

Exacerbating Inequalities: Social Networks, Racial/Ethnic Disparities, and the COVID-19 Pandemic in the United States

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Abstract

Objectives: The disruption and contraction of older adults' social networks are among the less discussed consequences of the COVID-19 pandemic. Our objective was to provide an evidence-based commentary on racial/ethnic disparities in social network resources and draw attention to the ways in which disasters differentially affect social networks, with meaningful insight for the ongoing pandemic.

Methods: We draw upon prior research on social networks and past natural disasters to identify major areas of network inequality. Attention is given to how pre-pandemic racial/ethnic network disparities are exacerbated during the current crisis, with implications for physical and mental health outcomes.

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Results: Evidence from the literature shows a robust association between strong social networks and physical and mental health outcomes. During times of crisis, access to social networks for older adults is disrupted, particularly for marginalized groups. We document pre-pandemic disparities in social networks resources and offer insight for examining the impact of COVID-19 on disrupting social networks among older adults.

Discussion: Importantly, racial/ethnic disparities in social networks both prior to and as a result of the pandemic intensify existing inequalities and demonstrate the necessity of better understanding social network inequalities for marginalized older adults, particularly in the context of the COVID-19 health crisis.

Keywords: COVID-19, Racial and ethnic minorities, Social networks

The novel coronavirus has proven to be particularly detrimental for the health of older adults in the United States (Centers for Disease Control and Prevention [CDC], 2020a). The ongoing pandemic has disrupted how Americans go about their daily lives through physical and social distancing policies aimed at reducing the spread of COVID-19. Restrictions and guidelines to limit the spread of infection have been stricter for older adults, which may exacerbate experiences of social isolation and its adverse consequences for health and well-being (Nicholson, 2012). Prior research on past epidemics and recent natural disasters suggests that marginalized populations will be disproportionately affected by the coronavirus pandemic. In the United States, overwhelming evidence indicates that race and ethnicity are important axes of stratification that differentiate the health experiences of older adults across the life course. In addition to being at a higher risk for infection and mortality (CDC, 2020b), older marginalized populations are more susceptible to economic, behavioral, and social impacts related to efforts to contain the COVID-19 pandemic. As social networks evolve in response to both the burden of disease and containment efforts, changes in networks may become another important factor worsening inequalities among older marginalized populations.

There are two main ways inequalities in social networks are exacerbated during a crisis. First, networks provide resources that are important for individuals to rely on during disasters. Groups that go into a pandemic with more resources (network or otherwise) are better able to weather the crisis. Second, crises can disrupt networks. Death, lack of geographic mobility, difficulty communicating, and depleted personal resources all contribute to network loss during a crisis, with important consequences for physical and mental health outcomes.

People are far more likely to have relationships with others who share their own race, religion, education, and occupation (McPherson et al., 2001; Smith et al., 2014). This network homophily process (a tendency for people to have relationships with people who are similar to themselves) reinforces the concentration of disadvantage into networks of people who are already disadvantaged. The harshest consequences of the pandemic are thus likely to be concentrated into networks of marginalized populations where disadvantages related to race/ethnicity, and economic class converge.

Below, we draw attention to the impact of COVID-19 on evolving network resources among older adults and highlight their implications for racial/ethnic disparities. While the COVID-19 pandemic is unique in many ways, we can draw general lessons from past natural disasters and major social upheavals to inform an effective response to disrupted networks among older adults, particularly minorities. Table 1 presents a summary of our expectations.

Social Isolation and Network Size

Personal network size is a fundamental indicator of social activity, with past work identifying important differences by age, gender, and race/ethnicity. Older adults with larger networks have fewer depressive symptoms and higher life satisfaction than those with smaller networks (Fuller-Iglesias et al., 2015). Cornwell et al. (2009) have found that older women have more discussion partners than men, which suggests that men have less access to network resources, despite typically having more resources of their own. Additionally, black and Latinx adults were found to have fewer discussion partners than whites. Smaller network sizes may be particularly damaging for the health and emotional well-being of racial/ethnic older adults due to contemporary racial inequalities that constrain social participation throughout the life course (Alwin et al., 2018).

Being socially connected is one of the best predictors of resilience during natural disasters (Rodriguez-llanes et al., 2013). Personal social networks were identified (along with religious organizations) as the most important sources providing psychological, financial, and social support after Hurricane Katrina (Forgette et al., 2009; Messias & Lacy, 2012). Pre-pandemic racial/ethnic and gender differences in network

Table 1. Theoretical Summary Outlining How the COVID-19 Pandemic Will Magnify Preexisting Inequalities

	<i>Network Resource Disparities:</i> Minority populations are less able to weather health consequences and containment efforts of the pandemic because they have less access to social support.	<i>Network Disruption:</i> The networks of minority populations will be more disrupted by the pandemic as their contacts are more strongly affected by disease and containment efforts.
<i>Effects of the Disease:</i> The burden of disease and mortality	Minority populations (CDC, 2020a), particularly minority men (Sharma et al., 2020), are more likely to be infected and to succumb than other groups. Geographic and racial homophily (Reyes et al., 2020; Sarkisian, 2007) ensures that the higher burden of illness borne by minority populations, including medical costs, job loss, and other social and economic stressors are concentrated into particular, disadvantaged communities.	Networks contract faster and more severely among minority populations (Verdery & Smith-Greenaway, 2020) as they are more likely to be infected and to not recover than other groups.
<i>Effects of Containment Efforts:</i> Stay-at-home orders and associated psychological harm and physical well-being	Minority populations, especially minority men, have smaller social networks (Cornwell et al., 2009) and are more likely to be isolated (McPherson et al., 2006). The mental health of minority populations is likely to be severely affected by the pandemic as they have less access to resources that bolster mental health during crises. Kin-based networks of women and minority populations limit long-term recovery (Casagrande et al., 2015). Moreover, drawing on kin resources in the long term can cause psychological and interpersonal stress when resources are scarce (Reid & Reczek, 2011).	Stay-at-home orders in residential facilities lead to isolation among residents (Nicholson, 2012), especially among women, who are more likely to reside in group-living arrangements (Stepler, 2016), and minority residents who have limited family support (Thomeer et al., 2015). Limited technological engagement for older women and individuals with less education will limit the maintenance of personal relationships when face-to-face contact is limited (Lee et al., 2019). Limits on face-to-face religious services Limits on congregational gatherings reduce opportunities to maintain non-kin ties, especially among women and minority populations, disrupting sources of psychological, financial, and social support (Taylor et al., 2019). Minority populations have higher network density— an advantage in mobilizing resources during a disaster (Hurlbert et al., 2000). However, social distancing threatens the network density of minority population networks.

size, and religious congregation, indicate that the current CDC recommendations to limit opportunities for face-to-face gatherings are disproportionately harsh for black and Latinx women.

The second way that crises exacerbate pre-pandemic inequalities is by changing the network structure itself. Crises cause networks to contract. For instance, Forgette et al. (2009) found that survivors lost 1.5 network members during Hurricane Katrina. Older adults are particularly susceptible to network loss during the pandemic. For some, digital media (e.g., Skype and Zoom) offer ways to connect to family, friends, and others outside the home (Polizzi et al., 2020). However, users must have access to technology and technological literacy. Older adults, those with less education, and women are often less comfortable using computers (Lee et al., 2019). More starkly, once infected by COVID-19, adults aged 65 and older, particularly men, are less likely to recover (CDC, 2020a). Internationally, the sex mortality ratio is between 1.8 and 2.8 with men at a disadvantage (Sharma et al., 2020). The disproportionate COVID-19 deaths of blacks and Latinxs relative to whites further intensify pre-pandemic disparities in network size and increase isolation disproportionately for older black and Latinx adults through bereavement (Verdery & Smith-Greenaway, 2020).

Older adults who reside in residential care communities will be at increased risk for social isolation or no social connections. Women comprise the majority of group setting residents, due in part to their greater longevity compared to men (Stepler, 2016). Policies intended to limit the spread of infection vary by a residential community, but many have restricted visits from family and friends, the interaction between residents, and movement beyond one's own room, which can result in older adults feeling isolated (CDC, 2020a). Prior evidence on the experience of quarantine suggests that feelings of stress, depression, and posttraumatic stress disorder are quite common, up to 4 times the levels of the general population (Brooks et al., 2020). Thus, older adults are more likely to experience the harshest social and psychological ramifications of a true quarantine, compared to younger individuals who have more mobility, and can communicate with family and friends more easily.

Pre-pandemic, black and Latinx adults (especially black men) exhibited a higher risk for social isolation than whites (McPherson et al., 2006); the COVID-19 crisis will increase the magnitude of these disparities. Older black and Latinx adults are less likely to reside in long-term

care facilities than whites. Those who do, however, have more functional limitations, and are less likely to have family support (Thomeer et al., 2015). Black and Latinx adults residing in long-term care facilities will suffer most, given their higher initial risk and lower family support.

Network Composition

The COVID-19 pandemic has also intensified racial/ethnic differences in network composition among older adults. Personal networks become more centered on kin (spouses and children) as individuals age (Cornwell et al., 2008), particularly among older women, blacks, and Latinxs (Ajrouch et al., 2001). Among all racial/ethnic groups, kin ties provide more social support than non-kin ties (Verdery & Campbell, 2019); however, there are important gender differences in kin relationships. For example, women have more positive, less ambivalent relationships with their adult children and report more frequent contact and help received from their adult children compared to men (Ward, 2008).

Network composition has important implications for accessing support during a pandemic. Hurlbert et al. (2000) found that during Hurricane Andrew, kin ties provided more frequent access to social support. Although kin provides multifaceted short-term assistance, lack of resources in these networks may limit their effectiveness, and diverse networks may matter more after the initial crisis phase. Following the 2008 Midwestern flooding of the Mississippi, survivors relied on kin for short-term, emergency, life-saving support and turned to broader networks of neighbors and professionals for support in the immediate aftermath (Casagrande et al., 2015). During Hurricane Katrina, Latinx survivors turned to their extended families for support, but homophily on economic class and national origin reduced their ability to provide it (Messias & Lacy, 2012). These dynamics put stress on family relationships (Reid & Reczek, 2011), particularly when they challenge normative gendered and intergenerational support giving roles.

Geographic homophily (spatial proximity) is another important dimension of disaster recovery. Unlike natural disasters, which can cause massive relocation, the current pandemic is forcing individuals to shelter in place. Close relatives (parents, children, and siblings) are most likely to live close to each other (Daw et al., 2019), with black (Reyes et

al., 2020), and Mexican Americans (Sarkisian, 2007) being more likely than whites to live with their kin. Although older black and Latinx adults may live closer to their kin and have more kin to rely on, these kin may have fewer resources to assist, given well-documented racial/ethnic inequalities in income and wealth. Thus, for older black and Latinx adults, being in close proximity to the family may lead to worse physical and mental health outcomes, given that all will likely have suffered similar losses due to the strong spatial clustering of the impact of COVID-19.

The COVID-19 pandemic may also affect the composition of older adults' networks. The restriction on face-to-face religious meetings is likely to result in a large decrease in non-kin ties for older black and Latinx adults (particularly women), who are disproportionately connected to non-kin through religious congregations (Taylor et al., 2019). Less diverse networks among blacks and Latinxs relative to whites are associated with worse mental health outcomes (Litwin, 2011). Social distancing measures related to the pandemic have clearly increased this trend, with potential negative effects on psychological health.

Density

Network density refers to the proportion of contacts who are connected to each other. Previous research shows a strong association between denser networks and better physical and mental health outcomes (Ashida & Heaney, 2008). Overall, older adults tend to have dense networks, though older women, individuals with less education, and Latinxs have denser networks compared to whites (Cornwell et al., 2008, 2009). Network density is more salient during disasters where there is an increased need to mobilize resources to bolster physical and mental health. Research on Hurricane Andrew found that survivors with denser networks were better able to activate informal support (Hurlbert et al., 2000). Pandemic restrictions on social gatherings have important implications for the health of older adults as the frequency of interaction is strongly associated with emotional closeness. However, the disparate impact of the pandemic is starker among older blacks and Latinxs with less access to resources that allow older adults to maintain contact during the ongoing period of physical distance.

Conclusions

Increasingly researchers recognize the critical role that social networks play in shaping the health and well-being of older adults. However, the disruption and shrinkage of older adults' social networks are among the less discussed consequences of the COVID-19 pandemic. Within the United States, racial/ethnic disparities in social networks demonstrate the necessity of better understanding social network inequalities for the well-being of older adults.

Gender is another important axis of stratification that fundamentally structures the experience of aging during a pandemic. Greater life expectancy and lower COVID-19 mortality among older women relative to men suggest that women will comprise the majority of older adults who will face long-term effects of the pandemic including bereavement and depleted resources. However, older minority men may face the most severe effects of the pandemic as they are more likely to be isolated and they have smaller networks and, therefore, less access to resources that bolster mental health during crises. Experiences of the pandemic based on gender are likely to vary by socioeconomic status (i.e., available resources) and race/ethnicity. We recognize that the United States has a unique system of stratification based on gender and race/ethnicity which may not be directly applicable to other national contexts.

Further research is needed to identify risk and resilience factors associated with social network disparities, both prior to and as a result of the pandemic, that influence physical and mental health among older adults. Policies aimed at balancing the need to protect older adults from infection and decreasing network inequality due to the impact of the virus are imperative to reduce the disruption and shrinkage of older adults' social networks, particularly among marginalized groups.

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Conflicts of Interest None.

References

- Ajrouch, K. J., Antonucci, T. C., & Janevic, M. R. (2001). Social networks among blacks and whites: The interaction between race and age. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, *56*(2), 112–118. doi:10.1093/geronb/56.2.s112
- Alwin, D. F., Thomas, J. R., & Sherman-Wilkins, K. J. (2018). Race, social relations and the life course. In D. F. Alwin, D. H. Felmlee, & D. A. Kreager (Eds.), *Social networks and the life course*. Springer, Cham. doi:10.1007/978-3-319-71544-5_14
- Ashida, S., & Heaney, C. A. (2008). Differential associations of social support and social connectedness with structural features of social networks and the health status of older adults. *Journal of Aging and Health*, *20*(7), 872–893. doi:10.1177/0898264308324626
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, *395*(10227), 912–920. doi:10.1016/S0140-6736(20)30460-8
- Casagrande, D. G., McIlvaine-Newsad, H., & Jones, E. C. (2015). Social networks of help-seeking in different types of disaster responses to the 2008 Mississippi river floods. *Human Organization*, *74*(4), 351.
- Centers for Disease Control and Prevention. (2020a). *Coronavirus disease 2019 (COVID-19)*. Retrieved May 12, 2020 from <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/older-adults.html>
- Centers for Disease Control and Prevention. (2020b). *Covid-19 in racial and ethnic minority groups. (COVID-19)*. Retrieved July 8, 2020 from <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/racial-ethnic-minorities.html>
- Cornwell, B., Laumann, E. O., & Schumm, L. P. (2008). The social connectedness of older adults: A national profile*. *American Sociological Review*, *73*(2), 185–203. doi:10.1177/000312240807300201
- Cornwell, B., Schumm, L. P., Laumann, E. O., & Graber, J. (2009). Social networks in the NSHAP study: Rationale, measurement, and preliminary findings. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, *64*(Suppl. 1), 47–55. doi:10.1093/geronb/gbp042
- Daw, J., Verdery, A. M. & Patterson, S. E. (2019). Beyond household walls: The spatial structure of American extended kinship networks. *Mathematical Population Studies*, *26*(4), 208–237. doi:10.1080/08898480.2019.1592637
- Forgette, R., Dettrey, B., Van Boening, M., & Swanson, D. A. (2009). Before, now, and after: Assessing Hurricane Katrina relief. *Population Research and Policy Review*, *28*(1), 31–44. doi:10.1007/s11113-008-9113-6
- Fuller-Iglesias, F. R., Webster, N. J., & Antonucci, T. C. (2015). The complex nature of family support across the life span: Implications for psychological well-being. *Dev Psychol*, *51*(3), 277–288. doi:10.1037/a0038665

- Hilfinger Messias, D. K., Barrington, C., & Lacy, E. (2012). Latino social network dynamics and the Hurricane Katrina disaster. *Disasters*, **36**(1), 101–121. doi:10.1111/j.1467-7717.2011.01243.x
- Hurlbert, J. S., Haines, V. A., & Beggs, J. J. (2000). Core networks and tie activation: What kinds of routine networks allocate resources in nonroutine situations? *American Sociological Review*, **65**(4), 598–618. doi:10.2307/2657385
- Lee, C. C., Czaja, S. J., Moxley, J. H., Sharit, J., Boot, W. R., Charness, N., & Rogers, W. A. (2019). Attitudes toward computers across adulthood from 1994 to 2013. *The Gerontologist*, **59**(1), 22–33. doi:10.1093/geront/gny081
- Litwin, H. (2011). The association between social network relationships and depressive symptoms among older Americans: What matters most? *International Psychogeriatrics*, **23**(6), 930–940. doi:10.1017/S1041610211000251
- McPherson, M., Smith-Lovin, L. & Brashears, M. E. (2006). Social isolation in America: Changes in core discussion networks over two decades. *American Sociological Review*, **71**(3), 353–375. doi:10.1177/000312240607100301
- McPherson, M., Smith-Lovin, L. & Cook, J. M. (2001). Birds of a feather: Homophily in social networks. *Annual Review of Sociology*, **27**, 415–444.
- Nicholson, N. R. (2012). A review of social isolation: An important but underassessed condition in older adults. *The Journal of Primary Prevention*, **33**(2–3), 137–152. doi:10.1007/s10935-012-0271-2
- Polizzi, C., Lynn, S. J., & Perry, A. (2020). Stress and coping in the time of COVID-19: Pathways to resilience and recovery | clinical neuropsychiatry. *Clinical Neuropsychiatry*, **17**(2), 59–62.
- Reid, M., & Reczek, C. (2011). Stress and support in family relationships after Hurricane Katrina. *Journal of Family Issues*, **32**(10), 1397–1418. doi:10.1177/0192513X11412497
- Reyes, A., Schoeni, R. F. & Choi, H. (2020). Race/ethnic differences in spatial distance between adult children and their mothers. *Journal of Marriage and Family*, **82**(2), 810–821. doi:10.1111/jomf.12614
- Rodriguez-Llanes, J. M., Vos, F., & Guha-Sapir, D. (2013). Measuring psychological resilience to disasters: Are evidence-based indicators an achievable goal? *Environmental Health*, **12**, 115. doi:10.1186/1476-069X-12-115
- Sarkisian, N., Gerena, M., & Gerstel, N. (2007). Extended family integration among Euro and Mexican Americans: Ethnicity, gender and class. *Journal of Marriage and Family*, **69**(1), 40–54. doi:10.1111/j.1741-3737.2006.00342.x
- Sharma, G., Volgman, A. S., Michos, E. D. 2020. Sex differences in mortality from COVID-19 pandemic: Are men vulnerable and women protected? *Journal of the American College of Cardiology*, **2**(9). doi:10.1016/j.jaccas.2020.04.027
- Smith, J. A., McPherson, M., Smith-Lovin, L. (2014). Social distance in the United States: Sex, race, religion, age, and education homophily among confidants, 1985 to 2004. *American Sociological Review*, **79**(4), 432–456. doi:10.1177/0003122414531776
- Stepler, R. (2016). *Smaller share of women ages 65 and older are living alone: More are living with spouse or children*. Pew Research Center.

- Taylor, R. J., Chatters, L. M., & Taylor, H. O. (2019). Race and objective social isolation: Older African Americans, black Caribbeans, and non-Hispanic whites. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **74**(8), 1429–1440. doi:10.1093/geronb/gby114
- Thomeer, M. B., Mudrazija, S., & Angel, J. L. (2015). How do race and Hispanic ethnicity affect nursing home admission? Evidence from the Health and Retirement Study. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **70**(4), 628–638. doi:10.1093/geronb/gbu114
- Verdery, A. & Campbell, C., 2019. Social support in America: Stratification and trends in access over two decades. *Social Forces*, **98**(2), 725–752. doi:10.1093/sf/soz008
- Verdery, A. & Smith-Greenaway, E. (2020). COVID-19 and bereavement in the United States. *Applied Demography*, **32**(1), 1–3.
- Ward, R. A. (2008). Multiple parent-adult child relations and well-being in middle and later life. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **63**(4), 239–247. doi:10.1093/geronb/63.4.s239