Preventing childhood obesity: Contributions from the social sciences to intervention

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ABSTRACT

Programming and implementation of health policies for the prevention of overweight and obesity have traditionally focused on the dissemination of specific messages identifying healthy foods and pointing out the importance of physical activity. Despite recurrent efforts, the prevalence of obesity in both adult and children populations continues to rise. The configuration of preventive proposals seems to neglect the more complex reality of the eating phenomenon, whose nature goes beyond its biological basis. Behind the presence of overweight or obesity, there are factors that exceed individual behaviors, which are constituted as elements of social order. This premise is based on the contributions made from several fields such as anthropology, sociology, and social epidemiology, especially over the past thirty years.

This study aims to analyze the traditional models of institutional intervention while making visible the importance of a socially-oriented perspective that takes into account context and network analysis to address the problem of childhood overweight and obesity, centered on the food component.

Key words: *eating behavior, social networks, childhood obesity.*

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Prevention of obesity in Argentina and other countries

In Argentina, over the past years, numerous plans, campaigns, and programs have been implemented to promote health and manage noncommunicable diseases, e.g. obesity. The National Ministry of Health,[1] together with provincial, municipal, and private organizations, has developed intervention strategies across the country, including the National Healthy Argentina Plan (*Plan Nacional Argentina Saludable*) and other national programs, such as Taking Care in Health Care (*Cuidarse en Salud*), Argentina Walks(Argentina Camina), and School Health (*Salud Escolar*). These programs encouraged campaigns that mainly targeted the adult population and promoted daily physical activity, reduced smoking and salt intake, and introduced the idea of a balanced diet through social communication, informational workshops, and recreational activities in different locations. In addition, agreements have been made with the food industry to reduce salt and sugar contents and remove trans fat from mass-market products. The most representative intervention components include advertising campaigns placed in public places, such as schools or health facilities. The information conveyed through the above-mentioned programs has focused on recommendations on how to incorporate physical activity into daily life and also indications regarding the nutritional value of different food products that may be included in everyday meals depending on their macronutrient percent distribution. A pictorial analysis of messages included in these campaigns described phrases such as "add 30' of physical activity every day," "eating healthy means no sacrifice," "small changes, big benefits," "active child, healthy adult," and "prevent overweight and obesity with a healthy diet and an active lifestyle."

Interventions that are specifically targeted at the pediatric population repeat these exercise and nutrition dissemination models and include messages like "eating healthy is fun" or "choose water." The Building Health (*Armando Salud*) campaign, which is part of the childhood obesity prevention strategy of the province of Buenos Aires,[2] also proposes the

following: "eating as a family," "playing with friends" or "value our traditions." However, these phrases scarcely appear in advertisements and are used as disconnected slogans or on the back of previously specified individual nutritional indications.

Institutional interventions have been developed in a similar manner in other countries. For example, informational activities by means of dissemination strategies and nutritional education in public and private settings aimed at promoting healthy eating habits and an active lifestyle.[3] Denmark was the first country to develop a plan that was specifically targeted at obesity prevention. The National Action Plan Against Obesity was launched in 2003 and included diverse proposals at a private, public, and community level.[4] In 2005, the Spanish government promoted the Strategy for Nutrition, Physical Activity and Obesity Prevention (*Estrategia para la Nutrición, Actividad Física y Prevención de la Obesidad*), which was promoted at a national level and replicated regionally, e.g., in the form of the Reference School Pilot Program for Health and Exercise against Obesity (*Programa Piloto Escolar de Referencia para la Salud y el Ejercicio contra la Obesidad*, PERSEO), targeted at primary school students.[5-7] Also, for example, France developed in 2006 the National Health and Nutrition Program (*Programme National Nutrition Santé*) and Mexico launched, in 2007, the National Health Program (*Programa Nacional de Salud*). These initiatives were supported by geographic and political actions at a larger scale, such as the EU Platform for Action on Diet, Physical Activity and Health,[8] or the Strategy for Europe on Nutrition, Overweight and Obesity related health issues,[9] both developed by the European Union.

Many of these actions are developed in accordance with the guidelines proposed by the World Health Organization (WHO), which published the Global Strategy on Diet, Physical Activity and Health in 2004.[10] This was the first international proposal that suggested specific tasks to fight against obesity and the increase in noncommunicable diseases. The core concept brought up the improvement of what was perceived as a generalized poor nutrition and lack of exercise phenomenon. The document also specified the need to adapt decisions to the existing cultural diversity. Therefore, it was expected that the different national actions would be adapted accordingly. However, as pointed out by Gracia Arnaiz,[3] the first programs were amazingly homogeneous and, despite the WHO's recommendations, they barely took into account the plurality of subjects at which they were targeted. So now we should ask ourselves about the possible relationship between such uniformity in proposals and their subsequent effectiveness because, in spite of the efforts made, obesity rates continue to rise. Probably for this reason, at present, countries like France are reviewing their strategies and publishing updates to include a broader approach to cultural and contextual characteristics and adapted messages.[11] In the future, such modifications and considerations should be assessed to establish if they benefit program implementation and results.

Over the past years, priority has been given to approaching this problem at an early age; therefore, worldwide organizations have developed new publications, such as the Pan American Health Organization´s Plan of Action for the Prevention of Obesity in Children and Adolescents[12] or the report of the WHO's Commission on Ending Childhood Obesity.[13]

Traditional intervention models

Based on an analysis of reviews made of intervention models, it is possible to identify three major criticisms. The first is based on the almost exclusive approach that prevention has established on nutritional education.[3] In an underlying manner, this approach assumes that people have a poor diet based on indifference, ignorance, and lack of information. However, different studies have demonstrated that the definition of a healthy diet —from the physician's perspective— is deeply rooted in the population.[5,14,15] Therefore, the problem seems to lie in the translation of the acquired knowledge into an expected behavior. There is no correlation between nutrition recommendations and consumption practices. Access to information does not seem to have transformed them.[5,14] This may be due to financial factors (high cost of healthy food products) and social-employment factors (management of time spent on shopping and cooking in relation to working hours and other activities). Other elements may also be considered, such as an ideal body image, preferences, convenience, symbolic and ideological elements.[16] This underscores the idea that the significance assigned to eating is of multifactorial origin and not always related to the biomedical concept of health.

Secondly, the analysis of institutional actions evidences that the regulatory message is built

homogeneously. The target population of these campaigns is treated in a uniform manner, leaving sociocultural peculiarities aside. In this regard, Díaz-Méndez indicated that the uniformity of socioeducational and informational interventions does not differentiate between groups at a greater or smaller risk and standardizes proposals; this may hinder the possibility of attaining adequate results. [7] The reference to the social environment is usually limited to an occasional and abstract notion, with no actual understanding.[17]

Lastly, the homogenization of actions is accompanied by an individualistic approach. According to this perspective, the existence of diseases and risky or unhealthy behaviors depends exclusively on subjects and, therefore, informational actions should be targeted individually.[7] Diez Roux[18] related this phenomenon to an essentially biomedical concept of health and, according to this, the actual causes of disease lie in biological factors typical of each subject, not of a social group. This may also be the result of the process known as medicalization of everyday life, which attributes the cause of problems to individuals instead of the social environment and, as a consequence, implements medical interventions in the same manner.[19] Blaming individuals for their health/disease status is therefore supported on the concept that scientific logic is enough to convince people to take up responsibility and act for the good of their own health. However, nutrition decisions are not individual or rationally simple.[5] From the perspective of anthropology, Mary Douglas[20] pointed out that reducing risky behaviors to an individual decision limited by an individual's own interests extricated the phenomenon from financial, political, moral, ethnic, age, or gender determinants that take place in its configuration.

A proposal made from a relational perspective

The criticisms mentioned above suggest a simplified perspective of obesity, which is perceived as a result of inadequate lifestyles; therefore, an attempt is made to modify such lifestyles by conditioning individual behaviors. In this scheme, the problem is usually restricted to two main components: energy intake and expenditure. People are obese because they eat in excess and do not do enough physical activity. The persistence of traditional research and biomedical intervention models is therefore explained by the hegemony of a mathematical logic, a caloric input and output equation. A matter of qualitative order is confronted with essentially quantitative proposals.[5,6] However, there is a contradiction in the messages communicated by international organizations and many biomedical investigations, which describe the growing importance of a comprehensive approach and the sociocultural perspective to understand and address this problem.[10,21,22] Such discrepancy between messages and actions may evidence certain superficiality in its management, at the institutional level and on part of the professionals involved. In this case, the holistic perspective works to provide a successful integration message that is not translated into real practice.

The criticism of the individual-centered medical approach looks to give place to a proposal that considers the context in which a phenomenon occurs and its understanding within a relational scheme (instead of isolated individual actions). These new ways of understanding obesity may be identified in the studies by Christakis and Fowler,[23] Cohen-Cole and Fletcher,[24] Madan et al.,[25] De la Haye et al.,[26] Fletcher et al.,[27] or Macdonald-Wallis et al.,[28] among others. These studies delineate how socialization contexts and connections with close bonds have a potential influence on the configuration of health-disease-associated behaviors, especially in relation to eating behaviors, body image, sedentary habits, and physical activity. In these settings of social interaction, there are mechanisms of interpersonal influence, both direct (mimicking) and indirect (internalization of group rules); therefore, it is worth noting the relational aspect of this problem.

The approach to children

An analysis of programs and/or campaigns targeted at the child population suggests that children are not considered the subjects of chronic disease. Actually, most of these projects seek to prevent or report on contagious diseases and leave adults as the only recipients of noncommunicable disease prevention. However, obesity is a serious health problem in children, and goes beyond its psychosocial consequences (low self-esteem, low peer acceptance, and low sociability). First of all, overweight or obesity during infancy and childhood are predictors of adult obesity.[29,30] Secondly, in addition to its long-term sequelae, obesity is a health risk for children and adolescents because of its associated comorbidities.[31,32] All these reasons validate the implementation of preventive interventions focused on the underage population.[33]

Childhood obesity is a global phenomenon,

especially in Western countries. In 2014, the WHO reported that overweight and obesity among preschoolers exceeded 30% in developing countries.[12] In Argentina, the National School Health Program (*Programa Nacional de Salud Escolar*, PROSANE)[34] found that 21.4% of children aged 5-13 were overweight, and 15.6% were obese; these numbers are similar to those published in the obesity map, which identified that 19.0% of children aged 6-12 were overweight, and 17.7%, obese.[35]

What is the trend these numbers reflect? In the United States, childhood obesity more than doubled among children and quadrupled among adolescents in the past 30 years.[36,37] The same trend is reflected in transitional countries. For example, in Brazil, the prevalence of overweight and obesity tripled between 1975 and 1997.[38] In Argentina, a mean prevalence of 25% was reported in 2007 for children and adolescents, in contrast with a 14.5% prevalence reported in 1990. This means a 40% increase in overweight whereas obesity quadrupled, especially among younger children.[39]

Such prevalence values point out the need to have more complex policies targeted at the problem, with a plural approach that seeks to modify traditional perspectives and include non-biological causative mechanisms. Also, proposals should set the individualistic perspective aside and emphasize on the context and close connection network. Considering childhood as a period of individual shaping and boundary setting, it is through the connections made with our closest bonds that we learn and shape our identity, group belonging, and shared codes. The social context is where meaning, use, and experience internalization occurs.[40] Eating and eating-associated habits are part of a set of rules that are socially conditioned, ever-lasting and transmissible, and that work as the structural foundation of an individual's actions, assessments, and perceptions. It has been suggested that tastes shared in these social bonding spaces account for participation and exclusion units and, as a result, define the type of food, taste and texture combinations that make up different eating habits.[16,41] The domestic sphere, peer relations, and the environment where children live work as agents in this eating socialization process.[42] Together with them, identity and social identification take shape, and the frame is set for a health-related behavior that will be maintained over time. This experience should not disregard the active role played by media and new technologies in the transmission of body shape models to the configuration of consumption.[43]

The way children define their attitude towards nutrition and health, i.e., their likes and dislikes, is directly related to the subjective management they make of themselves and their environment.[41] Children are not just a recipient where knowledge is passively deposited; instead, they have now become more autonomous and are actively involved in the learning process and the development of their cultural setting.[44] This takes place both during the decision-making process and the development of opinions and assessments.[27,28] Therefore, it is important to recognize knowledge transmission and acquisition mechanisms, the negotiations made in practice, and the values regarding nutrition that may influence the development of eating disorders during childhood.[42,45]

Final considerations

The little effectiveness of traditional institutional interventions calls for insistence on an extended and supplementary view of the overweight and obesity problem that includes social determinants of health in its management,[7] such as the significance given to health and disease, the symbolic aspects of the food and consumption culture, and the active role of media. Taking into account regional features and also thoughtfully considering their historicity, micro- and macrostructural elements should also be included, e.g., social exclusion, gender relations, education and employment policies, and their characteristics.[5]

When approaching childhood and adult overweight and obesity, it would also be valuable to look into immediate bonding contexts that make up the universe of identification and socialization that create habits and meanings. In addition to helping with the analysis of the multiple causes of this problem, it may be useful for programming and planning future public health interventions. This way, a possibility opens up for a proposal that suggests activities considering the existing social context, reinforcing cooperation bonds, and translating the message from "individual responsibility" into a collective care project. For example, the use of computing devices, such as computers and smartphones, has become widespread among the population. Instead of coping with –so far, unsuccessful– strategies

looking to reduce their use, new technologies may, paradoxically, be taken into account when developing interventions. The social networking logic underlying many electronic devices and applications may be harnessed to guide group and community involvement. This may work to organize cooperative activities and socialize changes, monitor progress, share information, or simply be inspirational. Just like social networks may be used to favor risky behaviors, they may be equally valuable to convey and disseminate messages and actions that may be beneficial in the mid- and long-run. ■

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