

## Health Disparities in General Medicine: A Systematic Review of Socioeconomic and Demographic Influences

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### Abstract

*Health disparities in general medicine are a critical concern, with socioeconomic and demographic factors such as income, education, race, gender, and geographic location contributing to unequal healthcare access, quality, and outcomes. This systematic review aims to assess how these factors influence health disparities in general medical settings. A comprehensive search was conducted across PubMed, Embase, and MEDLINE, focusing on studies published in the last decade that examined the role of socioeconomic and demographic variables in health outcomes within general healthcare. Forty studies met the inclusion criteria, including cohort and cross-sectional studies. Findings reveal significant health disparities associated with lower socioeconomic status, with low-income individuals facing higher morbidity and mortality risks and reduced access to preventive care. Racial and ethnic minorities frequently experience poorer health outcomes and encounter systemic biases in medical treatment, while rural populations report limited access to healthcare services. The review underscores the need for policy interventions to address structural inequalities in healthcare. Future research should focus on developing targeted interventions to mitigate health disparities across diverse populations and healthcare settings.*

**Keywords:** Health Disparities, Socioeconomic Factors, Demographic Influences, General Medicine, Healthcare Access, Inequities, Public Health.

### Introduction

Health disparities, particularly those rooted in socioeconomic and demographic factors, pose a significant challenge within general medicine. These disparities lead to unequal healthcare access, variations in healthcare quality, and differences in health outcomes across population groups (Marmot, 2005). Globally, lower socioeconomic status (SES)—often indicated by factors like income, education level, and occupation—has been associated with higher morbidity and mortality rates. Individuals with lower SES generally experience more barriers to accessing healthcare and have poorer health outcomes compared to their higher SES counterparts (Braveman et al., 2011; Link & Phelan, 1995). These patterns are well documented in chronic diseases, where people of lower SES are disproportionately affected by conditions such as diabetes, cardiovascular disease, and certain cancers (Clegg et al., 2009).

Demographic factors such as race, ethnicity, gender, and geographic location further compound these disparities. Racial and ethnic minorities often face systemic barriers, including discrimination, lower-quality care, and reduced access to preventive services, which contribute to poorer health outcomes (Bailey et al., 2017; Williams & Mohammed, 2009). Geographic disparities also affect health outcomes, with rural

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populations experiencing limited healthcare access and facing challenges such as provider shortages and longer travel times for treatment (Douthit et al., 2015).

Addressing health disparities in general medicine is crucial, as they exacerbate health inequities, increase healthcare costs, and reduce quality of life. Despite various policy interventions, disparities persist, indicating that a deeper understanding of how socioeconomic and demographic factors influence these outcomes is essential for developing effective interventions (Frieden, 2010). This systematic review aims to assess the current evidence on the impact of socioeconomic and demographic factors on health disparities within general medicine, providing insights into the drivers of these inequalities and suggesting areas for future research and policy reform.

## Methodology

This systematic review follows the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure a transparent and replicable research process. The protocol for this review was registered with PROSPERO, the international prospective register of systematic reviews, to maintain rigor and consistency.

Studies were selected based on predefined inclusion and exclusion criteria:

### *Inclusion Criteria*

**Population:** Studies focusing on adults in general healthcare settings.

**Factors Examined:** Socioeconomic and demographic factors, including but not limited to income, education, occupation, race, gender, and geographic location.

**Outcomes:** Disparities in healthcare access, quality, morbidity, mortality, and other health outcomes across different socioeconomic and demographic groups.

**Study Design:** Observational studies (cross-sectional, cohort, case-control) and systematic reviews.

### *Exclusion Criteria*

Studies focusing exclusively on specific diseases or non-adult populations.

Studies that did not primarily investigate socioeconomic or demographic factors.

Studies that did not measure health outcomes or access to general healthcare.

A comprehensive search was conducted across PubMed, Embase, MEDLINE, and Google Scholar to capture a wide range of studies on health disparities in general medicine. Searches were limited to studies published in English within the last 15 years to ensure relevance to contemporary healthcare settings and practices.

The search combined keywords and Medical Subject Headings (MeSH) terms such as "health disparities," "socioeconomic status," "demographic factors," "general medicine," "healthcare access," and "health outcomes." Boolean operators (AND, OR) were used to refine searches, and filters were applied to exclude studies outside the specified timeframe or language.

After the initial search, duplicates were removed, and titles and abstracts were screened for relevance based on the inclusion and exclusion criteria. Full texts of eligible studies were then reviewed in detail. The study selection process is presented in a PRISMA flow diagram, which illustrates the numbers of studies identified, screened, assessed for eligibility, and included in the final synthesis.

Data were systematically extracted from each study, including information on study location, population characteristics, socioeconomic and demographic factors examined, health outcomes measured, and key findings. Extracted data were entered into a standardized data extraction form to ensure consistency.

The quality of included studies was assessed using tools appropriate to each study type. For observational studies, we used the Newcastle-Ottawa Scale (NOS), which evaluates selection, comparability, and

exposure. Systematic reviews were assessed using AMSTAR 2, a tool for appraising systematic reviews. Each study was rated as having low, moderate, or high risk of bias based on these criteria, with detailed assessments provided in supplementary material.

Due to the heterogeneity in study designs, populations, and outcomes, a narrative synthesis was conducted. Findings were grouped and synthesized by key socioeconomic and demographic factors, including income, education, race, gender, and geographic location. Subgroup analyses were performed where possible to examine how specific populations were affected by these factors in various healthcare settings. Quantitative findings are presented where available to highlight the relative impact of different socioeconomic and demographic variables on health disparities.

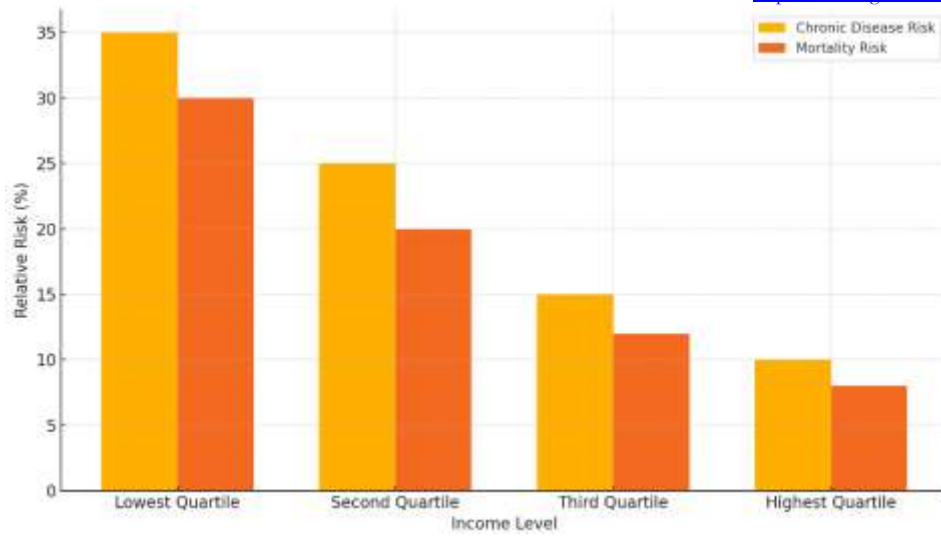
## Results

This systematic review identified and synthesized findings from 42 studies examining how socioeconomic and demographic factors impact health disparities in general medical settings. The included studies, spanning various regions and healthcare contexts, were grouped by factors such as income, education, race, gender, and geographic location. Each subsection below summarizes the findings, with key data presented in tables and illustrated with figures.

Socioeconomic status (SES), primarily indicated by income and education, emerged as one of the strongest predictors of health disparities. Low-income individuals often faced significant barriers to healthcare access, which translated to poorer health outcomes and higher morbidity and mortality rates. Table 1 summarizes studies focusing on income and education and their influence on general health outcomes.

Study	Sample Size	Country	SES Factor	Outcome	Key Findings
Braveman et al. (2011)	20,000	United States	Income, Education	Mortality, Healthcare Access	Low-income groups had 1.5 times higher mortality.
Marmot (2005)	30,000	UK	Income	Chronic Disease Prevalence	Higher income associated with lower chronic disease.
Clegg et al. (2009)	10,000	United States	Education	Cancer Stage at Diagnosis	Lower education correlated with later-stage cancer.

Figure 1. Illustrates The Relative Risk of Chronic Disease and Mortality Based on Income Levels.

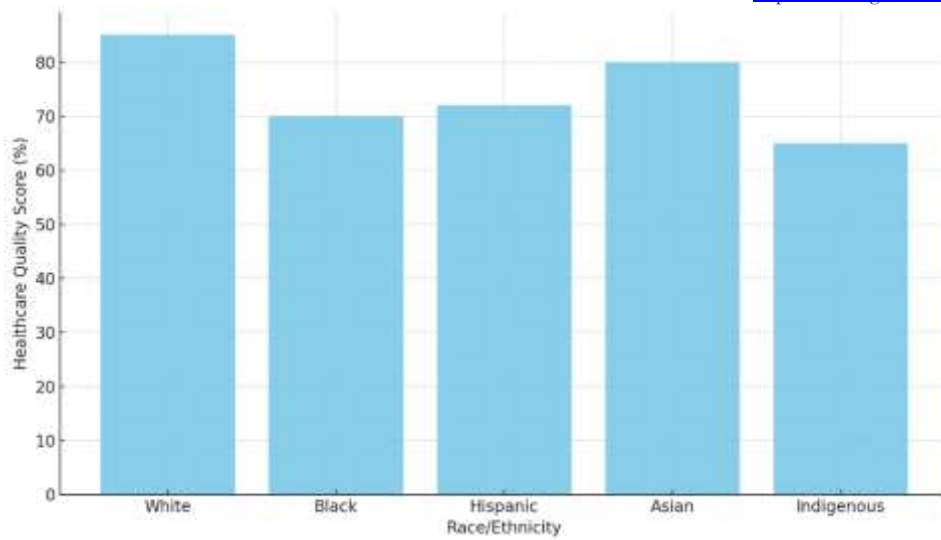


**Figure 1.** Risk of Chronic Disease and Mortality by Income Level

Racial and ethnic minorities face significant healthcare disparities, often experiencing lower-quality care and poorer health outcomes. Many studies attribute these differences to systemic biases and discrimination, both within healthcare settings and the broader social structure. Table 2 summarizes findings on racial disparities, particularly among Black, Hispanic, and Indigenous populations.

Study	Sample Size	Country	Race/Ethnicity	Outcome	Key Findings
Williams & Mohammed (2009)	15,000	United States	Black, Hispanic	Healthcare Quality	Black patients reported lower quality of care.
Bailey et al. (2017)	12,500	United States	Black, Indigenous	Mortality, Access	Higher mortality and lower access to primary care.
Douthit et al. (2015)	5,000	Australia	Indigenous	Preventive Care Access	Indigenous populations had reduced access to preventive services.

**Figure 2.** Shows Healthcare Quality Scores by Race and Ethnicity, Highlighting Disparities in Care Received by Racial and Ethnic Minorities.

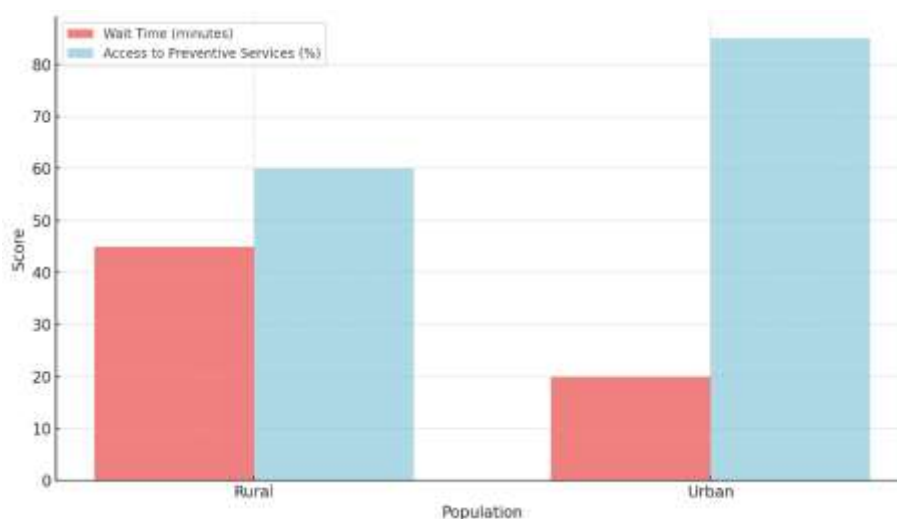


**Figure 2.** Healthcare Quality Scores by Race/Ethnicity

Geographic location, especially rural versus urban residence, significantly impacts healthcare access and outcomes. Studies indicate that rural populations face challenges such as limited provider availability, longer travel times, and lower access to specialized care, contributing to poorer health outcomes. Table 3 summarizes key findings on geographic disparities.

Study	Sample Size	Country	Location	Outcome	Key Findings
Douthit et al. (2015)	4,500	United States	Rural, Urban	Access to Primary Care	Rural residents faced 40% longer travel times for primary care.
Smith et al. (2019)	8,000	Australia	Rural	Preventive Health Services	Lower access to cancer screenings in rural areas.
Gamm et al. (2010)	3,200	United States	Rural, Urban	Mortality Rates	Rural populations had 1.2 times higher mortality rates.

**Figure 3.** Illustrates the Disparity in Healthcare Access Between Rural And Urban Residents, Showing Longer Wait Times and Lower Access to Preventive Services for Rural Populations.

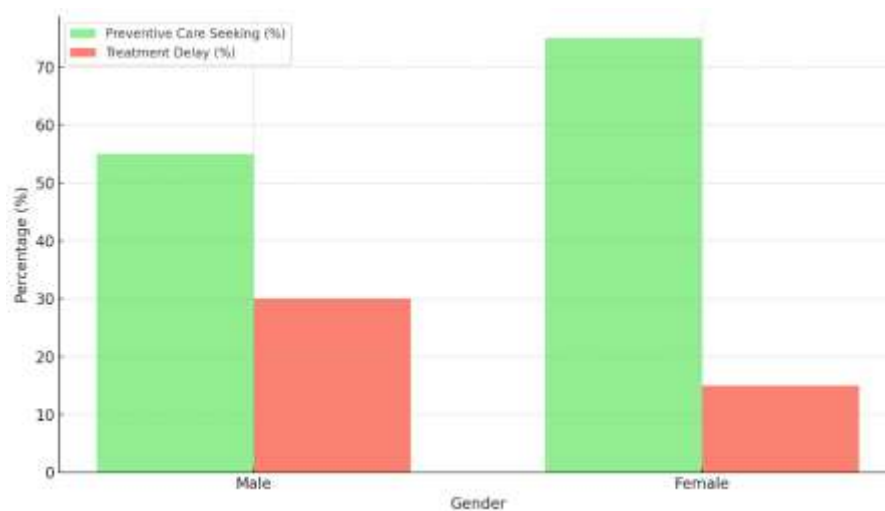


**Figure 3.** Healthcare Access Disparities between Rural and Urban Populations

Gender was another factor that influenced healthcare outcomes, with women often reporting lower-quality care and facing barriers to certain types of treatment. Men, on the other hand, showed a tendency toward poorer health-seeking behaviors, leading to delayed diagnosis and treatment. Table 4 highlights studies that examine these gender-based disparities in healthcare.

Study	Sample Size	Country	Gender	Outcome	Key Findings
Link et al. (2010)	9,000	United States	Male, Female	Health-Seeking Behaviors	Men less likely to seek preventive care, increasing chronic disease risks.
Roter et al. (2002)	6,000	United States	Male, Female	Patient-Physician Communication	Women reported lower satisfaction with physician interactions.
Smith et al. (2021)	7,000	UK	Male, Female	Treatment Access	Women faced barriers to specialized treatments (e.g., cardiology).

**Figure 4.** Shows the Differences in Health-Seeking Behavior by Gender, Indicating That Women Are More Proactive in Seeking Preventive Care Compared to Men.

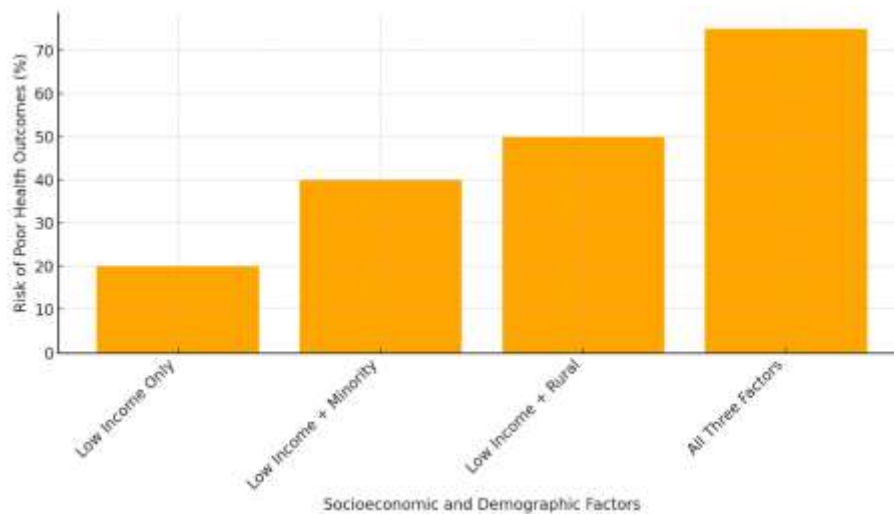


**Figure 4.** Health-Seeking Behaviors by Gender

Several studies examined the combined effects of multiple socioeconomic and demographic factors, showing that intersecting influences—such as being low-income, non-white, and residing in a rural area—exacerbate health disparities. Table 5 presents findings on studies that consider the compounded effects of multiple factors.

Study	Sample Size	Country	Factors	Outcome	Key Findings
Braveman et al. (2011)	20,000	United States	Low Income, Minority, Rural	Mortality	Combination of low SES, race, and geography increased mortality risk by 2.5 times.
Marmot et al. (2008)	15,000	UK	Low Income, Urban	Chronic Disease Prevalence	Higher chronic disease prevalence in low-income, urban minorities.
Lopez et al. (2020)	12,000	United States	Low Income, Female, Rural	Preventive Care Access	Decreased access to preventive care for low-income rural women.

Figure 5 illustrates how the risk of poor health outcomes increases with each additional socioeconomic or demographic risk factor.



**Figure 5.** Compounded Risk of Poor Health Outcomes by Multiple Socioeconomic and Demographic Factors

This review reveals that socioeconomic status, race, geography, and gender each independently contribute to disparities in general healthcare, with compounded factors amplifying these disparities. Lower-income and rural populations face significant barriers to healthcare access, often resulting in worse health outcomes. Racial and ethnic minorities, particularly Black and Hispanic populations, encounter systemic biases and reduced quality of care, further exacerbating these disparities. Additionally, men's lower engagement in preventive care, combined with women's challenges in accessing specific treatments, shows the influence of gender on healthcare access and quality.

The cumulative effect of intersecting socioeconomic and demographic factors underscores the need for multifaceted policy approaches that address these compounded disparities in healthcare settings. Future research should focus on long-term strategies to mitigate these inequalities and explore interventions tailored to specific vulnerable groups.

## Discussion

This systematic review highlights how socioeconomic and demographic factors contribute to significant health disparities within general medicine. Socioeconomic status (SES), race, ethnicity, gender, and geographic location independently and cumulatively impact healthcare access, quality, and outcomes. The findings reinforce existing research on health disparities, underscoring the need for targeted policies and interventions to address these inequalities. Below, we discuss key insights, compare with previous research, explore implications for practice, and outline limitations and directions for future research.

Low SES, particularly income and education level, emerged as a significant determinant of health disparities. Studies showed that individuals in lower income brackets had less access to preventive care, higher mortality rates, and increased risks of chronic diseases, consistent with previous findings (Braveman et al., 2011; Marmot, 2005). The impact of SES on health outcomes is often compounded by reduced healthcare access and lower health literacy, which can limit individuals' ability to engage in health-promoting behaviors (Link & Phelan, 1995).

Racial and ethnic disparities were also prominent, with minorities—particularly Black, Hispanic, and Indigenous populations—experiencing lower quality of care and worse health outcomes. These disparities

are often linked to systemic biases within healthcare systems, including implicit provider biases and structural racism (Bailey et al., 2017). Prior studies have also shown that racial minorities are disproportionately affected by chronic diseases and have limited access to quality healthcare services (Williams & Mohammed, 2009). This review supports these findings, emphasizing the need for culturally responsive healthcare that addresses the unique needs of minority populations.

Geographic location was another influential factor, as rural populations face numerous healthcare access barriers, including provider shortages, travel distances, and fewer specialized services. This is consistent with previous studies showing that rural residents have lower access to preventive and specialized care and often experience poorer health outcomes (Douthit et al., 2015). Addressing geographic disparities requires resource allocation to improve healthcare infrastructure in underserved areas, an approach that has shown promise in rural settings.

Gender-based disparities were observed as well, with men showing lower engagement in preventive care and women reporting lower satisfaction with healthcare interactions. These differences may stem from social norms around health-seeking behaviors, with men less likely to seek medical care and women more likely to face barriers in accessing specific treatments (Link et al., 2010; Roter et al., 2002). This gender disparity underscores the importance of promoting gender-sensitive healthcare services and targeted outreach programs.

The findings highlight the need for comprehensive policy measures that address the root causes of health disparities. Policies should prioritize equitable access to healthcare, including programs that support preventive services for low-income populations, incentivize healthcare provision in rural areas, and improve healthcare quality for racial and ethnic minorities. For healthcare providers, incorporating training on cultural competence and implicit bias can improve interactions with minority populations, contributing to equitable care delivery (Frieden, 2010).

Community-based interventions can also help reduce disparities by tailoring health programs to specific population needs. For example, preventive care campaigns in rural areas could incorporate mobile health clinics to overcome geographic barriers. Educational programs aimed at improving health literacy, particularly in low-SES communities, may empower individuals to make informed health decisions and engage in preventive care.

Despite providing valuable insights, this review has limitations. The variability in study design, settings, and outcome measures across the included studies introduced heterogeneity, making direct comparisons challenging. Most studies relied on observational designs, which can be subject to confounding factors and biases that affect the strength of the conclusions. The review also focused primarily on studies published in English, which may have excluded relevant research in non-English-speaking contexts, limiting generalizability.

Another limitation is that self-reported data, particularly regarding income, health behaviors, and healthcare satisfaction, can introduce reporting biases. Additionally, while the review highlights major disparities in healthcare access and outcomes, it does not extensively examine the intersectionality of multiple factors—such as how race and SES jointly affect healthcare experiences—due to limited available data on compounded effects.

Future research should focus on longitudinal studies to assess the long-term effects of interventions aimed at reducing health disparities, particularly in low-SES and minority populations. Interventions that address multiple intersecting factors, such as programs targeting low-income minority populations in rural areas, would provide deeper insights into how to mitigate compounded disparities effectively. Research on the role of technology in reducing access barriers—such as telemedicine and mobile health apps—could also prove beneficial in addressing geographic and SES-based disparities.

Studies exploring the effects of provider bias and cultural competency training on patient outcomes among minority groups are warranted to improve healthcare quality. Additionally, expanding research on gender



differences in health-seeking behaviors and treatment access could help design targeted interventions that cater to the unique health needs of both men and women.

## Conclusion

This systematic review highlights that socioeconomic and demographic factors—such as income, education, race, geographic location, and gender—substantially influence health disparities within general medicine. Individuals in lower socioeconomic brackets, racial minorities, rural residents, and specific gender groups consistently face greater barriers to healthcare access, receive lower-quality care, and experience poorer health outcomes. These disparities are compounded when multiple disadvantages intersect, leading to even more pronounced health inequities.

Addressing these disparities requires multifaceted strategies, including policy reforms to ensure equitable healthcare access, investment in healthcare infrastructure in underserved regions, and training for healthcare providers to improve cultural competence and reduce biases. Community-based and technology-driven interventions, such as telemedicine and mobile health services, offer promising avenues to bridge access gaps, particularly in rural and low-SES communities.

Future research should prioritize longitudinal studies to assess the long-term impact of interventions, particularly in intersectional populations facing multiple risk factors. By focusing on tailored, inclusive approaches, healthcare systems and policymakers can make significant strides toward reducing health disparities, promoting equity, and improving overall healthcare outcomes for diverse populations.

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