



## Letter to the Editor

### Beyond the physical built environment

#### Madam

As a nurse with particular interest in food accessibility and obesity-related disease prevention, I read the Peng and Kaza<sup>(1)</sup> article in the May 2019 edition of *Public Health Nutrition* with great interest. The article emphasised the impact of the greater built environment and neighbourhood context on food availability and fruit and vegetable purchases in US households. Growing evidence has shown, however, that food environments can no longer be isolated to ‘availability’ alone<sup>(2–5)</sup>. The authors briefly addressed related factors apart from availability in their background, but ultimately emphasised regional destination accessibility and neighbourhood destination diversity.

In examining concepts such as destination diversity and street connectivity, the authors disregarded other related concepts to food availability such as affordability, acceptability and accommodation<sup>(6)</sup>. Food affordability and food culture are intrinsically tied to food availability<sup>(4,7)</sup>. Isolating the concept of food availability solely to the physical built environment disregards strong socio-economic factors and psychosocial factors in food purchasing behaviours and food environments. Proximity to available stores or presence of convenience stores becomes irrelevant if basic financial means prevent purchases of fruits and vegetables, let alone simply adequate amounts of food. Even when supplementary funds are provided for individuals, such as SNAP benefits, participants struggle to adequately feed themselves and their families by the end of the month or consume adequate fruits and vegetables<sup>(8,9)</sup>.

Studying physical built environments and food availability in one context alone further homogenises the concept of food availability. The study by Peng and Kaza<sup>(1)</sup> (2019) examined families above median national household income and predominately White, despite food inaccessibility predominantly affecting low-income households<sup>(4,10)</sup>. Physical environments in the context of low-income households emphasise different aspects of the food environment like affordability more than availability<sup>(11)</sup>. Moreover, ‘supermarket greenlining,’ targeting socio-economically deprived neighbourhoods for new supermarkets, could cause an illusion of increased availability of healthy foods<sup>(12)</sup>. In reality, these areas only further reduce access to healthy foods, due to prices

targeting individuals of higher socio-economic status. This could possibly explain the study’s insignificant association between food store availability and fruit and vegetable expenditures. Thus, examining food accessibility through the context of physically built environments alone easily creates an incomplete picture of the food environment. The physical built environment is undoubtedly important, but factors such as affordability and time poverty should ultimately take precedence over regional destination accessibility or neighbourhood destination diversity.

#### Acknowledgements

*Acknowledgements:* Dr. Frances Lewis, University of Washington School of Nursing, ARCS Foundation Fellowship, School of Nursing Troop Scholarship, School of Nursing Fraser Scholarship. *Financial support:* None. *Conflict of interest:* None. *Authorship:* A.P. devised the letter to the editor with critical feedback from Dr Frances Lewis at the University of Washington School of Nursing. *Ethics of human subject participation:* Not applicable.

Anna Petrovskis

University of Washington,  
School of Nursing Seattle, WA 98195, USA  
Email: apetro@uw.edu

#### References

1. Peng K & Kaza N (2019) Availability of neighbourhood supermarkets and convenience stores, broader built environment context, and the purchase of fruits and vegetables in US households. *Public Health Nutr* **22**, 2436–2447.
2. He M, Tucker P, Irwin JD *et al.* (2012) Obesogenic neighbourhoods: the impact of neighbourhood restaurants and convenience stores on adolescents’ food consumption behaviours. *Public Health Nutr* **15**, 2331–2339.
3. Oexle N, Barnes TL, Blake CE *et al.* (2015) Neighborhood fast food availability and fast food consumption. *Appetite*, **92**, 227–232.
4. Richardson AS, Boone-Heinonen J, Popkin BM *et al.* (2012) Are neighbourhood food resources distributed inequitably by income and race in the USA? Epidemiological findings across the urban spectrum. *BMJ Open* **2**, 1–9.
5. Walkinshaw LP, Chan NL & Nadinechan M (2019) Healthy Food Availability Food Bank Network Report, (February). [https://www.seattle.gov/Documents/Departments/CityAuditor/auditreports/030519Corrected Healthy Food Availability Food Bank Network Report\\_FINAL.pdf](https://www.seattle.gov/Documents/Departments/CityAuditor/auditreports/030519Corrected%20Healthy%20Food%20Availability%20Food%20Bank%20Network%20Report_FINAL.pdf) (accessed January 2020).

© The Authors 2020



6. Walkinshaw LP, Quinn EL, Rocha A *et al.* (2018) An evaluation of Washington state SNAP-Ed farmers' market initiatives and SNAP participant behaviors. *J Nutr Educ Behav* **50**, 536–546.
7. Horning ML & Fulkerson JA (2015) A Systematic review on the affordability of a healthful diet for families in the United States. *Public Health Nurs* **32**, 68–80.
8. Keith-Jennings B, Llobrera J & Dean S (2019) Links of the supplemental nutrition assistance program with food insecurity, poverty, and health: evidence and potential. *Am J Public Health* **109**, 1636–1640.
9. Zhang F, Liu J, Rehm CD *et al.* (2018) Trends and disparities in diet quality among US adults by Supplemental Nutrition Assistance Program participation status. *JAMA Netw Open* **1**, 1–16.
10. Loopstra R (2018) Interventions to address household food insecurity in high-income countries. *Proc Nutr Soc* **77**, 270–281.
11. Darmon N & Drewnowski A (2015) Contribution of food prices and diet cost to socioeconomic disparities in diet quality and health: a systematic review and analysis. *Nutr Rev* **73**, 643–660.
12. Cohen N (2018) Feeding or Starving Gentrification: the Role of Food Policy. Cuny Urban Food Policy Institute. <https://static1.squarespace.com/static/572d0fcc2b8dde9e10ab59d4/t/5aba9936575d1fe8933df34e/1522178358593/Policy-Brief-Feeding-or-Starving-Gentrification-20180327-Final.pdf> (accessed January 2020).