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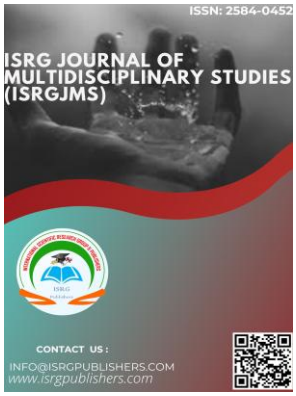

SOCIAL DETERMINANTS OF HEALTH AND THEIR IMPACTS ON ACCESSIBILITY TO PUBLIC HEALTH SERVICES

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Abstract

Social Determinants of Health (SDH) are widely recognized as fundamental drivers of health inequalities and unequal access to public health services. In universal health systems such as Brazil's Unified Health System (Sistema Único de Saúde – SUS), formal entitlement to healthcare does not necessarily translate into equitable accessibility, as structural social inequalities continue to shape patterns of health service utilization. This analytical essay critically examines how SDH influence accessibility to public health services, focusing on structural inequalities, barriers within health systems, and policy responses aimed at promoting equity. The analysis highlights that income distribution, education, employment conditions, territorial segregation, and structural racism operate as upstream determinants that shape both health needs and access opportunities. These factors generate cumulative disadvantages that affect individuals' ability to seek, reach, and receive appropriate healthcare, even in contexts of universal coverage. Accessibility is therefore understood as a multidimensional construct encompassing geographical, economic, organizational, informational, and cultural dimensions. Furthermore, the essay discusses how health systems reproduce or mitigate these inequalities through their organizational structures and policy designs. Persistent barriers such as bureaucratic complexity, long waiting times, fragmented care networks, and digital exclusion disproportionately affect socially vulnerable populations. While Brazil's SUS incorporates equity-oriented principles and primary care strategies, significant challenges remain in operationalizing intersectoral actions capable of addressing the root causes of inequities. Overall, the essay argues that improving accessibility in public health systems requires moving beyond healthcare service provision and toward integrated social and policy interventions targeting the structural determinants of health.

Keywords: *Social Determinants of Health; Health Inequalities; Health Services Accessibility; Health Equity; Unified Health System.*

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1. Introduction

Social Determinants of Health (SDH) constitute one of the most influential conceptual frameworks for understanding health inequalities and disparities in access to health services. Rather than being determined solely by biological or clinical factors, health outcomes are profoundly shaped by social, economic, cultural, environmental, and political conditions in which individuals are born, grow, live, work, and age. In publicly funded health systems such as Brazil's Unified Health System (Sistema Único de Saúde – SUS), SDH play a central role in explaining why universal coverage does not necessarily translate into equitable access.

In the Brazilian context, the principle of universality established by the 1988 Constitution guarantees health as a right of all citizens and a duty of the State. However, structural inequalities rooted in income distribution, education, housing conditions, territorial segregation, and labor market insertion generate persistent barriers to effective access to health services. These inequalities are not incidental but structurally produced and reproduced within society, affecting both demand and supply-side dimensions of healthcare utilization.

From a theoretical standpoint, SDH are not merely contextual variables but mechanisms that actively shape health system performance. They influence patterns of health-seeking behavior, availability of services, organizational capacity of health systems, and responsiveness of public policies. In this sense, accessibility to health services must be understood as a multidimensional construct that integrates geographical, economic, cultural, and informational dimensions of inequality.

Therefore, this essay critically examines how social determinants of health impact accessibility to public health services, with a particular focus on the Brazilian public health system. It argues that despite formal universality, access remains deeply stratified by social conditions, and that addressing SDH is essential for achieving equity in health systems.

1. Methodology

This article is developed as an analytical academic essay grounded in critical theoretical synthesis rather than empirical primary data collection. The methodological orientation is qualitative, interpretative, and exploratory, focusing on the conceptual relationships between social determinants of health and accessibility to public health services.

The analysis is based on a structured review of academic literature, policy documents, and theoretical frameworks related to SDH, health equity, and health system organization, particularly within the context of Brazil's Unified Health System (SUS). Rather than aiming at statistical generalization, the essay seeks to construct a coherent analytical argument that integrates different levels of abstraction, from structural social determinants to health system functioning.

The references used in this essay serve as epistemological and theoretical support for critical reflection. They are employed to sustain conceptual reasoning about how social inequalities are translated into health inequalities, and how these processes affect access to public health services. This approach allows for a rigorous yet interpretative discussion of a complex and multidimensional phenomenon.

This editorial decision does not imply the absence of theoretical grounding, but rather reflects an essay-based approach in which the cited literature serves as the intellectual foundation of the argument as a whole.

2. Development

2.1 Structural Social Inequalities and the Production of Health Inaccessibility

Social determinants of health operate primarily through structural mechanisms that generate unequal living conditions across populations. Income distribution, education levels, employment status, housing quality, and territorial segregation are among the most significant determinants shaping differential exposure to health risks and differential access to healthcare services. These factors do not act independently but interact in cumulative and reinforcing ways.

In Brazil, marked socioeconomic inequality produces a dual burden on access to public health services. Populations living in poverty are more exposed to health risks while simultaneously facing greater barriers to accessing timely and adequate care. These barriers include transportation costs, inability to miss work, lack of information, and limited health literacy, all of which reduce effective utilization of services even when they are formally available.

Education emerges as a critical determinant influencing health service accessibility. Lower levels of education are associated with reduced understanding of health system functioning, lower capacity to navigate bureaucratic structures, and delayed health-seeking behavior. This creates a structural disadvantage in accessing preventive and primary care services.

Territorial inequality further intensifies these disparities. Peripheral urban areas and rural regions often present lower density of health facilities, fewer specialized services, and weaker infrastructure. As a result, geographical distance becomes a significant barrier, transforming physical accessibility into a social inequality issue rather than a logistical one.

Labor market conditions also play a decisive role. Informal workers, who constitute a large proportion of the Brazilian workforce, often lack paid sick leave, making it economically difficult to seek healthcare during working hours. This reinforces delayed care-seeking and increases reliance on emergency services.

Structural racism and intersectional inequalities add another layer of complexity. Racialized populations disproportionately experience poorer living conditions, lower income, and reduced access to quality healthcare. These patterns are not accidental but reflect historically produced social hierarchies embedded in contemporary institutions.

Gender inequalities also shape access patterns. Women generally have higher utilization rates due to reproductive health needs, but also face barriers related to caregiving responsibilities and economic dependence. Men, on the other hand, often exhibit lower preventive care utilization due to sociocultural norms.

Environmental determinants such as sanitation, water quality, and exposure to pollution further influence health needs and access dynamics. Populations exposed to poor environmental conditions experience higher disease burdens, increasing demand for services that are often not equally distributed.

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Ultimately, structural determinants operate as upstream forces that define both health needs and the capacity to access care, producing systematic inequalities that cannot be fully addressed by healthcare interventions alone.

2.2 Social Determinants and Barriers to Accessibility in Public Health Systems

Accessibility to health services is a multidimensional concept that extends beyond mere physical availability of services. It includes organizational, economic, cultural, and informational dimensions that are directly shaped by social determinants of health. In publicly funded systems such as SUS, formal universality masks significant inequalities in effective access.

One of the primary barriers is organizational complexity. Health systems often require users to navigate multiple entry points, referral systems, and bureaucratic procedures. Individuals with higher educational and social capital are better equipped to navigate these systems, creating disparities in access efficiency.

Waiting times for specialized care represent another critical dimension of inaccessibility. Although primary care services may be widely available, access to diagnostics, specialized consultations, and surgical procedures is often delayed. These delays disproportionately affect socially vulnerable populations who lack alternative private care options.

Health literacy plays a fundamental role in shaping accessibility. Individuals with limited understanding of health information are less likely to engage in preventive care, adhere to treatment pathways, or recognize early symptoms of disease. This leads to late-stage presentations and worse health outcomes.

Cultural barriers also influence access patterns. Health services may not always be culturally sensitive or responsive to diverse population groups, including indigenous populations, migrants, and marginalized communities. This reduces trust in the health system and decreases service utilization.

Economic constraints remain significant even in universal systems. Although services are free at the point of use in SUS, indirect costs such as transportation, medication not covered by the system, and time away from work create substantial barriers.

Geographical accessibility remains uneven, particularly in large and territorially diverse countries like Brazil. Remote regions often depend on under-resourced primary care units with limited capacity to resolve health needs locally, requiring referrals that are difficult to complete.

Institutional fragmentation between levels of care further compromises accessibility. Weak integration between primary, secondary, and tertiary services leads to discontinuity of care and inefficient patient pathways, disproportionately affecting vulnerable populations.

Digital exclusion is an emerging barrier in modern health systems. As health services increasingly adopt digital platforms for scheduling, telehealth, and information management, populations without internet access or digital literacy face new forms of exclusion.

These combined barriers demonstrate that accessibility is not solely a matter of supply but is deeply conditioned by social structures that shape how individuals interact with health systems.

2.3 Policy Responses, Equity Strategies, and Persistent Structural Challenges

Public policies aimed at addressing social determinants of health have increasingly recognized the need for intersectoral action. Health equity cannot be achieved solely through healthcare interventions but requires integrated policies in education, housing, sanitation, income redistribution, and urban planning.

In Brazil, the Unified Health System incorporates the principle of equity as one of its foundational pillars. This principle acknowledges that unequal populations require unequal treatment in order to achieve fair health outcomes. However, operationalizing equity remains a persistent challenge in policy implementation.

Primary Health Care plays a central role in mitigating the effects of social determinants by acting as the first point of contact and coordinating care across the system. Strategies such as the Family Health Strategy aim to strengthen territorial responsibility and community engagement, improving access for vulnerable populations.

Health promotion policies also seek to address upstream determinants by focusing on prevention and community-based interventions. These include vaccination campaigns, chronic disease management programs, and health education initiatives.

However, fragmentation between sectors remains a major obstacle. Effective action on social determinants requires coordination between health, education, social assistance, and infrastructure sectors, which is often limited by institutional silos and political discontinuity. Resource allocation inequalities further constrain policy effectiveness. Regions with greater socioeconomic vulnerability often have fewer financial and human resources, perpetuating disparities rather than reducing them.

Monitoring and evaluation systems for health equity remain underdeveloped in many contexts, limiting the capacity of governments to assess the real impact of policies on reducing inequalities. Community participation is another critical but unevenly implemented component. While participatory mechanisms exist within SUS, their effectiveness depends on local governance capacity and civic engagement levels.

Thus, structural determinants such as income inequality and racial stratification require long-term structural reforms that go beyond the health sector. Without addressing these root causes, health policies can only partially mitigate the effects of social inequality on access.

To complement the analytical discussion developed throughout this essay, the following figure synthesizes the conceptual pathway through which Social Determinants of Health (SDH) influence accessibility to public health services and, ultimately, health outcomes. The diagram integrates multiple layers of analysis, beginning with structural and political contexts, moving through intermediary social and material conditions, and culminating in specific categories of barriers that shape access to care. These barriers are organized into geographical, economic, organizational, cultural, informational, and digital dimensions, reflecting the multidimensional nature of accessibility in contemporary health systems. In addition, the figure highlights the main domains of accessibility – such as approachability, acceptability, availability, affordability, and appropriateness – emphasizing that access is not a singular or linear concept but a complex interaction between individuals and health systems. Finally, the framework underscores

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that health outcomes are the cumulative result of these interacting layers, while also recognizing the moderating role of health systems, governance structures, and intersectoral policies, particularly within universal systems such as Brazil's SUS.

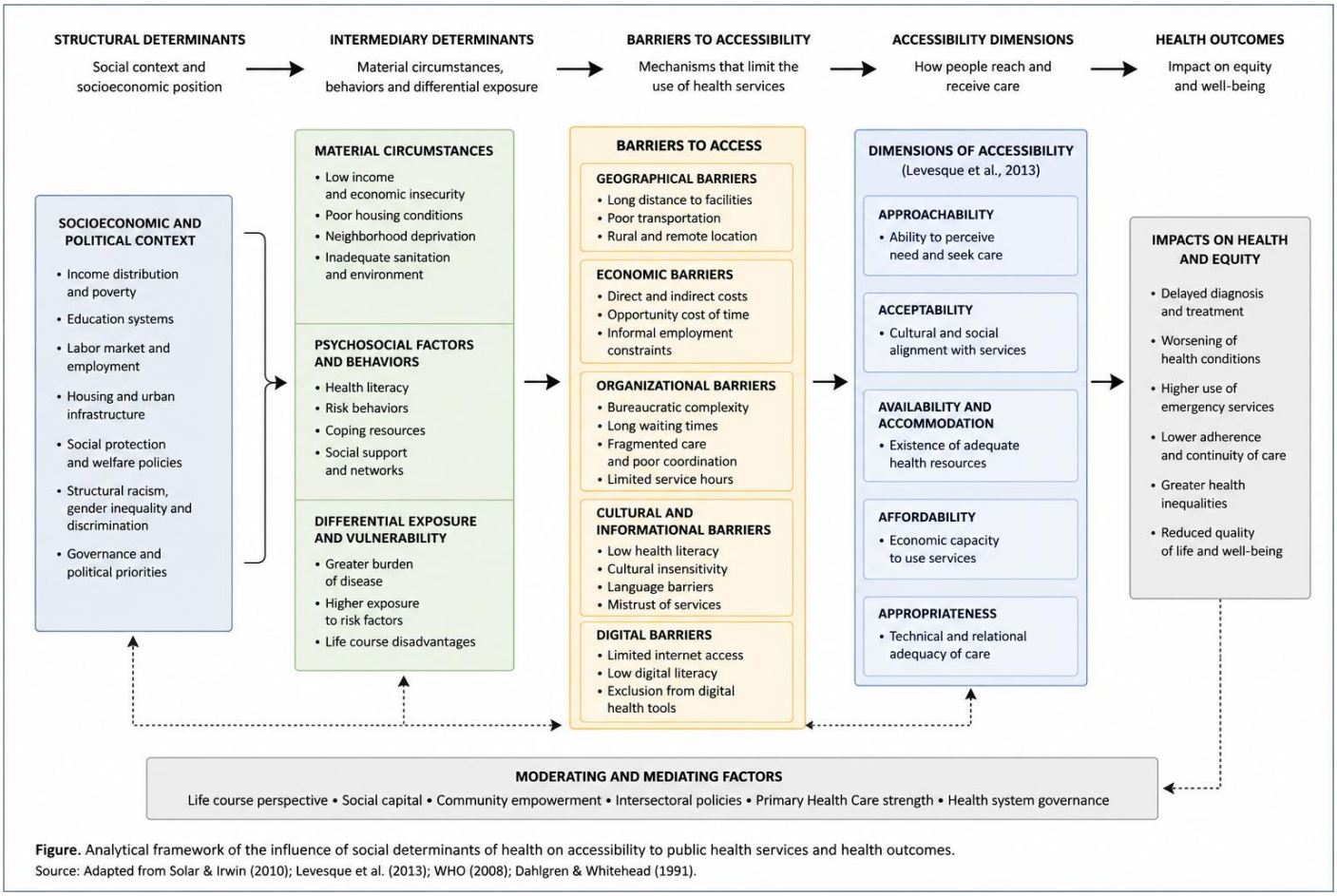

Figure. Analytical framework of the influence of social determinants of health on accessibility to public health services and health outcomes.
Source: Adapted from Solar & Irwin (2010); Levesque et al. (2013); WHO (2008); Dahlgren & Whitehead (1991).

Source: authors' own elaboration, 2026.

4. Conclusion

Social determinants of health constitute the foundational framework for understanding inequalities in access to public health services. They reveal that health disparities are not random but systematically produced through social, economic, and political structures that shape life conditions and health system interactions.

In publicly funded health systems such as Brazil's SUS, formal universality does not guarantee effective equity. Structural barriers related to income, education, territory, labor conditions, and social stratification continue to produce unequal access patterns, even in the presence of comprehensive policy frameworks.

Addressing these challenges requires a shift from a purely healthcare-centered model to an intersectoral and equity-oriented approach. Only through integrated policies that target the root causes of social inequality can health systems move toward genuine universality in both access and outcomes.

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