

Health Inequalities and Social Determinants of Health: Research Trends and Knowledge Structure

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ABSTRACT

Health inequalities are largely shaped by social determinants like employment, education, and socioeconomic position, environmental factors, and medical care accessibility. Understanding how these determinants influence health outcomes is essential for addressing persistent disparities across populations. This study used PRISMA standards to conduct a systematic literature review to analyse research trends and the knowledge structure related to health inequalities and social determinants of health. Articles were retrieved by employing predetermined search phrases in PubMed, Scopus, and Web of Science. After screening and eligibility assessment, ten studies were included for final analysis. The findings indicate that socioeconomic status, income inequality, education and employment conditions, housing stability, and healthcare accessibility are major determinants influencing health outcomes. The reviewed studies highlighted strong associations between disadvantaged socioeconomic conditions and increased risks of mortality, cardiovascular diseases, poor mental health, and limited healthcare access. Major research themes included socioeconomic inequality, education and employment disparities, environmental determinants, healthcare accessibility, and lifestyle behaviours. Health inequalities arise from complex interactions among multiple social determinants. Addressing these disparities requires interdisciplinary research and policy interventions that target structural and socioeconomic determinants to promote equitable health outcomes globally.

Keywords: Health inequalities; Social determinants of health; Health disparities; Socioeconomic status; Public health policy

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INTRODUCTION

Health inequalities can be defined as systematic, preventable, and unfair gaps in health among people and groups of populations caused by differences in social, economic and environmental circumstances (Arcaya et al., 2015; McCartney et al., 2019; Kawachi et al., 2002). These disparities are strongly related to the phenomena of health-related social determinants (SDOH), which characterise the circumstances under which people are born, develop, live, work, and age. Numerous factors, such as income, education, employment, housing quality, and access to healthcare services, affect the various populations' health outcomes (Solar & Irwin, 2010). In the study of public health, there is a growing recognition that the prospects for health are shaped by a broader social and economic system rather than just biological or behavioural elements (Braveman et al., 2011; Navarro, 2009; Cockerham et al., 2017). It has also been known that discrimination, institutional arrangements and social structures promote a pattern of health inequality (Krieger, 2012).

One of the most important factors influencing population health is still socioeconomic status. Educated people tend to live longer, have fewer health issues, and better health

results than their less fortunate counterparts because of their higher education and reliable jobs (Adler et al., 2016). In addition to determining exposure to health hazards and the availability of protective resources, environmental opportunities such as stable housing, neighbourhood safety, and nutritious food also influence health. The institutional structures and regulations, which are enforced by the government, play a significant role in the distribution of opportunity and resources within societies and determine the level of health equity (Dahlgren and Whitehead, 1991). According to comparative studies, healthcare systems and social institutions in various countries largely determine the existence of health disparities (Beckfield et al., 2013). Moreover, societies that are more unequal are associated with large disparities in health outcomes (Pickett and Wilkinson, 2015; Marmot, 2015).

Health disparities are a significant issue in the world despite the increasing awareness of the role of social determinants. Medical service and technologies have enhanced the prevention and treatment of illnesses, yet the structural and social determinants that cause health discrepancies have not been completely tackled. The complex relationships

existing between socioeconomic conditions, environmental exposures, health care access, and policy conditions determine health outcomes (Braveman et al., 2011). Also, the literature on health inequalities is spread among various fields like public health, sociology, economics, and policy studies, among others, and coming up with an overarching interpretation of the field is not easy. Other contextual factors have also been identified to play a role in community health and wellbeing, with social cohesion and social capital being among them (Kawachi and Berkman, 2000). In order to synthesise the available knowledge sources and gain a better understanding of the field's evolution, the current research project will serve to perform a comprehensive evaluation of the studies on health inequalities and health-related socioeconomic factors. This evaluation specifically seeks to identify the most important research subjects, emerging trends in the field that affect health outcomes, and the total body of knowledge in the literature. It also aims to find most significant research gaps and future research objectives of the research.

2. METHODOLOGY

2.1 Research Design

The research used a systematic literature review to create the data on health inequalities and socioeconomic determinants of health (SDOH). The PRISMA guidelines were reviewed and the review has presented a clear reproducible and full identification of the literature under review. The identification, screening and eligibility assessment standard processes offered a decrease in the selection bias and methodological manner. This

methodology assisted in integrating findings of various studies examining socioeconomic, environmental, and behavioural and access to healthcare variables as determinants of health outcomes.

2.2 Data Sources

Since they provide a wealth of peer-reviewed research on public health, epidemiology, and social sciences, three sizable academic databases, Web of Science, PubMed, and Scopus were searched. All of the required research on health inequities and social determinants of health was retrieved through the use of many databases. In order to complete the literature search, a manual screening of the chosen articles was carried out to address any other possibly pertinent research that might have been overlooked during the initial search results.

2.3 Search Strategy

The systematic search approach was used to develop keywords related to social determinants of health and health disparities. To improve retrieval accuracy, search phrases were merged using the Boolean operators AND and OR. Health disparities, health inequalities, and social determinants of health socioeconomic factors, and health outcomes were some of the key terms. The primary search query was as follows: ("social determinants of health" OR health inequalities" OR health disparities) and (socioeconomic factors" OR health outcomes). Each database slightly changed the search strategy and restricted it to the articles published in English as the peer-reviewed journal articles in order to check the quality of studies. Table 1 gives the detailed search strategy.

Table 1. Search strategy used for database retrieval

Database	Search Terms
PubMed	("social determinants of health" OR "health inequalities") AND ("health outcomes")
Scopus	("health disparities" OR "SDOH") AND ("socioeconomic status")
Web of Science	("health inequalities") AND ("social determinants")

2.4 Inclusion and Exclusion Criteria

To make it pertinent and of high methodological quality, Criteria for inclusion and removal were used. Articles that addressed health disparities or Health-related socioeconomic factors in relation to health outcomes and were published in English in peer-reviewed journals were qualified for inclusion in the study. It reviewed literature that involved empirical research on socioeconomic, environmental or social factors that may be associated with health disparities. Research, such as conference papers, editorials, commentaries, and book chapters were

eliminated. Articles which were not directly related to social determinants of health or that did not have full text were also excluded.

2.5 Study Selection Process

The literature selection was done according to the PRISMA guidelines that included identification, screening, eligibility analysis, and inclusion. First, 210 records were recognised by using databases and reference checks. Having eliminated 160 duplicates, 50 articles were left to screen. Abstracts and titles were also checked on their relevance, and 20 studies that failed to satisfy the inclusion criteria were excluded. The rest of the 30 articles were evaluated in terms of full-

text during the eligibility process. At this point, 20 articles were filtered out for irrelevance, lack of full text, inadequate data, or duplicate data. Lastly, 10 articles were incorporated

in the systematic review and fulfilled all the inclusion criteria as shown in Figure 1.

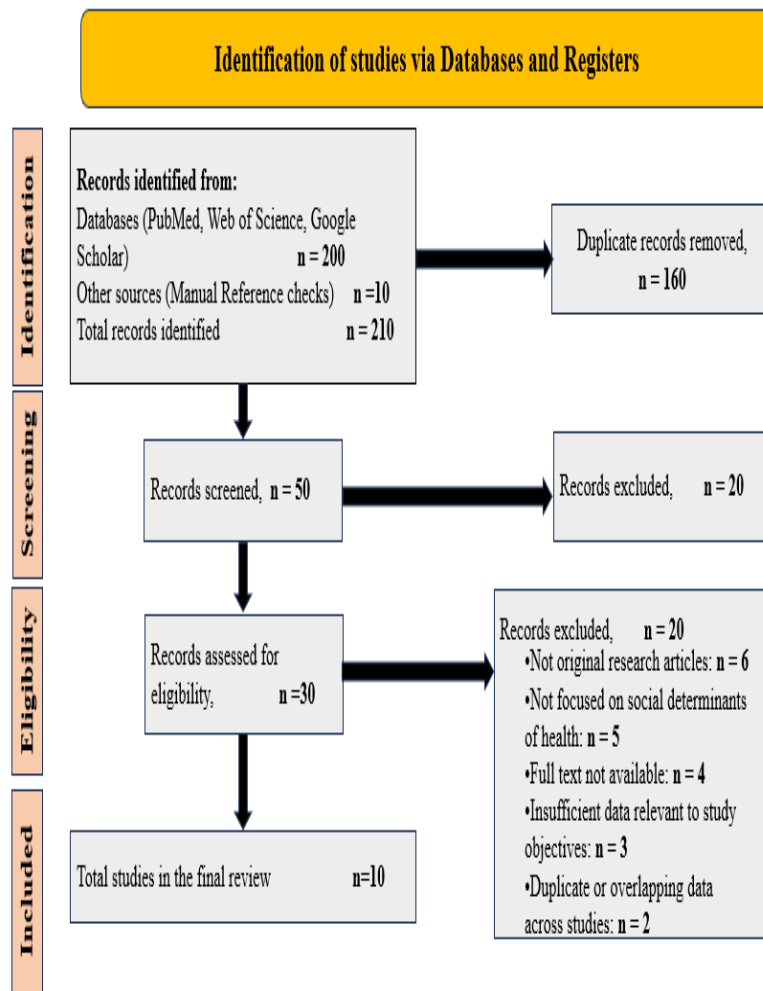


Figure 1. PRISMA flow diagram of study selection

2.6 Data Extraction and Analysis

The inclusion of the studies was done in a systematic manner in order to extract the required data to maintain consistency in the data analysis. The information obtained about each study that was relevant was the author and year of publication, the nation or area where the research was conducted, the study design, the key social determinants that the study investigated, and the main findings concerning the health inequalities. The data extracted were systematised and compiled to find out the similar themes and trends in the impact of social determinants on the health outcome. A comparative analysis was then conducted to find out similarities and differences between studies in order to have a complete overview of how socioeconomic and environmental differences and factors play a role in creating health inequalities.

3. RESULTS

3.1 Characteristics of Included Studies

Ten articles were reviewed to qualify as eligible research articles and included in the final analysis post PRISMA screening process. The fact that these analyses have been

conducted in a variety of geographical locations (like the US and Canada, Malaysia, the United Kingdom, and several multi-country datasets) suggests that the study on socioeconomic factors that influence health and disparities in health is applicable globally. The majority of studies have been published not earlier than 2017, which means that the interest in the field of study is rising among academics.

In terms of the study design, most of them adopted cross-sectional designs that studied connections between health and social determinants outcomes at a single point in time. As an example, (Chai et al., 2024) studied the relationship between the demographic traits, socioeconomic status, and social ties and smoking, drinking, and exercise in Canadian adults. On the same note, Miller et al. addressed associations between housing insecurity, food insecurity, and healthcare access among the uninsured groups in the United States. Certain studies also implemented the prospective cohort design to investigate the long-term associations between socioeconomic variables and health outcomes, including (Zhang et al., 2021), which examined the mortality and cardiovascular disease risks.

The important determinants among the studies were socioeconomic status, income inequality, education, employment, housing stability, food security, neighbourhood conditions, social support, and the outcomes were mortality, cardiovascular disease, health behaviours, mental health, access to healthcare and quality of life.

Table 2. Characteristics of the Included Studies (n = 10)

Author (Year)	Country	Study Design	Social Determinants Examined	Health Outcomes	Key Findings
Brignone et al. (2024)	USA	Cross-sectional	Social vulnerability, socioeconomic status, housing, food security	Health disparities and healthcare needs	Higher social vulnerability was associated with increased unmet social needs and poorer health outcomes.
Bergeron-Boucher et al. (2024)	USA	Cross-sectional analysis	Socioeconomic inequality, demographic factors	Mortality and lifespan inequality	Significant disparities in mortality risk were observed across different socioeconomic groups.
Chai, Tan & Dong (2024)	Canada	Cross-sectional	Socioeconomic status, demographics, social connections	Smoking, alcohol consumption, and physical activity	Socioeconomic characteristics strongly influenced lifestyle behaviours and health outcomes.
Besser et al. (2024)	USA	Research Article	Structural and social determinants, including race, neighbourhood environment, and socioeconomic conditions	Cardiovascular and ageing outcomes	Structural inequalities significantly contribute to disparities in cardiovascular and ageing-related health outcomes.
Nasreen et al. (2024)	Malaysia	Cross-sectional	Social support, education, and employment status	Mental health, caregiver burden, quality of life	Greater social support improved mental health and reduced caregiver burden.
Miller et al. (2024)	USA	Cross-sectional	Housing instability, food insecurity, and insurance status	Healthcare access and service utilization	Uninsured individuals experienced multiple social barriers affecting healthcare access.
Zhang et al. (2021)	USA & UK	Prospective cohort	Socioeconomic status, lifestyle behaviours	Cardiovascular disease and mortality	Lower socioeconomic status increased risk of cardiovascular disease and mortality despite healthy lifestyles.
Murray et al. (2020)	Global	Systematic analysis (GBD study)	Environmental, socioeconomic, and behavioural determinants	Global burden and mortality	Social and environmental risk factors contribute significantly to

					global health inequalities.
Marmot et al. (2008)	United Kingdom	Prospective cohort	Occupational status, socioeconomic inequality	Coronary heart disease	Lower occupational grade was linked to an increased risk of heart disease.
Stringhini et al. (2017)	Multi-country	Multicohort meta-analysis	Socioeconomic status	Premature mortality	Low socioeconomic status increased the risk of premature mortality across populations.

Table 2 consists of the features of the studies that were included. The research was diverse in geographical area, design, and social determinants under the studies, with the majority concentrating on socioeconomic level, accessibility to healthcare and environmental elements that may have an impact on different populations' health outcomes.

3.2 Publication Trends

In recent years, there has been an increase in research on health inequalities and social determinants of health, according to the publication trend analysis. Since the majority of the studies in the article are from 2020 or after, there is reason to be optimistic about the growing recognition of the need to take structural and social elements that impact health into account.

The biggest number was in the United States of studies in the geographical aspect, followed by Canada, Malaysia and the United Kingdom. Moreover, data in some of the larger global studies included data across many countries, and this indicates the international nature of the studies on health inequalities. The growing trend of cross-national and multicohort studies identifies the significance of the comprehension of social determinants in the various sociopolitical and economic settings.

Such patterns of publications indicate the Health disparities research has evolved into a multidisciplinary field mode of research which incorporates the approaches of epidemiology, public health, sociology and health policy.

3.3 Major Research Themes

The review of the involved studies showed that there were a few common themes associated with social determinants

of health and their role in shaping the health outcomes of a population. Socioeconomic position and income disparity were the first important subjects. Numerous studies found a strong correlation between low socioeconomic status and high mortality, cardiovascular disease, and other poor health outcomes. Multicohort data have shown that the lower socioeconomic status of individuals was associated with much higher premature mortality rates than those of individuals with a higher socioeconomic status.

The second theme was disparities in education and employment. Education and occupational attainment were often cited as determinants of health outcomes; Unstable employment and poorer educational attainment were linked to with higher health risks, reduced access to or poorer access to healthcare and worse health behaviours.

The other significant theme was that of environmental and neighbourhood determinants, such as housing instability, neighbourhood safety and environmental exposures of an important effect on health outcomes and healthcare use. The fourth theme was on healthcare access and policy interventions, where it was discovered that limited healthcare access, insurance coverage shortage and poor policies were the factors contributing to continued health disparities.

The thematic synthesis outlined the major themes of research regarding the health-related social determinants, such as socioeconomic inequality, education and employment disparity, environmental determinants, access to healthcare, and lifestyle behaviours, as outlined in Table 3.

Table 3. Major research themes identified in the literature

Theme	Determinants Examined	Supporting Studies	Key Evidence
Socioeconomic Status and Income Inequality	Income level, socioeconomic status, occupational position	Bergeron-Boucher et al. (2024); Zhang et al. (2021); Stringhini et al. (2017); Marmot et al. (2008)	Lower socioeconomic status was linked with higher mortality risk, increased cardiovascular disease incidence, and reduced life expectancy.
Education and Employment Disparities	Education level, employment status, occupational hierarchy	Nasreen et al. (2024); Marmot et al. (2008); Stringhini et al. (2017)	Lower educational attainment and insecure work were linked to lower quality of life and worse health outcomes.
Environmental and Neighbourhood Determinants	Housing instability, neighbourhood	Brignone et al. (2024); Miller et al. (2024); Murray et al. (2020)	Adverse living environments and limited resources contributed to

	conditions, food insecurity		health disparities and increased disease burden.
Healthcare Access and Structural Determinants	Insurance coverage, healthcare access, and structural inequality	Miller et al. (2024); Besser et al. (2024); Brignone et al. (2024)	Limited healthcare access and lack of insurance resulted in unmet healthcare needs and poorer health outcomes.
Health Behaviours and Lifestyle Determinants	Physical exercise, alcohol use, and smoking	Chai et al. (2024); Zhang et al. (2021)	Social and economic conditions influenced health behaviours that increase disease risk.

3.4 Knowledge Structure of the Field

The research that is part of it all shows that health disparities are not caused by a single factor, but rather by a complex interaction between several socioeconomic variables. Numerous factors affect the health outcomes of both people and populations, including socioeconomic level, education, employment status, exposure to the environment, and access to healthcare. An interdisciplinary approach to the investigation of socioeconomic determinants of health is becoming more and more popular, according to recent literature. To understand the influence of structural disparities on health, scholars are incorporating epidemiological, social, and policy viewpoints. The ability to examine such associations in diverse groups of individuals and places has also been increased by big datasets and multicohort studies.

4. DISCUSSION

The existing review evidences the increase in the number of studies on the social determinants of health (SDOH) and their impact on the discrepancies in population well-being. Most of the studies involved made emphasis on socioeconomic status, the availability of healthcare and environmental determinants as the key contributors to health outcomes. These findings complement the overall evidence of the fact that the disparity in health, in the vast majority, is a structural and social rather than individual problem (Williams et al., 2019; Marmot et al., 2012). Some of the studies identified the role of income, occupation, and communal vulnerability with regard to the likelihood of mortality, healthcare utilisation, and lifestyle health practices. In the example, social vulnerability and community-level variables significantly impact unmet health needs and health disparities (Brignone et al., 2024), and inequalities in lifespan and mortality find the long-standing contribution of social and demographic variables (Bergeron-Boucher et al., 2024).

The rising popularity of publications in the last few years also indicates growing concern about the issue of health inequalities in the world, especially after the COVID-19 pandemic. The pandemic has unveiled and magnified the pre-existing social and economic differences, having a higher impact on vulnerable people (Bambra et al., 2020; Luyckx, 2023; Bambra et al., 2021). The school closures were also used as examples of how policy choices can affect the health outcomes of the population (Viner et al., 2020). These changes support the statements of the need to implement structural interventions that could help to reduce health disparities and enhance population health equity (Marmot, 2020).

These results of the review are very close to those of the World Health Organisation Social Determinants of Health framework, which states that health results are influenced by the circumstances in which individuals are born, grow, live, work, and age (Marmot et al., 2012). Numerous studies have demonstrated the impact of structural determinants on health outcomes, such as socioeconomic position, work circumstances, and access to healthcare. Employment relationships, immigration status, and labour circumstances can impose health risks and socioeconomic disparities across communities (Benach et al., 2010), whereas structural factors, like racism and discrimination, have been identified as critical factors in influencing health disparities and inequities in access to health care (Williams et al., 2019).

Another recent scholarship is the presence of commercial determinants of health, such as corporate influence and economic systems that determine health behaviour (Kickbusch et al., 2016). It is necessary to respond to these aspects using synchronised policies, because more just societies tend to have better well-being and population health (Walton, 2019). The policies that help to minimise the effects of social inequalities focus on the role of policy interventions at the population level and structural policy interventions in reducing health disparities (Whitehead, 2007; Benach et al., 2013).

Even though the research on the topic of social determinants of health is growing, there are still several significant gaps. The majority of the studies are based in high-income areas such as the US, Canada, and Europe, thus restricting generalizability to low and lower-middle-income environments. Moreover, the use of cross-sectional designs inhibits the interpretation of causality, with the recommendation of the necessity to involve longitudinal and cohort-based studies. Research in the future ought to focus on policy studies that can implement evidence into tangible interventions that can help reduce structural determinants of health inequalities across the globe (Whitehead, 2007; Benach et al., 2013).

5. IMPLICATIONS AND LIMITATIONS

The results note the values of dealing with structural and social determinants in order to minimise health disparities. Policymakers must concentrate on measures that would improve socioeconomic position, access to healthcare, education, work prospects as well as housing to enhance population health outcomes. To better understand the long-term effects of socioeconomic determinants, future research should concentrate on longitudinal and transdisciplinary investigations and test policy interventions. However, there

are a number of drawbacks to this review, including the use of a limited number of databases, the restriction to English-language literature, and the skewed publication of papers with significant findings.

6. CONCLUSION

The research trends and body of knowledge about health disparities and this systematic review looked at the social determinants of health. The findings highlight how a complex interplay of social, environmental, and structural factors that determine population health outcomes greatly influences health disparities. The evidence from the included research demonstrated that factors that have a significant impact on population health include housing stability, access to healthcare services, education and employment status, and income inequality.

The results of various geographical settings always required the indication of poor socioeconomic status linked to higher rates of mortality, chronic illnesses and restricted access to healthcare. Some significant research themes identified in the review were also socioeconomic status and income inequality, education and employment disparities, environmental determinants and access to healthcare. These themes depict how health inequalities are multidimensional and that it is imperative to tackle them by dealing with structural determinants using integrated policy and public health interventions. Moreover, the rising number of recent publications shows that more people around the world are starting to be interested in the study of social and structural forces that trigger health disparities. All in all, this review adds to the better picture of the research landscape of health inequalities and social determinants of health. The results emphasise the importance of multifaceted, interdisciplinary and policy-based solutions to the problem of health disparities and achieving more equal health outcomes among various groups of people.

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