

COMMENTARY

The Weight of Social Risk and Opportunities for Obesity Prevention

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In the United States, children from families earning less than 200% of the federal poverty level have more than twice the rate of obesity compared to those from families earning at or above 400% of the poverty level [1]. Understanding how adverse social conditions associated with poor health, termed social risk factors, contribute to early-life obesity may help narrow this growing disparity and reduce the national obesity prevalence. While most studies investigating modifiable contributors to higher weight gain during infancy have focused on individual- and family-level factors such as diet and feeding practices, fewer have explored the role of social risk factors.

In this issue of *Obesity*, Duh-Leong and colleagues [2] address this knowledge gap by examining associations between social risk factors and weight-for-length at 6 months of age. This New York City-based clinical cohort study included over 1800 predominantly Hispanic infants covered by Medicaid. Utility hardship, defined as having the electric, gas, oil, or water shut off or threatened to be, was significantly associated with higher odds of elevated infant weight-for-length. No significant associations were found for food insecurity, housing instability, or transportation barriers. However, the connectedness of social determinants of health with other social categories, including class, race, ethnicity, and education, makes it challenging to separate a single factor as the driver of increased weight gain in infancy.

Food insecurity is the most extensively studied social risk factor in the context of childhood obesity. Nevertheless, the precise relationship remains inconclusive. Some studies report a positive association, whereas others, including that by Duh-Leong et al. [2], do not [3]. One limitation of large-scale studies testing

associations between food insecurity and obesity is the limited sensitivity of common screening tools. The Hunger Vital Sign, a two-item screener widely used in clinical cohort studies including by Duh-Leong et al., does not capture the severity of food insecurity. Consequently, families who worry about running out of food are grouped with those who truly lack adequate food. This more severe condition, termed food insufficiency, reflects limited food quantities and may involve skipped meals or reduced portion sizes. Future research employing more nuanced measures of food insecurity and insufficiency may yield deeper insights into the relationship between food access and childhood weight outcomes.

Studies of social support programs, especially those addressing nutrition, consistently demonstrate benefits in improving dietary quality and reducing obesity rates. The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) significantly enhances dietary quality and growth outcomes among children from low-income families. WIC participation is associated with increased consumption of fruits, vegetables, whole grains, and iron-rich foods and reduced food insecurity. Recent evaluations suggest that reforms to WIC, including updated food packages, have contributed to healthier weight trajectories and lower obesity prevalence among preschool-aged children [4]. Evidence is more limited regarding the impact of other US federal programs addressing social risk factors, such as Temporary Assistance for Needy Families (TANF) or the Low-Income Home Energy Assistance Program (LIHEAP). Given that direct cash transfers have been associated with improved pediatric weight outcomes [5], it is plausible that interventions targeting additional social risk factors may also confer benefits.

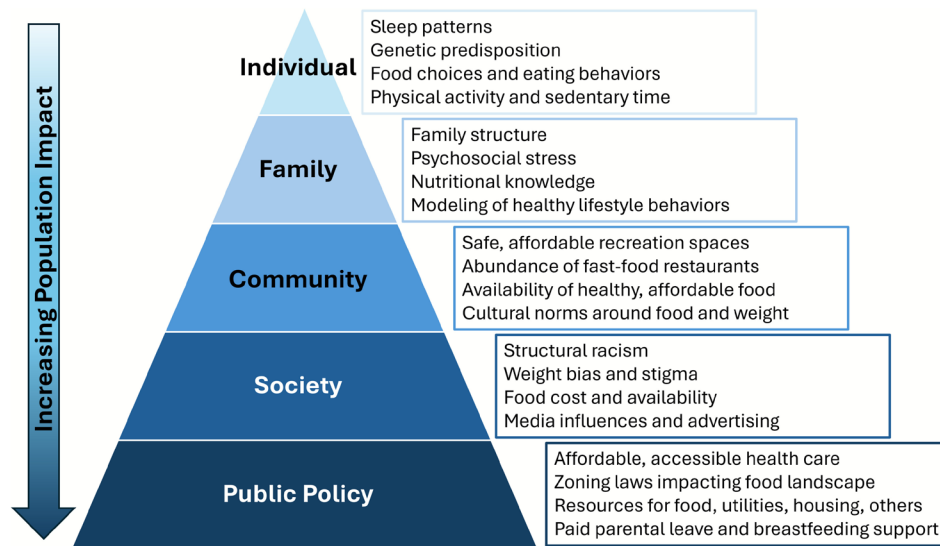


FIGURE 1 | Structural policies affecting early childhood obesity [7].

The Duh-Leong study [2] does not include information on infant feeding practices, a lost opportunity to advance understanding of the interdependence of poverty, early infant feeding practices, and growth. A robust body of literature links breastfeeding with more optimal growth rates in infancy and childhood, as well as highlights the wide disparities in breastfeeding rates by income [6]. Lower-income women are less likely to breastfeed due to systemic societal barriers, including limited access to lactation support, absence of paid parental leave, and workplace constraints that hinder breastmilk expression. Whether infant feeding practices mediate the relationship between financial hardship and elevated infant weight-for-length remains unclear and needs to be addressed in future studies.

Observational studies across multiple high-resource settings consistently demonstrate a strong association between poverty and childhood obesity risk. Sufficient evidence indicates that providing resources to families living in poverty improves child health outcomes, including for obesity. Yet current federal priorities overlook the potential of these resources to reduce obesity rates nationwide. While interventions that support healthier food choices remain essential, broader structural policies can exert a more substantial impact on reversing the rising prevalence of early childhood obesity (Figure 1). The findings reported by Duh-Leong et al. [2] add valuable momentum to the case for expanding social resource investments. These programs, which combine both material support and education, offer promising models for other high-income countries seeking to reduce early childhood obesity.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

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