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Mini Review

Impact of Legislative Initiatives, Policies and Programs on Childhood Obesity Prevention in Developed and Developing Countries

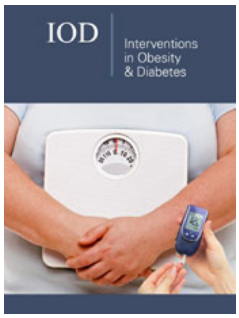
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Abstract

Childhood obesity in Latin America and Mexico is a growing public health. The principal causes are related with unhealthy diet and lack of physical activity. These risky behaviors are influenced by socioeconomic level, food accessibility, urban infrastructure, cultural practices, and public health policies. Legislative initiatives, policies and programs for preventing childhood obesity have showed differences between developed and developing countries. Countries with the greatest social-ecological impact on prevention have designed laws, public health strategies and programs; others are planned legal mechanisms such as promoting healthier choices and packaged food through labeling, food reformulation, taxation and restricting marketing of unhealthy food to children. In this review is analyzed the initiatives, policies and programs to tackle childhood obesity, comparing some developed versus developing countries of Latin America, mainly Mexico. In developed countries some programs such as EPODE ("Ensemble Prevenons L'Obesite Des Enfants") and HENRY ("Health Exercise Nutrition for the Really Young") have been successful in reducing overweight and obesity risk, and the OPAL ("Obesity Prevention Lifestyle") program was successful in reducing the trend of increasing percentage of children with obesity; in addition, these programs have managed to scale up on reducing the inequality gap in communities with lower socioeconomic levels. In contrast, in developing countries such as Mexico, strategies have been unsuccessful due Mexican government policies have not been based on a comprehensive view of the problem. The childhood obesity prevention could be based on providing strategy and organization by public sector institutions to create healthy environments; implement effective methodologies to educate children, parents and general population about healthy lifestyle; and ensure that national and local governments provide financial resources to perform childhood obesity programs, as well as consider the financial support from private sector enterprises.

Keywords: Childhood obesity; Prevention; Latin America; Mexico; Legislative initiatives; Policies; Programs

Introduction

Childhood obesity has become a global public health crisis. This health condition demands planned public health strategies and programs from national governments to guide specific strategies, accompanied by the allocation of resources [1]. The leading causes of childhood overweight and obesity are hyper caloric diets, added sugars, unhealthy fats, and poor physical activity [2]. These individual risky behaviors are influenced by socioeconomic level, food accessibility, urban infrastructure, cultural practices, and public health policies [3]. Therefore, childhood obesity prevention requires a multidimensional and multilevel approach [4], however, there is few information available, especially in developing countries, that demonstrates the effect of government-driven laws and public policies on obesity

prevention. Childhood obesity prevention has presented significant differences between developed and developing countries regarding the amplitude and depth in the adoption of effective laws and policies. There are laws designed to have an ecological impact, others are planned as legal mechanisms to impact overweight-related behaviors [5]. This review has conducted a comparative analysis of initiatives, policies and programs between of developed countries that have achieved significant results in preventing childhood obesity, comparing with developing countries of Latin America, mainly Mexico.

Discussion

Laws, policies, and programs to prevent childhood obesity in some developed countries

Some governments have implemented local, regional or targeted initiatives to reduce the childhood obesity prevalence. For instance, in France, the program "Ensemble Prevenons L'Obesite des Enfants" (EPODE) (Together Let's Prevent Childhood Obesity) launched in 2004 as a community-based approach, promoting healthier lifestyles in ten communities. Stakeholders were involved at two levels: bottom-up (at local community, social, cultural and physical adaptations of activities), and top-down (providing resources and support at a central level) [6]. This intervention reduced obesity by 25% and progressively scaled up to more communities and targeted more ambitious goals: EPODE for Promotion of Health Equity (EPHE) was applied in 1,062 children and their families across seven European communities, with the purpose of reducing inequalities in diet and physical activity. After five years EPODE continues in more than 90% of the original pilot communities, then, it scaled-up across 500 communities in seven countries. Furthermore, in France, fiscal measures were also implemented to reduce overconsumption of sweetened beverages (tax of €0.07per liter), showing a positive effect on soda consumption, with a 6.7% of reduction of soda intake in the first two years, with the greatest reduction in young people, households with adolescents and low-income people [7].

In Leeds, United Kingdom (UK) the program "Health Exercise Nutrition for the Really Young" (HENRY) reported that 93% of families were leading healthy or very healthy lifestyles comparing to 21% at the start. In Leeds city, obesity rates fallen from 10.3% to 8.7% over a 7-year of follow-up, while the national trends have remained almost immobile [8,9].

In United States of America (USA) the program "The Women, Infants and Children's" program (WIC) for low-income pregnant women and new mothers, reported a participation of target population of 60.1% [10]. This country also performed programs based on the socioecological model, which proposes the interconnected interactions that influence obesity related behaviors, including intrapersonal, interpersonal, organizational, community and societal factors, implementing Consumer Information Policies, consisting in Menu labelling-chain restaurant, Dietary guidelines, Nutrition-facts; School and Early Childhood Policies; Safe Routes to School; and Health Coverage and Prevention Policies; however, the impact of these programs on lifestyle and anthropometric indicators has not been assessed [11].

In Netherlands, the program "Jongeren Op Gezond Gewicht (JOGG)" (Youth at a Healthy Weight) showed higher fruit and vegetable consumption among young participants, but it not showed a significant impact on BMI or vigorous physical activity [12]. In the South of Australia "Obesity Prevention and Lifestyle" (OPAL) was developed on the basis of EPODE, whose objective was improving eating and physical activity habits through 20 metropolitan and regional communities, showing an expected risk reduction of overweight and obesity by 12.2% among children aged 4-5 years, and greater impact was seen among higher socioeconomic status areas [13,14]. Moreover, a review identified opportunities for a comprehensive national obesity strategy to prevent early childhood obesity in Australia, attempting to identify what international recommendations, actions and polices are available taken in other countries, using the policy mapping technique regarding a set of criteria to identify gaps and opportunities for developing a policy strategy, providing a comparison across Australia, Scotland, Canada, England, New Zealand, and Ireland. This review evidenced that most policies to prevent childhood obesity were in the downstream and midstream areas across the six countries: the major impact over specific policy levers was in the food environment and food policy [15]. Additionally, in this country was found a widening structural gap to support national obesity policy, due new public management strategies limit the ability of intergovernmental institutions to support coordination within and between different levels of the Australian government [16].

Laws, policies, and programs to prevent childhood obesity in Latin America and Mexico

In some countries of Latin America childhood obesity is one of the highest in the world, due changes in the food environment since 1990s, such as supermarkets, convenience stores, fast food restaurants, and vending machines of fast food and sweetened beverages. Different governments in Latin America have implemented strategies to shift consumption, promoting healthier choices and healthier packaged food through labeling, food reformulation, taxation and restricting marketing of unhealthy food to children, but the evidence of their impact is poor and inconclusive [17]. In Latin America some legislative initiatives have been proposed to tackle childhood obesity, for instance: in Mexico, taxes on junk food have been implemented and regulation of the sale of unhealthy foods and beverages in elementary schools [18]; in Chile, labeling and marketing, restriction of unhealthy food and beverages to children [19]; in Brazil dietary guidelines to return to a diet with a minimum of processed foods have shown certain impact; in addition, governmental food assistance programs have been implemented to increase the availability of fresh fruit and vegetables in rural areas, such as Glass of Milk and Community Kitchens in Peru, and "Diconsa" (a company to guarantee the supply of food at affordable prices) in Mexico, but their impact has not been assessed. Moreover, USA and Latin America countries developed the "Childhood Obesity Prevention Across Borders" (COPAB), in order to identify strategies for collaboration. This kind of knowledge exchange and increased research collaboration

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could accelerate the adaptation and implementation of promising childhood obesity interventions among Latino populations in both, USA and Latin America [17], however, there are no evaluations of the goals achieved by this initiative.

In Mexico, some nationwide and health promotion strategies have been executed by the governments: from 2006 to 2012, the program "Five Steps to Your Health, to live better", consisting in promoting physical activity, water intake, vegetables and fruits consumption [20]; from 2013 to 2018, the intervention consisted of installing high-quality drinking fountains, and ban the sale of junk food at elementary schools [21]. The current Mexican government (2024 to 2030) published an agreement to establish guidelines to guarantee healthy eating and lifestyles in the public elementary, secondary and high schools, in all country: ban the sale of junk food, promote natural water consumption and regular physical activity [22]. Nevertheless, although Mexico had executed diverse public health promotion strategies to improve children's lifestyle and health, their impact have been poor, due most programs offer information through the memorization of healthy lifestyle topics without a pedagogic teaching strategy, without encouraging regular PA at the school, and few of them have not educated by generating emotions and a positive attitude towards a healthy lifestyle, nor have involved family support [3].

In Mexico, there are several health promotion interventions carried out by research groups, which have showed partially successful intervention strategies to prevent weight gain and obesity in childhood: A randomized controlled trial assessed the effectiveness of an environmental, multifactor, multilevel, and school-based intervention in 27 elementary schools from Mexico City, showed that the prevalence of overweight and obesity reduced from 12 to 10% [23]; A randomized cluster intervention performed in 1,020 children of 60 schools, which consisted in nutrition and PA workshops, sale of fruits, vegetables and pure water at the school food cooperative, showed a risk reduction of overweight/obesity of 54% [24]; A community randomized trial was performed in elementary schools of two communities, that consisted of education on healthy habits, showed a reduction of BMI by 0.3Kg/m2 [25]. Finally, a cluster randomized field trial was performed to assess the effectiveness of a school-based intervention in elementary schools, highlighting that the combined effect of encouraging healthy food consumption, sportive tournaments, healthful school environment, and family support, significantly reduced the risk of overweight/obesity by 35%, and abdominal obesity by 41% [3].

Conclusion

There are significant differences between developed and developing countries in the amplitude and depth about the implementation of effective obesity prevention policies. In developed countries some programs such as EPODE and HENRY have been successful in reducing overweight and obesity risk [7,8], and the OPAL program was successful in reducing the trend of increasing percentage of children with obesity [13]; in addition, these programs have managed to scale up to more ambitious programs focused on reducing the inequality gap in communities with lower socioeconomic levels. Meanwhile, in developing countries such as Mexico, strategies to prevent childhood obesity have been unsuccessful due Mexican government policies have not been based on a comprehensive view of the problem and has not employed scientifically proven methodologies to address the problem [15]. There is increasing evidence that support the need of multi-component interventions, such as creating healthy environments with community participation, strategies based on coordinated policy that involves multiple sectors and all levels of government. Furthermore, because childhood obesity prevention policy is complex, it is crucial to understand that, due governments have different roles and influence over diverse environments, they can significantly impact the effectiveness of childhood obesity prevention strategies [16]. However, public policies must also consider that hormone imbalances is a growing community problem that can leads to appetite dysregulation with overeating [26]; thus, to reduce the prevalence of obesity and treat this condition, research on the appetite control should be also addressed [27].

To promote obesity prevention policies, there is broad consensus that decisive actions are required: from government, businesses, and consumers. Governments have lacked the necessary political will to adopt the precise measures needed to protect children's health; the food industry has actively worked to frustrate policies that affect its commercial interests, while consumers have not utilized sufficient influence or pressure to bring about change [28]. The childhood obesity prevention could be based on three key points: provide strategy and organization by public sector institutions to create healthy environments; implement effective methodologies to educate children, parents and general population about healthy lifestyle; and ensure that national and local governments provide financial resources, as well as consider the financial support from private sector enterprises.

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