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CONCLUSION

Education for childhood obesity prevention across the life-course: workshop conclusions

R Pérez-Escamilla[1,5], J Hospedales[2,6], A Contreras[3,6] and G Kac[4]

The objectives of this paper are to present the conclusions from the workshop 'Education for childhood obesity prevention: a life-course approach', coordinated by the Pan-American Health Organization and the Pan-American Health and Education Foundation, and held on 14 June 2012 in Aruba, as part of the II Pan-American Conference on Childhood Obesity (http://www.paco.aw/). This workshop focused on the need to recognize the life-course framework and education as a social determinant of health to address the childhood obesity epidemic through diverse education-based initiatives. Workshop participants agreed that both education *per se* and the education sector are key for obesity prevention and must form part of multidisciplinary interventions and collaboration between schools, families and the entire society. Capacity building in obesity prevention is required and should include the entire learning community, teachers, leaders, health-care providers, related services personnel, university professors and other interested community members. Obesity prevention initiatives should also engage key community institutions outside the formal education system, including early childhood centers, churches, pediatric/family medicine clinics, among others, to support family nutrition education, healthy food access and daily physical activity—all of which are key to promote a child's 'healthy weight'.

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INTRODUCTION

The objectives of this paper are to present the conclusions from the workshop 'Education for childhood obesity prevention: a life-course approach', coordinated by the Pan-American Health Organization and the Pan-American Health and Education Foundation, and held on 14 June 2012 in Aruba, as part of the II Pan-American Conference on Childhood Obesity (http://www.paco.aw/).

This workshop focused on the need to recognize the life-course framework to address the childhood obesity epidemic. This framework posits:[1] (a) a maternal pregnancy-related weight-gain cycle that explains excessive gestational weight gain and postpartum weight retention, as a function of a high pre-pregnancy body mass index. This cycle explains why the level of maternal obesity increases with each successive pregnancy. Healthy weight during pregnancy is key, as both under- and overweight increase the risk of childhood obesity. Maternal pregnancy situations that are very deprived nutritionally, for example, starvation/severe under-nutrition, also sets up newborns for subsequent excessive weight gain when exposed to a Western high calorie environment; (b) a cycle showing how an obese mother transfers her obesity risk to her child, especially if the child is exposed to suboptimal infant feeding practices and gains excessive weight during infancy. The life-course approach to childhood obesity prevention has indeed very significant public health implications. Waiting to address the epidemic until children are of school age may be too late for many children who may already be epigenetically programmed to become obese, as a result of their intrauterine and early childhood exposures to obesogenic environments. Action is needed from the prenatal condition, through optimal infant feeding practices, daycare, kindergarten, pre-school and primary school periods, at every level.

Workshop participants agreed that both education *per se* and the education sector are key for obesity prevention and must form part of multidisciplinary interventions and collaboration between schools, families and the entire society. Capacity building in obesity prevention is required and should include the entire learning community, teachers, leaders, health-care providers, related services personnel, university professors and other interested community members. The specific conclusions reached at this workshop specifically call for:

1. Educational interventions to reduce obesity in the preconception period, fostering appropriate weight gain during pregnancy, supporting women in avoiding the retention of excessive weight gain during the postpartum period and promoting optimal infant feeding practices, including breast feeding, nutritious and safe complementary feeding, and the avoidance of sugar sweetened beverages and 'junk foods', that is, foods high in fat, sugar, salt and which are highly processed.
2. National policies including inputs from the civil society organizations and the private sector are important to influence the social, economic and environmental determinants of obesity and other inequities in health. Well-informed parents, students and citizens need to have easy choices available regarding healthy eating and active living in cities and settings where people live, work, learn, eat and enjoy.
3. Implementing evidence-based interventions to prevent childhood obesity in all educational settings such as homes, childcare and early education centers, schools (pre and after

[1]Department of Chronic Disease Epidemiology, Yale School of Public Health, New Haven, CT, USA; [2]Prevention & Control, Non-Communicable Disease, Pan-American Health Organization, Washington, DC, USA; [3]Health Promotion Settings & Social Communication, Pan-American Health Organization, Washington, DC, USA; [4]Observatório de Epidemiologia Nutricional, Instituto de Nutrição Josué de Castro, Universidade Federal, do Rio de Janeiro, Brazil; [5]Office of Public Health Practice, Yale School of Public Health, New Haven, CT, USA; [6]Pan American/World Health Organization, Washington, DC, USA. Correspondence: Professor R Pérez-Escamilla, Department of Chronic Disease Epidemiology, Yale School of Public Health, 135 College Street, Suite 200, New Haven, CT 06510, USA.
E-mail: rafael.perez-escamilla@yale.edu

school programs), faith-based organizations, recreational and social settings and other community-based facilities for children and families.
4. Incorporating nutrition and physical activity for healthy living information into core curricula (math, language arts, social studies, and so on) in all educational settings (schools, early childhood centers/child care centers, summer programs, among others).
5. Developing or strengthening feeding and physical activity interventions at preschool, after school, and summer care programs with the aim to reduce 'screen time' and increase consumption of nutritious foods and physical activity during out of school time. Educational-based feeding programs must promote consumption of locally available fruits and vegetables, safe water and physical activity, while restricting access to calorie-dense,[2] fat-dense, nutrient-poor foods and beverages. In addition, obesity prevention must be practiced in a way that is culturally sensitive and takes into account beliefs associated with body image, particularly in young women.
6. Inter-sectorial collaboration to enable environments that increase accessibility to safe spaces (gyms, game courts, parks) and infrastructure (bike and walking paths) to promote and increase physical activity during and after hours.
7. Engaging key community institutions outside the formal education system, including early childhood centers, churches, pediatric/family medicine clinics, among others, to support family nutrition education, healthy food access and daily physical activity—all of which are key to promote child 'healthy weight'.

Additional strategies to enable the education interventions through the life-course approach should include:

1. Institutionalization of an early career leadership scholars program/network in Latin America and the Caribbean, which focuses on evidence-based approaches to childhood obesity prevention based on the life-course framework.
2. Promoting investment in longitudinal research to explore effectiveness, repeatability and sustainability of interventions to prevent childhood obesity through the life-course prioritizing on the preconception, pregnancy and early infancy periods.
3. Including childhood obesity prevention initiatives as a priority into the maternal–child health and education policies, and programs of international agencies including the Inter-American system.
4. Implementing innovative and attractive social marketing educational efforts developed to disseminate food-based dietary guidelines and other evidence-based messages to improve nutrition and physical activity.
5. Implementing monitoring and evaluation systems to properly assess process and impacts of life-course national strategies, including specific life-course targets for childhood obesity prevention in national and regional plans.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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DISCLAIMER

The conclusions presented in this article represent the consensus of the workshop participants and do not necessarily represent the position of any of the institutions with which the authors are affiliated. The workshop agenda and presenters can be found at: http://www.paco.aw/paco2documents.php (see PAHO-PAHEF workshop no. 4).

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