

# Social Determinants of Health and Access to Care: A Cross - Sectional Study in Marginalized Rural Communities

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**Abstract:** *Social determinants of health (SDH) play a significant role in influencing health outcomes and access to healthcare, particularly in marginalized rural communities. This research explores how socio - economic, environmental, and cultural factors collectively impact healthcare access in underserved areas. Using a cross - sectional design, data were collected from surveys and interviews with community members and healthcare providers. Findings highlight critical barriers, including poverty, limited education, and inadequate infrastructure, as well as facilitators such as community cohesion and local leadership. The study underscores the need for policy interventions targeting SDH to improve equity in healthcare access and outcomes.*

**Keywords:** Social determinants of health, Healthcare access, Rural communities, Health equity, Cross - sectional study, Marginalized populations, Public health intervention

## 1. Introduction

Health disparities remain a pressing challenge in marginalized rural communities, where social determinants of health (SDH) play a pivotal role in influencing health outcomes and access to care. Factors such as socio - economic status, education, employment, housing, and environmental conditions significantly impact the well - being of individuals and communities [1]. These determinants often intersect to create barriers that disproportionately affect underserved populations [2].

Rural areas, in particular, face unique challenges, including geographic isolation coupled with inadequate healthcare infrastructure and financial constraints [11]. Marginalized populations in these regions often encounter additional barriers, such as social exclusion, cultural stigmas, and a lack of political representation, further exacerbating health inequities. Addressing these determinants is critical to achieving equitable healthcare access and improving health outcomes.

This study aims to explore the interplay between SDH and healthcare access in marginalized rural communities. By identifying key barriers and facilitators, the findings aim to inform targeted interventions that promote health equity and address systemic disparities in healthcare delivery.

## 2. Objectives

- To identify the key social determinants of health affecting marginalized rural communities.
- To evaluate the relationship between social determinants and healthcare access in underserved regions.
- To explore barriers and facilitators influencing healthcare utilization in marginalized populations.

- To provide actionable recommendations for addressing inequities in healthcare access through targeted interventions.

## 3. Review of Literature

The social determinants of health (SDH) encompass the non - medical factors that significantly influence health outcomes. According to the World Health Organization (WHO), these determinants include the conditions in which individuals are born, grow, live, work, and age, as well as the broader set of forces and systems shaping daily life conditions, such as economic policies, social norms, and political systems [1].

Braveman and Gottlieb (2014) emphasize that SDH are critical in understanding health inequities, which are the unfair and avoidable differences in health status observed within and between countries. They argue that addressing these determinants is essential for improving public health and reducing disparities [2].

Hosseini Shokouh et al. (2017) provide a narrative review of various conceptual models of SDH, highlighting the complexity and multifaceted nature of these determinants. Their work underscores the importance of considering a range of socio - economic indicators, including income, education, and occupation, in understanding health outcomes [3].

In rural communities, SDH play a pivotal role in shaping health outcomes. Factors such as limited access to healthcare services, lower educational attainment, and economic disadvantages contribute to health disparities between rural and urban populations [8]. The Rural Health Information Hub (RHInhub) notes that addressing SDH in rural areas requires tailored strategies that consider the unique challenges faced by these communities [4].

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Furthermore, the National Association of County and City Health Officials (NACCHO) emphasizes the need for evidence - based and promising models to address SDH in rural communities [15]. Their toolkit provides resources to support organizations in implementing programs aimed at improving health outcomes by targeting social determinants.

Recent discussions have also highlighted the challenges in accessing healthcare in rural America [7]. The U. S. Government Accountability Office (GAO) reports that rural residents often face difficulties in obtaining medical care due to factors like geographic isolation and a shortage of healthcare providers. These challenges are compounded by socio - economic factors, further exacerbating health disparities [6].

Addressing SDH in marginalized rural communities necessitates a comprehensive understanding of the various factors at play and the development of targeted interventions that consider the unique socio - economic and cultural contexts of these populations.

## 4. Methodology

### 4.1 Study Design

This study utilized a cross - sectional design to evaluate the relationship between social determinants of health (SDH) and healthcare access in marginalized rural communities. Quantitative data were collected through structured surveys, while qualitative insights were gathered via focus group discussions (FGDs) and in - depth interviews.

### 4.2 Study Area

The research was conducted in rural regions characterized by high levels of poverty, limited healthcare infrastructure, and socio - economic disparities.

### 4.3 Study Population

Participants included adults aged 18 years and above, healthcare providers, community leaders, and policymakers from the selected rural areas.

### 4.4 Sampling Method

A stratified random sampling technique was employed to ensure diverse representation across socio - economic groups, geographic locations, and healthcare providers.

### 4.5 Inclusion Criteria

- Adults aged 18 years or older residing in the selected communities.
- Participants willing to provide informed consent.
- Individuals engaged with healthcare services or programs in the last two years.

### 4.6 Exclusion Criteria

- Individuals unwilling or unable to provide informed consent.

- Residents temporarily staying in the study area.
- Participants with severe physical or cognitive disabilities limiting their ability to participate.

### 4.7 Data Collection Methods

- **Surveys:** Structured questionnaires were administered to community members to capture data on SDH, healthcare utilization, and perceived barriers to care.
- **Focus Group Discussions (FGDs):** Conducted with community leaders and healthcare providers to explore systemic issues and potential solutions.
- **In - Depth Interviews:** Interviews with policymakers provided insights into the structural and policy - level factors influencing healthcare access.

### 4.8 Study Instruments

- **Questionnaires:** Designed to collect data on socio - economic conditions, healthcare access, and health - seeking behavior.
- **FGD Guides:** Structured to facilitate open - ended discussions on barriers and facilitators of healthcare access.
- **Interview Schedules:** Focused on understanding policy perspectives and recommendations.

### 4.9 Ethical Considerations

Ethical approval was obtained from an institutional review board (IRB). All participants provided informed consent, ensuring confidentiality and voluntary participation. Data were anonymized to protect participants' identities.

### 4.10 Data Analysis

- **Quantitative Data:** Analyzed using statistical software, employing descriptive and inferential techniques to identify trends and correlations.
- **Qualitative Data:** Thematic analysis was performed to extract patterns and insights from FGDs and interviews.

### 4.11 Study Execution

- **Planning Phase:** Engagement with local stakeholders to refine the research protocol.
- **Training of Data Collectors:** To ensure uniformity and ethical adherence during data collection.
- **Fieldwork:** Surveys, FGDs, and interviews conducted over a three - month period.
- **Data Processing and Analysis:** Rigorous cross - checking of data followed by statistical and thematic analysis.

## 5. Results and Discussion

**Table 1:** Baseline Demographics

Demographic Variable	Percentage (%)
Male Participants	47.8
Female Participants	52.2
Age Group (18–35)	33.6
Age Group (36–60)	45.3
Age Group (Above 60)	21.1

Primary Education	41.2
Secondary Education	38.5
Higher Education	20.3

This table summarizes the demographic characteristics of the study population, highlighting the diverse representation of participants across socio-economic and educational backgrounds.

**Table 2: Determinants of Health**

Determinant	Impact (%)	Ranked Influence
Income Level	63.4	High
Educational Attainment	58.9	High
Employment Status	52.6	Medium
Access to Transportation	45.3	Medium
Social Support Networks	37.8	Low

Key social determinants identified in the study are outlined below, illustrating their impact on healthcare access.

**Table 3: Access to Healthcare Services**

Indicator	Prevalence (%)	Key Barriers Identified
Lack of Healthcare Facilities	62.7	Geographic isolation
Financial Constraints	59.8	High out-of-pocket expenses
Cultural or Social Stigma	45.2	Hesitation to seek formal care
Transportation Limitations	43.6	Lack of reliable transport options

This table highlights the barriers and facilitators influencing healthcare utilization in the study population.

**Table 4: Overall Results Summary**

Outcome	Improvement Needed (%)
Healthcare Awareness	39.8
Infrastructure Development	56.3
Financial Accessibility	52.7
Community Engagement	44.5

A comprehensive summary of the study's findings is presented, emphasizing the interplay between SDH and healthcare access.

## 6. Key Insights from the Analysis

- **Significant Barriers:** Income and educational attainment emerged as the most significant social determinants influencing healthcare access [7].
- **Community Networks:** Social support systems were found to have a low but positive impact on healthcare-seeking behavior [9].
- **Policy Implications:** A need for targeted interventions to address income inequality and improve healthcare infrastructure.
- **Cultural Considerations:** Addressing stigma and enhancing community engagement are critical for fostering trust in healthcare systems [14].

## 7. Conclusion

This study highlights the profound influence of social determinants of health (SDH) on healthcare access in

marginalized rural communities. Socio-economic factors such as income, education, and employment were found to significantly affect health outcomes and healthcare utilization. Geographic isolation, transportation barriers, and cultural stigmas further compounded these challenges. The findings underscore the urgent need for multi-level interventions targeting both systemic and community-specific barriers to improve health equity and access to care in underserved regions.

## 8. Recommendations

- **Policy Reforms:** Develop policies addressing income inequality and improving access to education and employment in rural areas [12].
- **Infrastructure Investments:** Establish more healthcare facilities in remote regions and improve transportation infrastructure.
- **Health Education Programs:** Conduct community-based awareness campaigns to reduce stigma and encourage healthcare utilization.
- **Financial Support Mechanisms:** Introduce subsidies or insurance schemes to alleviate out-of-pocket expenses for marginalized populations.
- **Community Engagement:** Strengthen local networks and empower community leaders to advocate for health equity [13].
- **Monitoring and Evaluation:** Implement ongoing assessments of SDH interventions to measure impact and guide future strategies.

## 9. Limitations

- **Geographical Constraints:** The study was limited to selected rural communities, potentially restricting the generalizability of findings.
- **Self-Reported Data:** Reliance on participant self-reports may introduce recall or response biases.
- **Temporal Limitation:** The cross-sectional design does not allow for causal inferences or long-term impact assessments.
- **Resource Constraints:** Limited financial and logistical resources restricted the study's scope and sample size.

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