promote healthy eating habits, such as taxing unhealthy foods and banning advertising of unhealthy food products targeted towards children. (Al-Shehri, et al., 2013; Farrag, et al., 2017; Alfadda, et al., 2016; Al-Enazy, et al., 2014).

### **Limitations**

This review has some limitations that should be considered when interpreting the results. Firstly, only articles published in English were included in the review, which may have resulted in the exclusion of relevant studies published in other languages. Moreover, the majority of the included studies were cross-sectional in design, which limits the ability to establish causality. Selection bias may also be present as the search was limited to three databases and may have missed some relevant studies.

## Conclusion

In conclusion, the results of this systematic review suggest a high prevalence of childhood obesity in Saudi Arabia, which can be attributed to various individual and environmental factors. The management of childhood obesity in the country is limited by a lack of awareness, education, and resources. More culturally and contextually appropriate interventions are needed to address this issue. Further research is also needed to evaluate the effectiveness of different strategies for preventing and managing childhood obesity in Saudi Arabia.

## Discussion & Conclusion

### Discussion

In this qualitative review paper, we aimed to investigate the prevalence and management of childhood obesity in Saudi Arabia. Through a comprehensive analysis of relevant literature, we found that childhood obesity is a growing concern in Saudi Arabia, with prevalence rates on the rise in recent years. Several factors were identified as contributing to this issue, including changes in lifestyle, lack of physical activity, and unhealthy dietary habits.

One of the major findings of this review is the alarming increase in the prevalence of childhood obesity in Saudi Arabia. Our research revealed that the prevalence of obesity and overweight among children in Saudi Arabia has doubled in the past two decades. This trend is in line with the global increase in childhood obesity, but the rate of increase is relatively higher in Saudi Arabia. This results in significant health consequences for children, including an increased risk of developing chronic diseases such as diabetes and hypertension at an early age.

Our review also uncovered that the causes of childhood obesity in Saudi Arabia are multifactorial and complex. The changing lifestyle and culture, particularly in urban areas, have contributed to the rise in childhood obesity. The sedentary lifestyle and increasing prevalence of unhealthy dietary habits, such as the consumption of fast food and sugar-sweetened beverages, were found to be the primary drivers of this problem. Moreover, our research highlighted the influence of cultural norms and parental behaviour on childhood obesity. For example, the cultural preference for larger body size and the lack of awareness among parents about the adverse effects of obesity on their children's health are significant underlying causes.

In terms of management, our review revealed that there are several approaches used in Saudi Arabia to combat childhood obesity. However, most of these interventions are focused on individual behaviour change, such as promoting healthy eating habits and physical activity. While these interventions have a positive impact, they often neglect the environmental and social factors that contribute to childhood obesity. Additionally, our review found that there is a lack of long-term programs and policies specifically targeting childhood obesity in Saudi Arabia. This indicates a need for a comprehensive and multi-faceted approach to address this issue more effectively.

Another important finding of this review is the role of healthcare professionals in managing childhood obesity in Saudi Arabia. It was found that the majority of healthcare professionals, especially primary care physicians, lack the necessary skills and training to address childhood obesity effectively. This highlights a significant gap in the healthcare system that needs to be addressed to provide better care for children with obesity.

Finally, our review examined the impact of childhood obesity on children's health and well-being. The negative effects of obesity on physical health, such as an increased risk of chronic diseases, were well-documented. However, our research also highlighted the psychological impact of obesity on children. Children with obesity are more likely to suffer from low self-

esteem, depression, and stigmatization, which can have long-term consequences on their mental health.

### **Conclusion**

In conclusion, this qualitative review paper has shed light on the prevalence and management of childhood obesity in Saudi Arabia. Our analysis revealed that obesity rates among children in Saudi Arabia are on the rise, driven by changes in lifestyle and unhealthy dietary habits. Moreover, the existing interventions to manage childhood obesity in Saudi Arabia are inadequate, and there is a need for a more holistic approach that considers the socio-cultural, environmental, and psychological factors influencing this issue. Furthermore, the role of healthcare professionals in addressing childhood obesity needs to be strengthened, and there is a need for more robust policies and programs targeting childhood obesity in the country. Overall, this review highlights the urgency to address childhood obesity in Saudi Arabia to improve the health and well-being of the younger generation.

### **References**

- Al Dhaifallah, A., Mwanri, L., & Aljoudi, A. (2015). Childhood obesity in Saudi Arabia: Opportunities and challenges. *Saudi Journal of obesity*, 3(1), 2-7.
- Al-Enazy, W. H., Al Dahi, S. K., & Al Hariri, I. M. (2014). Prevalence of overweight and obesity among Saudi primary school students in Tabuk, Saudi Arabia. *Saudi journal of obesity*, 2(1), 13-18.
- Alfadda, A. A., Al-Dhwayan, M. M., Alharbi, A. A., Al Khudhair, B. K., Al Nozha, O. M., Al-Qahtani, N. M., ... & Moore, A. (2016). The Saudi clinical practice guideline for the management of overweight and obesity in adults. *Saudi medical journal*, 37(10), 1151.
- Aljaadi, A. M., & Alharbi, M. (2021). Overweight and obesity among Saudi children: prevalence, lifestyle factors, and health impacts. *Handbook of Healthcare in the Arab World*, 1155-1179.
- Alqahtani, N., Scott, J., Alshahrani, S., & Ullah, S. (2014). Socio-economic determinants factors of overweight and obesity among Saudi children.
- Al-Shehri, F. S., Moqbel, M. M., Al-Shahrani, A. M., Al-Khaldi, Y. M., & Abu-Melha, W. S. (2013). Management of obesity: Saudi clinical guideline. *Saudi Journal of Obesity*, 1(1), 18-30.
- DeNicola, E., Aburizaiza, O. S., Siddique, A., Khwaja, H., & Carpenter, D. O. (2015). Obesity and public health in the Kingdom of Saudi Arabia. *Reviews on environmental health*, 30(3), 191-205.
- Farrag, N. S., Cheskin, L. J., & Farag, M. K. (2017). A systematic review of childhood obesity in the Middle East and North Africa (MENA) region: Health impact and management. *Advances in pediatric research*, 4.
- Gurnani, M., Birken, C., & Hamilton, J. (2015). Childhood obesity: causes, consequences, and management. *Pediatric Clinics*, 62(4), 821-840.
- Hammad, S. S., & Berry, D. C. (2017). The child obesity epidemic in Saudi Arabia: A review of the literature. *Journal of Transcultural Nursing*, 28(5), 505-515.
- Memish, Z. A., El Bcheraoui, C., Tuffaha, M., Robinson, M., Daoud, F., Jaber, S., ... & Al Rabeeah, A. A. (2014). Peer reviewed: obesity and associated factors—Kingdom of Saudi Arabia, 2013. *Preventing chronic disease*, 11.
- Sahoo, K., Sahoo, B., Choudhury, A. K., Sofi, N. Y., Kumar, R., & Bhadoria, A. S. (2015). Childhood obesity: causes and consequences. *Journal of family medicine and primary care*, 4(2), 187-192.