The Impact of a Multi-Level Multi-Component Childhood Obesity Prevention Intervention on Healthy Food Availability, Sales, and Purchasing in a Low-Income Urban Area

In this community-based intervention for childhood overweight and obesity prevention, multilevel multicomponent strategies were implemented to slow weight gain in children living in a low-income food desert. The intervention, B’more Healthy Communities for Kids (BHCK), used wholesaler, corner store, carryout, recreation centre and household changes “to improve availability, purchasing, and consumption of healthier foods and beverages (low-sugar, low-fat) in low-income food desert predominantly African American zones in the city of Baltimore (MD, USA)”.

From 2014 to 2016, the two-wave intervention was used in seven food deserts, each with a community centre as its nucleus. Each wave had three phases: healthy drinks, healthy snacks and healthy cooking methods, with the second wave having an additional reinforcement phase. Wholesale managers “were asked to stock healthier products” promoted by BHCK, and corner stores and carryout owners were “incentivised to stock and/or prepare foods using BHCK promoted items”. BHCK products were promoted in the stores and customers were exposed to these products through promotional materials, social media and educational interactive sessions from BHCK interventionists in the stores.

Overall increases in “the sales of promoted beverages and snacks” were observed at the wholesale level over the course of the two waves. However, “no changes in the sales of low-fat cooking ingredients” were seen. A significant increase in the stocking of promoted foods and beverages were seen in corner stores and carryouts. There was no statistically significant correlation “between positive changes in healthy food purchasing behaviour and levels of exposure to the BHCK trial among adult caregivers”. However, there was a positive trend “between healthy food purchasing and exposure levels among children”. Future multilevel programmes should include enhanced engagement with parents/adults. These findings suggest that multilevel, multicomponent interventions targeting childhood obesity through changes in the urban food environment can augment healthy eating choices available to communities and the behaviour of the individuals in them.