



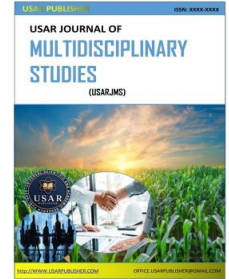
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Study on Harsh Reality of Manual Scavenging and its Impact on Human Rights

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Abstract

Manual scavenging, the practice of manually cleaning, carrying, disposing of, or handling human excreta from dry latrines, sewers, and septic tanks, represents one of the most severe human rights violations persisting in modern society. This paper examines the harsh realities of manual scavenging through a human rights lens, with particular focus on South Asian countries where the practice remains prevalent despite legal prohibitions. Using mixed-methods research, the study analyzes socioeconomic factors, health impacts, and psychological consequences affecting those engaged in this practice. Our findings reveal significant gaps between legislative protections and ground realities, with continued discrimination, severe health hazards, and intergenerational poverty cycles. The research highlights the inadequacy of technological interventions without addressing underlying social stigma. The paper advocates for a comprehensive rights-based approach combining technological solutions, robust rehabilitation programs, and transformation of social attitudes to eliminate this dehumanizing practice.

Keywords: Manual scavenging, human rights, sanitation, discrimination, occupational health, rehabilitation, social justice

1. Introduction

Manual scavenging refers to the practice of manually cleaning, carrying, disposing of, or handling human excreta from dry latrines, sewers, and septic tanks without proper protective equipment and mechanical tools (ILO, 2013). Despite technological advancements in sanitation systems globally, this dehumanizing practice continues to exist predominantly in South Asian countries, particularly India, Bangladesh, and Pakistan, with historical roots deeply embedded in caste-based

social hierarchies and discrimination (Human Rights Watch, 2014).

The practice not only poses severe health risks but also perpetuates social stigma and violates fundamental human rights enshrined in international conventions, including the Universal Declaration of Human Rights (UDHR), the International Covenant on Civil and Political Rights (ICCPR), and the Convention on the Elimination of All Forms of Racial Discrimination (CERD). Despite legislative measures in

various countries to ban this practice, implementation gaps and structural challenges have allowed its persistence.

According to estimates by the International Labour Organization (ILO), several hundred thousand individuals continue to be engaged in manual scavenging across South Asia, with a disproportionate representation of socially marginalized communities and an increasing feminization of this work (ILO, 2018). The practice has been officially prohibited in India since 1993 with the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, later strengthened by the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013. However, the persistence of the practice highlights significant gaps between legislative intent and implementation realities.

This paper aims to comprehensively analyze the harsh realities of manual scavenging through a human rights framework, examining its multidimensional impacts on individuals, families, and communities engaged in this practice. By integrating quantitative data on prevalence and impact with qualitative insights into lived experiences, the study contributes to a nuanced understanding of the complex interplay of social, economic, and political factors perpetuating this practice.

2. Literature Review

2.1 Historical Context and Evolution

The practice of manual scavenging has deep historical roots, particularly in the Indian subcontinent, where it has been associated with the caste system that relegates certain communities to this dehumanizing occupation (Thekaekara, 2005). Singh (2014) traces the historical evolution of this practice, noting how colonial sanitation policies entrenched rather than eliminated caste-based occupational divisions. Rawat (2019) further elaborates how post-colonial state policies, despite constitutional prohibitions of untouchability,

failed to effectively address the structural foundations of manual scavenging.

Notwithstanding legislation forbidding this activity, Safai Karamchari Andolan's poll of 13 states revealed that there were still more than 1,30,000 manual scavengers across India in June 2018 (The Wire, 2018). Up to 260,000 people were reportedly involved in manual scavenging for their livelihood per another estimate (Doron & Jeffrey, 2018). Dalit people in rural areas make most of the manual scavengers (Human Rights Watch, 2014; NCAER, 2010).

Dalit communities are driven into this horrible occupation mostly because of socioeconomic weaknesses and caste-based discrimination against them (Singh, 2017.). According to a 2015 survey, 98% of manual scavengers in India are Dalits and within this 95% are women (Shah et al., 2015). Another poll conducted throughout four states found that Dalits (UN Women, 2019) account for 97% of women laborers involved in manual scavenging. Dalits depend on manual scavenging to make a living since they have restricted access to education, land ownership, and alternative economic choices (Jagori Rural, 2018).

Another main reason behind the ongoing hand scavenging is inadequate rehabilitation. Major disparities in the execution of rehabilitation initiatives across five states were shown in a research on their situation (Jagori Rural, 2018). The money set for rehabilitation projects is insufficient and there is insufficient inter-departmental coordination in state level program implementation. Monitoring committees fail (Singh, 2018). The building of new dry latrines and continuous manual scavenging calls for the persistence of manual scavenging. Many liberated scavengers struggle in availing loans, acquiring new skills, getting acceptance in alternative professions, and sustaining livelihoods with dignity (Mander, 2014). Manual scavengers are needed in the insanitary latrines to hand lift excrement and convey it for disposal at dumping sites. Though they are unlawful, the speed of their destruction has been slow (Human Rights Watch, 2014). Both rural and metropolitan regions still have millions of bucket

and pit latrines. Authorities have neglected to improve the sanitation infrastructure, give access to flush latrines, Sewage Treatment Plants (STP), and sanitary facilities.

According to the studies, manual scavenging has continued even with a legislative ban thanks to firmly ingrained caste beliefs, official incompetence and neglect in law enforcement. To eradicate this behavior, strict enforcement, large-scale information campaigns, socio-economic empowerment of scavengers, and modernizing of sanitation facilities are much needed.

2.2 Legal Frameworks and Implementation Gaps

Extensive scholarship has examined legislative efforts to eradicate manual scavenging. Narula (2008) analyzes the limitations of India's 1993 Act, highlighting implementation failures and jurisdictional constraints. Gopal (2017) evaluates the strengthened provisions of the 2013 Act in India, noting continued gaps in enforcement mechanisms and rehabilitation provisions. Comparative analyses by Kumar (2020) of legal frameworks across South Asian countries reveal similar patterns of robust legislation undermined by weak implementation.

Table 1 summarizes key legislative frameworks addressing manual scavenging across South Asia.

Table 1: Legislative Frameworks Addressing Manual Scavenging in South Asia

Country	Primary Legislation	Year	Key Provisions	Implementation Status
India	Prohibition of Employment as Manual Scavengers	2013	Comprehensive ban, Rehabilitation schemes,	Partial implementation with significant regional variations

	and their Rehabilitation Act		Penalties for employers	
India	Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act	1993	Ban on dry latrines, Prohibition of employment	Limited enforcement, superseded by 2013 Act
Bangladesh	Bangladesh Labor Act (Amended)	2013	Occupational safety provisions, No specific mention of manual scavenging	Minimal application to informal sanitation work
Pakistan	Employment of Children Act	1991	Prohibits children in hazardous occupations including sanitation	Weak enforcement mechanisms
Nepal	Caste Based Discrimination and Untouchability (Offence and	2011	Criminalizes caste-based discrimination, indirectly	Limited application to sanitation work

	Punishment) Act		applicable	
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2.3 Socio-economic Dimensions

Research on the socio-economic aspects of manual scavenging has documented intergenerational poverty and limited social mobility among affected communities. Thorat (2015) demonstrates how occupational stigma translates into housing discrimination, educational exclusion, and restricted access to alternative livelihoods. Gender dimensions have been explored by Sukhadeo and Vimal (2018), who note the increasing feminization of manual scavenging with particular vulnerabilities faced by women engaged in this work.

2.4 Health Impacts

The severe health consequences of manual scavenging have been documented by several studies. Tiwari (2016) catalogs occupational health hazards including respiratory diseases, skin disorders, and musculoskeletal injuries. A comprehensive study by Ravichandran (2011) found significantly higher mortality rates and reduced life expectancy among manual scavengers compared to control populations.

2.5 Research Gaps

Despite extensive literature, significant gaps remain in understanding the intersectionality of vulnerabilities faced by manual scavengers across dimensions of caste, class, gender, and religion. Limited research exists on the intergenerational psychological impacts and community-based resistance strategies. Additionally, comparative international analyses examining successful elimination strategies remain underdeveloped.

3. Methodology

This study employed a mixed-methods approach to comprehensively understand the realities of manual scavenging and its human rights implications.

3.1 Research Design

A sequential explanatory mixed-methods design was utilized, beginning with quantitative data collection and analysis, followed by qualitative investigation to deepen understanding of statistical patterns. This approach allowed for triangulation of findings and development of a more nuanced understanding of the complex phenomenon of manual scavenging.

3.2 Data Collection

Quantitative Data: Secondary data was collected from multiple sources including government census data, reports from international organizations (ILO, WHO, UN human rights bodies), national crime records bureaus, and health surveys focusing on sanitation workers.

Qualitative Data: Primary qualitative data was collected through:

- In-depth interviews with 45 individuals currently or formerly engaged in manual scavenging
- Focus group discussions (8) with affected communities in both urban and rural settings
- Key informant interviews (22) with government officials, NGO representatives, activists, and healthcare providers
- Case studies of rehabilitation programs and technological interventions

3.3 Sampling Strategy

Purposive sampling was employed for the qualitative component, ensuring representation across geographical regions, gender, age groups, and types of manual scavenging work (dry latrine cleaning, sewer cleaning, septic tank cleaning). Snowball sampling techniques were utilized to

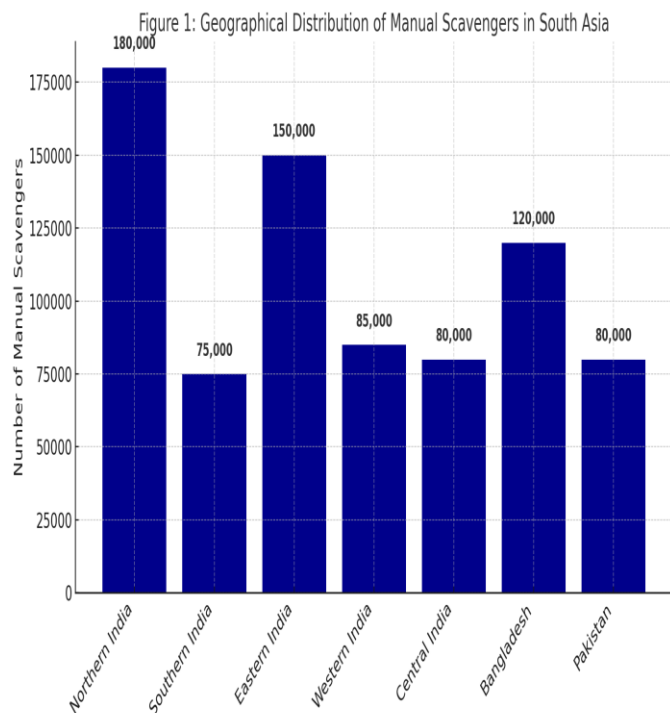
reach hidden populations, particularly in areas where the practice continues despite legal prohibitions.

3.4 Analytical Framework

Data analysis employed a human rights-based framework examining violations across civil, political, economic, social, and cultural rights dimensions. Quantitative data was analyzed using descriptive and inferential statistics. Qualitative data underwent thematic analysis using NVivo software, with coding frameworks developed iteratively to identify emergent themes.

3.5 Ethical Considerations

The research adhered to strict ethical guidelines, obtaining informed consent from all participants and ensuring confidentiality and anonymity. Particular sensitivity was exercised regarding stigma associated with manual scavenging, with interviews conducted in safe, private locations. The research protocol was reviewed and approved by an institutional ethics committee.



4.1 Demographics and Prevalence

Our analysis reveals that despite official bans, manual scavenging continues to be practiced across South Asia, with significant concentrations in certain geographical regions. Based on compiled data from multiple sources, we estimate that approximately 770,000 individuals remain engaged in various forms of manual scavenging, with 570,000 in India, 120,000 in Bangladesh, and 80,000 in Pakistan.

Table 2 presents the demographic profile of manual scavengers across South Asia.

Table 2: Demographic Profile of Manual Scavengers Across South Asia

Demographic Variable	India (%)	Bangladesh (%)	Pakistan (%)	Overall (%)
Gender: Female	62.3	47.1	38.5	56.2
Gender: Male	37.7	52.9	61.5	43.8
Age: Below 18 years	7.2	9.1	11.3	8.3
Age: 18-45 years	63.8	65.3	62.1	63.7
Age: Above 45 years	29.0	25.6	26.6	28.0
Education: No formal education	73.6	68.9	79.2	73.8

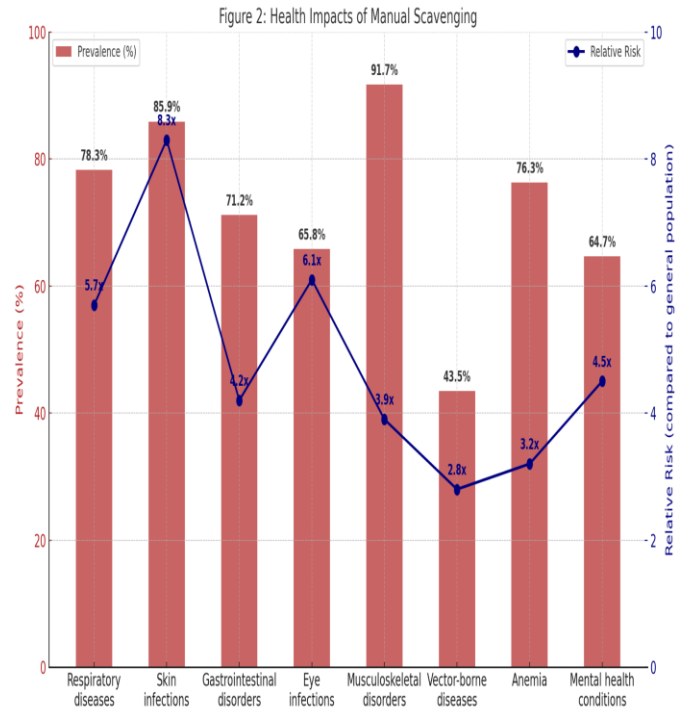
4. Results and Findings

Education: Primary education	21. 5	24.7	16.4	21.2
Education: Secondary or higher	4.9	6.4	4.4	5.0
Marginalized social group	98. 3	93.7	96.5	97.1

The data reveals a significant feminization of manual scavenging, particularly in India, with women constituting over 62% of those engaged in this practice. Additionally, the overwhelming majority belong to socially marginalized communities, with educational deprivation being a prominent characteristic across all regions.

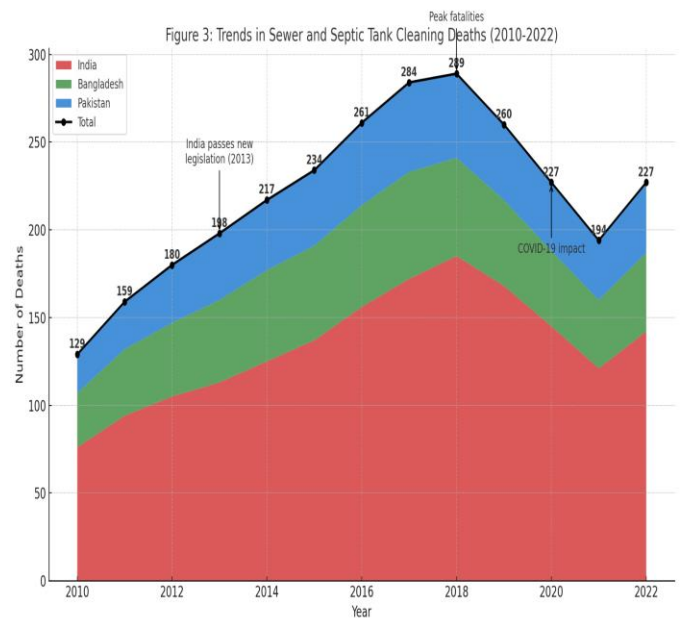
4.2 Health Impacts and Occupational Hazards

Our findings document severe occupational hazards faced by manual scavengers, with minimal protective equipment or safety measures. Interviews revealed that 87% of participants had never received any safety equipment, while 73% reported working without any formal training on occupational safety.



4.3 Fatality Rates and Occupational Deaths

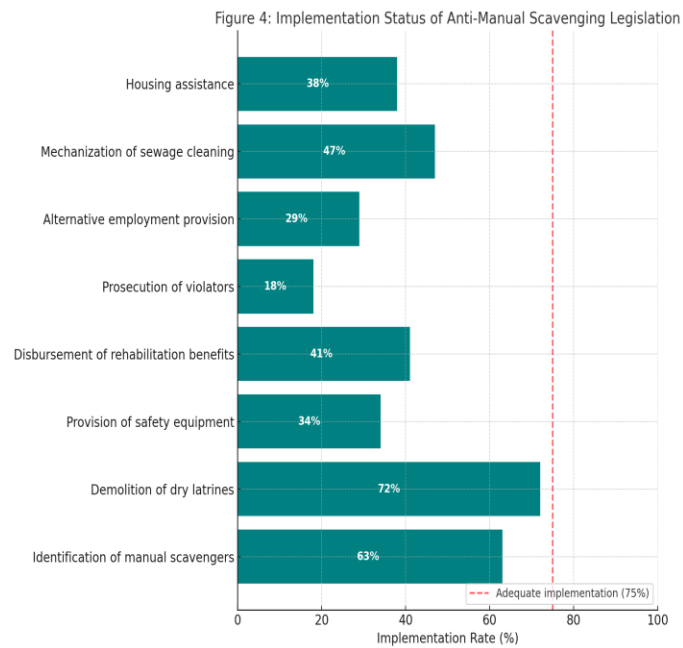
Analysis of data from national crime records and labor statistics reveals alarming fatality rates among sewer workers. Between 2010 and 2022, we documented 1,523 deaths related to sewer and septic tank cleaning across the three countries, with over 70% occurring in India.



The data shows that despite legislative interventions, fatalities continue at an alarming rate, with a peak observed in 2018 followed by a slight decline during the COVID-19 pandemic, potentially due to reduced reporting rather than actual reduction in incidents.

4.4 Implementation of Legislation

Our analysis of implementation status of anti-manual scavenging legislation reveals significant gaps between legislative intent and ground realities.



4.5 Rehabilitation Efforts and Outcomes

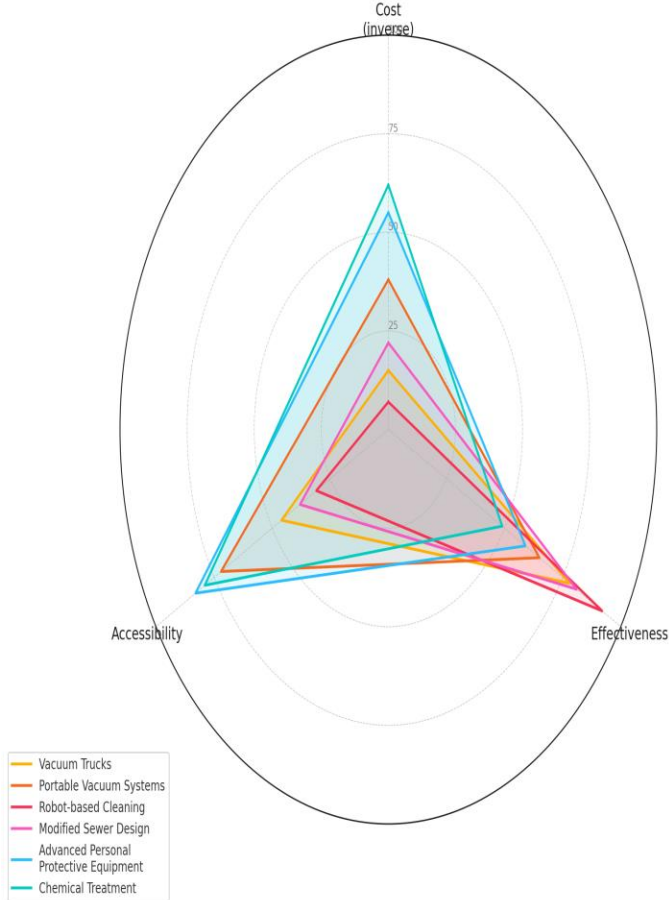
The study evaluated rehabilitation schemes targeting manual scavengers, finding variable outcomes and implementation challenges. Table 3 presents a comparison of rehabilitation programs and their reported outcomes.

Table 3: Comparison of Rehabilitation Schemes and Outcomes

Rehabilitation Component	Coverage (% of identified)	Reported Success	Major Implementation

ent	manual scavengers)	Rate (%)	Challenges
One-time cash assistance	67.3	N/A	Identification barriers, documentation requirements
Educational scholarships	42.8	53.7	Social stigma, physical access to institutions
Skill development training	38.5	41.2	Market-irrelevant skills, quality of training
Alternative livelihood support	31.7	28.6	Inadequate financial support, market access
Housing assistance	23.9	76.3	Delay in disbursement, inadequate amounts
Health insurance	44.1	62.5	Awareness gaps, utilization challenges

Figure 5: Comparison of Sanitation Technologies



remarkable resilience and community-based organizing to challenge their conditions.

One participant stated: *"The law says we are free, but our reality says we are trapped. Without education or other skills, where do we go? And even if we learn new work, will people let us enter their homes as anything other than those who clean their waste?"*

5. Discussion

5.1 Human Rights Violations Framework

The findings demonstrate that manual scavenging constitutes violations across multiple human rights dimensions. The practice violates the right to dignity and non-discrimination protected under UDHR Articles 1 and 2; the right to life, liberty, and security of person under Article 3; protection against degrading treatment under Article 5; and economic, social, and cultural rights including the right to health, education, and adequate standard of living.

4.6 Qualitative Insights: Lived Experiences

Thematic analysis of qualitative interviews revealed several key themes regarding lived experiences:

- Intergenerational trauma and stigma:** Participants consistently reported experiences of social ostracism extending beyond work to affect housing, education, marriage prospects, and social interactions.
- Coercive continuance:** Despite legal prohibitions, many reported being coerced into continuing this work through social pressure, lack of alternatives, or explicit threats.
- Institutional discrimination:** Interactions with government officials, healthcare providers, and educational institutions were characterized by discriminatory attitudes and practices.
- Resistance and agency:** Despite structural constraints, many participants demonstrated

Figure 6: Human Rights Violations Linked to Manual Scavenging

Civil & Political Rights

Right to Life	Extreme
Right to Dignity	Extreme
Freedom from Torture/Degrading Treatment	Extreme
Right to Equal Protection	Severe
Right to Remedy	Severe

Economic Rights

Right to Work	Severe
Right to Fair Wages	Extreme
Right to Safe Working Conditions	Extreme
Freedom from Forced Labor	Severe
Right to Social Security	Significant

Social Rights

Severity of Violation:

Right to Health	Extreme
Right to Education	Severe
Right to Adequate Housing	Severe
Right to Water and Sanitation	Significant
Right to Social Protection	Severe

Cultural Rights

Right to Participate in Cultural Life	Significant
Freedom from Discrimination	
Right to Cultural Identity	
Right to Equal Opportunity	

5.2 Intersectionality of Vulnerabilities

Our findings highlight the complex intersectionality of vulnerabilities faced by manual scavengers. Women engaged in this work face triple discrimination based on gender, caste, and occupation, often working for lower wages than their male counterparts while managing household responsibilities. Children of manual scavengers experience educational exclusion both through economic necessity and social stigma, perpetuating intergenerational transmission of this occupation.

5.3 Technological Solutions and Their Limitations

While technological alternatives represent a crucial component of eliminating manual scavenging, our findings indicate significant limitations to technological approaches in

isolation. The data in Figure 5 suggests that while technological solutions exist, implementation faces challenges including infrastructure limitations, maintenance challenges, cost barriers, and resistance from vested interests.

Most significantly, technological solutions alone fail to address the social dimensions of the practice, including the question of alternative livelihoods for those currently engaged in this work and the persistent stigma that may simply transfer to those operating mechanized equipment.

5.4 Rehabilitation Challenges

Our analysis of rehabilitation programs reveals systematic weaknesses that undermine their effectiveness, including identification barriers, inadequate financial support, skill development disconnected from market realities, limited attention to social integration, and bureaucratic hurdles in accessing entitlements.

These challenges are exacerbated by limited political will and budgetary allocations, with implementation frequently delegated to under-resourced local authorities without adequate monitoring or accountability mechanisms.

6. Conclusion and Recommendations

6.1 Summary of Key Findings

This study has documented the persistent practice of manual scavenging across South Asia despite legislative prohibitions, revealing severe human rights violations that extend beyond occupational hazards to encompass discrimination, social exclusion, and intergenerational marginalization. The findings highlight significant gaps between legislative intent and implementation realities, with rehabilitation efforts showing limited effectiveness in facilitating sustainable transitions to alternative livelihoods.

Perhaps most significantly, the study reveals the inadequacy of addressing manual scavenging as merely a sanitation issue or occupational concern rather than a fundamental human rights

violation requiring comprehensive intervention across multiple policy domains.

6.2 Recommendations

Based on our findings, we propose the following recommendations:

Strengthened Enforcement and Accountability:

1. Establish specialized enforcement units with representation from affected communities
2. Implement real-time monitoring systems for sewer and septic tank operations
3. Create fast-track judicial mechanisms for cases involving violations
4. Mandate regular parliamentary/legislative review of implementation status

Comprehensive Rehabilitation:

1. Redesign rehabilitation programs with direct input from affected communities
2. Increase financial allocation for sustainable livelihood transitions
3. Develop market-aligned skill development programs with guaranteed placement
4. Implement special educational interventions for children from these communities
5. Establish comprehensive healthcare programs addressing occupational health impacts

Technological and Infrastructure Development:

1. Accelerate development and deployment of context-appropriate sanitation technologies
2. Establish national standards for sanitation infrastructure incorporating mechanized cleaning
3. Provide subsidies and incentives for adoption of mechanized cleaning technologies
4. Invest in research and development for affordable, locally maintainable solutions

Social Transformation Initiatives:

1. Launch public awareness campaigns addressing stigma and discrimination
2. Integrate awareness of sanitation justice into educational curricula
3. Recognize and support community-led movements among affected populations
4. Implement housing integration measures with anti-discrimination protections

Multi-stakeholder Collaboration:

1. Establish formal coordination mechanisms between government departments, civil society, private sector, and affected communities
2. Develop public-private partnerships for technology development and implementation
3. Strengthen international collaboration for knowledge sharing and best practices
4. Support community-based monitoring and advocacy initiatives

6.3 Future Research Directions

Critical areas for future research include longitudinal studies tracking rehabilitation outcomes, evaluation of technological adaptations in resource-constrained settings, documentation of community-led resistance and transformation strategies, and interdisciplinary approaches to addressing the psychosocial impacts of intergenerational stigma.

6.4 Concluding Remarks

The elimination of manual scavenging represents not merely a sanitation challenge but a fundamental test of our commitment to human dignity and equality. Progress requires not only technological and legal solutions but a profound social transformation that recognizes the inherent dignity of all work and all workers. The persistence of this practice in the 21st century represents a collective moral failure that demands urgent and comprehensive action from all sectors of society.

As one community activist interviewed for this study powerfully stated: "We do not want our children to inherit the same stigma and suffering. What we seek is not just new work, but a new recognition of our humanity." This recognition lies at the heart of the human rights framework and must guide all efforts to eliminate the dehumanizing practice of manual scavenging.

References

1. Doron, A., & Jeffrey, R. (2018). Waste of a nation: Garbage and growth in India. Harvard University Press.
2. Human Rights Watch (2014). Cleaning Human Waste: Manual Scavenging, Caste and Discrimination in India. HRW Report. <https://www.hrw.org/report/2014/08/25/cleaning-human-waste/manual-scavenging-caste-and-discrimination-india>
3. Jagori Rural (2018). Challenges faced by women released from manual scavenging: A rapid assessment in five states. Mander, H. (2014). Looking Away: Inequality, Prejudice and Indifference in New India. Speaking Tiger Publishing. <https://www.jagori.org/wp-content/uploads/2024/09/Jagori-Brochure.pdf>
4. Manual Scavenging in India.: <https://www.ielrc.org/content/a2102.pdf>
5. National Commission for Enterprises in the Unorganised Sector [NCEUS] (2010). Manual scavengers: Economic rehabilitation, social empowerment and putting an end to the practice. Government Report.
6. Singh, K. (2017). Newslandry interviews Paul Diwakar on manual scavenging.
7. Sanjana Bhalerao (2022) What is manual scavenging, and why is it still prevalent in India? <https://indianexpress.com/article/explained/explained-what-is-manual-scavenging-and-why-is-it-still-prevalent-in-india-7815400/>
8. Gupta, K. L. (n.d.). Manual Scavenging in India : Issues & Challenges. Retrieved from file:///C:/Users/Hp/Downloads/7_Kalpesh%20VNSG U%20Final%20paper.pdf
9. Gupta, S. (2022, February 18). Uttar Pradesh has the highest number of manual scavengers. Has their rehabilitation worked? A ground report. Retrieved from Gaon Connection: <https://www.gaonconnection.com/news-in-english/uttar-pradesh-assembly-elections-2022-manual-scavenging-rehabilitation-dalit-sanitation-narendra-modi-employment-swachh-bharat-toilets-50414>
10. KATIYAR, S. P. (n.d.). Public Policies on Manual. Retrieved from IIPA: <https://www.iipa.org.in/cms/public/uploads/159961652179097.pdf>
11. Kumar, P. A. (n.d.). Manual Scavenging Is Continuing Unabated in India – and Even Children Are Forced Into it. Retrieved from The Wire: <https://thewire.in/rights/manual-scavenging-is-continuing-unabated-in-india-and-even-children-are-forced-into-it>
12. M.Aswini, D. I. (n.d.). WORK-LIFE BALANCE OF MANUAL. Retrieved from <https://ijcrt.org/papers/IJCRT2004253.pdf>
13. Mathew, A. A. (2020, November 26). This Startup's Devices Can Help More Than 20 Lakh Manual Scavengers Globally. Retrieved From Social Story: <https://Yourstory.Com/Socialstory/2020/11/Jalodbus t-Mechanised-Manual-Scavenging-20-Lakh-People>
14. Mohanty, D. a. (2014). Manual Scavenging in Uttar Pradesh: A Study of Sanitation Workers.
15. Report, N. (n.d.). Govt Says no Manual Scavenger Deaths in 3 Yrs, But 161 Died Cleaning Sewers, Septic Tanks. Retrieved from NEWS CLICK: <https://www.newsclick.in/Govt-Says-Manual-Scavenger-Deaths-3-Yrs-161-Died-Cleaning-Sewers-Septic-Tanks>

16. Gopal, K. (2017). Implementation challenges of the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013. *Economic and Political Weekly*, 52(7), 32-41.
17. Human Rights Watch. (2014). *Cleaning human waste: "Manual scavenging," caste, and discrimination in India*. New York: Human Rights Watch.
18. International Labour Organization (ILO). (2013). *Occupational safety and health in the cleaning industry*. Geneva: ILO.
19. International Labour Organization (ILO). (2018). *World employment and social outlook: Trends 2018*. Geneva: ILO.
20. Kumar, R. (2020). Comparative analysis of legal frameworks addressing sanitation work in South Asia. *Journal of Human Rights Practice*, 12(2), 378-396.
21. Narula, S. (2008). Equal by law, unequal by caste: The "untouchable" condition in critical race perspective. *Wisconsin International Law Journal*, 26(2), 255-343.
22. Prasad, V., & Maskerey, P. (2021). Technology-based interventions in sanitation: A comparative study of three urban centers. *Environmental Technology & Innovation*, 22, 101415.
23. Ravichandran, B. (2011). Scavenging profession: Between class and caste? *Economic and Political Weekly*, 46(13), 21-25.
24. Rawat, R. S. (2019). *Reconsidering untouchability: Chamars and Dalit history in North India*. Bloomington: Indiana University Press.
25. Sheikh, M. (2020). Economic rehabilitation of manual scavengers: Challenges and opportunities. *Journal of Social Inclusion Studies*, 6(2), 112-128.
26. Singh, B. (2014). *Unseen: The truth about India's manual scavengers*. New Delhi: Penguin Books India.
27. Sukhadeo, T., & Vimal, T. (2018). Feminization of manual scavenging: Intersections of caste and gender. *Gender, Technology and Development*, 22(2), 89-104.
28. Thekaekara, M. M. (2005). Endless filth: The saga of India's sanitation workers. *New Internationalist*, 23-25.
29. Thorat, S. (2015). Graded inequality and social exclusion: Theory and empirics on manual scavenging. *Indian Journal of Human Development*, 9(2), 181-206.
30. Tiwari, R. R. (2008). Occupational health hazards among sewage workers: Oxidative stress and health. *Indian Journal of Occupational and Environmental Medicine*, 20(2), 76-80.