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Editorial

Structural Racial Discrimination and Structural Resilience: Measurement Precedes Change

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Life-course experiences shape the health and well-being of older adults. The foundational and continuing discrimination in the United States toward racial and ethnic groups of color perpetuate health profiles, particularly of older Black Americans, that are unequal and unjust. In all realms of life from education to neighborhoods to jobs and daily interchanges, older Black Americans have lived and aged through dissimilar circumstances than older White Americans. Our country needs a more refined understanding of exactly how discrimination affects health.

This special issue contains papers that seek to advance our understanding of the impact of discrimination on health among older Black Americans. Collectively these papers shed light on the complex relationships between interpersonal discrimination and its effect on health of older Black Americans. Interpersonal, or perceived discrimination is associated with inflammatory markers (1), cognitive decline (2), and premature mortality (3). In this issue, the articles extend this important body of work but with unintuitive findings. Sims et al. found a lack of association between hypertension and everyday discrimination (4). However, lifetime discrimination was associated with higher odds of hypertension among older men but not older women. Hailu et al. found no association overall between everyday discrimination and telomere length (a marker of accelerated aging) but did find that telomere length was shorter in those individuals with major experiences of discrimination who lived in neighborhoods with low social cohesion (5). The papers note that there may be recall bias for events that happened during the life course, survival bias of who lives long enough and is healthy enough to be in studies, or selection bias of those willing to enroll in studies. In addition to those critiques is the idea that measuring perception of or interpersonal discrimination merely captures a piece, important nonetheless, of the differently structured lives and stressors that Black Americans experience throughout life.

The structurally different experiences that Black Americans face in the major sectors of life may have more health impact than

perceived discrimination. Structural discrimination (i) occurs across systems, rather than depending on one individual or institution, and (ii) is perpetuated by unintentionally or intentionally discriminatory policies and practices that compound inequities between groups in income and wealth, health, employment, neighborhood factors, environment, education, incarceration and criminal justice, media and marketing, and civic participation (6). As such, it is a "fundamental cause" or a cause of other causes (Figure 1) (7). One relevant aspect of a fundamental cause is that new health risks or new health innovations widen disparities; those with more privilege are able to access new treatments (eg, cancer disparities widen with new treatments (8)) and those with less privilege are less able to avoid the risk (eg, racial disparities in COVID-19 deaths). An important implication of structural discrimination as a fundamental cause is that chronic conditions cannot be addressed by focusing on intervening mechanisms, such as high blood pressure, alone. Rather approaches that target the underlying exposures are needed. A strong measure of structural racial discrimination would ideally be able to capture exposures over the life course and account for geographical differences in structural discrimination experiences.

Structural Resilience

Another aspect of structural racial discrimination is the resilience and reserve developed in communities and neighborhoods. The current science of reserve and resilience is predominantly focused on individuals or on individual brains. While individual resilience is important, it is supported by differentially distributed structural resilience. Parallel to the need to develop measures of structural discrimination is a need for measures of structural resilience that draw from the environments in which people live, work, eat, shop, play, and pray (7). As described in our Society-to-Cells Resilience Framework (9), resilience is not only an individual characteristic (ie,

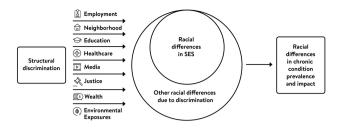


Figure 1. Structural discrimination as a cause of causes. SES = socioeconomic status.

religiosity or optimism), but has many domains including community and policy factors (eg, family leave policies for caregivers), the physical layout of the home, family support, coping skills, and social networks that spring up in crisis (10). It is important to redress and stop all discrimination, structural and everyday. While we work toward that goal, it will be important to identify what structural resilience factors can improve health and function and how. For example, in this special issue, Hailu et al. found a buffering effect of social cohesion on the relationship between discrimination and telomere length. Social cohesion may be a key factor in resilience. Other life-course resilience-building factors related to health and function in late life may include religious communities, mutual aid societies, greenspace, family tradition, and Historically Black College/ University attendance.

There is too little scientific focus on the potentially synergistic impact of individual and structural resilience. For example, Black Americans with low education may not benefit from high-effort coping in the way their counterparts with more education do (11). Addressing structural factors could not only directly affect health but could also unleash individual and family-level resilience-another mechanism for improved outcomes. African Americans' access to developing family and communal resources has been diminished throughout their over 400-year history in this country, through violence, oppression, and seizure of developing wealth. For example, in 1921 the Tulsa massacre devastated Black Wall Street, resulting in lost Black lives and the decimation of Black business infrastructure, property, and wealth potential (12). Today, differential criminal justice enforcement strips Black communities of social and financial capital (13). Studying resilience as an individual trait neglects the rich scientific opportunities to create interventions that draw on family, community, and societal conditions to increase cognitive reserve.

Measuring Structural Discrimination and Structural Resilience

Despite structural discrimination and structural resilience being drivers of health outcomes, there is currently no individualized way to measure them across the life course (14) and hence address them. A recent publication made a large leap on the multidimensional nature of structural discrimination but with a cross-sectional, rather than a life course, approach (15). Residential segregation is often used as a proxy for exposure to structural discrimination (14) but is only one component. Adequately measuring structural discrimination requires measuring both cumulative life-course exposure and measuring across contexts, such as education, employment, and the criminal justice system. The field needs more precise instruments that can assess exposure to structural discrimination across the life course and across contexts.

Similarly in the resilience realm, to our knowledge, there are currently no measures of community- or structural-level resilience outside of preparation for natural disasters (16). The tenets of our society-to-cells resilience theory can be a foundation for measurement of structural resilience. Two relevant tenets are: (i) that communities have periods in which they are particularly likely to be resilient; and (ii) interventions that occur on multiple levels (at built environment and policy level, for example) are more likely to have enduring impact.

A comprehensive measure of structural discrimination and resilience could evaluate the intersecting and compounding nature of structurally different access to the 9 domains identified in Figure 1 (14). Better understanding the relationship between structural factors and chronic disabling conditions such as Alzheimer's disease could help inform the effectiveness of policies or interventions at mitigating the impact of structural discrimination on Alzheimer's Disease and Related Dementias outcomes.

Plans to Improve Measurement of Structural Discrimination and Resilience

A significant side benefit of developing a reliable, valid measure of structural racial discrimination and resilience to test its role in some conditions such as dementia is that this work will enhance our understanding of other conditions as well, such as hypertension, stroke, heart disease, cancer, and conditions mediated by inflammation that are on the causal pathway to dementia. Understanding how to equalize Black and White chronic condition and functional limitation burden is an ethical imperative and will also reveal mechanisms that will optimize its prevention and care.

Overall, older people are able to contribute longer to society than in the past. This opportunity to affect in meaningful ways has been muted for African Americans. Individuals and families lose this time but so does society itself when 15% of its citizens have a twofold higher likelihood of early mortality and limiting chronic conditions such as Alzheimer's disease. If all people had the same likelihood of major chronic conditions and disability, this would return time to older African Americans—to volunteer in schools, in churches, and to help advise small businesses. Refocusing our measurement to combat disparities is desperately needed. Identifying factors amenable to change is critical as we face our future.

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References

- Szanton SL, Miller ER, Thorpe RJ, et al. Psychological stress associated with red blood cell oxidative stress: the Healthy Aging in Neighborhoods of Diversity across the Life Span (HANDLS) study. *Psychosom Med*. 2009;71(3):A69. doi:10.1007/s12529-011-9188-z
- Barnes LL, Lewis TT, Begeny CT, Yu L, Bennett DA, Wilson RS. Perceived discrimination and cognition in older African Americans. *J Int Neuropsychol Soc.* 2012;18(5):856–865. doi:10.1017/S1355617712000628
- Barnes LL, de Leon CF, Lewis TT, Bienias JL, Wilson RS, Evans DA. Perceived discrimination and mortality in a population-based study of older adults. Am J Public Health. 2008;98(7):1241–1247. doi:10.2105/ AJPH.2007.114397
- Sims KD, Smit E, Batty GD, Hystad PW, Odden MC. Intersectional discrimination and change in blood pressure control among older adults:

- the Health and Retirement Survey. J Gerontol A Biol Sci Med Sci. 2022;77(2):375–382. doi:10.1093/gerona/glab234
- Hailu EM, Lewis TT, Needham BL, Lin J, Seeman TE, Mujahid MS. Longitudinal associations between discrimination, neighborhood social cohesion, and telomere length: the Multi-Ethnic Study of Atherosclerosis. J Gerontol A Biol Sci Med Sci. 2022;77(2):365–374. doi:10.1093/gerona/glab193
- Bailey ZD, Krieger N, Agénor M, Graves J, Linos N, Bassett MT. Structural racism and health inequities in the USA: evidence and interventions. *Lancet*. 2017;389(10077):1453–1463. doi:10.1016/S0140-6736(17)30569-X
- Phelan JC, Link BG. Is racism a fundamental cause of inequalities in health? Annu Rev Sociol. 2015. doi:10.1146/ annurev-soc-073014-112305
- Sankar P, Cho MK, Condit CM, et al. Genetic research and health disparities. JAMA. 2004;291(24):2985–2989. doi:10.1001/jama.291.24.2985
- Szanton SL, Gill JM, Thorpe RJ, Jr. The society-to-cells model of resilience in older adults. In: Whitfield KE, ed. Annual Review of Gerontology and Geriatrics, 2010: Focus on Biobehavioral Perspectives on Health in Late Life. Springer Publishing Co.; 2010: 5–34.
- 10. Nembhard JG. Collective Courage. Penn State University Press; 2014.

- Subramanyam MA, James SA, Diez-Roux AV, et al. Socioeconomic status, John Henryism and blood pressure among African-Americans in the Jackson Heart Study. Soc Sci Med. 2013;93:139–146. doi:10.1016/j. socscimed.2013.06.016
- Messer CM, Shriver TE, Adams AE. The destruction of Black Wall Street: Tulsa's 1921 Riot and the eradication of accumulated wealth. Am J Econ Sociol. 2018. doi:10.1111/ajes.12225
- Turney K, Wakefield S. Criminal Justice Contact and Inequality. RSF; 2019. doi:10.7758/RSF.2019.5.1.01
- Groos M, Wallace M, Hardeman R, Theall K. Measuring inequity: a systematic review of methods used to quantify structural racism. *J Health Dispar Res Pract*. 2018;11(2):13. https://digitalscholarship.unlv.edu/jhdrp/vol11/iss2/13
- Chantarat T, Van Riper DC, Hardeman RR. The intricacy of structural racism measurement: a pilot development of a latent-class multidimensional measure. EClinical Medicine. 2021;40:101092. doi:10.1016/j.eclinm.2021.101092
- Pfefferbaum RL, Pfefferbaum B, Van Horn RL, Klomp RW, Norris FH, Reissman DB. The Communities Advancing Resilience Toolkit (CART): an intervention to build community resilience to disasters. *J Public Health Manag Pract*. 2013;19(3):250–258. doi:10.1097/PHH.0b013e318268aed8