Equity Index Indicators

Economy

Poverty

- There is a negative relationship between a neighborhood’s poverty rate & its physical and mental health.
- Additionally, higher rates of poverty negatively affect student graduation rates and the future earnings of children who grow up in higher poverty neighborhoods
- There is a dynamic and adaptive relationship between special context, race, and poverty when it comes to health inequity

Job Density

- Minority women have poorer spatial access to jobs than white women, as indicated by their longer commuting times and less-localized labor markets
- Black, Asian, and Hispanic women and men are concentrated in jobs that have long commutes and low wages, expanding disadvantage because those with long commutes are not compensated by well-paid employment
- Minority women still commute long times on slow public transit in New York- highlighting the racial and gender disparities in geographical access to employment within the metropolitan region
Educational Attainment

- A postsecondary education holds the promise of higher lifetime earnings and social mobility, but too many low-income students never complete their degrees.

- Among students who started in four-year public institutions, black students had the lowest six-year completion rate (45.9 percent). The completion rate of Hispanic students was almost 10 percentage points higher than that of black students (55.0 percent). Over two-thirds of white and Asian students completed a degree within the same period (67.2 percent and 71.7 percent, respectively). Nationally, 62.4 percent of students finished a degree or certificate within six years.

- Experiencing concentrated poverty in adolescence strongly reduces the odds of graduating from college, neighborhood economic opportunity and resource deprivation are key aspects of poverty-saturated neighborhoods that influence college graduation odds.
  - Levy, B.L., Heterogeneous Impacts of Concentrated Poverty During Adolescence on College Outcomes. Social Forces, Volume 98, Issue 1, September 2019, Pages 147–182.

Median household income

- Economic and racial segregation are commonplace in America and scholars argue that income determines where we are able to live. Because of exclusionary zoning tactics, low income households are relegated to neighborhoods with lower median incomes, which decrease as poverty become concentrated.
Unemployment rate

- Unemployment can affect both physical and mental health. Those with lower educational attainment suffer greater than those with higher educational attainment. The consequences of job loss are magnified in regions experiencing a higher unemployment rate.
- Major economic setbacks, like the loss of a job, significantly increase the likelihood of marital dissolution, causing emotional turmoil for family members.
- Parental job loss can have persistent negative effects on children throughout their development and future, such as lower rates of college attendance or lower earning potential.

Livability

Home ownership rate

- Homeownership is the largest contributor to family wealth and economic security. Adults whose mothers owned homes in 1994 were over 1.5 times more likely to own a home, attained higher education, and were moderately less likely to receive public assistance in 2014 as compared to adults with mothers who did not own homes.
- Homeownership represents social status, allows for the building of wealth, and presents the promise of moving into a nice home for African American and Latino populations.
- For most Americans, home equity represents the largest reservoir of wealth. A typical white family’s wealth is more than $73,000 greater than the typical black family’s.

Housing burden

- Housing burden is an important risk factor for mental health, the pressure on household finances that unaffordable housing imposes can adversely impact the mental health of adults and children.

- Single households, poor households (i.e., income less than two times the poverty level), less educated households, black 40 households, Hispanic households, and foreign born non-citizen households all experience more severe levels of housing insecurity

- Most poor renting families in America now devote at least half of their income to covering housing costs, and eviction has become common

### Transit Access and Access to Jobs by Transit

- Residents of low-income neighborhoods in major metropolitan areas have access to many more jobs by car than by transit

- Public transit is important for low-income households, and improving access to bus transportation may assist in changing the spatial distribution of poverty and creating more equitable and inclusive cities

- Poverty and vehicle access are related to significant differences in primary medication non-adherence

### Internet Access

- Broadband internet access is a social determinant of health, this has been demonstrated by COVID-19 which showed that lack of internet influences each of the six social determinants of health (economic stability, neighborhood and physical environment, education, food, community and social context, healthcare system) domain defined by the American Medical Association, and it affects access to credible information
• 10.1% of children participating in online learning nationally did not have adequate access to the internet and a computer, more specifically 35.5% of children of black parents with less than high school education did not have adequate access

• Likely that digital technologies will increase health inequities associated with increased age, lower level of educational attainment, and lower socio-economic status- programs to enhance literacy and access are important for reducing these inequities

**Crime**

• Racial disparities in violent crime are attributable in large part to the persistent structural disadvantages that are disproportionately concentrated in African American communities

• There is a correlation between crime rate and transit connectivity, disparities exist with access to public transit infrastructure for Baltimore’s minority, low income, elderly, and youth populations have limited access to transit facilities compared to others

• Perceived lack of safety from crimes constrains personal activity behavior affecting public health

**Life Expectancy**

• In the USA, a 14 year gap in life expectancy has been reported between the richest 1% of the population and poorest 1%

• In the USA between 2001 and 2014, deindustrialization and incarceration subtracted roughly 2.5 years from the lifespan of the poor

• Life expectancy disparities in the U.S mean that black Americans experience the deaths of more friends and family members than do White Americans from childhood through later life

**High School Graduation Rate**

- There is an overrepresentation of racialized students among those suspended and suspensions significantly lower math achievement in high school
- 10% of students that have been suspended drop out of high school, there is a problem with the hyper-disciplining of vulnerable populations
- Students with disabilities and Black students, especially males are suspended nearly 3 times as often as white males, again suspension leads to dropping out of high school

**Accessibility**

**Proximity to parks/open space**

- Inequitable access to green space can relate to health disparities or inequalities. Initiatives that have integrated green spaces in projects may promote health equity
- Green space shows stronger associations with physical health for groups with low socioeconomic status, than for those with higher socioeconomic status. Disadvantaged groups have stronger protective effects from green space. Green space could be a tool to advance health equity
- Inequitable access to urban greenspaces often overlaps race/ethnicity and results in reduced access to ecosystem services from green spaces and increased health disparities
Pedestrian and Bike Facilities

- Sidewalks can serve as indicators of racial inequities in southern metropolitan cities
- Transportation infrastructure can exacerbate existing social inequities, through providing infrastructure that ignores the needs of vulnerable communities
- Poverty, as well as health care, family, and community factors (like the presence of sidewalks) are associated with mental, behavioral, and development disorders in children

Civic engagement (Voter Participation)

- In the U.S, a “civic engagement gap” persists between low-income youth and their high-income counterparts
- There is an income-participation gap- the rich participate in politics more than the poor, which can be attributed to current economic status and childhood economic history
- Community-level income inequality affects political participation. Local experiences of inequality increase awareness of the unequal distribution of income in the US, provoking political activity specifically among those with more resources. This could lead to elected officials to be even less responsive to the preferences and needs of the less affluent

Access to Healthy Foods

- Lack of access to retail venues within the neighborhood that have healthy food options like full-service grocery stores, has been associated with an increased risk for obesity and a poorer diet. Studies suggest that having a greater access to convenience stores and fast food, where healthier options cost more or may not be accessible, also has been associated with lower dietary quality and higher rates of obesity.


- Research shows that neighborhoods with predominantly African American residents have less access to grocery stores compared to white communities.

- In racially segregated regions, African Americans pay more for food that is lower quality than white residents.

**Environment**

**Particulate Matter 2.5**

- Long term exposure to PM$_{2.5}$ and ozone has been associated with the development and progression of cardiovascular disease, and for PM$_{2.5}$, higher cardiovascular mortality

- Subgroups living in poverty experience the greatest absolute burdens from coal-fired electricity-generating units that emit PM$_{2.5}$

- Disparities in burden from PM$_{2.5}$ emitting facilities exists at multiple geographic scales, those in poverty have a 1.35 times higher burden than did the overall population and non-whites had 1.28 times higher burden, Black people specifically had 1.54 times higher burden than the whole population

**Traffic Density**
• Areas with majority African-American populations had significantly higher exposure to both air pollutants and higher prevalence of disease. In considering health outcomes in connection with pollution exposure infrastructure, demographics remain the most significant explanatory variable.
• Minority and lower socioeconomic status are systematically linked to higher exposure to traffic
• Children with significant neighborhood traffic had higher odds of having asthma/asthma-like symptoms than children without neighborhood traffic, and there are significant racial/ethnic disparities that exist

**Diesel Emissions**

• Low income and minority populations have the greatest health risks from the air quality impacts of transportation (vehicle-related emissions)
• Elevated early life exposure to near-roadway air pollution (including diesel emissions) contribute to increased obesity risk in children
• Children – from infancy to the age of 14 – are especially susceptible to the health effects of traffic emissions due to their rapidly developing immune, neurologic, and lung systems and high ventilation rates. Children in disadvantage neighborhoods are disproportionately exposed to traffic emissions due to proximity to highways and other high-volume roadways

**Toxic Release from Facilities**

• Racial/ethnic disparities in chronic diseases in the US may be because of chemical exposure

- Renters with African American or Hispanic/LatinX names are 41% less likely than renters with White names to receive responses for properties in low-exposure locations. Relative access to housing choices increases where there is higher exposure risk to toxic pollution.

- Current efforts in the U.S. to reduce toxic chemical releases from facilities rely on information disclosure which tends to help local communities take information-based action and generate pressure on facilities to reduce emissions. However, depending on residents’ political resources for collective action and their education level community pressure can vary and it is usually weak in poor, minority, and less educated communities. This leads to high exposure of residents to toxic chemicals in disadvantaged communities.