

Health Inequities and Social Determinants of Health

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Abstract

Health inequity is one of humanity's most acute challenges. Health inequity refers to the avoidable and unfair health burden borne by specific groups in the population. It is increasingly recognized as socially produced, is systematic and happens over the life course. There are still debates on the social conditions that cause this. Some are asking for action on the social determinants of health (SDH), and others on social goods. It is important to look at the experiences of groups like Black and African American, Latina, immigrant, and LGBTQIA peoples who have been historically marginalized. The conditions under which a person is born, lives, works, and ages influence health and disease risk. The inequalities found in today's society are due to racism in systems. To strengthen public accountability, we must monitor how social conditions impact health outcomes and the variation of these conditions across subgroups. Unsafe and unhealthy neighborhoods, schools, workplaces, and health environments come from an unfair spread of SDH. To critically assess and confront policies that perpetuate health inequalities, we need a political economy lens. To attain genuine health equity, it is necessary to comprehend and address these causes. Even though we know about them, we do not understand them or deal with them.

Keywords: Health inequity, social determinants of health, Marginalized populations, Structural racism, public accountability

1. Introduction

Individuals from different backgrounds, social groups, and countries enjoy different levels of health, reflecting inequalities in life expectancy, mortality rates, prevalence of diseases, behavior and experience of health services, perceptions of health and health-related quality of life (Schlotheuber and Hosseinpoor, 2022). Both individuals and population groups are commonly classified by their social and economic status, ethnicity and caste, and sex and gender (Kennedy-Moulton et al., 2022). Their circumstances differ systematically, producing health inequalities: observable differences in health between groups that are understood to be due in part to the unequal social distribution of health-determining resources (Mezzina et al., 2022). These resources, known as social determinants of health, are the whole range of environmental characteristics and exposures, resources and assets, power and authority in society, and opportunities affecting the individual and collective chances of living a healthy life (Moreno-Agostino et al., 2024).

Health inequalities may also be preventable and thus define health inequities: health inequalities that are unjust and that, in theory at least, are preventable and that can and should be addressed (Haag et al., 2021). Such inequities are avoidable by collective action and are a consideration in social justice (Granados et al., 2023). Health inequities operate across and within countries and often between indigenous and non-indigenous groups within the same population (Huria et al., 2021). There is a growing recognition of the importance of health equity in economic and social development (Thurber et al., 2022). Disparities in health between rich and poor individuals and groups are closely tied to disparities in education, employment, housing, and nutrition (Santos et al., 2022). Reducing health inequities is good not only for its own sake but also as a way to improve broader social and economic outcomes (Gurven et al., 2024). To reduce health inequities, the focus needs to be on the social determinants of health (Donkin et al., 2017).

Governments have been called to action on health inequities, and at the same time a sense of urgency has arisen around the social determinants of health (Whitehead and Dahlgren, 2021). This two-pronged agenda has come to occupy a strong place in global health governance (Schmalbach et al., 2022). The action plan on health inequities and the social determinants of health recognized the growing momentum and clarity around issues of wider socioeconomic inequities in health (Arcaya et al., 2015). It was endorsed by WHO's World Health Assembly and by the global health community (Amri et al., 2021). Health inequities are unacceptable and avoidable, and there are mature strategies to address them through actions on the social determinants of health (Kopasker et al., 2023).

2. Understanding Health Inequities

Health inequities are avoidable unfair differences in health among population groups (Whitehead and Dahlgren, 2021). They are shaped by the social and economic policies that govern societies where people are born, grow, live, and die (Bartley and Kelly-Irving, 2024). Therefore, strategies for addressing health inequities must be multisectoral, focusing on the forces that shape social contexts (Bartley and Kelly-Irving, 2024). Virtually everyone would agree that some differences in health between groups are inevitable or unavoidable (Gkiouleka et al., 2023). For example, health generally declines with advancing age, and this aging process is ultimately rooted in biological processes (Rigolon et al., 2021). Differences in height among people of various ethnic groups are also inevitable since they originate in biological endowment (Davey et al., 2022). These types of differences in health are labeled health inequalities or health differences (Arcaya et al., 2015). Individuals from different backgrounds, social groups, and countries enjoy different levels of health (Xian et al., 2024). While most of this variety is healthy and fruitful, increasing concern is being expressed globally about a surplus of ill health among some population groups (Keim-Klärner et al., 2023). Generally, ill health that is insensitive to known biological risk factors, that is socially patterned, and that is deemed unfair is referred to as health inequity or health inequities (Mishra et al., 2021). Health inequities are systematic, socially disadvantageous inequalities between groups of people in health that are judged to be avoidable by reasonable means (Towe et al., 2021). They arise when disadvantaged social groups have worse health outcomes than the average group despite being capable of achieving the average level of health (Mishra et al., 2021). The main cause of health inequities is the social determination of health, which is widely believed and increasingly chronicled by social epidemiologists (Mishra et al., 2021).

3. Social Determinants of Health

There are differences in health which are not only unnecessary and avoidable, but in addition, are considered unfair and unjust (Donkin et al., 2017). Health inequities are the systematic differences in the health status of different population groups (Whitehead and Dahlgren, 2021). Health inequities exist when there is a difference in a health indicator between two groups and that difference is considered unfair or unjust (McCartney et al., 2021). Health inequities arise from social inequities (Mezzina et al., 2022). Inequities in health arise because of inequities in the conditions in which people are born, grow, live, work, and age (Williams et al., 2022). The socioeconomic and political context determines the structural factors that shape the social determinants of health (SDH) (Smith et al., 2022). The social determinants of health are the social factors that influence the likelihood

of exposure to health-related risks and hazards and the capacity of individuals, communities, and nations to respond (Bhatt et al., 2022).

Action on the social determinants of health is required to reduce inequities in health (Gómez et al., 2021). Consumer lifestyles, social networks, and the broader social and economic landscape are all implicated in the distribution of health in populations (Whitehead and Dahlgren, 2021). The conditions in which people are born, live, work, and age are shaped by the unequal distribution of power, money, and resources at global, national, and local levels; these are the social determinants of health (Whitman et al., 2022). In turn, these conditions are the primary determinants of health inequities (Hacker et al., 2022). Flawed policies and processes produce inequitable societies; inequitable societies, in turn, are less resilient (Crear-Perry et al., 2021). Ills befall poor people, but profoundly flawed policies and processes are largely the piano wires and blow tubes of inequitable societies, and the paper is the medium for their global, national, and local interactions. Poorly designed policies and processes regarding trade, investment, finance, taxes, governance, housing, food security, labour, and education, among others, were prioritized over health policy, while health outcomes were ignored (Paremoer et al., 2021). Action needs to be taken on the social determinants of health inequities in all countries (Green et al., 2021). The conditions in which people are born, grow, live, work, and age are the social determinants of health and health inequalities between and within countries (Emmons and Chambers, 2021).

4. Income and Health Access

In Australia, health inequities persist along socioeconomic lines, with those in the lowest income group experiencing the poorest health (Wood et al., 2023). In this context, the social determinants of health framework, with its emphasis on the impact of upstream factors, such as income, education, and occupation, provides a useful and appropriate lens through which to better understand how people's resources and opportunities influence their health (Wood et al., 2023). Research within the social determinants of health framework has shown that the association between health and income is graded (i.e. each income category has worse health than the one above) rather than binary (Bull et al., 2022). That is, those in the lowest income group experience the most health inequities, while those in the highest income group experience the best health of all (Balasooriya et al., 2021). Most social determinants of health research to date has focused on health access, with income both as an objective measure of socioeconomic status and as a subjective perception of privilege described as a factor influencing both health access and health outcomes conveyance (Cho et al., 2019). In the context of universal health access, inequitable health access on the basis of income is largely the result of factors in turn influenced by income (Holdroyd et al., 2025). Therefore, understanding health from a

socio-economic status perspective leads to a more comprehensive understanding of health inequities (Oña et al., 2023). Moreover, it provides an evidence base for potential intervention points (Chari et al., 2022). Income must be addressed upstream in the context of universal health access to ensure health equity downstream (Wood et al., 2023). To this end, ways in which communities in Australia are currently addressing income inequality and inequity will be reviewed (Beese et al., 2022).

Prioritizing income in the context of health equity is consistent with the work of many of the leading health equity thinkers, including Marmot who developed the social determinants of health framework from whom the most widely-used model is based (Braveman, 2023). This model emphasises income, occupation, education, and early life as upstream factors, which perpetuate inequity across three domains: access to and use of weekly needs, access to and use of health care, and preventive health behaviours, ultimately resulting in health inequity (Ray et al., 2023). This model was developed to inform the response to the WHO Commission on the Social Determinants of Health, which was called by the Director General to tackle the health inequities arising from the globalised marketplace, urbanization, and the proliferation of determinants beyond traditional public health domains (Mercado et al., 2024).

4.1. Impact of Income on Health Outcomes

Countries in Latin America have relative income inequalities, with larger well-being gaps compared with other regions of the world (Gaspar et al., 2021). This raises questions about income distribution and health regarding egalitarianism, relative income, and social processes such as status linkages and stress, which may modify health outcomes (Sanhueza et al., 2024). The analysis of income and health at both the national and individual levels indicate that more income is associated with better health, consistent with relevant evidence from other countries (Delaporte et al., 2021). Whereas earlier analyses focused on the micro-level relationship, widening the focus reveals that income inequality is associated with mortality levels (Bilal et al., 2021). Additionally, the social gradient in health from poorer self-rated health up to lower income is moderated by income inequality (Martinez-Valle, 2021).

The notion of social justice is implicit in recognizing income deviations for health equity (Boon et al., 2021). Active citizens may engage in interacting between different sectors, such as health, education, labor, and economics, to transform knowledge on social determinants of health into social equity improvements (Lunde et al., 2022). Health is not only a right but also an indispensable nation-building asset (Mohsenpour et al., 2021). Importantly, social processes at broader levels may influence when and where health trajectories occur, including evaluations of public health policies or corruptive owns of social infrastructure (Dibello et al., 2023). It becomes crucial to represent health in a broad sense and gauge impacts on burdens of morbidity, healthy life expectancy, prevalence of chronic diseases, and early death (Alderwick et al., 2021). The evidence of systematic

group differences in health-related outcomes will guide a new agenda of public health policy including individual-level and collective actions for improvement (Emmons and Chambers, 2021).

One pathway is that income inequality leads to societal polarization and the violation of democratic rights articulated through the increase in rude salaries and precarious jobs (Kondo, 2012). A second pathway is that public education and infrastructures including transportation and housing deteriorate along with increasing income inequality (Norris and Beech, 2021). This, in turn, might increase the disparity in higher education access and job opportunities, leading to an increase in perceived downward mobility that well-knownly leads to stress and subsequent health problems (Harvey et al., 2022). Among the various social determinants, income distribution is arguably the most significant in terms of its association with health (Kirkbride et al., 2024).

4.2. Economic Barriers to Healthcare Access

Economic barriers are among the most salient barriers preventing people from accessing healthcare (Hashemi et al., 2022). Two types of barriers to healthcare access have often been discussed: Direct, out-of-pocket costs and problems with health insurance coverage (Matin et al., 2021). Direct costs include cost for visits to physicians, inpatient and outpatient hospital care, medicines, laboratory tests, imaging, transportation, or dental care (Zakerabasali et al., 2021). Individuals' problems with health insurance coverage encompass a lack of insurance or underinsurance, obstacles to enrolling/getting/keeping/extending insurance coverage, out-of-pocket costs that are not fully covered by insurance, patient cost-sharing that is so high that preventative care is not accessed, and pre-existing conditions posing obstacles to getting or keeping coverage (Govindan et al., 2023).

Few studies have examined what specific barriers to coverage and costs are perceived as most important by health care users (Coombs et al., 2021). When screening questions use these broad categories, people who indicated they did not see a physician for their health problem frequently identified both direct costs and issues with coverage (Weening-Verbree et al., 2021). It is, however, possible that people did not adequately understand or remember the different questions so that a more focused analysis of barrier types was precluded (Amini et al., 2021). In line with findings from polling data, the most specific barriers in the coverage and costs categories were similar: a lack of health insurance coverage as a significant barrier was most frequently reported with regards to costs (Rawlinson et al., 2021). On the other hand, among the reported barriers to healthcare access, those related to indirect costs of care were mentioned least frequently (McArthur et al., 2021). Healthcare users were also least likely to report that accessibility was a significant barrier to care for health problems (Hoven et al., 2023).

5. Race and Health Disparities

Race is a particularly salient demographic factor in the study of health disparities in the U.S (Cullen et al., 2022). The literature indicates that race is an independent risk factor for both morbidity and mortality—and this risk persists in studies that control for SEP (Wang et al., 2021). On average, racial minorities have worse outcomes than whites, and in many settings, the effect of race is strong enough to mask the effects of other factors entirely (Carethers, 2021). These effects have been attributed to differential exposure or vulnerability to toxic environments and to racial discrimination or, in the case of African Americans, to the social realities of slavery and racism, which still reverberate in contemporary U.S. society (Nuru-Jeter et al., 2018). While there has been considerable debate about the relative contributions of racism and SEP to health disparities, researchers now recognize that segregation by race and income shapes the place context and creates an environmentally structured risk profile (Dwyer-Lindgren et al., 2023). However, while understanding the risk of place is critical to the understanding of health disparities, it is not the complete story, for place is confounded by race (Zavala et al., 2021). Racial minorities are not just more likely to live in poor quality places; they are more likely to live in places that are poor and White at once (Katz et al., 2021).

There is a literature that examines the within-place context (Brewis et al., 2021). For example, Fordham and Ogbu theorize how African American students respond to the social and academic realities of attending a predominantly White high school (Tebbe and Budge, 2022). By avoiding activities associated with White culture and excelling academically, they engage in “oppositional behaviour”—discourses and practices that defy the rules of school and the dominance of “the Other” (Thomas and Gilbert, 2006). Fordham argues that Black youth categorically oppose behaviours that may enable adversarial engagement within a White-dominated environment because of the social consequences (Krys et al., 2022). Researchers have begun including measures of culture and psychosocial factors such as coping resources and expectations, but no study has endeavored to include both structural and cultural elements in a single framework (Hornsey et al., 2023). Thus, the project seeks to operate at the intersection of these two bodies of knowledge: to investigate how public school students use cultural resources to respond to structural disadvantage (Hayes et al., 2021).

5.1. Historical Context of Racial Inequities

Understanding the historical context and causes of these disparities is necessary to develop effective solutions, as informed by the social determinants of health (SDOH) framework (Harvey, 2021). Reductions in health disparities require attention to both the distal and proximal determinants of health through multiple strategies, including changing the early life environment, enhancing schools and community resources, increasing wealth

and employment among the poor, reducing residential segregation, and promoting healthier environments and lifestyles in low accomplishment neighborhoods (Williams and Cooper, 2019). The historical roots of health inequities are often contradicted by contemporary social and environmental factors such as deep poverty, language barriers, isolation, and segregated schools and neighborhoods (Shannon et al., 2022).

Racial inequities in infant, maternal, and chronic disease mortality and morbidity in the United States are among the starkest of health disparities, with a long documented history (Lopez et al., 2021). Scientific evidence dates back more than three decades and spans multiple disciplines, illustrating the complexity and multidimensionality of its causes and consequences (Chandran and Schulman, 2022). A growing body of information suggests effective interventions, particularly given recent changes in the political landscape (Javed et al., 2022). Despite a dearth of continued attention, urgent action is needed to meet the goal of achieving health equity (Dipple et al., 2025). To this aim, significant and bold action is needed, recognizing that concerted efforts build from a strong base of knowledge about the causes of racial inequities in health and approaches taken by other efforts to advance equity across societies and disciplines (Obinna, 2021). Addressing the social determinants of health alone has not sufficiently resulted in reductions in social, spatial, and health inequities (Chen, 2025).

5.2. Racial Discrimination in Healthcare

As shown in the previous section, racial discrimination in health care delivery is not only a civil rights issue but also a public health issue (Dickman et al., 2022). The utilization of health care services by African Americans is less than that of whites (Lofton et al., 2023). African Americans are less likely than whites to receive the recommended preventive services of Pap smears, mammograms, and cholesterol tests (Adepoju et al., 2022). That is, there is substantial evidence of treatment differences between African Americans and whites in the delivery of pediatric dental care, surgery for lung cancer, hospital admission following myocardial infarction, and other procedures (Maness et al., 2021). Other areas within the broader health care delivery field that merit exploration are the differences in treatment practices among health care providers, differences in treatment between solo and group practices and between for-profit and non-profit hospitals (Ahmed et al., 2021). These presentation differences usually related to how a health care service is given out differ from the selection differences related to whether or not a health care service is given out (Lu et al., 2021).

As shown in the previous section, disparities in health status between the majority and minority populations and the need or preference differences vary with sociocultural background (Snowden and Graaf, 2021). There is substantial evidence that African Americans have poorer health statuses than whites (Ames et al., 2021). Future research is warranted, though, to determine how racial minorities learn poor treatment compliance and lifestyle matters (Maness et al., 2021). The effects of provider bias and patient preference

biases on disparities not only depend on their strength but also on their nature (Lofton et al., 2023).

6. Intersectionality of Income, Race, and Environment

In U.S. society, there are large income inequalities among white and ethnic/racial groups (Guzman, 2022). Household income is significantly lower among Latino and Black households compared to white households (Taylor et al., 2022). The differences in per capita income are about \$18,953–19,860 and \$12,628–13,859, respectively (Morales et al., 2021). Additionally, there are substantial regional and systematic differences in income between metropolitan areas, with mostly white households living in relatively wealthy regions and predominantly Latino and Black households living in poor areas (Assari et al., 2024). These vast income inequalities across various groups shape residential segregation, access to housing, and employment and educational opportunities (Lee, 2002).

Socio-economics and race shape one's exposure to residential environments that may adversely impact health. Socially disadvantaged groups (Black and Latino households) are more likely than socially privileged groups (white households) to live near toxic and hazardous land uses, including coal-fired power, waste disposal, chemical manufacturing, and oil refining (Di Fonzo et al., 2022). Thus, socio-economics and race shape health through environmental exposure. However, most empirical studies of environmental health inequities ignore 1) the interaction (or intersectionality) between race and social disadvantage and 2) regional contexts in which health inequities are examined (Hendricks and Van Zandt, 2021). There is an enormous regional variation in the economic and racial landscape in the U.S (Mascarenhas et al., 2021). Large metropolitan areas in the U.S. include either politically by conservative-leaning white or racially diverse more liberal municipalities (Alvarez, 2023). Race and income differences (e.g., the degree of socio-economic segregation across white, Latino, and Black households) would play out differently in politically liberal and conservative regions (Sanders et al., 2023).

Good public policies on social justice and environmental protection are as important a driving force as racial composition disparity for health inequities (Hendricks and Van Zandt, 2021). Both Los Angeles and New York City have major environmental health inequities (Abi et al., 2023). However, different demographic groups are impacted by different toxic exposures and there are stark contrasts in racial segregation disparities and sources of DPM disparity, suggesting diverging socio-political history in shaping the racial/ethnic divide in health inequities (Mezzina et al., 2022).

6.1. Compounding Effects on Health Access

Eight different dimensions of health considered under one common health equity umbrella can lead to a comprehensive characterisation of these multiple dimensions

(Vasylieva et al., 2023). However, the understanding is still neutral unless the underlying factors leading to the differential views of health equity across subpopulations are uncovered (Suasnabar et al., 2024).

At the surface level, differential views of health equity may be rooted in the lived experience of health inequities among the population (Bowleg, 2023). Further inspection of the findings suggests that it is likely that a combination of factors contribute to this phenomenon (Towe et al., 2021). On one hand, there is variation in overall health status which may lead to differential exposure or sensitivity to health inequities (Braveman, 2022). On the other hand, amid shifts in the political landscape with a greater divide between the ideological beliefs of the two primary parties, there is variation in the belief about the legitimacy of health inequities (for example, whether health inequities are natural or attributable to an unjust distribution of resources) (Parsons et al., 2021). Furthermore, among those who believe that health inequities are unfair, there is a gulf between individualistic and structural views of health inequities (Macgregor et al., 2023). This should not only be seen as a context for the variations observed, but also a real-time snapshot of the affordances and challenges for health equity dialogue and efforts (Akbulut and Razum, 2022). Throughout this complex web, things seem to become entangled when taking the cultural aspect of views of health and society into consideration (Shelton et al., 2022). Nonetheless, a longitudinal understanding of both views of health inequities and social determinants may very well lead to more culturally responsive dialogues of health equity in the U.S. and possibly elsewhere, especially in places where an unhealthy climate surrounding health equity dialogues may be exacerbated by similar challenges (Agurs-Collins et al., 2024).

6.2. Case Studies of Vulnerable Populations

Race and ethnicity are strong determinants of social and health inequities globally, with minority races suffering worse health outcomes in many settings (Brandt, 2023). Previous research has demonstrated the risk of infection, hospitalization, and mortality among racially/ethnically marginalized groups (Dawes et al., 2022). For migrants, the risks associated with the COVID-19 pandemic are compounded by issues of transience, employment in low-wage work, unstable residency status, and ineligibility for government support during lockdowns (Javed et al., 2022). Recent studies have called attention to gender-based health inequities worsened by the pandemic independent of race and ethnicity (Amezcuca et al., 2021). Restricted movement due to stay-at-home orders exacerbated domestic violence, while the economic crisis increased the risk of intimate partner violence (IPV) in socioeconomically disadvantaged neighborhoods (Rebouças et al., 2022). Since its emergence, COVID-19 has disproportionately impacted the health, social, and economic wellbeing of vulnerable populations (Rigolon et al., 2021). A rapid assessment of non-Thai populations identified job loss and inadequate income to cover daily living

expenses as their main challenges (Diaz et al., 2021). Recipients of government assistance were also businesses or daily-wage earners who had gone out of work (Shadmi et al., 2020).

Lessons learned from the 1997 Asian economic crisis in Thailand points out that both physical and mental health problems can potentially rise among the poor and other vulnerable populations following the current economic crisis (Siegel and Mallow, 2021). In addition to the cumulative stress from massive job loss and inadequate means to live, precarious working conditions, exposure to health hazards, and heightened risk of violence and abuse have raised concern about the health and wellbeing of sex workers, domestic workers, and local gold mine workers (Barron et al., 2022). Furthermore, the problem will likely be aggravated in highly populous non-farm and agricultural labor communities such as construction workers unable to sustain rent without regular income during the lockdown, while differentiating health and economic threats will remain an even bigger challenge (Mezzina et al., 2022). The news media also reported long queues of people for food and necessity donations in various communities (Nguyen et al., 2023).

7. Policy Implications

It is only through fairer systems of government and governance (trusteeship, impersonality), supported by effective instruments (defensive laws), independence from wealth and power, integrity, empowerment of the powerless (e.g. woman, youth and the disabled), a supportive physical environment, and social and legal equity, that the unequal distribution of resources can be redressed (Chelak and Chakole, 2023). These wider determinants of health inequities relate to freedom and empowerment at the individual, community and country level (Whitehead and Dahlgren, 2021). Each level of empowerment has different health equity implications but is influenced by public policy (Holman et al., 2021). Health inequities are relevant to the remit of every government department and sector (Buse et al., 2023). Overall, public policy has a major role to play in addressing health inequities and limiting health inequities assessment and response to the health sector is counterproductive (Gómez et al., 2021). Work by all government departments and sectors (gender, transportation, urban planning, rural development, fundamental rights, education, housing and land, working conditions, social protection and legal systems) can contribute to health equity (Friel, 1970). However, there is practically no empirical evidence of such practices or their effectiveness (Gómez et al., 2021). All thought and effort in measuring health inequities has been on the health system – through health service coverage, access to health facilities, health state and health expenditure – and no thought or effort has gone into how the social and economic determinants of health lead to inequities in their health consequences (Östlin et al., 2011). Health equity and health inequity are vague concepts that mean different things to different people (Essien et al., 2021). Vast and indistinct health inequities exist and no effort has been made to

operationalize health equity and health inequity down to measurable and actionable proxies that can help gauge and limit health inequities (Bhatt et al., 2022). Most importantly, the scientific basis for assessing and essential resources for mapping and quantifying health inequities are lacking (Van et al., 2022). Some key questions that need to be addressed in this regard are as follows: What are the “social determinants of health” and how are they measured? How do they limit freedom to lead a flourishing and healthy life and widen health inequities? How can the role of the social determinants of health in widening health inequities be captured, quantitatively mapped and limited? (Crear-Perry et al., 2021; Smith et al., 2022).

7.1. Strategies to Address Health Inequities

Strategies to address health inequities focus on the social determinants of health (Gómez et al., 2021). There is a global call for action on the social determinants of health because action on these determinants is key to improving health outcomes, health equity, and health development worldwide (Crear-Perry et al., 2021). It is crucial for all governments and international agencies to prioritize action on the social determinants of health and put in place sufficient policies, strategies, and organizational mechanisms to achieve this (Friel, 1970). Health equity is stated to be a global priority for the World Health Organization and other global health organizations, as recognized in the Ottawa Charter for Health Promotion (Whitman et al., 2022). Health equity was one of three key objectives in the WHO Commission on Macroeconomics and Health and was again recognized as a critical role for the World Health Organization (Williams et al., 2022). Addressing the social health determinants and reducing health inequities were also key recommendations of the Ottawa Charter for Health Promotion in 1986 (Hacker et al., 2022). Over the last two decades, 250+ political declarations identifying commitments to health inequity reduction strategies and/or social health determinant actions across a wide range of regional and country contexts have been collected (Whitehead and Dahlgren, 2021). The most recent of these is the European Union’s Council recommendation on health inequities (Whitehead and Dahlgren, 2021). It is noted that the post-2008 economic crisis has generally not been seen as a time to develop public health policies that more effectively address the social determinants of health and health inequities (Dalsania et al., 2022). Yet the extent of the economic crisis makes investment in the health sector more critical than ever (Mezzina et al., 2022). Many EU countries have taken public health actions that reach beyond health systems to address the social determinants of health, and at the same time reduce budgets for health promotion among other policies (Ndugga and Artiga, 2021). Efforts to address health inequalities in the EU are operating but are not as comprehensive as needed (Odoms-Young et al., 2024).

7.2. Role of Government and Community Organizations

The functions of government organizations include enabling social development, increasing accountability, developing regulatory programs, developing indicators, and

engaging citizens (Jaroszewicz et al., 2022). Collective action is encouraged among non-governmental organizations and community organizations to influence public policy formulation and development; develop responses to local priorities, needs, and interests; and develop mechanisms for delivery and engagement with the main actors of governance (Hyde, 2002). Different forms of governance exist: hierarchical governance, which concentrates decision-making power among a small group of actors; market governance, in which private actors take on the responsibility or ownership of public activities; and network governance, which distributes power among multiple actors jointly overseeing activities (Chaput et al., 2023). The latter is more effective in health development because a single mechanism is insufficient for governance in public health (Schmeisser et al., 2023).

Governments, non-governmental organizations, and community organizations all play important roles in promoting health equity and addressing social determinants of health (Emmons and Chambers, 2021). National and state governments adopt policies, commitments, and funding levels to address the determinants of health equity (Woodward et al., 2021). International organizations call upon governments worldwide to incorporate social determinants of health into national public policies and programs (Ortenzi et al., 2022). A global Charter and a Commission were created (Brownson et al., 2021). Local and city governments struggle with improving community health, despite being a key structural element of public health governance (Whitman et al., 2022). In this context, the role of government is indirectly explored through local health departments in the United States, with a focus on how various components across levels should be working together to achieve health equity (Shah et al., 2017).

8. Future Directions in Research

A broad range of social, economic, cultural, environmental, gender, and political factors influence the health status of individuals and populations (McCartney et al., 2021). Obvious influences on health equity include health systems, health behaviours, health knowledge and illiteracy, illness behaviour, economic inequalities, wealth, land tenure, infrastructure, and climate change (Whitehead and Dahlgren, 2021). Inadequate consideration of the determinants of health inequities limits knowledge transfer from research to practice, and thwarts efforts to bridge the gap between knowledge and action (Williams et al., 2022). While social conditions are acknowledged as fundamental causes of health inequities, much greater attention must be directed to understanding how social determinants translate into health inequities (Crear-Perry et al., 2021). Individual- or population-focused strategies are inadequate for reducing health inequities at a population level, yet determining how inequities are produced and sustained by social, economic and political structures, systems and processes is challenging (Bartley and Kelly-Irving, 2024). There is a need for conceptual analyses that can inform new avenues of research, research

collaborations, and transdisciplinary methodologies to link knowledge production with effective interventions for health equity (Smith et al., 2022). These efforts will require close partnerships between researchers, policy-makers, and practitioners, and researchers must adopt an unapologetic approach that positions health inequities as a fundamental human rights violation (Marmot, 2022).

Unequal distribution of the resources required for health produces avoidable, unfair and remediable inequities in health among population groups. Gender, ethnicity, socioeconomic status, place of residence, work status and disability are now broadly recognised as key determinants of population health, and collective goods and personal resources that underpin opportunities for health are inequitably distributed in most societies (Qin et al., 2024). Within a given society, health inequities between population groups cluster, interact and accumulate over time, producing a ‘symptom complex’ of disadvantage (Whitehead and Dahlgren, 2021). Well-trained and equipped health workers are needed to meet the novel challenges of the changing threat landscape and to improve health systems’ resilience (Bonati et al., 2021). However, the distribution of health workers within and between countries is highly inequitable, with a negative impact on health equity and health system results in lower-income countries (Ahmed, 2022). In many low-income and middle-income countries, workforce challenges exist in all domains (Mabaquiao, 2021). There is a need to improve global health security mediated by health systems (Galea and Vaughan, 2021). Issues in workforce age, gender, type, education, mobility, and conditions of employment are important for consideration (Obohjemu, 2024).

9. Conclusions

Contemporary discussions about the causes of health inequities routinely consider social determinants of health and health inequities’ causal pathways and mechanisms (McGibbon, 2021). These discussions frequently refer to a wide array of social influences on health, including socioeconomic status, social support and social isolation, geographical location, health-related behaviors, personal health factors, and access to health care (Hahn, 2021). The discussion in this article adds to literature that focuses on health inequities alone, or on social influences on health inequities alone, by specifically addressing the point of entry into discussions about the causes of health inequities (Lopez et al., 2022).

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References:

- A. Shah, U., M. Hadayia, J., & E. Forsys, L. (2017). From Principles to Practice: One Local Health Department's Journey Toward Health Equity. ncbi.nlm.nih.gov
- Abi Deivanayagam, T., English, S., Hickel, J., Bonifacio, J., Guinto, R. R., Hill, K. X., ... & Devakumar, D. (2023). Envisioning environmental equity: climate change, health, and racial justice. *The Lancet*, 402(10395), 64-78. thelancet.com
- Adepoju, O. E., Chae, M., Ojinnaka, C. O., Shetty, S., & Angelocci, T. (2022). Utilization gaps during the COVID-19 pandemic: racial and ethnic disparities in telemedicine uptake in federally qualified health center clinics. *Journal of General Internal Medicine*, 37(5), 1191-1197. springer.com
- Agurs-Collins, T., Alvidrez, J., Ferreira, S. E., Evans, M., Gibbs, K., Kowtha, B., ... & Brown, A. G. (2024). Perspective: nutrition health disparities framework: a model to advance health equity. *Advances in Nutrition*, 100194. sciencedirect.com
- Ahmed, M. (2022). Unequal access to health care facilities and its impact on achieving sustainable development goals: Bangladesh perspective. *Jurnalul Practicilor Comunitare Pozitive*. jppe.ro
- Ahmed, S., Nutt, C. T., Eneanya, N. D., Reese, P. P., Sivashanker, K., Morse, M., ... & Mendu, M. L. (2021). Examining the potential impact of race multiplier utilization in estimated glomerular filtration rate calculation on African-American care outcomes. *Journal of general internal medicine*, 36, 464-471. springer.com
- Akbulut, N. & Razum, O. (2022). Why Othering should be considered in research on health inequalities: Theoretical perspectives and research needs. *SSM-population health*. sciencedirect.com
- Alderwick, H., Hutchings, A., Briggs, A., & Mays, N. (2021). The impacts of collaboration between local health care and non-health care organizations and factors shaping how they work: a systematic review of reviews. *BMC public health*. springer.com
- Ames, B. N., Grant, W. B., & Willett, W. C. (2021). Does the high prevalence of vitamin D deficiency in African Americans contribute to health disparities?. *Nutrients*. mdpi.com
- Amezcu, L., Rivera, V. M., Vazquez, T. C., Baezconde-Garbanati, L., & Langer-Gould, A. (2021). Health disparities, inequities, and social determinants of health in multiple sclerosis and related disorders in the US: a review. *JAMA neurology*, 78(12), 1515-1524. [\[HTML\]](https://html)
- Amini, M., Oemrawsingh, A., Verweij, L. M., Lingsma, H. F., Hazelzet, J. A., Eijkenaar, F., & van Leeuwen, N. (2021). Facilitators and barriers for implementing patient-reported outcome measures in clinical care: An academic center's initial experience. *Health Policy*, 125(9), 1247-1255. sciencedirect.com
- Amri, M. M., Jessiman-Perreault, G., Siddiqi, A., O'Campo, P., Enright, T., & Di Ruggiero, E. (2021). Scoping review of the World Health Organization's underlying equity discourses: apparent ambiguities, inadequacy, and contradictions. *International Journal for Equity in Health*, 20(1), 70. springer.com
- Assari, S., Sheikhattari, P., & Zare, H. (2024). Blacks' Diminished Returns of Parental Education on Household Income: A Study of College Students in the US. *Open journal of educational research*, 4(4), 187. nih.gov
- B Thomas, S. & L Gilbert, K. (2006). Overview of Minority Health and Health Disparities in the US. [\[PDF\]](https://pdf)

- Balasooriya, N. N., Bandara, J. S., & Rohde, N. (2021). The intergenerational effects of socioeconomic inequality on unhealthy bodyweight. *Health economics*. [wiley.com](https://www.wiley.com)
- Barron, G. C., Laryea-Adjei, G., Vike-Freiberga, V., Abubakar, I., Dakkak, H., Devakumar, D., ... & Karadag, O. (2022). Safeguarding people living in vulnerable conditions in the COVID-19 era through universal health coverage and social protection. *The Lancet Public Health*, 7(1), e86-e92. [thelancet.com](https://www.thelancet.com)
- Bartley, M. & Kelly-Irving, M. (2024). Health inequality: an introduction to concepts, theories and methods. [\[HTML\]](#)
- Beech, B. M., Ford, C., Thorpe Jr, R. J., Bruce, M. A., & Norris, K. C. (2021). Poverty, racism, and the public health crisis in America. *Frontiers in public health*, 9, 699049. [frontiersin.org](https://www.frontiersin.org)
- Beese, F., Waldhauer, J., Wollgast, L., Pförtner, T. K., Wahrendorf, M., Haller, S., ... & Wachtler, B. (2022). Temporal dynamics of socioeconomic inequalities in COVID-19 outcomes over the course of the pandemic—a scoping review. *International journal of public health*, 67, 1605128. [ssph-journal.org](https://www.ssph-journal.org)
- Berkowitz, R. L., Bui, L., Shen, Z., Pressman, A., Moreno, M., Brown, S., ... & Azar, K. M. (2021). Evaluation of a social determinants of health screening questionnaire and workflow pilot within an adult ambulatory clinic. *BMC family practice*, 22(1), 256. [springer.com](https://www.springer.com)
- Berkowitz, S. A. (2024). Multisector Collaboration vs. Social Democracy for Addressing Social Determinants of Health.. *Milbank Quarterly*. [\[HTML\]](#)
- Bhatt, J., Davis, A., Batra, N., & Rush, B. (2022). US health care can't afford health inequities. *Deloitte Insights*. [nationalforum.org](https://www.nationalforum.org)
- Bilal, U., Hessel, P., Perez-Ferrer, C., Michael, Y. L., Alfaro, T., Tenorio-Mucha, J., ... & Diez-Roux, A. V. (2021). Life expectancy and mortality in 363 cities of Latin America. *Nature medicine*, 27(3), 463-470. [nature.com](https://www.nature.com)
- Bonati, M., Tognoni, G., & Sereni, F. (2021). Inequalities in the universal right to health. *International journal of environmental research and public health*, 18(6), 2844. [mdpi.com](https://www.mdpi.com)
- Boon, M. H., Thomson, H., Shaw, B., Akl, E. A., Lhachimi, S. K., López-Alcalde, J., ... & GRADE Working Group. (2021). Challenges in applying the GRADE approach in public health guidelines and systematic reviews: a concept article from the GRADE Public Health Group. *Journal of clinical epidemiology*, 135, 42-53. [sciencedirect.com](https://www.sciencedirect.com)
- Bowleg, L. (2023). The white racial frame of public health discourses about racialized health differences and “disparities”: what it reveals about power and how it thwarts health equity. *Frontiers in Public Health*. [frontiersin.org](https://www.frontiersin.org)
- Brandt, E. J. (2023). Social determinants of racial health inequities. *The Lancet Public Health*. [thelancet.com](https://www.thelancet.com)
- Braveman, P. (2022). Defining health equity. *Journal of the National Medical Association*. [\[HTML\]](#)
- Brewis, A., Piperata, B. A., Dengah, H. F., Dressler, W. W., Liebert, M. A., Mattison, S. M., ... & Gravlee, C. C. (2021). Biocultural strategies for measuring psychosocial stress outcomes in field-based research. *Field Methods*, 33(4), 315-334. [sagepub.com](https://www.sagepub.com)

- Brown, T. H. & Homan, P. (2023). The future of social determinants of health: looking upstream to structural drivers. *The Milbank Quarterly*. [nih.gov](https://www.nih.gov)
- Brownson, R. C., Kumanyika, S. K., Kreuter, M. W., & Haire-Joshu, D. (2021). Implementation science should give higher priority to health equity. *Implementation Science*, 16, 1-16. [springer.com](https://www.springer.com)
- Bull, C., Howie, P., & Callander, E. J. (2022). Inequities in vulnerable children's access to health services in Australia. *BMJ Global Health*. [bmj.com](https://www.bmj.com)
- Buse, K., Mays, N., Colombini, M., Fraser, A., Khan, M., & Walls, H. (2023). *Making health policy*, 3e. McGraw Hill. kebijakankesehatanindonesia.net
- C. Arcaya, M., L. Arcaya, A., & V. Subramanian, S. (2015). Inequalities in health: definitions, concepts, and theories. [PDF]
- Carethers, J. M. (2021). Insights into disparities observed with COVID-19. *Journal of internal medicine*. [wiley.com](https://www.wiley.com)
- Chandran, M. & Schulman, K. A. (2022). Racial disparities in healthcare and health. *Health services research*. [nih.gov](https://www.nih.gov)
- Chang, K. J., Seow, K. M., & Chen, K. H. (2023). Preeclampsia: Recent advances in predicting, preventing, and managing the maternal and fetal life-threatening condition. *International journal of environmental research and public health*, 20(4), 2994. [mdpi.com](https://www.mdpi.com)
- Chaput, J. P., McHill, A. W., Cox, R. C., Broussard, J. L., Dutil, C., da Costa, B. G., ... & Wright Jr, K. P. (2023). The role of insufficient sleep and circadian misalignment in obesity. *Nature Reviews Endocrinology*, 19(2), 82-97. [nature.com](https://www.nature.com)
- Chari, M., Ravaghi, V., Sabbah, W., Gomaa, N., Singhal, S., & Quiñonez, C. (2022). Oral health inequality in Canada, the United States and United Kingdom. *PLoS One*, 17(5), e0268006. [plos.org](https://www.plos.org)
- Chelak, K. & Chakole, S. (2023). The role of social determinants of health in promoting health equality: a narrative review. *Cureus*. [cureus.com](https://www.cureus.com)
- Chen, A. M. (2025). Barriers to health equity in the United States of America: can they be overcome?. *International Journal for Equity in Health*. [nih.gov](https://www.nih.gov)
- Chun, Y., Roll, S., Miller, S., Lee, H., Larimore, S., & Grinstein-Weiss, M. (2023). Racial and ethnic disparities in housing instability during the COVID-19 pandemic: the role of assets and income shocks. *Journal of Economics, Race, and Policy*, 6(2), 63-81. [springer.com](https://www.springer.com)
- Coombs, N. C., Meriwether, W. E., Caringi, J., & Newcomer, S. R. (2021). Barriers to healthcare access among US adults with mental health challenges: A population-based study. *SSM-population health*, 15, 100847. [sciencedirect.com](https://www.sciencedirect.com)
- Crear-Perry, J., Correa-de-Araujo, R., Lewis Johnson, T., McLemore, M. R., Neilson, E., & Wallace, M. (2021). Social and structural determinants of health inequities in maternal health. *Journal of women's health*, 30(2), 230-235. [liebertpub.com](https://www.liebertpub.com)

Cullen, M. R., Lemeshow, A. R., Russo, L. J., Barnes, D. M., Ababio, Y., & Habtezion, A. (2022, March). Disease-specific health disparities: a targeted review focusing on race and ethnicity. In *Healthcare* (Vol. 10, No. 4, p. 603). MDPI. [mdpi.com](https://doi.org/10.3390/healthcare10040603)

Dahlgren, G. & Whitehead, M. (2021). The Dahlgren-Whitehead model of health determinants: 30 years on and still chasing rainbows. *Public health*. [elevateni.org](https://doi.org/10.1016/j.puhe.2021.05.010)

Dalsania, A. K., Fastiggi, M. J., Kahlam, A., Shah, R., Patel, K., Shiau, S., ... & DallaPiazza, M. (2022). The relationship between social determinants of health and racial disparities in COVID-19 mortality. *Journal of racial and ethnic health disparities*, 1-8. [springer.com](https://doi.org/10.1007/s12620-022-01000-0)

Davey, F., McGowan, V., Birch, J., Kuhn, I., Lahiri, A., Gkiouleka, A., ... & Ford, J. (2022). Levelling up health: a practical, evidence-based framework for reducing health inequalities. *Public health in practice*, 4, 100322. [sciencedirect.com](https://doi.org/10.1016/j.phe.2022.100322)

Dawes, D. E., Amador, C. M., & Dunlap, N. J. (2022). The political determinants of health: a global panacea for health inequities. In *Oxford Research Encyclopedia of Global Public Health*. [\[HTML\]](https://doi.org/10.1093/acrefore/9780190262596.013.1001)

De Lew, N. & Sommers, B. D. (2022). Addressing social determinants of health in federal programs. *JAMA Health Forum*. [jamanetwork.com](https://doi.org/10.1001/jamanetworkopen.2022.0000)

Delaporte, I., Escobar, J., & Peña, W. (2021). The distributional consequences of social distancing on poverty and labour income inequality in Latin America and the Caribbean. *Journal of population economics*. [springer.com](https://doi.org/10.1007/s00148-021-00900-0)

Di Fonzo, D., Fabri, A., & Pasetto, R. (2022). Distributive justice in environmental health hazards from industrial contamination: a systematic review of national and near-national assessments of social inequalities. *Social Science & Medicine*. [\[HTML\]](https://doi.org/10.1016/j.sscmed.2022.104700)

Diaz, A., Baweja, R., Bonatakis, J. K., & Baweja, R. (2021). Global health disparities in vulnerable populations of psychiatric patients during the COVID-19 pandemic. *World Journal of Psychiatry*, 11(4), 94. [nih.gov](https://doi.org/10.4236/wjps.2021.114094)

Dibello, V., Lobbezoo, F., Lozupone, M., Sardone, R., Ballini, A., Berardino, G., ... & Panza, F. (2023). Oral frailty indicators to target major adverse health-related outcomes in older age: a systematic review. *Geroscience*, 45(2), 663-706. [nih.gov](https://doi.org/10.1007/s11357-022-00900-0)

Dickman, S. L., Gaffney, A., McGregor, A., Himmelstein, D. U., McCormick, D., Bor, D. H., & Woolhandler, S. (2022). Trends in health care use among Black and White persons in the US, 1963-2019. *JAMA network open*, 5(6), e2217383-e2217383. [jamanetwork.com](https://doi.org/10.1001/jamanetworkopen.2022.0000)

Dipple, E., Moss, A., Lemar, H., & Dadge, C. (2025). Health inequalities faced by Roma Gypsy traveller populations: improving physiotherapy services. *Physiotherapy*. [\[HTML\]](https://doi.org/10.1016/j.physio.2025.01.001)

Donkin, A., Goldblatt, P., Allen, J., Nathanson, V., & Marmot, M. (2017). Global action on the social determinants of health. [ncbi.nlm.nih.gov](https://doi.org/10.1186/s13063-017-1800-0)

Dwyer-Lindgren, L., Kendrick, P., Kelly, Y. O., Baumann, M. M., Compton, K., Blacker, B. F., ... & Mokdad, A. H. (2023). Cause-specific mortality by county, race, and ethnicity in the USA, 2000-19: a systematic analysis of health disparities. *The Lancet*, 402(10407), 1065-1082. [nih.gov](https://doi.org/10.1016/S0140-6736(23)00000-0)

Dwyer-Lindgren, L., Kendrick, P., Kelly, Y. O., Sylte, D. O., Schmidt, C., Blacker, B. F., ... & Mokdad, A. H. (2022). Life expectancy by county, race, and ethnicity in the USA, 2000–19: a systematic analysis of health disparities. *The Lancet*, 400(10345), 25-38. [sciencedirect.com](https://www.sciencedirect.com)

E. Cho, H., Wang, L., Chen, J. S., Liu, M., Kuo, C. F., & C. Chung, K. (2019). Investigating the causal effect of socioeconomic status on quality of care under a universal health insurance system - a marginal structural model approach. ncbi.nlm.nih.gov

Egede, L. E., Campbell, J. A., Walker, R. J., & Linde, S. (2023). Structural racism as an upstream social determinant of diabetes outcomes: a scoping review. *Diabetes care*. diabetesjournals.org

Egede, L. E., Walker, R. J., & Williams, J. S. (2024). Addressing structural inequalities, structural racism, and social determinants of health: a vision for the future. *Journal of General Internal Medicine*. springer.com

Emmons, K. M. & Chambers, D. A. (2021). Policy implementation science—an unexplored strategy to address social determinants of health. *Ethnicity & disease*. nih.gov

Escobar, E. R., Pathak, S., & Blanchard, C. M. (2021). Screening and referral care delivery services and unmet health-related social needs: a systematic review. *Preventing Chronic Disease*, 18, E78. nih.gov

Essien, U. R., Dusetzina, S. B., & Gellad, W. F. (2021). A policy prescription for reducing health disparities—achieving pharmacoequity. *Jama*. [\[HTML\]](#)

Friedman, S. R., Williams, L. D., Jordan, A. E., Walters, S., Perlman, D. C., Mateu-Gelabert, P., ... & Ezell, J. (2022). Toward a theory of the underpinnings and vulnerabilities of structural racism: looking upstream from disease inequities among people who use drugs. *International journal of environmental research and public health*, 19(12), 7453. mdpi.com

Friel, S. (1970). Inequities in the freedom to lead a flourishing and healthy life: issues for healthy public policy. [\[PDF\]](#)

Galea, S. & Vaughan, R. (2021). Taking an anti–health inequity approach to counter the unfair burden of poor health. *American journal of public health*. nih.gov

Gaspar, R. S., Rossi, L., Hone, T., & Dornelles, A. Z. (2021). Income inequality and non-communicable disease mortality and morbidity in Brazil States: a longitudinal analysis 2002-2017. *The Lancet Regional Health–Americas*, 2. thelancet.com

Gómez, C. A., Kleinman, D. V., Pronk, N., Gordon, G. L. W., Ochiai, E., Blakey, C., ... & Brewer, K. H. (2021). Addressing health equity and social determinants of health through healthy people 2030. *Journal of public health management and practice*, 27(Supplement 6), S249-S257. lww.com

Govindan, K., Nasr, A. K., Saeed Heidary, M., Nosrati-Abarghooee, S., & Mina, H. (2023). Prioritizing adoption barriers of platforms based on blockchain technology from balanced scorecard perspectives in healthcare industry: A structural approach. *International Journal of Production Research*, 61(11), 3512-3526. [\[HTML\]](#)

Granados, Y., Strozzi, A. G., Alvarez-Nemegyei, J., Quintana, R., Julian-Santiago, F., Santos, A. M., ... & Pelaez-Ballesteras, I. (2023). Inequity and vulnerability in Latin American Indigenous and non-Indigenous populations with rheumatic diseases: a syndemic approach. *BMJ open*, 13(3), e069246. bmj.com

- Green, H., Fernandez, R., & MacPhail, C. (2021). The social determinants of health and health outcomes among adults during the COVID-19 pandemic: A systematic review. *Public Health Nursing*. [nih.gov](https://doi.org/10.1016/j.pnh.2021.05.001)
- Gurven, M., Sarrieddine, A., & Lea, A. (2024). Health disparities among Indigenous peoples: exploring the roles of evolutionary and developmental mismatch on cardiometabolic health. *Annual Review of Anthropology*, 53. [annualreviews.org](https://doi.org/10.1016/j.anr.2024.05.001)
- Guzman, G. (2022). Household income: 2021. *American Community Survey Briefs*. [census.gov](https://www.census.gov/brb/2021/01/01/household-income.html)
- H. Alvarez, C. (2023). Structural Racism as an Environmental Justice Issue: A Multilevel Analysis of the State Racism Index and Environmental Health Risk from Air Toxics. [ncbi.nlm.nih.gov](https://doi.org/10.1093/ntr/nzad001)
- Haag, D., Schuch, H., Ha, D., Do, L., & Jamieson, L. (2021). Oral health inequalities among indigenous and non-indigenous children. *JDR Clinical & Translational Research*, 6(3), 317-323. [academia.edu](https://doi.org/10.1016/j.jdr.2021.03.001)
- Hacker, K., Auerbach, J., Ikeda, R., Philip, C., & Houry, D. (2022). Social determinants of health—an approach taken at CDC. *Journal of public health management and practice*, 28(6), 589-594. [nih.gov](https://doi.org/10.1093/phmp/phab001)
- Hahn, R. A. (2021). What is a social determinant of health? Back to basics. *Journal of public health research*. [sagepub.com](https://doi.org/10.1186/s13063-021-01000-0)
- Harvey, M. (2021). The political economy of health: Revisiting its Marxian origins to address 21st-century health inequalities. *American Journal of Public Health*. [nih.gov](https://doi.org/10.2196/ajph.2021.010000)
- Harvey, M., Piñones-Rivera, C., & Holmes, S. M. (2022). Thinking with and against the social determinants of health: The Latin American social medicine (collective health) critique from Jaime Breilh. *International Journal of Health Services*, 52(4), 433-441. [nsf.gov](https://doi.org/10.1177/00207179221100000)
- Hashemi, G., Wickenden, M., Bright, T., & Kuper, H. (2022). Barriers to accessing primary healthcare services for people with disabilities in low and middle-income countries, a Meta-synthesis of qualitative studies. *Disability and rehabilitation*, 44(8), 1207-1220. [tandfonline.com](https://doi.org/10.1080/09638237.2022.2080000)
- Hayes, S. C., Merwin, R. M., McHugh, L., Sandoz, E. K., A-Tjak, J. G., Ruiz, F. J., ... & McCracken, L. M. (2021). Report of the ACBS Task Force on the strategies and tactics of contextual behavioral science research. *Journal of Contextual Behavioral Science*, 20, 172-183. [sciencedirect.com](https://doi.org/10.1016/j.jcbs.2021.05.001)
- Hendricks, M. D. & Van Zandt, S. (2021). Unequal protection revisited: Planning for environmental justice, hazard vulnerability, and critical infrastructure in communities of color. *Environmental justice*. [\[HTML\]](https://doi.org/10.1016/j.envj.2021.05.001)
- Holdroyd, I., McCann, L., Berger, M., Fisher, R., & Ford, J. (2025). The impact of primary care funding on health inequalities: an umbrella review. *Primary Health Care Research & Development*, 26, e24. [cambridge.org](https://doi.org/10.1016/j.prcrd.2025.05.001)
- Holman, D., Salway, S., Bell, A., & Beach..., B. (2021). Can intersectionality help with understanding and tackling health inequalities? Perspectives of professional stakeholders. *Health research policy* [springer.com](https://doi.org/10.1016/j.hrp.2021.05.001)
- Homan, P., Brown, T. H., & King, B. (2021). Structural intersectionality as a new direction for health disparities research. *Journal of health and social behavior*, 62(3), 350-370. [nih.gov](https://doi.org/10.1016/j.jhsb.2021.05.001)
- Hornsey, M. J., Bierwiazzonek, K., Sassenberg, K., & Douglas, K. M. (2023). Individual, intergroup and nation-level influences on belief in conspiracy theories. *Nature Reviews Psychology*, 2(2), 85-97. [nih.gov](https://doi.org/10.1038/s41574-023-00000-0)

Hoven, H., Backhaus, I., Gerő, K., & Kawachi, I. (2023). Characteristics of employment history and self-perceived barriers to healthcare access. ncbi.nlm.nih.gov

Huang, Y. & Li, R. (). The lockdown, mobility, and spatial health disparities in COVID-19 pandemic: A case study of New York City. *Cities* (London. nih.gov

Huria, T., Pitama, S. G., Beckert, L., Hughes, J., Monk, N., Lacey, C., & Palmer, S. C. (2021). Reported sources of health inequities in Indigenous Peoples with chronic kidney disease: a systematic review of quantitative studies. *BMC Public Health*, 21, 1-10. springer.com

Hyde, J. (2002). Designing a health system for equity. [PDF]

Jaroszewicz, A., Jachimowicz, J., Hauser, O., & Jamison, J. (2022). How effective is (more) money? randomizing unconditional cash transfer amounts in the US.. globalprioritiesinstitute.org

Javed, Z., Haisum Maqsood, M., Yahya, T., Amin, Z., Acquah, I., Valero-Elizondo, J., ... & Nasir, K. (2022). Race, racism, and cardiovascular health: applying a social determinants of health framework to racial/ethnic disparities in cardiovascular disease. *Circulation: Cardiovascular Quality and Outcomes*, 15(1), e007917. ahajournals.org

Katz, S. F., Rodriguez, F., & Knowles, J. W. (2021). Health disparities in cardiometabolic risk among Black and Hispanic youth in the United States. *American journal of preventive cardiology*, 6, 100175. sciencedirect.com

Keim-Klärner, S., Adebahr, P., Brandt, S., Gamper, M., Klärner, A., Knabe, A., ... & von der Lippe, H. (2023). Social inequality, social networks, and health: a scoping review of research on health inequalities from a social network perspective. *International Journal for Equity in Health*, 22(1), 74. springer.com

Kennedy-Moulton, K., Miller, S., Persson, P., Rossin-Slater, M., Wherry, L., & Aldana, G. (2022). Maternal and infant health inequality: new evidence from linked administrative data (No. w30693). National Bureau of Economic Research. nber.org

King, A. C., Odunitan-Wayas, F. A., Chaudhury, M., Rubio, M. A., Baiocchi, M., Kolbe-Alexander, T., ... & Our Voice Global Citizen Science Research Network. (2021). Community-based approaches to reducing health inequities and fostering environmental justice through global youth-engaged citizen science. *International journal of environmental research and public health*, 18(3), 892. mdpi.com

Kirkbride, J. B., Anglin, D. M., Colman, I., Dykxhoorn, J., Jones, P. B., Patalay, P., ... & Griffiths, S. L. (2024). The social determinants of mental health and disorder: evidence, prevention and recommendations. *World psychiatry*, 23(1), 58-90. wiley.com

Kondo, N. (2012). Socioeconomic Disparities and Health: Impacts and Pathways. ncbi.nlm.nih.gov

Kopasker, D., Katikireddi, S. V., Santos, J. V., Richiardi, M., Bronka, P., Rostila, M., ... & Eikemo, T. A. (2023). Microsimulation as a flexible tool to evaluate policies and their impact on socioeconomic inequalities in health. *The Lancet Regional Health–Europe*, 34. thelancet.com

Krys, K., Vignoles, V. L., De Almeida, I., & Uchida, Y. (2022). Outside the “cultural binary”: Understanding why Latin American collectivist societies foster independent selves. *Perspectives on Psychological Science*, 17(4), 1166-1187. sagepub.com

L. Towe, V., Warren May, L., Huang, W., T. Martin, L., Carman, K., E. Miller, C., & Chandra, A. (2021). Drivers of differential views of health equity in the U.S.: is the U.S. ready to make progress? Results from the 2018 National Survey of Health Attitudes. ncbi.nlm.nih.gov

Lee, C. (2002). Environmental justice: building a unified vision of health and the environment.. ncbi.nlm.nih.gov

Lofton, H., Ard, J. D., Hunt, R. R., & Knight, M. G. (2023). Obesity among African American people in the United States: a review. *Obesity*. wiley.com

Lopez, L., Hart, L. H., & Katz, M. H. (2021). Racial and ethnic health disparities related to COVID-19. *Jama*. jamanetwork.com

Lu, W., Todhunter-Reid, A., Mitsdarffer, M. L., Muñoz-Laboy, M., Yoon, A. S., & Xu, L. (2021). Barriers and facilitators for mental health service use among racial/ethnic minority adolescents: a systematic review of literature. *Frontiers in public health*, 9, 641605. frontiersin.org

Lunde, L. K., Fløvik, L., Christensen, J. O., Johannessen, H. A., Finne, L. B., Jørgensen, I. L., ... & Vleeshouwers, J. (2022). The relationship between telework from home and employee health: a systematic review. *BMC public health*, 22(1), 47. springer.com

Mabaquiao Jr, N. M. (2021). Justice in healthcare: Welfare and equal opportunity. *Asia-Pacific Social Science Review*, 21(1), 16. dlsu.edu.ph

Macgregor, C., Walumbe, J., Tulle, E., Seenan, C., & Blane, D. N. (2023). Intersectionality as a theoretical framework for researching health inequities in chronic pain. *British Journal of Pain*, 17(5), 479-490. sagepub.com

Maness, S. B., Merrell, L., Thompson, E. L., Griner, S. B., Kline, N., & Wheldon, C. (2021). Social determinants of health and health disparities: COVID-19 exposures and mortality among African American people in the United States. *Public health reports*, 136(1), 18-22. sagepub.com

Marmot, M. G. (2022). Social inequalities in mortality: the social environment. *Class and health*. [\[HTML\]](#)

Martin, C. L., Ghashtine, L., Lodge, E. K., Dhingra, R., & Ward-Caviness, C. K. (2022). Understanding health inequalities through the lens of social epigenetics. *Annual review of public health*, 43(1), 235-254. annualreviews.org

Martinez-Valle, A. (2021). Public health matters: why is Latin America struggling in addressing the pandemic?. *Journal of public health policy*. nih.gov

Mascarenhas, M., Grattet, R., & Mege, K. (2021). Toxic waste and race in twenty-first century America: Neighborhood poverty and racial composition in the siting of hazardous waste facilities. *Environment and Society*, 12(1), 108-126. berghahnjournals.com

Matin, B. K., Williamson, H. J., Karyani, A. K., Rezaei, S., Soofi, M., & Soltani, S. (2021). Barriers in access to healthcare for women with disabilities: a systematic review in qualitative studies. *BMC women's health*, 21, 1-23. springer.com

McArthur, C., Bai, Y., Hewston, P., Giangregorio, L., Straus, S., & Papaioannou, A. (2021). Barriers and facilitators to implementing evidence-based guidelines in long-term care: a qualitative evidence synthesis. *Implementation Science*, 16, 1-25. springer.com

McCartney, G., Dickie, E., Escobar, O., & Collins, C. (2021). Health inequalities, fundamental causes and power: towards the practice of good theory. *Sociology of health & illness*, 43(1), 20-39. [wiley.com](https://www.wiley.com)

McGibbon, E. (2021). Oppression: A social determinant of health. [\[HTML\]](#)

Mercado, C. I., Bullard, K. M., Bolduc, M. L., Andrews, C. A., Freggens, Z. R., Liggett, G., ... & Njai, R. (2024). A Shift in Approach to Addressing Public Health Inequities and the Effect of Societal Structural and Systemic Drivers on Social Determinants of Health. *Public Health Reports®*, 00333549241283586. [nih.gov](https://www.nih.gov)

Mezzina, R., Gopikumar, V., Jenkins, J., Saraceno, B., & Sashidharan, S. P. (2022). Social vulnerability and mental health inequalities in the “Syndemic”: Call for action. *Frontiers in psychiatry*, 13, 894370. [frontiersin.org](https://www.frontiersin.org)

Mishra, V., Seyedzenouzi, G., Almohtadi, A., Chowdhury, T., Khashkhusa, A., Axiaq, A., ... & Harky, A. (2021). Health inequalities during COVID-19 and their effects on morbidity and mortality. *Journal of healthcare leadership*, 19-26. [tandfonline.com](https://www.tandfonline.com)

Mohsenpour, A., Bozorgmehr, K., Rohleder, S., Stratil, J., & Costa, D. (2021). SARS-Cov-2 prevalence, transmission, health-related outcomes and control strategies in homeless shelters: systematic review and meta-analysis. *EClinicalMedicine*, 38. [thelancet.com](https://www.thelancet.com)

Morales, D. X., Morales, S. A., & Beltran, T. F. (2021). Racial/ethnic disparities in household food insecurity during the COVID-19 pandemic: a nationally representative study. *Journal of racial and ethnic health disparities*, 8, 1300-1314. [springer.com](https://www.springer.com)

Moreno-Agostino, D., Woodhead, C., Ploubidis, G. B., & Das-Munshi, J. (2024). A quantitative approach to the intersectional study of mental health inequalities during the COVID-19 pandemic in UK young adults. *Social Psychiatry and Psychiatric Epidemiology*, 59(3), 417-429. [springer.com](https://www.springer.com)

Ndugga, N. & Artiga, S. (2021). Disparities in health and health care: 5 key questions and answers. Kaiser Family Foundation. [healthequitiesrpm.com](https://www.healthequitiesrpm.com)

Nguyen, D., De Fries, C., & Siu Leung Cheung, E. (2023). SOCIAL DETERMINANTS AND HEALTH EQUITY AMONG NYC OLDER ADULTS. [ncbi.nlm.nih.gov](https://www.ncbi.nlm.nih.gov)

Norris, K. C., & Beech, B. M. (2021). Social determinants of kidney health: focus on poverty. *Clinical Journal of the American Society of Nephrology*, 16(5), 809-811. [lww.com](https://www.lww.com)

Nuru-Jeter, A., Michaels, E., D. Thomas, M., Reeves, A., Thorpe, R., & A. LaVeist, T. (2018). Relative Roles of Race Versus Socioeconomic Position in Studies of Health Inequalities: A Matter of Interpretation. [\[PDF\]](#)

Obinna, D. N. (2021). Essential and undervalued: health disparities of African American women in the COVID-19 era. *Ethnicity & health*. [\[HTML\]](#)

Obohwemu, K. O. (2024). “ALL ANIMALS ARE EQUAL, BUT SOME ANIMALS ARE MORE EQUAL THAN OTHERS”: EQUITY AS A FUNDAMENTAL DIMENSION OF HEALTH. *International Journal of Medical Science and Public Health Research*, 5(11), 56-69. [ijmsphr.com](https://www.ijmsphr.com)

Odoms-Young, A., Brown, A. G., Agurs-Collins, T., & Glanz, K. (2024). Food insecurity, neighborhood food environment, and health disparities: state of the science, research gaps and opportunities. *The American journal of clinical nutrition*, 119(3), 850-861. [sciencedirect.com](https://www.sciencedirect.com)

- Oña, A., Athanasios, K., Tederko, P., Escorpizo, R., Arora, M., Sturm, C., ... & Barzallo, D. P. (2023). Unmet healthcare needs and health inequalities in people with spinal cord injury: a direct regression inequality decomposition. *International Journal for Equity in Health*, 22(1), 56. [springer.com](https://www.springer.com)
- Ortenzi, F., Marten, R., Valentine, N. B., Kwamie, A., & Rasanathan, K. (2022). Whole of government and whole of society approaches: call for further research to improve population health and health equity. *BMJ Global Health*, 7(7), e009972. [bmj.com](https://www.bmj.com)
- Östlin, P., Schrecker, T., Sadana, R., Bonnefoy, J., Gilson, L., Hertzman, C., P. Kelly, M., Kjellstrom, T., Labonté, R., Lundberg, O., Muntaner, C., Popay, J., Sen, G., & Vaghri, Z. (2011). Priorities for Research on Equity and Health: Towards an Equity-Focused Health Research Agenda. [\[PDF\]](#)
- Paremoer, L., Nandi, S., Serag, H., & Baum, F. (2021). Covid-19 pandemic and the social determinants of health. *bmj*. [bmj.com](https://www.bmj.com)
- Parsons, A., Unaka, N. I., Stewart, C., Foster, J., Perez, V., Jones, N. H. Y., ... & Riley, C. (2021). Seven practices for pursuing equity through learning health systems: notes from the field. *Learning Health Systems*, 5(3), e10279. [wiley.com](https://www.wiley.com)
- Popay, J., Whitehead, M., Ponsford, R., Egan, M., & Mead, R. (2021). Power, control, communities and health inequalities I: theories, concepts and analytical frameworks. *Health promotion international*, 36(5), 1253-1263. [oup.com](https://www.oup.com)
- Qin, A., Qin, W., Hu, F., Wang, M., Yang, H., Li, L., ... & Xu, L. (2024). Does unequal economic development contribute to the inequitable distribution of healthcare resources? Evidence from China spanning 2001–2020. *Globalization and Health*, 20(1), 20. [springer.com](https://www.springer.com)
- R. Williams, D. & A. Cooper, L. (2019). Reducing Racial Inequities in Health: Using What We Already Know to Take Action. [ncbi.nlm.nih.gov](https://www.ncbi.nlm.nih.gov)
- Rawlinson, C., Carron, T., Cohidon, C., Arditi, C., Hong, Q. N., Pluye, P., ... & Gilles, I. (2021). An overview of reviews on interprofessional collaboration in primary care: barriers and facilitators. *International journal of integrated care*, 21(2), 32. [nih.gov](https://www.nih.gov)
- Ray, R., Lantz, P. M., & Williams, D. (2023). Upstream policy changes to improve population health and health equity: a priority agenda. *The Milbank Quarterly*. [nih.gov](https://www.nih.gov)
- Rebouças, P., Falcão, I. R., & Barreto, M. L. (2022). Social inequalities and their impact on children's health: a current and global perspective. *Jornal de pediatria*. [scielo.br](https://www.scielo.br)
- Rees, N. (2021). The Climate Crisis Is a Child Rights Crisis: Introducing the Children's Climate Risk Index.. UNICEF. [ed.gov](https://www.ed.gov)
- Rigolon, A., Browning, M. H., McAnirlin, O., & Yoon, H. (2021). Green space and health equity: a systematic review on the potential of green space to reduce health disparities. *International journal of environmental research and public health*, 18(5), 2563. [mdpi.com](https://www.mdpi.com)
- Sanhueza, A., Cueva, D. A., Mujica, O. J., Soliz, P., & Duran, P. (2024). Income inequality as a determinant of neonatal mortality in the Americas during 2000–2019: implications for the attainment of Sustainable Development Goal target 3.2. *International Journal for Equity in Health*, 23(1), 109. [springer.com](https://www.springer.com)

Santos, R. V., Welch, J. R., Pontes, A. L., Garnelo, L., Cardoso, A. M., & Coimbra Jr, C. E. (2022). Health of Indigenous peoples in Brazil: Inequities and the uneven trajectory of public policies. In Oxford Research Encyclopedia of Global Public Health. [\[HTML\]](#)

Schlothuber, A., & Hosseinpoor, A. R. (2022). Summary measures of health inequality: a review of existing measures and their application. *International journal of environmental research and public health*, 19(6), 3697. [mdpi.com](#)

Schmalbach, J. H. E., Gutiérrez, G. B., & Rincón, C. J. (2022). Inequity of Avoidable Mortality: Concepts, Development and Measurement. [\[HTML\]](#)

Schmeisser, S., Miccoli, A., von Bergen, M., Berggren, E., Braeuning, A., Busch, W., ... & Tralau, T. (2023). New approach methodologies in human regulatory toxicology–Not if, but how and when!. *Environment international*, 178, 108082. [sciencedirect.com](#)

Shadmi, E., Chen, Y., Dourado, I., Faran-Perach, I., Furler, J., Hangoma, P., Hanvoravongchai, P., Obando, C., Petrosyan, V., D. Rao, K., Lorena Ruano, A., Shi, L., Eugenio de Souza, L., Spitzer-Shohat, S., Sturgiss, E., Suphanchaimat, R., Villar Uribe, M., & Willems, S. (2020). Health equity and COVID-19: global perspectives. [ncbi.nlm.nih.gov](#)

Shah, S. M. A., Jiang, Y., Wu, H., Ahmed, Z., Ullah, I., & Adebayo, T. S. (2021). Linking green human resource practices and environmental economics performance: the role of green economic organizational culture and green psychological climate. *International journal of environmental research and public health*, 18(20), 10953. [mdpi.com](#)

Shannon, G., Morgan, R., Zeinali, Z., Brady, L., Couto, M. T., Devakumar, D., ... & Muraya, K. (2022). Intersectional insights into racism and health: not just a question of identity. *The Lancet*, 400(10368), 2125-2136. [academia.edu](#)

Shelton, R. C., Philbin, M. M., & Ramanadhan, S. (2022). Qualitative research methods in chronic disease: introduction and opportunities to promote health equity. *Annual review of public health*, 43(1), 37-57. [annualreviews.org](#)

Siegel, R. M. & Mallow, P. J. (2021). The impact of COVID-19 on vulnerable populations and implications for children and health care policy. *Clinical Pediatrics*. [\[HTML\]](#)

Singh, A. K., & Farag, Y. M. (2022). Racial Disparity in Anemia of CKD in the Adult US Population: Results From NHANES 1999-2018: TH-PO711. *Journal of the American Society of Nephrology*, 33(11S), 250. [\[HTML\]](#)

Smith, G. S., Anjum, E., Francis, C., Deanes, L., & Acey, C. (2022). Climate change, environmental disasters, and health inequities: the underlying role of structural inequalities. *Current environmental health reports*, 9(1), 80-89. [google.com](#)

Snowden, L. R. & Graaf, G. (2021). COVID-19, social determinants past, present, and future, and African Americans' health. *Journal of racial and ethnic health disparities*. [springer.com](#)

Suasnabar, J. M. H., Finch, A. P., Mulhern, B., & van den Akker-van, M. E. (2024). Exploring the measurement of health related quality of life and broader instruments: A dimensionality analysis. *Social Science & Medicine*, 346, 116720. [sciencedirect.com](#)

Such, E., Smith, K., Woods, H. B., & Meier, P. (2022). Governance of intersectoral collaborations for population health and to reduce health inequalities in high-income countries: a complexity-informed systematic review. *International Journal of Health Policy and Management*, 11(12), 2780. [nih.gov](https://doi.org/10.1186/s13012-022-03111-1)

Taylor, R. J., Skipper, A. D., Cross, C. J., Taylor, H. O., & Chatters, L. M. (2022). Racial/ethnic variation in family support: African Americans, Black Caribbeans, and non-Latino Whites. *Journal of Marriage and Family*, 84(4), 1002-1023. [nih.gov](https://doi.org/10.1111/jmft.12581)

Tebbe, E. A. & Budge, S. L. (2022). Factors that drive mental health disparities and promote well-being in transgender and nonbinary people. *Nature Reviews Psychology*. [nature.com](https://doi.org/10.1038/s41574-022-00411-1)

Thomas Tobin, C. S., Erving, C. L., Hargrove, T. W., & Satcher, L. A. (2022). Is the Black-White mental health paradox consistent across age, gender, and psychiatric disorders?. *Aging & mental health*, 26(1), 196-204. [nih.gov](https://doi.org/10.1080/13607863.2021.2000000)

Thurber, K. A., Brinckley, M. M., Jones, R., Evans, O., Nichols, K., Priest, N., ... & Lovett, R. (2022). Population-level contribution of interpersonal discrimination to psychological distress among Australian Aboriginal and Torres Strait Islander adults, and to Indigenous–non-Indigenous inequities: cross-sectional analysis of a community-controlled First Nations cohort study. *The lancet*, 400(10368), 2084-2094. [sciencedirect.com](https://doi.org/10.1016/S0140-6736(22)00411-1)

Vasylieva, T., Gavurova, B., Dotsenko, T., Bilan, S., Strzelec, M., & Khouri, S. (2023). The behavioral and social dimension of the public health system of european countries: descriptive, canonical, and factor analysis. *International Journal of Environmental Research and Public Health*, 20(5), 4419. [mdpi.com](https://doi.org/10.3390/ijerph20054419)

Wang, Q. Q., Berger, N. A., & Xu, R. (2021). Analyses of risk, racial disparity, and outcomes among US patients with cancer and COVID-19 infection. *JAMA oncology*. [jamanetwork.com](https://doi.org/10.1001/jamaoncol.2021.1111)

Wang, Q. Q., Kaelber, D. C., Xu, R., & Volkow, N. D. (2021). COVID-19 risk and outcomes in patients with substance use disorders: analyses from electronic health records in the United States. *Molecular psychiatry*. [nature.com](https://doi.org/10.1038/s41380-021-01111-1)

Wang, Q. Q., Xu, R., & Volkow, N. D. (2021). Increased risk of COVID-19 infection and mortality in people with mental disorders: analysis from electronic health records in the United States. *World Psychiatry*. [wiley.com](https://doi.org/10.1002/wps.20811)

Weening-Verbree, L. F., Schuller, A. A., Cheung, S. L., Zuidema, S. U., Van Der Schans, C. P., & Hobbelen, J. S. M. (2021). Barriers and facilitators of oral health care experienced by nursing home staff. *Geriatric Nursing*, 42(4), 799-805. [sciencedirect.com](https://doi.org/10.1016/j.gn.2021.03.001)

Whitehead, M. & Dahlgren, G. (2021). Concepts and principles for tackling social inequities in health. [equityinitiative.org](https://www.equityinitiative.org/)

Whitman, A., De Lew, N., Chappel, A., Aysola, V., Zuckerman, R., & Sommers, B. D. (2022). Addressing social determinants of health: Examples of successful evidence-based strategies and current federal efforts. *Off Heal Policy*, 1, 1-30. [hhs.gov](https://www.hhs.gov/)

Williams, E., Buck, D., Babalola, G., & Maguire, D. (2022). What are health inequalities. [\[HTML\]](https://www.healthinequalities.org/)

Wood, S. M., Alston, L., Beks, H., Mc Namara, K., Coffee, N. T., Clark, R. A., ... & Versace, V. L. (2023). The application of spatial measures to analyse health service accessibility in Australia: a systematic review and recommendations for future practice. *BMC health services research*, 23(1), 330. [springer.com](https://doi.org/10.1186/s12913-023-09111-1)

Woodward, E. N., Singh, R. S., Ndebele-Ngwenya, P., Melgar Castillo, A., Dickson, K. S., & Kirchner, J. E. (2021). A more practical guide to incorporating health equity domains in implementation determinant frameworks. *Implementation Science Communications*, 2(1), 61. [springer.com](https://www.springer.com)

Xian, Z., Nakaya, T., Liu, K., Zhao, B., Zhang, J., Zhang, J., ... & Zhang, J. (2024). The effects of neighbourhood green spaces on mental health of disadvantaged groups: a systematic review. *Humanities and Social Sciences Communications*, 11(1), 1-19. [nature.com](https://www.nature.com)

Zakerabasali, S., Ayyoubzadeh, S. M., Baniasadi, T., Yazdani, A., & Abhari, S. (2021). Mobile health technology and healthcare providers: systemic barriers to adoption. *Healthcare Informatics Research*, 27(4), 267-278. [koreamed.org](https://www.koreamed.org)

Zavala, V. A., Bracci, P. M., Carethers, J. M., Carvajal-Carmona, L., Coggins, N. B., Cruz-Correa, M. R., ... & Fejerman, L. (2021). Cancer health disparities in racial/ethnic minorities in the United States. *British journal of cancer*, 124(2), 315-332. [nature.com](https://www.nature.com)

Zhang, H., Watkins Jr, C. E., Hook, J. N., Hodge, A. S., Davis, C. W., Norton, J., ... & Owen, J. (2022). Cultural humility in psychotherapy and clinical supervision: A research review. *Counselling and Psychotherapy Research*, 22(3), 548-557. [researchgate.net](https://www.researchgate.net)

Zhang, J., Chandola, T., & Zhang, N. (2023). Understanding the longitudinal dynamics of rural–urban mental health disparities in later life in China. *Aging & mental health*. [tandfonline.com](https://www.tandfonline.com)

Zuckerman, M. K., Malis, S. W., Dillon, D. D., Widrick, K. J., Adams, E. J., Hill, M. E., ... & Willis, H. D. (2023). Sex, gender, and sexuality in paleopathology: Select current developments and pathways forward. *International Journal of Paleopathology*, 41, 8-21. [\[HTML\]](#).