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Multidimensional Vulnerability in Urban Slums: A Qualitative Analysis of Economic, Social, Physical, and Health Challenges in Haryana, India

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Abstract

This study investigates the factors contributing to slum residents' vulnerability to poor health and examines how economic, physical/infrastructural, and social determinants interact to influence health outcomes, with the aim of informing policy and program development. A mixed deductive-inductive approach was employed for data analysis. Initially, a deductive framework categorized the data into four overarching themes: Economic, Physical/Infrastructure, Social, and Health. Subsequently, following Braun and Clarke's methodology, sub-themes were identified based on researchers' interpretations and the lived experiences reported by slum residents. The research was conducted across 13 districts, utilizing 40 focus group discussions to collect information from vulnerable populations. Poverty emerged as the primary driver of rural-to-urban domestic migration, exacerbating challenges such as illiteracy, unemployment, and substandard living conditions, which increase susceptibility to various health problems. Inadequate access to nutritious food, unsafe water, and poor waste management further amplify health risks. Slum populations experience intertwined economic, social, and physical vulnerabilities that collectively contribute to adverse health outcomes. Improving health and well-being in slum communities necessitates an integrated strategy combining policy interventions, community engagement, and multisectoral collaboration.

Keywords: Vulnerabilities, Health Outcomes, Qualitative Research, Slums, Focus Groups

Introduction

Rapid rural-to-urban migration represents a significant demographic shift worldwide [1]. Currently, over half of the global population resides in urban areas, with projections suggesting this will rise to nearly 68% by 2050 [2]. In India, migration is frequently driven by the search for better education, healthcare, and infrastructure, as well as by economic pressures including limited land, labor demands, poor working conditions, and poverty. For many rural migrants, urban housing remains unaffordable, often forcing them to settle in informal settlements or slums [3].

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According to UN-HABITAT, slums are defined as "contiguous settlements where inhabitants live in inadequate housing with insufficient basic services, often unrecognized by authorities as part of the urban fabric" [4]. These areas typically lack proper sanitation, safe drinking water, electricity, and formal housing. Employment among slum residents is often insecure and informal, including daily wage labor, street vending, rickshaw pulling, and construction work, which exposes them to heightened social and economic vulnerabilities [5].

The 2011 Indian census reported that about 65 million people lived in slums, accounting for roughly 17% of the urban population. Residents face systemic marginalization that limits access to education, jobs, and healthcare services, compounding their health risks [2, 6]. Vulnerability arises when individuals or groups are disadvantaged in ways that restrict informed decision-making and self-determination, often affecting low-income families, ethnic minorities, children, the elderly,

the chronically ill, and the homeless [7, 8]. Despite urban proximity to healthcare facilities, slum populations frequently experience higher morbidity and mortality than other urban or rural populations [8].

Classical and contemporary theories—including structural, functional, conflict, demographic transition, and push-pull frameworks—offer explanations for migration and associated socio-economic hardships [9, 10]. While empirical studies have supported some theoretical predictions, they also reveal limitations that require further exploration [11]. The critical realist perspective, which goes beyond positivist approaches, is adopted in this study to examine underlying structures shaping vulnerabilities in slum populations.

This research, conducted under the National Urban Health Mission (NUHM) in Haryana in collaboration with PGIMER, Chandigarh, aims to identify factors contributing to slum dwellers' vulnerability to poor health. It assesses healthcare availability, utilization, and access barriers while addressing three key questions:

1. How do economic, physical/infrastructural, and social vulnerabilities influence health outcomes?
2. Which healthcare services are accessible to slum populations?
3. What challenges limit slum residents' access to healthcare?

A contextual framework for this study was developed by adapting existing models of vulnerability and health outcomes [5], providing a structured approach for understanding and addressing the complex risks faced by slum communities.

Materials and Methods

This study represents the qualitative component of a broader mixed-methods research project that concurrently collected qualitative and quantitative data. The focus here is on the qualitative findings, while quantitative results will be reported separately. The qualitative investigation aimed to examine living and working conditions, health challenges, and the availability of healthcare services among slum residents.

Study setting

The research was conducted across selected cities in 13 districts of Haryana, India, where districts function as administrative divisions. Notified slums within each district were identified using official government records. The National Urban Health Mission (NUHM), Haryana, provided a list of vulnerable population groups for inclusion in focus group discussions (FGDs), encompassing rag pickers, the elderly, female sex workers, domestic workers, minority populations, daily wage laborers, factory workers, and other context-specific groups. For each city, at least two locations within officially notified slums were selected for data collection.

Sampling

Purposive sampling was employed to recruit community members, including rag pickers, unorganized laborers, female sex workers, truck drivers, domestic workers, leprosy patients, nomadic populations, and refugees. Local healthcare staff, such as Auxiliary Nurses and Midwives (ANMs) and Accredited Social Health Activists (ASHAs), facilitated site identification and participant recruitment. Participants were provided with detailed information about the study objectives and procedures, and had the opportunity to ask questions, ensuring informed consent.

FGDs included 8–15 participants and were conducted separately by gender to encourage open discussion. A total of 53 FGDs were initially conducted to capture diverse perspectives across gender, age, occupation, and ethnic groups. After excluding four FGDs due to poor audio quality and nine due to data saturation, 40 FGDs were included in the final analysis. The study design aimed for a minimum of two FGDs per category to ensure comprehensive coverage, ultimately exceeding this number to achieve saturation.

Data collection

Data collection was carried out by trained staff from the National Health Mission, Haryana, using a pretested topic guide developed by PGIMER staff. The guide addressed issues including housing and working conditions, access to clean water, sanitation, waste disposal, healthcare availability, and health and hygiene concerns.

Ethical clearance was obtained from the Institute's Ethics Committee (PGI/IEC/2018/001019, dated 10/08/2018). FGDs were audio-recorded after obtaining written and verbal consent from participants. A dedicated note-taker accompanied the moderator to document discussions. All participants were assured of confidentiality, and personal identifiers were anonymized to safeguard participant

privacy and prevent unauthorized disclosure of information.

Data analysis

Audio-recorded FGDs were transcribed verbatim, and transcripts were carefully reviewed for accuracy. The recordings and accompanying notes were read multiple times to achieve familiarity with the content. A senior researcher led the analysis, with support from a co-researcher during the familiarization phase.

A combined deductive-inductive approach was employed, integrating theory-driven categorization with data-driven insights [5, 12]. Initially, a deductive framework was applied to classify the data into four overarching themes: Economic, Physical/Infrastructure, Social, and Health. These categories were informed by existing literature on vulnerabilities among marginalized urban populations and provided a clear structure for analysis [13, 14]. While these deductive themes offered a broad organizational framework, sub-themes were identified inductively, emerging from participants' narratives. Inductive coding allowed the researchers to capture nuanced, context-specific vulnerabilities that were not anticipated in advance, offering deeper insights into the lived experiences of slum residents in India. Data coding and management were conducted using NVivo 12.

Results and Discussion

Most participants reported migrating from states such as Uttar Pradesh, Bihar, Rajasthan, and Madhya Pradesh—regions with predominantly agricultural economies and lower income levels—either to other districts within Haryana or to other states in search of livelihoods. The vulnerabilities experienced by slum residents are summarized in **Table 1**. with themes and sub-themes providing detailed accounts of economic, social, physical, and health-related challenges. Guided by prior research, the analysis begins with economic vulnerabilities, which emerged as a primary factor shaping the health outcomes of slum dwellers.

Table 1. Vulnerabilities affecting health of slum dwellers in Haryana, India

Vulnerabilities	Themes/Sub-Themes	Description	Quotes
Economic	Unstable Employment	Common jobs include rag picking, manual labor, truck driving, or seasonal vending.	"We collect garbage as rag-pickers to feed our children." (FGD33M)
	Low Daily Earnings	Daily income ranges from INR 100 to 300, falling below government-set minimum wage rates for specific areas.	"We earn barely 200–300 rupees a day, which isn't enough to feed our family." (FGD8M)
Physical/ Infrastructural	Poor Housing and Environmental Risks	Most slum residents live in temporary "kacha" structures with tin roofs, mud-brick walls, and mud floors, vulnerable to environmental hazards.	"My kacha house leaks from the ceiling during the rainy season." (FGD15F)
	Inadequate Water, Sanitation, and Waste Systems	Residents face poor-quality water supply, shared toilets leading to health risks like infectious diseases, and no proper garbage disposal, forcing open dumping.	"The tap water is dirty and not safe to drink, but we have no choice." (FGD2F)
Social	Widespread Illiteracy	Over 80% of respondents lack literacy.	"Most of us are illiterate." (FGD35M)
	Inconsistent Public Distribution System	Though enrolled in the Public Distribution System (PDSS), many families cannot access all benefits.	"We only get wheat; our green card excludes us from other items." (FGD28F)
	Limited Health Insurance Knowledge and Access	Awareness and access to the Ayushman Bharat health insurance scheme are low among residents.	"We don't know how to get health insurance; we're barely surviving day to day." (FGD21M)

Health	Barriers to Healthcare Access	Residents often choose private healthcare due to long wait times at government hospitals and lack of transport to facilities.	"Government hospitals are overcrowded." (FGD23F)
	High Rates of Communicable Diseases and Environmental Health Risks	Common illnesses include diarrhea, viral fever, dengue, malaria, seasonal flu, skin infections, typhoid, and tuberculosis, worsened by poor environmental conditions.	"With no garbage disposal system, our community faces high disease risks and needs urgent action." (FGD30F)

Note: Identifiers for Quotes: FGD number and gender (*M*- Male, F- Female).

Economic vulnerability

Many domestic migrants residing in urban slums originally moved in search of employment due to poor economic conditions in their rural communities, which limited their ability to support their families. Focus group discussions (FGDs) highlighted that these migrants faced severe financial instability, reflected in extremely low and irregular incomes, inadequate access to basic services, and insecure housing. A significant portion of slum employment falls within the informal sector, which offers low pay, little stability, and no social security or employment benefits.

Precarious employment conditions

A majority of slum residents worked as daily laborers, truck drivers, seasonal vendors, or rag pickers. These occupations were inconsistent; many were employed for only half of each month. Truck drivers, for instance, often relied on rented vehicles and frequently experienced unemployment for more than ten days monthly. Most migrants had come from other states (such as Uttar Pradesh, Bihar, Rajasthan, and Madhya Pradesh) or other districts of Haryana in search of work. Rag pickers, seasonal vendors, and daily laborers endured physically exhausting and unpredictable work conditions without any guaranteed income. This instability meant they lived with constant anxiety about meeting basic needs and providing for their families.

As a result, children were frequently withdrawn from school to contribute to household income, often assisting in rag picking or other informal jobs alongside their parents. Women also commonly participated in these labor-intensive activities. One participant remarked, "These children serve as domestic helps, rag pickers, and sometimes vendors. Since no one has permanent employment here, rag picking is the only work available" (FG31F).

Insufficient daily wages

Daily earnings ranged from INR 100 to 300, which was insufficient to secure adequate food or other necessities, resulting in poor living conditions. Many households required both partners to work to exceed INR 300 per day. Even then, families struggled to meet basic nutritional needs, sometimes managing only a single meal per day. A participant explained, "Our father migrated to Karnal from UP. I was born and raised here, yet we are unable to earn enough to provide better food or housing for our children" (FGD5M).

This chronic lack of financial stability forced families into a cycle of short-term survival at the expense of long-term wellbeing. Without reliable income, they could not plan for the future or improve their living conditions. The persistent poverty not only limited access to nutritious food and safe living environments but also imposed significant health risks, trapping slum residents in ongoing hardship.

Physical/Infrastructural vulnerability

Slum residents frequently live in temporary dwellings that are poorly constructed, cramped, and inadequately ventilated, exposing them to numerous health risks. Inadequate water and sanitation services further exacerbate vulnerabilities and negatively affect child development.

Substandard housing and exposure to environmental hazards

Housing conditions significantly influence health outcomes, particularly when structures are fragile or located near environmental hazards. Over half of the study participants across 13 districts lived in temporary structures, commonly known as *kutcha* houses or shanties, made of mud walls with tin roofs; only a minority resided in brick-and-concrete homes. Many slum areas were densely populated, with narrow lanes, poor ventilation, and inadequate drainage. Rag pickers and daily wage laborers typically lived in shanties, whereas truck drivers, nomadic groups, domestic

workers, and leprosy patients occupied rented concrete houses. Shanty dwellers often lacked electricity and running water. Temporary structures were particularly vulnerable to heavy rains and strong winds, posing risks to residents' safety. Even concrete houses presented challenges, including limited space and ventilation, contributing to health issues such as asthma and skin conditions.

Slums were often situated near open drains or polluted water bodies, such as rivers and ponds, which increased flood risk. Stagnant water and open drains facilitated mosquito breeding, heightening susceptibility to vector-borne diseases. Residents reported feeling unsafe during the rainy season due to frequent flooding, proximity to high-tension wires, and nearby railway tracks. The combination of inadequate housing, overcrowding, and poor sanitation amplified their exposure to health hazards.

"We stay near the nallah, which collects all the city's garbage and floods every time it rains heavily. The floodwater mixes with sewage and garbage, and we have to clear it ourselves—no one helps us" (FGD28F).

Inadequate water, sanitation, and waste management

Access to clean water, sanitation, and hygiene (WASH) services is essential for maintaining health. Participants reported that available water was often contaminated and unsafe for drinking. Rag pickers and daily wage laborers lacked reliable water sources, relying on community taps, neighbors' water, or purchased bottled water despite their limited income. Many described the water as having a foul, sewage-like odor, making it unsuitable for cooking or consumption. Government-supplied water often served over 20 households per tap, and longstanding complaints about water quality had largely gone unaddressed.

"Sewer water is mixed in drinking water; it is very unfit to drink. We complained, but no action was taken" (FGD35M).

Although some common toilet facilities existed, certain shanties in four districts lacked any access, forcing residents to practice open defecation. Public toilets were often poorly maintained and water supply was irregular, discouraging usage. In some cases, a single toilet served more than 15 families.

"Public toilets are not clean; we cannot use them" (FGD9M).

Garbage disposal systems were largely absent or inefficient. Residents frequently managed waste themselves, disposing of trash in open areas, drainage channels, or vacant plots. Irregular municipal collection left slum dwellers with no alternative but to dump waste openly, despite repeated complaints to authorities.

"No one comes to take garbage. We have no other option but to dispose of it in open grounds or drainage pipes. The municipality has not provided dustbins. I personally don't like to litter, but what can we do?" (FGD23F).

Social vulnerability

Illiteracy remains a pervasive challenge among slum populations, severely constraining opportunities for social and economic advancement and reinforcing the cycle of poverty. Limited education prevents many residents from obtaining stable employment with adequate wages, confining them to low-paying, unskilled labor. Furthermore, lack of literacy impedes their ability to understand and access social welfare programs, healthcare services, and pathways for upward mobility.

The Indian government provides various social welfare schemes, such as the Public Distribution System (PDS) for food security and health insurance through the Ayushman Bharat [15] Pradhan Mantri Jan Arogya Yojana. The PDS ensures the distribution of essential food grains in scarcity-prone areas, helping low-income households meet basic nutritional needs. Meanwhile, Ayushman Bharat offers free health insurance coverage to economically disadvantaged populations, providing partial financial protection against the burden of medical emergencies.

High levels of illiteracy

More than 80% of respondents across the 13 districts were illiterate, while the remainder had only primary-level education, effectively rendering them functionally illiterate. Low literacy levels pushed many into precarious, unskilled employment in the informal sector. In turn, the demands of daily labor often left little time for parents to support their children's education, contributing to high school dropout rates. Children of rag pickers and daily wage laborers frequently accompanied their parents to work, assisting with income-generating activities instead of attending school. Despite the availability of free education in government schools, dropout rates remained particularly high among these children.

Irregular access to public distribution schemes [16]

Although the PDS was operational in all districts and most participants were registered, eligibility restrictions limited access to the full benefits of the program. Migrant families, such as rag pickers and daily wage laborers from other states, were often excluded from comprehensive coverage, exacerbating food insecurity. In addition, beneficiaries frequently reported that rations were of poor quality, insufficient to meet nutritional requirements.

"We only get wheat, and that too of very poor quality" (FGD51F).

These shortcomings in the PDS not only undermined food security but also had tangible health consequences, particularly for children who require adequate nutrition for growth and development. Complaints about the system were frequently ignored, leaving affected families feeling neglected and powerless. The inconsistencies in access and quality highlight structural weaknesses in social welfare provision, deepening the vulnerabilities of slum populations.

Limited awareness and access to health insurance

Awareness and enrollment in health insurance programs among slum residents were extremely limited. Very few participants were registered under the Ayushman Bharat scheme, a government-sponsored health insurance initiative, and most were unaware of the procedures required to access its benefits. Many reported that they could not enroll due to the lack of a PDS (ration) card, which is often a prerequisite for eligibility. Consequently, the majority of slum dwellers were not covered by any health insurance, and knowledge about Ayushman Bharat or alternative schemes was minimal. Even among those with health cards, understanding of how to utilize the scheme was poor. Despite its high-profile launch, Ayushman Bharat largely failed to reach the poor populations who qualified for coverage, leaving rag pickers, unskilled laborers, and jhuggi dwellers uninsured.

"Ayushman Bharat facility is given to those who have the Ration card. As we do not have a Ration card, we do not have the facility" (FGD11F).

Health vulnerability

The economic, physical/infrastructural, and social vulnerabilities discussed above collectively contribute to substantial health risks among slum populations. Economic challenges, including low education and unstable employment, restrict access to essential resources such as food and safe housing. Poor housing conditions, lack of clean water, and inadequate sanitation further heighten exposure to disease. Social vulnerabilities, such as limited participation in welfare programs and dissatisfaction with public services, exacerbate these health risks and restrict access to support systems.

Healthcare availability and barriers to utilization

Although public healthcare facilities were generally located within five kilometers of most slum areas, various barriers impeded their use. Long waiting times, inadequate transport, and distant locations discouraged residents from utilizing government services. In districts such as Sirsa, Panchkula, and Gurgaon, the inaccessibility of government dispensaries, particularly at night, prompted residents to seek private care.

Commonly reported health problems included diarrhoea, viral fevers, dengue, malaria, seasonal influenza, skin infections, typhoid, and tuberculosis. Participants attributed these conditions primarily to contaminated water and unhygienic living environments. Due to daily wage constraints, many slum residents could not afford to spend hours waiting for government medical services, often opting for private clinics or unqualified practitioners to avoid losing income.

The involvement of non-governmental organizations (NGOs) in healthcare support was limited. Only a few districts, including Panchkula, Gurgaon, Ambala, and Karnal, had active NGO interventions. Overall, the combination of inadequate government and NGO support left slum residents with insufficient healthcare access.

"We cannot waste a day's wage waiting in the government hospital, so we prefer to consult quacks or private care facilities" (FGD3M).

Prevalence of communicable diseases and environmental health risks

Diarrhoea, viral fevers, dengue, malaria, seasonal influenza, skin infections, typhoid, and tuberculosis were reported as the most prevalent health conditions among slum residents, as reflected across multiple FGDs. Participants consistently linked these illnesses to poor-quality drinking water and unhygienic living environments. Notably, non-communicable diseases, such as diabetes or hypertension, were not mentioned by participants.

"Due to the overflow of drainage water, our community members suffer from malaria, dengue, and other diseases" (FGD24M).

This study aimed to examine the multifaceted vulnerabilities of urban slum populations and their impact on health outcomes. By focusing on qualitative data from a concurrent mixed-methods study in Haryana, the research highlights the social, economic, physical, and health-related challenges faced by slum dwellers.

The findings underscore a pronounced disparity between the living conditions of slum residents and those of other urban populations. Slum dwellers' economic constraints, inadequate housing, and limited access to health and social services hinder their ability to escape the cycle of poverty that often motivates rural-to-urban migration.

Existing literature indicates that agricultural and industrial policies contribute to poverty, limited literacy, and rural-to-urban migration [17]. Low skill levels often force migrants into informal, low-paying employment, while substandard housing and environmental hazards exacerbate health risks [18, 19]. Economic vulnerabilities—such as working without social security in the unorganized sector—combined with physical exposures to natural hazards and limited access to social welfare programs, contribute collectively to health vulnerability and poor health outcomes. Additional factors include poverty, inadequate healthcare access, unsanitary living conditions, social exclusion, environmental hazards, and weak support networks.

Migrants entering urban job markets with low educational attainment and limited skills frequently face economic insecurity [20-22]. Coupled with inadequate housing and poor WASH (water, sanitation, and hygiene) infrastructure, these conditions significantly threaten the health and well-being of slum populations.

To mitigate these challenges, government initiatives such as the Public Distribution System (PDS) for food security and Ayushman Bharat Pradhan Mantri Jan Arogya Yojana for health insurance aim to support low-income households. Despite their existence, many slum residents struggle to access these programs due to documentation requirements and difficulties in proving identity or economic status.

This situation highlights the necessity of not only implementing social welfare programs but also ensuring they are inclusive and accessible. Simplifying enrollment procedures, raising awareness about available schemes, and offering assistance to navigate bureaucratic processes are essential to enable vulnerable populations—including migrants and slum dwellers—to improve economic stability, health outcomes, and overall well-being.

Urban health initiatives and persistent vulnerabilities

The National Rural Health Mission, launched by the Government of India in 2005, sought to address health challenges among rural populations [23]. In 2013, the National Urban Health Mission (NUHM) was introduced to extend similar support to socio-economically disadvantaged urban populations, including residents of slums [24]. Despite nearly a decade of operation, our study indicates that the mission's reach remains limited in slum areas.

In particular, slums accommodate vulnerable groups such as leprosy patients, who often rely on charitable organizations and NGO grants for their livelihood. Social stigma associated with disease further restricts their employment opportunities and access to healthcare, reinforcing both social and economic vulnerabilities. Among slum youth, unemployment is frequently linked to health conditions or disabilities, which compound their marginalization and vulnerability.

Drivers of rural–urban migration and slum growth

Rural-to-urban migration, prompted by economic, social, and environmental factors, contributes significantly to slum proliferation, particularly when urban planning and affordable housing provisions are inadequate. Consequently, slum residents face heightened health risks, including poor sanitation, contaminated water, and substandard housing, which increase susceptibility to both communicable and non-communicable diseases [25]. Many participants reported migration as a direct response to economic hardship in their rural regions, a theme consistently mentioned during FGDs.

The combination of population migration and insufficient urban housing policies has driven rapid slum expansion, with roughly two-fifths of Indian cities and towns—including those in Haryana—reporting slum settlements [26].

Challenges and policy gaps

Qualitative findings reveal that slum residents, predominantly rural migrants, experience compounded social and physical vulnerabilities that exacerbate health risks. Their exposure to poverty, poor housing, inadequate healthcare, limited education, social

exclusion, environmental hazards, and weak support networks contributes to persistent poor health outcomes. Most participants lived in unhealthy conditions, characterized by malfunctioning drainage systems and unmanaged waste disposal. Although government water supply schemes were operational in some areas, poor water quality contributed to communicable diseases such as diarrhoea, dengue, malaria, viral infections, and skin conditions. In addition, inadequate nutrition and the stress of insecure employment further predispose residents to non-communicable diseases.

Urban migrants are often among the poorest, with minimal capacity to spend on basic needs [27]. Ineffective policy implementation has restricted access to healthcare and social welfare, resulting in high rates of undernutrition, neonatal and under-five mortality, and low immunization coverage among slum children [28, 29]. Key determinants of health in urban slums include economic and social conditions, living environment, access to public healthcare, mobility, morbidity, and literacy [28, 30].

The findings underscore the need for systemic economic and social policy reforms to address the multifaceted vulnerabilities of slum populations. Community participation, combined with multisectoral approaches, is essential for developing interventions that reduce health risks and improve overall well-being.

Although programs such as the National Food Security Act, Pradhan Mantri Krishi Sinchai Yojana (PMKSY) [31], National Mission for Sustainable Agriculture (NMSA) [32], and the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) have aimed to support agriculture and rural livelihoods, they have largely failed to prevent migration or improve conditions for urban poor populations. Smallholder farmers struggling to survive in rural areas continue to migrate to cities in search of employment. While industrialization and urbanization have attracted rural populations, development policies have often fallen short in providing social security and fundamental human rights, including access to housing, education, and health (Agriculture - National Mission for Sustainable Agriculture).

Policy interventions and vulnerability framework

The qualitative analysis of this study identifies the underlying causes and contributing factors of vulnerability among slum populations and demonstrates how these vulnerabilities translate into adverse health outcomes. While participants were unable to articulate specific communicable diseases, existing evidence indicates a rising prevalence of non-communicable conditions, such as hypertension and diabetes, among economically disadvantaged populations. The findings underscore the need for periodic policy revisions to address evolving challenges in slum communities. Regular monitoring and evaluation of interventions are essential to assess their effectiveness in reducing current vulnerabilities and preventing emerging health risks.

Conclusion

This study highlights the multifaceted vulnerabilities faced by urban slum populations in Haryana, encompassing social, economic, physical, and health dimensions. Although government schemes and programs exist to mitigate these challenges, issues related to accessibility and documentation limit their effectiveness. The findings suggest that only an integrated and comprehensive strategy—including policy reform, community engagement, and multisectoral collaboration—can meaningfully improve the health and well-being of slum residents. Inclusive programs that enhance housing, water and sanitation infrastructure, and broader societal conditions are critical for achieving improved health outcomes.

Strengths and limitations

A key strength of this study is its scale and depth: the quantitative component included data from 13 districts encompassing 307,259 individuals, while the qualitative component analyzed 40 FGDs involving 454 participants. The study also benefited from a thorough literature review. However, the policy and programmatic review was limited to national and state-level interventions, and a more detailed analysis across sectors—including agriculture, industry, urban and rural development, and education—would be valuable before implementing multisectoral action plans.

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