

GENTRIFICATION: A PRIORITY FOR ENVIRONMENTAL JUSTICE AND HEALTH EQUITY RESEARCH

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Although gentrification is occurring at increasing rates across the United States, our understanding of what this means for public health is limited. While positive changes, such as increases in property values and reduced crime rates occur, negative consequences, such as residential displacement, also ensue. Individuals living through gentrification experience major changes in social and environmental conditions often in short periods of time, which can result in disrupted social networks and stress, both associated with decrements in health. As neighborhoods across the United States undergo revitalization, understanding health effects of gentrification, positive and negative, is paramount. We posit that gentrification may be beneficial in some aspects of health and detrimental in others. To address current challenges in the gentrification-health literature, we recommend future research: 1) examine the gentrification processes and stages; 2) integrate built, natural, and social environment metrics; and 3) assess mediating and moderating associations. As gentrification expands across the United States, research conducted in this area is poised for timely contributions to equitable development and urban planning policies. *Ethn Dis.* 2020;30(3):509-512; doi:10.18865/ed.30.3.509

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INTRODUCTION: GENTRIFICATION – A PUBLIC HEALTH ISSUE

The Centers for Disease Control and Prevention has recognized gentrification as a public health issue.¹ Rising costs associated with gentrification can result in: problems locating affordable healthy housing; food insecurity from the need to pay high rents with limited income; and increased stress associated with decrements in health, including depression, obesity, cardiovascular disease, and mortality.^{1,2} Conversely, some may experience health benefits along with gentrification. This process often brings in additional businesses, extra tax revenue, less violent crime, lower vacancy rates, community development, increased property values, expanded amenities and services, and an overall revitalization of the area.² While residents of gentrified neighborhoods live within the same shared

space, they do not have the same shared experiences – these inequities may perpetuate health disparities.

Neighborhood dynamics play an important and longstanding role in the ability of individuals to thrive. Yet, the impacts of gentrification pro-

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cesses have been largely devoid of a public health context. While gentrification generates neighborhood improvements that benefit many, it may also be detrimental to the health of our most vulnerable populations. Has gentrification become a potential tool for deepening urban inequality and related health disparities? Empirical research is needed to answer this question. Given the current knowledge

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about social determinants of health and how differential experiences can result in health inequities, understanding neighborhood level contextual factors associated with residence in a gentrified neighborhood can be important for achieving health equity.

CALL TO ACTION

Public health researchers, advocates, and policymakers are called upon to examine gentrification through the lenses of social and environmental justice. Doing so requires tackling questions related to the disparate burdens and benefits that accompany gentrification, such as: Are certain populations more heavily impacted by gentrification and its health consequences? Is environmental gentrification pushing vulnerable residents to more toxic environments? Does gentrification result in differential access to resources needed to sustain a healthy life? Do individuals living in neighborhoods that are both gentrified and segregated suffer double jeopardy in health impacts?

To address these questions and many more we need strong policy, backed by sound research and knowledge. Prior scholarship provides insight into measurement error associated with gentrification and the need to address these difficulties.³ Here we make three additional recommendations to strengthen research on gentrification and health equity.

Research Stages of Gentrification

First, gentrification is a progression that occurs over time. Many

studies currently investigate the health impacts of gentrification as a static condition. Emerging research should examine the impacts of various gentrification processes (ie, through phases of development, severity, mechanisms, speed, etc.) on health equity. Stages of gentrification are widely acknowledged within urban planning and sociology literature, but rarely applied to public health research. Studies elucidating the impacts of gentrification on health at various stages are needed to help inform points of intervention and/or policies aimed at reducing disparities.⁴ Most gentrification-health studies examine outcomes at a single endpoint; however this technique cannot address concerns of temporality. Assessing health outcomes at multiple, biologically plausible timepoints throughout the gentrification process can strengthen causal inference. While some efforts have been made to incorporate stages, there is currently no consensus on how these stages are operationalized. Additionally, areas considered gentrified may be currently undergoing rapid gentrification or may have been gentrified years or decades ago. Gentrification occurring over long time periods could allow residents to gradually adjust, form new social structures, and adapt to changing financial obligations and thus, lessen some difficulties related to health disparities.

Studies are also needed to understand these short- and long-term health impacts of the rapidity of gentrification processes. Examining these complex processes will require new strategies. Approaches in machine learning have been used to find un-

derlying patterns in neighborhood change and predict gentrification trajectories in London.⁵ While the use of big data may be helpful in modeling health disparities, such models are typically unconcerned with causality and can return predictors not relevant to policy or health. Such strategies must be rooted in appropriate theoretical constructs and balanced with the need to incorporate both social and cultural constructs. Examining the stages of gentrification will not negate other methods of conceptualizing this process, but rather provide valuable insight into the impact of gentrification on health disparities.

Include Built, Natural, and Social Environment in Gentrification Research

Second, integrating metrics from the built, natural, and social domains can facilitate a complete understanding of the total environment. While understanding the impacts of gentrification on health disparities is itself paramount, residents living through this process are simultaneously exposed to multiple changes in both chemical and non-chemical stressors (eg, physical environment and psychosocial impacts), which may be interrelated. Integrating data on multiple factors that co-occur or evolve along with gentrification is critical to understanding the impacts of the process on health and health disparities.

Geography tools, including geographic information systems, satellite data and Google maps, have been useful for incorporating aspects from the built and natural environment characteristics but are rather limited in the gentrification-health literature.

The common use of census to define neighborhood boundaries can be improved by incorporating factors related to gentrification such as (businesses, transportation, and walkability). Natural environment exposures associated with health disparities (greenspace, air quality, etc.) can change with gentrification and should be incorporated into future research with attention to exposure assessment as well.

Prior research on gentrification ‘riskscape’ has pointed toward disparities in exposures to air toxins for residents of gentrified neighborhoods.⁶ Similar studies linking these exposures and others to actual health outcomes are needed. While social factors are often examined in gentrification literature, applying mixed methods and ‘systems thinking’ approaches to gentrification and health disparities research may help us to understand the connectedness of each of these individual characteristics. Understanding the cumulative effects of the changes that occur in the gentrification process can aid in creating and sustaining health equity solutions in these communities.

Explore Mediating and Moderating Impacts of Gentrifying Neighborhoods

Lastly, determining the mediating and moderating impacts of contextual changes within gentrifying neighborhoods can provide valuable information for policies in health equity. The pathways linking gentrification to individual health outcomes are complex, involving factors that move in opposing directions. Mediation analyses will allow for a better understanding of the mechanisms

through which gentrification impacts health disparities. Identifying important mediators can be accomplished by utilizing qualitative research that informs interactions (social networks, health behaviors, available resources, etc.) within communities undergoing gentrification. Longitudinal studies, natural experiments and life course

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approaches all lend themselves to conducting mediation analyses that can strengthen causal inference in gentrification-health disparities research.

Additionally, assessing moderating factors can explain whether gentrification has different health effects among different subgroups. Several studies already assess effect modi-

fiers of the gentrification-health association, mostly as race, income, and Black vs White gentrification.^{7,8} Though limited in number, these studies repeatedly report disparities in health outcomes between Blacks and Whites, including lower self-rated health, increased preterm birth, and increased mortality rates all among Blacks.⁷⁻¹⁰ A potentially important modifier of the gentrification-health association, not studied much in the literature, is length of residence – meaning a comparison between new and existing residents. While existing residents of gentrified neighborhoods experience changes (positive or negative) in an established community, new residents actively make the choice to move to a gentrifying area. Thus the effects of a changing residential environment may not be as strong. Many more factors (both individual- and neighborhood-level) of the relationship between gentrification and health should be examined, such as effect modifiers, including education, home ownership, environmental influences, social support, etc. Understanding mediating and moderating factors of gentrification-health associations are critical for informing policies that are effective in eliminating health disparities and should be conducted wherever possible.

CONCLUSION

As gentrification continues, research on health disparities can inform policies in urban planning and development as the process occurs, as opposed to afterwards. Addressing these challenges in the literature will

be vital to ensuring that urban renewal occurs in an equitable manner. While doing so, viewing gentrification through the lens of environmental justice is paramount to yielding findings relevant to attaining health equity. Without this perspective, we face the risk of perpetuating a process that may deepen urban inequality.

CONFLICT OF INTEREST

No conflicts of interest to report.

AUTHOR CONTRIBUTIONS

Research concept and design: Smith, Thorpe; Manuscript draft: Smith, Thorpe; Acquisition of funding: Smith; Administrative: Thorpe; Supervision: Smith

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