ARTICLE IN PRESS

Social Science & Medicine xxx (xxxx) xxx

ELSEVIER

Contents lists available at ScienceDirect

Social Science & Medicine

journal homepage: www.elsevier.com/locate/socscimed



Ageism and late-life mortality: How community matters

Deborah Carr

Department of Sociology and Center for Innovation in Social Science, Boston University, 704 Commonwealth Ave, Boston, MA, 02215, USA

ABSTRACT

Ageism: the deeply entrenched biases that people hold about old age—is a persistent social problem that intensified during the COVID-19 pandemic. The harmful physical, emotional, and cognitive health consequences of individual-level age bias are well-documented, with most studies operationalizing ageism as an older adult's personal encounters with age discrimination, self-perceptions of their own aging, and internalized negative beliefs about old age. However, the impacts of community-level age bias on older adults' well-being have received less attention. This commentary reviews recent evidence (Kellogg et al.,) showing that county-level explicit age bias is associated with lower mortality rates among older adults, with effects limited to older adults residing in counties with relatively younger populations. Effects were not detected in counties with relatively older populations, or for implicit age bias. These counterintuitive findings require further exploration, including the use of more fine-grained measures of community-level ageism, attention to the role of gentrification in communities, and the development of new measures of structural ageism, drawing on approaches used to study the impacts of structural racism. Data science approaches, including the use of social media data in tandem with mortality data, may reveal how age bias affects older adults. Communities are especially important to older adults, who spend much of their time in areas immediately proximate to their homes. As more individuals age in place, and as federal funding for home-based and community services (HCBS) increases, researchers should identify which community-level characteristics, including age bias, undermine or enhance late-life well-being.

Ageism—the deeply entrenched biases that people hold about old age—is one of the most persistent and pervasive "isms" in contemporary society (Allen et al., 2022). The COVID-19 pandemic brought into sharp relief how widespread ageism is, evidenced by the proliferation of hashtags referring to the pandemic as the #boomerremover, and the emergence of phrases like "boomer doomer," "coffin dodgers" and "sacrifice the weak" (Lichtenstein, 2021; Morrow-Howell and Gonzales, 2020). Ageism has been a regular feature of social life long before the pandemic. Lexicologists detected the first use of phrases like "old fogey" or "old coot" in the late 18th century (Fleming et al., 2003). One year before the pandemic onset, a 2019 survey of more than 2000 U. S. older adults documented that nearly all (93 percent) had experienced one or more forms of everyday ageism, which encompasses age-based discrimination, prejudice, and negative stereotypes. Two-thirds reported regular exposure to ageist messages, including jokes about impaired functioning, and nearly half reported personal microaggressions like being treated as if they could not remember basic facts or understand simple technologies (Allen et al., 2022).

The harmful physical, emotional, and cognitive health consequences of individual-level age bias are well-documented, with most studies operationalizing ageism as an older adult's personal encounters with age discrimination, self-perceptions of their own aging, and internalized negative beliefs about old age (see Hu et al., 2021, for a systematic review). However, the impacts of *community-level* age bias on older adults' well-being have received far less attention. Understanding the extent to

which one's community members adhere to ageist beliefs, and how these beliefs may bear on the well-being of older residents is of critical importance. Researchers dating back to Chicago School scholars in the early 20th century emphasized the importance of "ecology" or those aspects of place that affect everyday life. Place, and particularly neighborhoods, are especially consequential for older adults, because their daily activities are largely confined to their immediate communities (Choi et al., 2015; Glass and Balfour, 2003). Older adults navigate a narrower life-space than younger people; life space refers to the spatial area in which a person moves about and interacts with the world. Upon retirement from the paid workforce, older adults spend more time in their immediate neighborhoods. Physical health conditions that limit one's capacity to drive, walk, bike, or take public transit long distances further limit older adults' movements beyond their communities. Data from the Health and Retirement Study reveal that 20 percent of older adults had not left their city, town, or county in the past two months, due in part to mobility challenges (Choi et al., 2015).

Despite the outsized impacts of community characteristics on older adults' well-being, only two studies to my knowledge have explored whether *community-level age bias* affects the health and mortality risk of older adults. These two studies—one focused on state-level (Giasson and Chopik, 2020) and the other on county-level (Kellogg et al.,2022) indicators of ageist beliefs—yielded generally consistent yet counterintuitive findings: Older adults living in areas with higher levels of age bias had *superior* health outcomes. Specifically, Kellogg and colleagues

E-mail address: Carrds@bu.edu.

https://doi.org/10.1016/j.socscimed.2022.115501 Received 14 October 2022; Accepted 30 October 2022 0277-9536/© 2022 Elsevier Ltd. All rights reserved. (2022) focused on county-level variation in age-adjusted mortality risk among adults ages 65 and older. Their focal predictors were county-level explicit and implicit age bias among persons under age 65. The former is assessed with a single item, ranging from 1 (strongly prefer older adults) to 7 (strongly prefer younger adults), whereas the latter is based on scores on the implicit association age test (IAT). The IAT is a widely used approach for assessing subconscious biases towards particular populations, such as older versus younger adults. Participants are asked to categorize words and images simultaneously as old or young, as well as good or bad. Responding more rapidly when young and good are paired, relative to when old and good are paired, is considered an indication of an underlying preference for younger persons and bias against older persons (see Cunningham et al., 2001 for review).

Surprisingly, the Kellogg et al.(2022) study results showed that U.S. counties with higher explicit age bias against older adults had lower mortality risk—with this effect detected in younger counties only—indicated by a county's median age. The protective effects of living in a county with higher levels of explicit old-age bias also extended to young adult (25–44) and midlife (45–64) mortality risk, although the association was strongest for age 65+ mortality risk. Yet, implicit community age bias (i.e., IAT score) was not significantly associated with the longevity of any age group. To understand the mechanisms underlying these counterintuitive findings, the authors used area-level data from the Behavioral Risk Factor Surveillance Systems (BRFSS) to ascertain health behaviors (e.g., exercise) and mental health among midlife residents. These supplemental analyses suggested that better midlife mental health partially explained the associations between explicit age bias and older adult mortality in younger counties.

Do these intriguing results suggest that living amidst ageist younger people can be beneficial to one's health and survival, especially for older adults? How can we reconcile these results with a voluminous body of research showing that individual-level ageism—whether institutional discrimination encounters like employment barriers or interpersonal slights like "elderspeak"—undermines the self-esteem, mental health, cognitive functioning, and physical health of older adults in the U.S. and worldwide (Chang et al., 2020)? Kellogg and colleagues (2022) suggest that their findings may partially reflect social selection, such that healthier older people may live in places with preferences for youth. Giasson and Chopik (2020) offered a similar interpretation, suggesting that explicit age bias may be socially acceptable in regions where older people are relatively healthy. The authors propose substantive as well as methodological explanations, observing that stigmatization benefits those in positions of power (Kellogg et al.,). The benefits that younger and midlife adults accrue due to this power may enhance their mental health, spurring positive health behaviors or creating health-enhancing youth culture (see also Lukachko et al., 2014).

Other explanations also are plausible. For instance, older adults living in younger communities may engage in "self-group distancing," a process whereby members of lower-status groups distance themselves from the negative aspects of their group's stereotypes to enhance their emotional well-being and ward off social identity threats (Weiss and Kornadt, 2018). An older adult living in a community that prioritizes youth may think "I'm not like those other old people ..." and may engage in a health-enhancing fitness regimen to affirm that belief.

Before concluding that community-level explicit age bias is health-enhancing for older adults residing in younger counties, however, much more work is needed. In particular, researchers should unpack precisely what community-level age bias is, the distinctive structural and perceptual aspects of bias that may bear on older adults, the potential mechanisms through which community-level age bias may affect health and survival, as well as variation in these impacts across subgroups of older adults. Future studies also could delve more fully into the meaning of neighborhood age composition, changes therein, and the resources or obstacles present in those neighborhoods that contribute to late-life well-being.

One important yet seldom investigated factor may be gentrification

and the extent to which the age and socioeconomic composition of a neighborhood changes over time. Although Kellogg et al., considered the median age of each U.S. county, they did not capture over-time changes in county age-structure and related characteristics like household income. Gentrifying neighborhoods may be particularly beset by ageist beliefs, as young residents-often affluent and upwardly mobile—move to urban or urban-adjacent neighborhoods inhabited by older adults of lower socioeconomic strata (Smith et al., 2018). These younger adults may bring with them a preference for older versus younger neighbors, although their arrival is typically accompanied by a proliferation of health-enhancing goods and services like healthy grocery stores, yoga studios, gyms, and organized advocacy for better walking or biking paths. These amenities could benefit the survival of young and old residents, provided they have sufficient income to afford such amenities. One ethnographic study of older adults in a gentrifying neighborhood in Queens, New York even shows psychological growth. as long-time community members band together, develop strengthened social networks, and feel empowered as they collectively adapt to the changes in their neighborhood Weil, 2019. These new-found inner strengths and social ties could indirectly bear on older residents' health

More fine-grained information on community age composition also may help to understand why community-level explicit age bias might be linked with older adults' superior longevity in younger counties only. County-level median age is a good starting point yet more nuanced measures may offer further insights into the mechanisms at play. For instance, in a series of studies of neighborhood age composition and older adult health, Moorman and colleagues (e.g., Moorman et al., 2017) used Census tract data to construct a typology of neighborhood composition encompassing both age of householder and family structure. Neighborhoods with younger adults also tend to have more young families, and thus may enjoy family-focused programs and supports that may strengthen neighborhood ties. By contrast, areas with older adults tend to have more single-dweller households, and thus may be deprived of important neighborhood social capital that can enhance health and well-being.

Researchers also should theorize and develop more fine-grained measures of community-level age bias. The counterintuitive results of Kellogg et al., rest on a single and arguably narrow measure of explicit age bias. The underlying meaning of their measure also is unclear. Because they measured explicit age bias beliefs among younger persons only, we cannot definitively ascertain whether a self-reported preference for "younger" versus "older" people reflects bias against older persons, or an in-group preference for younger persons.

Future analyses should develop and test the effects of alternative measures that may be more consequential for older adults' health and well-being. Structural aspects of ageism may be a particularly fruitful area for research, following the lead of scholars calling for more innovative and meaningful measures of structural racism at the community level (e.g., Hardeman et al., 2022). Parallel metrics could be developed for the study of community-level ageism and might include markers like public spending priorities. The Census Bureau's Census of Governments obtains information on public expenditures from all U.S. county, subcounty, and state governments every five years. These data reveal patterns in public spending for health care, education, cash assistance, and other resources that may disproportionately benefit older (versus younger) adults in ways that affect constituent health and well-being.

Data scientists also are pioneering innovative strategies for documenting county- and neighborhood-level racism and its impacts through linking Twitter data with other population-based data resources. For example, one study obtained more than 30 million tweets containing racial sentiments, and averaged these at the state level (Nguyen et al., 2021). They linked the Twitter data with national data resources like FBI Uniform Crime Reports, Project Implicit data, and General Social Survey data to document links between racist sentiment expressed on Twitter and markers of hate crimes and other indicators of

Social Science & Medicine xxx (xxxx) xxx

D. Carr

the well-being of minoritized communities. This approach could be used to analyze tweets maligning older adults or perpetuating ageist stereotypes (e.g., Jimenez-Sotomayor et al., 2020). Twitter data, in tandem with state- or county-level health and mortality data, could shed novel insights into the impacts of community age bias on late-life health and mortality. Accessing, constructing, and linking innovative data sources for the study of ageism—like structural racism—is not a simple task, however, especially because such indicators may not be readily available for all levels of geographic analysis (Hatzenbuehler, 2018; Reid and Earnshaw, 2022). Nonetheless, these ambitious and time-intensive efforts to create adata platform for analyzing area-level structural bias and stigma have high potential to advance the study of ageism and multiple other systems of oppression.

Finally, future studies should move beyond a coarse characterization of older adults as ages 65+ and should consider important sources of heterogeneity within this population. Older adults are a highly diverse group; the young-old have just celebrated their 65th birthdays, whereas the oldest-old might survive long past age 100. Older adults also vary widely with respect to their physical health, cognitive capacities, wealth, social connectedness, literacy, and daily mood. Exposure to ageist beliefs may have little bearing on the health and well-being of those who are relatively young (65–74), healthy, active, and socially integrated, whereas exposure to ageism may be particularly consequential and salient to those oldest-old, frail, or socially isolated individuals who are made aware on a daily basis of their declines.

Delineating precisely how and for whom community-level indicators of ageism affect late-life health and well-being is a timely and critically important enterprise. One important question for researchers is whether population aging will alter the pervasiveness, content, and impacts of ageist beliefs. The U.S. and global populations are aging at an unprecedented rate. Older adults now account for 17 percent of the total U.S. population, and this share is projected to reach one in four by 2060. Worldwide, older adults accounted for 9 percent of the global population in 2020, with this share projected to reach 16 percent by 2050. Thus, one out of every six people on the planet will be an older adult in the year 2050 (Carr, 2022 NOTE: the book publication date is February 2023. So, include as either 2023 or In press). As older adults become an increasingly large fraction of the population, will these numbers be translated into power and the potential to destigmatize aging? Can older adults rewrite public discourse regarding aging, and in the process change the attitudes of their community members?

Evidence from other types of discrimination do not necessarily bode well. For instance, researchers have examined whether weight stigma, specifically the devaluation of persons with high body mass index, would diminish as rates of overweight and obesity have increased throughout the late 20th and early 21st centuries. Studies using both feeling thermometers assessing feelings towards "overweight people" (Chivers et al., 2022) and reports of interpersonal (i.e., "microaggressions) and institutional discrimination experienced by overweight and obese people (Andreyeva et al., 2008) show no change in sizeism or preferences for more slender physiques. Future studies should draw on historical data to explore whether experiences of personal ageism differ across recent cohorts of older adults, particularly comparing the small Greatest Generation cohort with the large Baby Boomer cohort to understand whether "power in numbers" can disrupt ageism or alter its impacts for older adult well-being.

Answers to these questions are more than academic; understanding the ways community (whether county or state-level) attitudes affect older adult well-being is critical to the effectiveness of social policies. AARP consistently reports that 90 percent of older adults say that they want to "age in place" or grow old in their current homes and communities rather than move to a retirement or long-term care facility. That means older adults want to remain in age-integrated communities. Public policies are shifting to support this preference. Medicaid funding for Home- and Community-Based Services (HCBS), relative to funding for institutional care, has increased dramatically over the past two

decades (Watts et al., 2022). In 2020, 59 percent of national Medicaid spending for long-term services and supports (LTSS) was dedicated to HCBS, a threefold increase from the 18 percent share in 1995. This increase reflects both older adults' preferences for HCBS, and state-level efforts to encourage use of HCBS versus more costly institutional care. These investments in HCBS cover services like homemaking and home health aides, personal care assistance, and day and residential habilitation services that enable older adults to remain in their communities. As more older adults both wish to and actually receive supports that enable them to age at home, it is essential for researchers to effectively identify, measure, and document the community-level factors that promote long healthy lives, marked by social integration and respect.

Data availability

No data was used for the research described in the article.

References

- Allen, J.O., Solway, E., Kirch, M., et al., 2022. Experiences of everyday ageism and the health of older US adults. JAMA Netw. Open 5 (6), e2217240. https://doi.org/ 10.1001/jamanetworkopen.2022.17240. e2217240.
- Andreyeva, T., Puhl, R.M., Brownell, K.D., 2008. Changes in perceived weight discrimination among Americans, 1995–1996 through 2004–2006. Obesity 16 (5), 1129–1134.
- Carr, D., 2022. Aging in America. University of California Press, Berkeley, CA. Chivers, E.A., Yogeeswaran, K., Zubielevitch, E., Sibley, C.G., 2022. Change in weight-based bias over a decade: a longitudinal nationally representative survey. The Lancet Regional Health-Western Pacific 23, 100450.
- Chang, E.S., Kannoth, S., Levy, S., Wang, S.Y., Lee, J.E., Levy, B.R., 2020. Global reach of ageism on older persons' health: a systematic review, PLoS One 15 (1), e0220857.
- Choi, N.G., Kim, J., DiNitto, D.M., Marti, C.N., 2015. Perceived social cohesion, frequency of going out, and depressive symptoms in older adults. Gerontology and Geriatric Medicine 1, 233372141561547. https://doi.org/10.1177/ 2333721415615478.
- Cunningham, W.A., Preacher, K.J., Banaji, M.R., 2001. Implicit attitude measures: consistency, stability, and convergent validity. Psychol. Sci. 12 (2), 163–170.
- Fleming, K.C., Evans, J.M., Chutka, D.S., 2003. A cultural and economic history of old age in America. Mayo Clin. Proc. 78 (7), 914–921.
- Giasson, H.L., Chopik, W.J., 2020. Geographic patterns of implicit age bias and associations with state-level health outcomes across the United States. Eur. J. Soc. Psychol. 50 (6), 1173–1190.
- Glass, T.A., Balfour, J.L., 2003. Neighborhoods, aging, and functional limitations. In: Kawachi, I., Berkman, L.F. (Eds.), Neighborhoods and Health. Oxford University Press, pp. 303–334.
- Hardeman, R.R., Homan, P.A., Chantarat, T., Davis, B.A., Brown, T.H., 2022. Improving the measurement of structural racism to achieve antiracist health policy: study examines measurement of structural racism to achieve antiracist health policy. Health Aff. 41 (2), 179–186.
- Hatzenbuehler, M.L., 2018. Structural stigma and health. In: Major, B., Link, B.G., Dovidio, J.F. (Eds.), The Oxford Handbook of Stigma, Discrimination, and Health. Oxford University Press, New York, pp. 105–252.
- Hu, R.X., Luo, M., Zhang, A., Li, L.W., 2021. Associations of ageism and health: a systematic review of quantitative observational studies. Res. Aging 43 (7–8), 311–322. https://doi.org/10.1177/0164027520980130.
- Jimenez-Sotomayor, M.R., Gomez-Moreno, C., Soto-Perez-de-Celis, E., 2020. Coronavirus, ageism, and Twitter: an evaluation of tweets about older adults and COVID-19. J. Am. Geriatr. Soc. 68 (8), 1661–1665.
- Kellogg, A. J., Hancock, D. W., Cho, C. Y., & Reid, A. E. (in press). Community-level age bias and older adult mortality. Soc. Sci. Med..
- Lichtenstein, B., 2021. From "coffin dodger" to "boomer remover": outbreaks of ageism in three countries with divergent approaches to coronavirus control. J. Gerontol.: Ser. Bibliogr. 76 (4), e206–e212.
- Lukachko, A., Hatzenbuehler, M.L., Keyes, K.M., 2014. Structural racism and myocardial infarction in the United States. Soc. Sci. Med. 103, 42–50. https://doi.org/10.1016/ j.socscimed.2013.07.021.
- Moorman, S.M., Stokes, J.E., Morelock, J.C., 2017. Mechanisms linking neighborhood age composition to health. Gerontol. 57 (4), 667–678.
- Morrow-Howell, N., Gonzales, E., 2020. Recovering from coronavirus disease 2019 (COVID-19): resisting ageism and recommitting to a productive aging perspective. Public Policy & Aging Report 30 (4), 133–137.
- Nguyen, T.T., Huang, D., Michaels, E.K., Glymour, M.M., Allen, A.M., Nguyen, Q.C., 2021. Evaluating associations between area-level Twitter-expressed negative racial sentiment, hate crimes, and residents' racial prejudice in the United States. SSM-Population Health 13, 100750.
- Reid, A.E., Earnshaw, V.A., 2022. Embracing heterogeneity: implications for research on stigma, discrimination, and African Americans' health. Soc. Sci. Med. https://doi. org/10.1016/j.socscimed.2022.115111.
- Smith, R.J., Lehning, A.J., Kim, K., 2018. Aging in place in gentrifying neighborhoods: implications for physical and mental health. Gerontol. 58 (1), 26–35.

ARTICLE IN PRESS

D. Carr Social Science & Medicine xxx (xxxx) xxx

Watts, M.O., Musumeci, M.B., Ammula, M., 2022. Medicaid home & community-based services: people served and spending during COVID-19—issue brief—9892. KFF (March 4, 2022). https://www.kff.org/medicaid/issue-brief/medicaid-home-and-community-based-services-enrollment-and-spending/. (Accessed 30 October 2022).

Weil, J., 2019. Relationship to place for older adults in a New York City neighborhood undergoing gentrification: a discourse analysis. City Community 18 (4), 1267–1286.
Weiss, D., Kornadt, A.E., 2018. Age-stereotype internalization and dissociation: contradictory processes or two sides of the same coin? Curr. Dir. Psychol. Sci. 27 (6), 477–483.