

ENDURING MARGINS: A SOCIO-ECONOMIC ANALYSIS OF SEWAGE WORKERS IN DELHI-NCR

Anurag Kumar *

INTRODUCTION:

In the rapidly modernising urban landscape of Delhi/NCR, the rise of skyscrapers and infrastructure development often overshadows ongoing social inequalities, particularly in occupational labour. The caste system confines marginalised communities to degrading and hazardous jobs. Sewage workers, mainly from Dalit sub-castes like Valmiki and Mehtar, are limited to tasks such as sewer cleaning and manual scavenging occupations marked by extreme physical risks, social stigma, and a lack of dignity.

The caste system, a centuries old framework of social stratification, dictates labour roles by assigning certain communities to "polluting" occupations. Despite constitutional guarantees of equality and protective legislation like the Prohibition of Employment as Manual Scavengers and Their Rehabilitation Act (2013), caste-based exclusion remains prevalent. This highlights significant shortcomings in policy implementation and the persistent influence of social stigma. Scholars such as Ambedkar (1948), Thorat (2023), and Guru (2009) assert that caste serves as a formidable barrier to social and economic advancement, affecting labour markets and perpetuating socio-economic immobility.

Sewage workers face numerous physical risks, including exposure to toxic gases, infections, and unsafe working conditions. They also endure the psychological burden of caste-based ostracism, trapping them in cycles of poverty and exclusion with limited pathways to upward mobility. This systemic marginalisation challenges India's aspirations for equitable development and social justice. In such context, this study aims to provide a socio-economic analysis of sewage workers in Delhi-NCR, examining their working conditions, health challenges, access to education, and experiences of discrimination. It situates their struggles within broader discussions of structural inequality and emphasises the need for reform, drawing on theoretical insights from thinkers such as Ambedkar and Bourdieu.

Research Methodology

This study employs a mixed-methods design, combining qualitative and quantitative approaches to analyse the socio-economic conditions of sewage workers in Delhi-NCR.

* Ph.D. Research Scholar, Department of Sociology, Jamia Millia Islamia, New Delhi, India

This integration ensures nuanced understanding through qualitative data and generalizability with quantitative analysis. The target population includes sewage workers in Delhi-NCR, with 45 respondents selected via purposive and snowball sampling based on their active involvement in sewage-related occupations. Data were collected from Sangam Vihar in South Delhi (25 respondents) and Faridabad (20 respondents) from June to August 2024, reflecting a range of demographics such as caste, gender, age, and education. Structured interviews, validated by a pilot test with five participants, gathered comprehensive information on socio-economic conditions, education, health challenges, and discrimination experiences. Interviews were conducted in preferred languages to ensure accuracy and comfort. Quantitative data were analyzed using descriptive statistics with MS Excel, while qualitative data were thematically coded for deeper insights. This dual approach integrates numerical trends with personal narratives, addressing the research questions and aiming to provide a detailed understanding of the socio-economic realities faced by sewage workers in Delhi/NCR, contributing to discussions on caste-based labour and systemic inequalities.

Literature Review

Ambedkar (1948) argued that the caste system enforces social and economic exclusion by confining Dalits to the lowest occupational levels. This structure limits economic opportunities and reinforces social stigma, creating a cyclical relationship between caste and labour. Recent studies have built upon Ambedkar's insights, demonstrating the persistence of caste-based discrimination in labour markets. Singh (2014) found that "polluting" occupations like sewer cleaning and manual scavenging are disproportionately assigned to Dalits, highlighting the entrenchment of caste hierarchies despite legislative measures. Thorat (2023) emphasised the systemic barriers faced by Dalits in terms of recruitment, wages, and workplace conditions. These findings illustrate how structural inequalities sustain occupational segregation and inhibit socioeconomic mobility.

Another significant concern is the intergenerational transmission of caste-based occupations. Families engaged in sewage work often remain trapped in this cycle due to limited access to education, social networks, and alternative employment. Guru (2009) pointed out that occupational stigma affects entire communities, perpetuating cycles of exclusion. These insights underscore the complex interplay between caste, labour, and structural inequality that shapes the experiences of sewage workers in Delhi-NCR.

Teltumbde (2010) argued that caste-based stigma exacerbates dehumanization and isolation among workers, creating a cycle of vulnerability that limits their ability to seek better working conditions or alternative livelihoods. Addressing these issues requires enhanced workplace protections and societal changes to dismantle caste-based stigmas. Shah (2006) noted that inadequate funding, weak enforcement mechanisms, and a lack of

political will hinder the effectiveness of legislative protections. Many workers report insufficient support for transitioning to alternative employment, leaving them trapped in hazardous jobs.

Thorat and Newman (2012) found that Dalit students face systemic biases, such as low expectations from teachers, social ostracism, and unequal access to resources. These challenges hinder their academic performance and limit their opportunities for higher education and non-stigmatized employment. Rathod (2022) contended that broader structural reforms, including skill development programs, educational initiatives, and affirmative action policies, are necessary to tackle the root causes of caste-based exclusion. Without such measures, legal protections alone are unlikely to bring about meaningful change.

Theoretical Perspectives on Caste and Labour

Theoretical frameworks offer important insights into the complex dynamics of caste and labour. Ambedkar (1948) critiques the caste system for perpetuating socio-economic exclusion and advocates for structural reforms, such as land redistribution, education, and political representation. These concerns remain highly relevant in contemporary discussions on caste and labour. Bourdieu's (1986) theory of social capital further illuminates the challenges faced by sewage workers, as Dalit communities often lack access to critical social networks, cultural capital, and economic resources, trapping them in cycles of poverty and exclusion. This underscores the importance of mentorship programs, community development initiatives, and policies that promote social and economic inclusion. Guru (2009) explores the cultural dimensions of caste-based stigma, highlighting how the devaluation of "polluting" jobs perpetuates both social exclusion and the marginalisation of Dalit labour. Addressing this issue requires confronting entrenched biases and stereotypes to foster meaningful social change.

Results:

Table 1: Demographic and Socio-Religious Profile of Sewage Workers

Variable	Categories	Frequency (n = 45)	Percentage (%)
Gender	Male	45	100
	Female	0	0
Age Group	18–30 years	12	26.7
	31–45 years	20	44.4
	46+ years	13	28.9

Education Level	Illiterate	20	44.4
	Primary Education	18	40
	Secondary Education	7	15.6
Religion	Hindu	42	93.3
	Muslim	2	4.4
	Others	1	2.2
Caste	Scheduled Caste (SC)	42	93.3
	Other Backward Class (OBC)	2	4.4
	Others	1	2.2

Source: Fieldwork Data collected by Author, 2024

The demographic profile of sewage workers, as presented in Table 1, shows that the workforce is entirely male with no female representation. The majority of workers, 44.4%, are aged 31 to 45, followed by 28.9% who are 46 and older, and 26.7% who fall within the 18 to 30 age range. In terms of education, 44.4% of workers are illiterate, 40.0% have completed primary education, and only 15.6% have finished secondary education.

In terms of religion, 93.3% are Hindu, 4.4% are Muslim, and 2.2% belong to other groups. Caste distribution shows that 93.3% come from Scheduled Castes (SC), with a small number from Other Backward Classes (OBC) and other castes.

Table 2: Employment Type and Income Profile of Sewage Workers

Variable	Categories	Frequency (n = 45)	Percentage (%)
Employment Type	Permanent	1	2.2
	Contractual	21	46.7
	Daily Wage Employed	23	51.1
Monthly Income (in)	Less than 5,000	5	11.1
	5,001–10,000	20	44.4
	10,001–15,000	18	40
	Above 15,000	2	4.4

Source: Fieldwork Data collected by Author, 2024

The employment types and income profiles of sewage workers provide important insights into their economic conditions and job security, as illustrated in Table 2. Among the workers, the majority (51.1%) are employed as daily wage workers, while 46.7% are employed on a contractual basis. Permanent employment is extremely rare, with only 2.2% of workers holding secure and stable jobs. Despite recommendations to provide basic social security measures, such as health cards, none of the respondents except for the permanent employee-reported having access to a health card.

Income distribution further underscores the precarious financial situation of many workers. Only 4.4% earn more than Rs.15,000 per month, while a significant proportion (44.4%) earn between Rs.5,001 and Rs.10,000. A notable 40.0% of workers fall into the income bracket of Rs. 10,001-15,000, reflecting a slightly better financial standing. However, a concerning 11.1% of the workforce earns less than Rs. 5,000 per month, highlighting the vulnerability of this group to economic hardship.

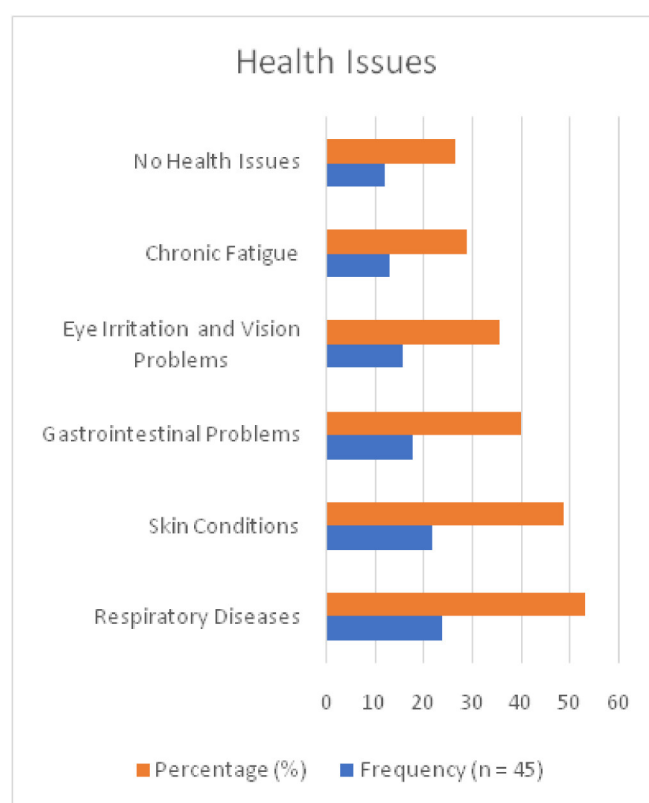


Figure 1: Health Issues Among Sewage Workers

Source: Fieldwork Data collected by Author, 2024

The health profile of sewage workers reveals a range of health issues, with many employees facing multiple challenges, as shown in Figure 1. Respiratory diseases are the most commonly reported, affecting 53.3% of workers, followed by skin conditions at 48.9% and gastrointestinal problems at 40.0%. Additionally, 35.6% of workers experience eye irritation and vision problems, while 28.9% report chronic fatigue, likely linked to the physically demanding nature of their jobs. Interestingly, 26.7% of workers report no health issues, suggesting that a portion of the workforce remains unaffected by occupational hazards. This may be due to better personal protective measures or shorter exposure durations.

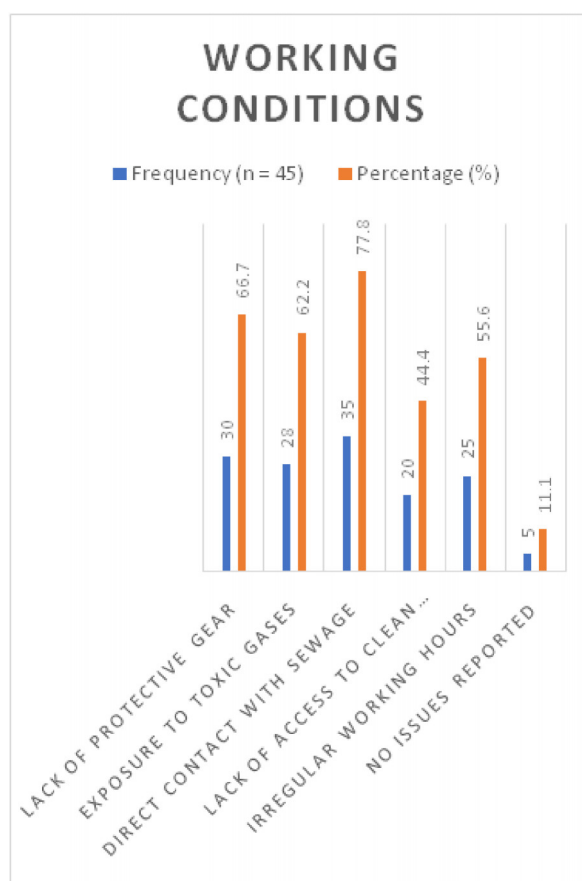


Figure 2: Working Conditions of Sewage Workers

Source: Fieldwork Data collected by Author, 2024

The trends shown in Figure 2 indicate that a significant majority of workers (77.8%) have direct contact with sewage, which puts them at considerable health and safety risks. Furthermore, a large percentage (66.7%) do not have access to protective gear, which

increases their vulnerability to occupational hazards. Additionally, 62.2% of respondents reported exposure to toxic gases, highlighting the dangerous conditions of their work environment.

Additionally, 55.6% of the workers experience irregular working hours, which can contribute to physical and mental fatigue. Nearly half (44.4%) of the respondents lack access to clean drinking water during work, reflecting a severe gap in basic workplace provisions. Notably, 11.1% of workers reported no issues, suggesting that some individuals may work under relatively better conditions or have shorter exposure durations

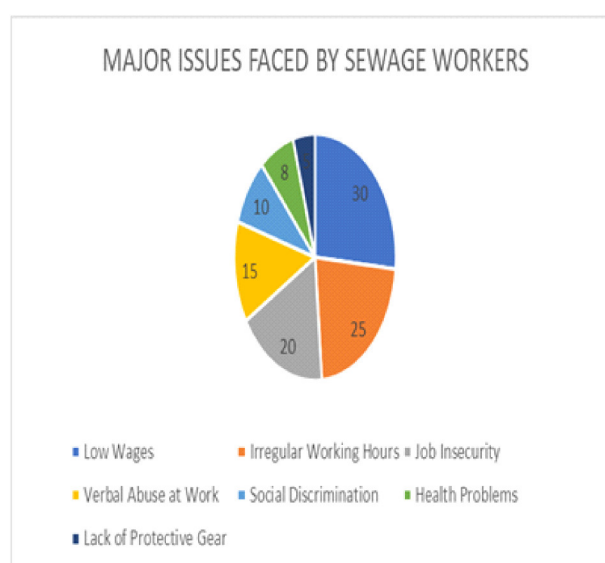


Figure 3: Major Issues Faced by Sewage Workers

Source: Fieldwork Data collected by Author, 2024 (Data in percentage)

A comprehensive analysis of the challenges faced by sewage workers reveals several key issues, as illustrated in Figure 3. Low wages affect 66.7% of respondents, followed by irregular working hours at 55.6% and job insecurity at 44.4%. Additionally, 33.3% report experiencing verbal abuse, while 22.2% face social discrimination, highlighting the stigma associated with this occupation. Health problems are reported by 17.8% of workers, and 11.1% express concern over the lack of protective gear.

Discussion

The data presents a stark and comprehensive picture of the socio-economic and occupational challenges faced by sewage workers. The predominance of male workers with low educational attainment reflects entrenched societal norms and systemic barriers. Drawing on Ambedkar's writings on caste (Ambedkar, 1948), the concentration of Scheduled Castes in degrading work underscores systemic discrimination and occupational immobility

perpetuated by caste-based hierarchies. Ghurye (1969) exploration of caste and social structures emphasises how occupational stratification reinforces traditional divisions within Indian society.

The caste-based stigma attached to sewage work, described by Guru (2009) as an "ontological stigma," dehumanises workers and perpetuates their marginalisation. This stigma traps sewage workers in caste-based occupations, reinforcing social hierarchies despite constitutional provisions for equality. Manoj (pseudonym), a 34-year-old worker, stated, "People look at us with disgust when they see us working. Some officials refuse to talk to us directly." Here, Ambedkar's concept of caste as a system of "graded inequality" is evident in the lives of sewage workers, who face systemic barriers to upward mobility and dignified employment. This marginalisation, particularly affecting Dalit communities like the Valmiki's, confines them to the lowest socio-economic rungs and stigmatizes sanitation work.

Insecure employment and low wages underscore the economic instability that sewage workers face, often leading to their alienation from societal respect and dignity. Marx's theory of alienation is apparent as these workers engage in hazardous labour without adequate compensation or recognition. Engels' observations about the working class resonate with the perilous conditions encountered by sewage workers. High-interest loans from non-institutional lenders exacerbate their financial insecurity, highlighting systemic challenges in accessing formal credit and support. Shyam (a pseudonym) borrowed Rs50000 from his contractor to cover unexpected expenses, resulting in financial stress. He shared, "For the past year, I have been receiving a very low salary, as the contractor deducts from my pay. He often compels me to work overtime, and without any assistance, I end up doing the work of two or three men on my own."

Educational barriers exacerbate these challenges. Bourdieu's theory of cultural capital (Bourdieu, 1986) suggests that the exclusion of marginalised groups from cultural and educational resources limits their social mobility. Low educational attainment among sewage workers perpetuates cycles of poverty and exclusion. This is evident in the finding that many sewage workers often lack the educational qualifications that could help them move beyond their current socioeconomic status. Furthermore, Children of sewage workers often attend government schools with limited resources and minimal guidance, hindering their potential to improve life chances through education. As Bourdieu's theory of cultural capital suggests, this lack of educational support puts them at a disadvantage in academic performance and future opportunities. The combination of low educational attainment and limited access to cultural capital creates a cycle of disadvantage, trapping marginalised groups in poverty and preventing upward social mobility.

The study also reveals that 85% of workers live in overcrowded, poorly ventilated single-room dwellings in urban ghettos, spending a significant portion of their earnings on rent. For instance, Rajesh (a pseudonym), a 28-year-old sewage worker, pays Rs.3,500 for a small room in Delhi, leaving him with Rs.5,000 for food and family expenses. Only 20% of workers have separate toilets, most relying on community facilities. Despite their efforts to maintain urban sewage systems, they face inadequate sanitation infrastructure.

Sewage workers face significant health risks from toxic gas exposure, infections, and injuries, worsened by limited healthcare access. Mohalla Clinics are often closed, and government hospitals are overcrowded. Rajesh (a pseudonym), a sewage worker, shares: "After suffering a physical injury, I developed an infection. The Mohalla Clinic was closed, and at a government hospital, I lost two days' pay for basic treatment. My health and livelihood are at risk." These narratives highlight the struggles sewage workers endure due to unsafe conditions and inadequate healthcare, perpetuating their poverty cycle.

Legal frameworks like the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act (2013) and programs such as Swachh Bharat Abhiyan fail to address caste-based occupational stratification and socio-economic inequality. The study highlighted a lack of awareness regarding government programs, including the National Action for Mechanised Sanitation Ecosystem (NAMASTE). Despite sewer cleaning machines, these are not adequately equipped for unauthorised areas in Delhi-NCR. Consequently, these schemes have a marginal impact on sewage workers' welfare, who continue to face fatalities while cleaning sewers, even as state authorities deny such claims.

The social discrimination and verbal abuse faced by sewage workers underscore the stigma associated with their occupation. A significant 52% of respondents report exclusion from social functions like religious gatherings and weddings. Raju recounts, "My family is not invited to any weddings or festivals in our neighborhood. We are treated as if our presence would contaminate the event." Sewage workers face pervasive humiliation and stigma in daily interactions, including derogatory slurs and physical distancing, which diminishes their self-esteem and reinforces the caste hierarchy in modern India. The absence of upper-caste workers in sanitation roles highlights the disproportionate burden on Dalits. Srinivas concept of the 'dominant caste' controlling subordinate groups is evident, as caste-based discrimination perpetuates the exploitation and marginalisation of these workers. This systemic oppression and the state's neglect of marginalised labourers reflect Roy's critique of inadequate labour policies (Roy, 2014).

These findings underscore the need for targeted policy interventions that address healthcare accessibility, improve educational support, and provide pathways for social integration. future research could explore the intersection of caste, labour, and technology,

investigating how technological advancements may exacerbate or alleviate existing inequalities. Understanding the role of technology in shaping labour markets and social mobility for marginalised groups could provide valuable insights into the evolving dynamics of caste-based labour systems and inform strategies for fostering more inclusive growth.

Conclusion

The study underscores the socio-economic and occupational challenges faced by sewage workers in the Delhi-NCR region, emphasising their systemic marginalisation and the impact of caste-based hierarchies. The findings reveal that this workforce endures hazardous working conditions while being trapped in cycles of low education, poor health, economic vulnerability, and social discrimination. Barriers to education and structural constraints hinder their upward mobility, which is in line with the theories of systemic exclusion and cultural capital proposed by Ambedkar and Bourdieu.

The lack of protective measures and fair wages, coupled with exploitation in informal employment, illustrates a disregard for labour rights. Caste-based stigma further reinforces social hierarchies and alienates these workers. Additionally, ineffective rehabilitation programs and government schemes leave them susceptible to exploitative practices and cycles of debt. Addressing these challenges requires a multifaceted approach, including improving workplace safety, enforcing labour laws, and ensuring fair wages. Targeted educational programs and awareness initiatives are crucial for empowering sewage workers and breaking the cycles of poverty and marginalisation. The study calls for a reevaluation of state interventions and the involvement of civil society to dismantle systemic inequalities. Integrating marginalised communities into mainstream society through structural and cultural changes is essential for achieving equity, dignity, and social cohesion. This endeavor necessitates sustained efforts to challenge deeply rooted social norms and economic practices.

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