

3rd International Symposium on Nutrition (ISN 2022): Urban food policies for sustainable nutrition and health, 27–28
January 2022

Associations between food environment and nutritional quality of food purchases in French households: The Mont’Panier cross-sectional study

Daisy Recchia¹, Marlène Perignon¹, Pascaline Rollet¹, Simon Vonthron², Marion Tharrey¹, Nicole Darmon¹, Thierry Feuillet^{3,4}, Caroline Méjean¹ and Surfood-Foodscapes working group

¹MoISA, Univ Montpellier, CIRAD, CIHEAM-IAMM, INRAE, Institut Agro, IRD, Montpellier, France,

²INNOVATION, Univ Montpellier, CIRAD, INRAE, Institut Agro, Montpellier,

³University Paris 8, LADYSS, UMR 7533 CNRS, Saint Denis, and

⁴Nutritional Epidemiology Research Team (EREN), Inserm U1153, Inrae U1125, Cnam, Epidemiology and Statistics Research Center, Paris, France

Background/Objectives: There is growing interest in the role of food environment in dietary behaviors (1–2); exposure to the food environment is however complex to define (2–3). The purpose of this study was to assess whether the built food environment, measured by multiple indicators around home and in activity space, was associated with nutritional quality of food purchases.

Methods: This cross-sectional study included 462 households from a quota sampling survey conducted in the south of France (Montpellier metropolitan area). The revised Healthy Purchase Index was implemented in order to assess nutritional quality of food purchases. Food environment indicators (presence, number, relative density and proximity of food outlets) were calculated around home and in activity space (around home, work, other places of activity and along commuting journeys) using a geographical information system. Six different types of food outlets were studied: supermarkets, markets (open-air and covered markets), greengrocers, bakeries, other specialized food stores (butcher’s, fishmonger’s and dairy stores) and small grocery stores. Associations between food environment and nutritional quality of food purchases were assessed using multilevel models, and geographically weighted regressions to account for spatial nonstationarity. Models were adjusted for households’ socioeconomic and demographic characteristics.

Results: Nutritional quality of food purchases was positively associated with the number of greengrocers around home (1 vs 0: $\beta=0.26$, 95%CI= [0.01, -0.50]; >1 vs 0: $\beta=0.28$, 95%CI= [0.03, 0.52]), but negatively associated with the number of markets around home (1 vs 0: $\beta=-0.20$, 95%CI= [-0.40, 0.00]; >1 vs 0: $\beta=-0.40$, 95%CI= [-0.72, -0.08]), these associations varied across space in the studied area. For households with lower income, number of greengrocers in activity space was positively associated with nutritional quality of food purchases (1 vs 0: $\beta=0.71$, 95%CI= [0.13, 1.3]; >1 vs 0: $\beta=0.67$, 95%CI= [0.23, 1.1]).

Discussion / Conclusion: Greengrocers might be an efficient food store type to promote healthier dietary behaviors. Further studies, particularly interventional studies, are needed to confirm these results in order to guide public health policies in actions designed to improve the food environment.

References

1. Dixon BN, Ugwoaba UA, Brockmann AN, *et al.* (2021) *Obes Rev.* Apr; **22**(4), e13171.
2. Bivoltsis A, Cervigni E, Trapp G, *et al.* (2018) *Int J Health Geogr.* 09; **17**(1), 19.
3. Crawford TW, Jilcott Pitts SB, McGuirt JT, *et al.* (2014) *Health Place.* Nov; **30**, 215–25.

Disclosure of Interest

None Declared