The Importance of the Food and Physical Activity Environments

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The development of socioecological models of health behaviors in the last two decades has promoted ‘the environment’ as a key theme in our thinking about obesity prevention and treatment. This means increasing interest in identifying the characteristics of neighborhood or local environments (physical, social, economical) that might favor unhealthy dietary and physical activity patterns leading to excess weight and obesity at the population level. Dietary behavior may indeed be influenced by spatial accessibility to food through the patterns of implantation of various types of food outlets and services. Access to food services represents however a complex concept that associates different dimensions related to accessibility: proximity, diversity, availability, affordability as well as perception, with ‘diversity’ referring to the types of food outlets and ‘availability’ referring to the food supply at the food outlets.

Assessment of characteristics of the built environment in relation to food and physical activity has greatly improved in recent years. Various methods have been used, based either on assessment of the perceptions by individual residents of their neighborhood or on an objective assessment of the actual built environment [1, 2]. Objective measures mainly rely on preexisting inventory databases and business directories or, in some cases, on environmental audits, which consist of sending trained raters with checklists to document specific aspects of the physical environment. Among objective approaches, spatial analysis methods based on geographic information systems (GIS) have opened up a new era of research in the field of public health nutrition [3]. Using GIS tools, analyses can be carried out to model spatial interactions between different types of information.

According to recent systematic reviews, current literature in adults shows more consistent evidence of associations between environmental factors and weight status than between environmental factors and obesity-related dietary intakes [4]. Greater accessibility to supermarkets and less access to take away outlets were associated with lower BMI or
prevalence of overweight/obesity. No consistent association was found between fruit and vegetable consumption and access to supermarkets or take away outlets, or availability/shelf space of fruits and vegetables. In contrast, area-level socioeconomic status was more consistently associated with healthier dietary behaviors. In children, based on objective measures of environmental factors, available data suggest that weight is positively related to spatial accessibility to convenience stores, but findings with other food retail outlets and restaurants appear mixed [5].

Significant advances have been made in recent years regarding the theories and methods used to study the food environment. However, we have to acknowledge that major challenges are ahead to better understand the complex pathways through which attributes of the built environment may impact weight status, in conjunction with neighborhood and individual socioeconomic characteristics. Since most studies were performed in the US, the UK or Australia, there is a need for data from other countries and settings. In addition, defining the size of the neighbourhood in which the relation between environment and behavior operates remains a methodological issue as much as ways to combine refined objective spatial measures with assessment of how residents perceive their environment. Designing and implementing longitudinal studies and ‘natural experiments’ are on the list of priorities. To integrate findings about the ‘foodscape’ in a global picture including the social and policy environments appears very much in line with the current thinking on the prevention of non-communicable diseases. The translation of findings from such transdisciplinary research will not be possible without the input from all potential stakeholders.

References