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Neighborhoods and Risk of Diabetes Mellitus: Person and Place or Person in Place?

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To the Editor

Christine and colleagues¹ briefly comment on the implications of their findings for addressing income and racial disparities in type 2 diabetes mellitus (T2DM),¹ and the accompanying commentary discusses the limitations of only altering the environment to address disparities.² Both articles acknowledge the potential link between neighborhoods and stress. However, we feel this notion is more nuanced than either article describes, and we want to use this opportunity to extend the conversation about how neighborhoods may contribute to T2DM disparities.

In the analysis by Christine and colleagues,¹ the relationship between neighborhood factors and T2DM was driven by perceived—not actual—neighborhood characteristics and was not explained by individual behaviors (ie, diet, physical activity). These findings lead us to this question: How is perception of a neighborhood environment instead of actual neighborhood resources predictive of T2DM risk? We believe these counterintuitive findings reflect the convergence of cognitive appraisal with the affordances (ie, resources and stressors) in the environment.³

Stress perception, cognitive appraisal, and coping are rarely integrated into investigations of neighborhood factors, and often individuals are implicitly treated as either passive recipients of the environment or as free-will agents who opt into particular environments (ie, person/place dichotomy). However, there is a growing body of evidence that this intersection of stress, coping, and context plays a central role in the emergence and persistence of income and racial disparities in T2DM. The contextual environment shapes whether experiences are perceived as stressors and thereby prompts coping responses, some of which are contrary to long-term health (eg, eating unhealthy foods to alleviate stress).^{3,4} For example, in low-income minority neighborhoods, individuals report that stress (ie, financial strain, racial discrimination) negatively affects their ability to engage in a healthy diet.⁴ This suggests that stress should be conceptualized as a mediator of the relationship between the contextual environment and T2DM risk instead of a moderator, as was done in this study.

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The finding that food environments had a stronger impact on T2DM for individuals under chronic stress is consistent with our interpretation and illustrates the salience of stress for understanding the biological and behavioral processes by which the environment affects T2DM risk.⁵ We need to unify “person” and “place” to “person *in* place.” This reframing of how context influences T2DM has implications for the development of interventions that go beyond paradigms of individual behavior change⁵ and seek to affect the fixed environment in concert with the fluid characteristics of people who navigate them.

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