

## **Childhood Obesity, a Threat to Health: Challenges and Solutions**

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In recent decades, obesity has turned into a public health problem worldwide due to its high prevalence, costs, and negative health effects. In 2014, over 1.9 billion adults (over 18 years of age) were overweight; of these, more than 600 million were obese [1, 2]. Adulthood-related health problems come from unhealthy behavioral patterns during childhood. Obese children are more likely to have obesity in adulthood, and even disability and premature death may threaten them. In addition, obese children experience breathing difficulties, increased risk of fractures, hypertension, early markers of cardiovascular diseases (CVDs), insulin resistance, psychological disorders, depression and social isolation [3]. Childhood obesity is caused by excessive food consumption and drinking of high-calorie sweetened beverages, lack of physical activity, and genetic factors; other behavioral and environmental factors may also play a main role in this regard [4].

The rapidly rising rates of childhood obesity and subsequent increasing burden of disease and disability have grave social and economic consequences, contributing to the rising cost of health services, limiting economic growth and exacerbating health inequalities and inequities. Hence, control and prevention of childhood obesity is a vital issue, and the related interventions can guarantee these children's health in future [5]. Obesity is preventable and solvable if people get acquainted with the disease and its consequences and perform the recommended preventive health behaviors. Although health education is the first step to change unhealthy behaviors, but health education programs merely are not sufficient. To combat obesity and its negative effects, comprehensive policies through coordinating and collaborating with other sustainable development sectors are required [6, 7].

The cross-sectional study was conducted on a sample of 416 junior high-school students who

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were selected using stratified random sampling in Khoy City, North West of Iran. The aim of the research was to evaluate the causes of obesity among children in the view of students. The data collection tool was a valid and reliable questionnaire. Data were analyzed using descriptive and analytical statistical methods in the SPSS software (ver.22). The results showed that the prevalence of obesity in the studied sample was 19%, which is a high and alarming risk factor according to the available statistics in the world; also the main predictors of obesity were: 1) Sedentary life style due to watching screens of television and computer for more than two hours per day, 2) Eating high-fat and unhealthy foods, and 3) Drinking sweetened beverages instead of water. There was a statistically significant relationship between the above three factors and obesity in children ( $P < 0.05$ ).

It is required that several effective public health programs and urgent measures be utilized for the control of obesity in children. To prevent and control obesity in students, the following strategies are recommended: a) raising people's knowledge and attitudes regarding obesity preventive lifestyle; b) limiting the consumption of unhealthy foods and beverages (sugary drinks) and choosing healthier foods (such as grains, fruits and vegetables, healthy fat and protein sources) for children; c) adding health-related educational

contents in the schools' curricula; d) be a role model (parents and teachers who eat healthy foods and participate in physical activity are good examples for the children and students to more likely do the same; e) limiting the time of viewing television, computer, and "sit time"; f) encouraging physical activity (children should have 60 minutes of moderate physical activity in most days of the week); g) providing specific places for walking and bicycling in the urban environments to promote physical activity; and h) advertising and promoting healthy lifestyle for people through mass media [8, 9]. In general, obesity should be considered as a health problem with high priority by health decision makers and policymakers, and steps should be taken to control and prevent it at both individual and community levels. In this way, effective strategies should be used with regard to the capabilities of the community and in accordance with the policies of the communities.

#### **Authors' Contribution**

Authors had the major role in the following areas: study concept and design; acquisition of data; analysis and interpretation of the data; drafting of the manuscript, critical revision of the manuscript for important intellectual content; statistical analysis; and administrative, technical and material support.

### **Funding/Support**

This study was supported by Urmia University of Medical Sciences, Urmia/Iran

### **References**

1. Spahr C, Wells A, Christens BD, Pollard E, LaGro Jr J, Morales A, Dennis S, Hilgendorf A, Meinen A, Korth A, Gaddis J, Schoeller D, Tomayko EJ, Carrel A, Adams A. Developing a strategy menu for community-level obesity prevention. *WMJ* 2016; 115(5): 264-8.
2. WHO. Obesity and overweight [Internet]. Fact Sheet. Updated January 2015; N 311. Available from: <http://www.who.int/mediacentre/factsheets/fs311/en/>
3. Luppino FS, de Wit LM, Bouvy PF, Stijnen T, Cuijpers P, Penninx BW, Zitman FG. Overweight, obesity, and depression: a systematic review and meta-analysis of longitudinal studies. *Arch Gen Psychiatry* 2010; 67(3): 220-9. DOI: 10.1001/archgenpsychiatry.2010.2
4. Xu S, Xue Y. Pediatric obesity: Causes, symptoms, prevention and treatment. *Exp Ther Med* 2016; 11(1): 15-20. DOI: 10.3892/etm.2015.2853
5. WHO. Consideration of the evidence on childhood obesity for the Commission on Ending Childhood Obesity: report of the ad hoc working group on science and evidence for ending childhood obesity, Geneva, Switzerland, 2016. Available from: [http://www.who.int/about/licensing/copyright\\_form/index.html](http://www.who.int/about/licensing/copyright_form/index.html)
6. WHO. Report of the first meeting of the ad hoc working group on science and evidence for ending childhood obesity: 18-20 June 2014, Geneva, Switzerland, 2014. Available from: [www.who.int/about/licensing/copyright\\_form/en/index.html](http://www.who.int/about/licensing/copyright_form/en/index.html)
7. Moghimi-Dehkordi B, Safaee A, Vahedi M, Pourhoseingholi A, Pourhoseingholi M, Ashtari S, Zali MR. Overweight and obesity and related factors in urban Iranian population aged between 20 to 84 years. *Ann Med Health Sci Res* 2013; 3(2): 171-6. DOI: 10.4103/2141-9248.113656.
8. Swinburn BA, Caterson I, Seidell JC, James W. Diet, nutrition and the prevention of excess weight gain and obesity. *Public Health Nutr Public Health Nutrition* 2004; 7(1a): 123-46.
9. Chobandmowlae S, Alamdari S, Shahrzad M, Delshad H, Amiri P. Policy Priorities of the IR of IRAN for Childhood Obesity Prevention. *Iranian Journal of Endocrinology and Metabolism* 2017; 18(6): 403-11. [In Persian]