

A Review of Childhood Obesity- "A Grave Concern"

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Abstract

The childhood obesity is a matter of global concern in the current time. Changing demography, life-style, diet and social factors are responsible for gradual increase in the population of over-weight children in most parts of the world. The risk and complications related to the obesity in younger population are numerous and that include health concerns, cardiovascular and metabolic co-morbidities, socio-economic impacts and an overall long-term burden at personal and national level. The present effort through literature review of the published data so far, is an attempt to highlight the prevalence of "childhood obesity" in different continents and discuss the causes and impact at various levels in order to manage and avoid consequences. This review of literature may be a source of reference for health authorities, federal agencies or social organizations while planning or dealing with the issue of Childhood obesity in future.

Keywords: *Childhood Obesity; Socio-Economic Impacts*

Introduction

According to the World Health Organization (WHO), approximately 155 million children are overweight and 30 - 45 million are obese [1]. The risk and complications related to the obesity in younger population are numerous and that include health concerns, cardiovascular and metabolic co-morbidities, respiratory and endocrine complications, socio-economic impacts and an overall long-term burden at personal and national level [2,3]. The definition of childhood obesity is variable and has been defined by the 'WHO', Centre for Disease Control and Prevention (CDC) and the International Obesity Task Force (IOTF) [1-4]. The simplest denominators are 110 - 120% of ideal weight for height, weight and height "Z" score of more than 1 - 2 or Body Mass Index (BMI) of more than 25 kg/m² as per age and gender specific BMI [2].

Purpose of the Study

The purpose of review of the literature is to highlight the importance of keeping a healthy body weight through avoidance of possible etiologic factors and take necessary measures such as an active-life with physical activity for the betterment of the society.

Materials and Methods

The available English literature was reviewed through a "google" and "PubMed" search using search criteria of "childhood obesity" and "physical activity in childhood". The recent prominent research articles were selected randomly in order to make a small sample of study. The upper limit of included children's age was considered to be 18 years in most of the articles.

Observation and Results

Country	Year	Prevalence of overweight/obesity%	Remarks
United States	2000	15.4 - 25.6	NA
Canada	1996	11 - 27	More females
Chile	2000	10.6 - 19.6	More females
Finland	1999	8.3 - 19.4	More males
France	1990	10 - 11.7	More females
Germany	1995	10 - 20.7	More females
Netherland	1997	3.3 - 13.2	More females
Poland	1997	23.8 - 22.1	NA
Russia	1998	9 - 15.6	NA
UK	2000	15.9 - 26.3	More females

Table 1: Prevalence of childhood obesity in the United States and Europe.

Country	Year	Prevalence of overweight/obesity%	Remarks
Singapore	1993	1.1 - 15.2	More males
Japan	2000	10.1 - 17.2	More males
Taiwan	1996	21.4 - 21.3	Only females data
China	1997	6.4 - 7.7	NA
New Zealand	2000	13.4 - 30	NA
Australia	1995	10.7 - 21.5	More females

Table 2: Prevalence of childhood obesity in the South-East Asia.

Country	Year	Prevalence of overweight/obesity%	Remarks
Bahrain	2003	4.6 - 35	More females
Jordan	2003	3.9 - 10.9	NA
Kuwait	2004	13.1 - 31.8	More females
Lebanon	2003	4.2 - 28.8	More females
Libya	2002	7.5	NA
UAE	2005	7.1 - 20.1	More females

Table 3: Prevalence of childhood obesity in the Middle-East countries.

Discussion

The literature published during last 2 decades have shown the data related to the prevalence of overweight or obesity in most part of the world (Table 1-3). Most of the countries data suggest that there is a variable percentage of children in the countries have either overweight or obesity. The United States and Canada has more number of populations with obesity as compared to European children (Table 1). In contrast, the Germany, France and Netherland population have shown a considerably less obesity figures and that clearly depicts the fact that the Europe has a better position in this issue.

The People Republic of China and Singapore has minimal numbers of children with obesity. This is remarkable in the South East Asia and has contrasting figures than Australia and New Zealand (Table 2). The females outnumbered males in most of the observed studies (Table 1-3).

The changing socio-economic conditions following oil-boom in the Middle-East countries have led to many health-related problems that includes emergence of 'fast-food' diet, sedentary life style and lack of physical activity that is leading to obesity in the young generation [3,4]. In this context, Bahrain, Kuwait, Lebanon and the UAE have shown a rising number of childhood overweight or obesity in recent years (Table 3).

The analysis of data as shown in the tables and the literature review clearly indicates the high numbers of children with overweight and this issue is raising serious concerns to the 'WHO', health care industry, governments and parents. The childhood obesity is associated with development of various non-communicable diseases such as hypertension, diabetes, fatigue or heart and brain diseases [4]. The data analysis is important to all of us in order to implement preventive measures to control consequence of obesity in this generation in order to avoid long-term medical or socio-economic impacts.

A study by Farrag, *et al.* [4] has shown the health impact and management of childhood obesity. It reveals that there are cardiovascular risks, diabetes, disordered eating habits, poor quality of life, high blood pressure, high incidence of injury and psychological issues associated with overweight or obesity.

The low numbers of obese children as indicated in some countries could be due to local eating habits, custom, culture, physical activities, ethnic variation or genetic predispositions [1,3].

As per literature, some preventive and corrective measures for childhood obesity have been described or implemented by the physicians, governments or "WHO" include recommendations on physical activity (according to the age), consumption of healthy diet, avoidance of junk-food, health education, changes in the food industry, changes in the school and child care, parent-education and use of media for education on the issue of obesity and associated effects [1-5].

Conclusion

In conclusion, the childhood obesity is prevalent all over the world and there is a significant population at risk. In order to avoid deleterious health-related consequences, the need of the hour is to take preventive measure according to the guidelines for a healthy and better outcome. The cardiovascular and metabolic complications of the obesity are life-threatening and preventable.

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