

Workplace Challenges and Safety Measures Among Sanitation Workers: An Empirical Study

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Cite this paper as: S. Sulochana, Dr. V. P. Karthikeyan, (2025) Workplace Challenges and Safety Measures Among Sanitation Workers: An Empirical Study. *Journal of Neonatal Surgery*, 14 (9s), 289-293.

ABSTRACT

Sanitation workers play a crucial role in maintaining public health and environmental cleanliness, yet they face numerous occupational hazards, job insecurity, and poor working conditions. This study examines the challenges faced by sanitation workers. A descriptive research design was employed, using quantitative data collection methods to analyze socio-economic factors, working conditions, occupational health risks, and safety equipment usage. Findings reveal that most sanitation workers endure long hours (61.44%), low wages (21.74% below Rs.16,000), and limited holidays (3.78%). Health issues (69.76%) and workplace accidents (64.46%) highlight poor safety conditions. Hand gloves (Rank I) and face masks (Rank II) are the most valued protective equipment, stressing the need for better accessibility and quality of safety gear. The study underscores the urgent need for better occupational health policies, enhanced workplace safety measures, and improved access to medical support. Addressing these challenges through higher wages, proper working conditions, regular health check-ups, and comprehensive safety training is essential for ensuring the well-being and job satisfaction of sanitation workers. These interventions will contribute to a more sustainable and dignified sanitation workforce while enhancing public health outcomes.

1. INTRODUCTION

Sanitation workers play a crucial role in maintaining public health and environmental cleanliness, yet they often face numerous occupational hazards and challenges that affect their quality of life. Studies conducted by Girish Degavi et al. (2021) in Ethiopia and Glenne B. Lagura and Victoria O. Ligan (2018) in the Philippines shed light on the lived experiences of sanitation workers, revealing systemic issues such as job dissatisfaction, lack of job security, inadequate compensation, and limited access to essential resources and benefits.

In their study titled "Prevention of Occupational Hazards Among Sanitary Workers" (2021), Girish Degavi et al. examined the knowledge, attitude, and practices of sanitation workers in Bulehora, Ethiopia, revealing a significant gap between positive attitudes and actual implementation of safety practices. Despite the provision of basic personal protective equipment (PPE), only a small percentage of workers demonstrated good practice in preventing occupational health hazards, indicating systemic challenges in translating knowledge into action.

Similarly, the phenomenological study conducted by Glenne B. Lagura and Victoria O. Ligan (2018) explored the lived realities of street sweepers in the Davao Region of the Philippines. Street sweepers, despite their essential role in maintaining urban cleanliness, face precarious working conditions characterized by lack of job security, meager compensation, and bureaucratic hurdles. These challenges force them to resort to coping mechanisms such as reliance on loans and moonlighting, highlighting the pervasive impact of socioeconomic factors on their quality of life.

While both studies underscore the pressing need to address the systemic challenges faced by sanitation workers, they also shed light on the resilience, pride, and satisfaction that workers derive from their essential but often underappreciated work. However, improving the quality of life for sanitation workers requires more than just addressing immediate socioeconomic challenges; it necessitates comprehensive interventions that address structural issues while leveraging technological advancements to enhance working conditions, safety, and overall well-being.

In this context, this paper aims to examine the occupational challenges faced by sanitation workers, focusing on workplace hazards, job conditions, and the availability of protective measures. By analyzing key factors such as work nature, health risks, safety equipment usage, and compensation, we seek to identify areas for improvement that can enhance occupational safety, job satisfaction, and overall well-being. Addressing these issues is essential for creating a safer and more sustainable work environment for sanitation workers.

Statement of the Problem

Sanitation workers play a vital role in maintaining public health and environmental cleanliness. However, they often face poor working conditions, job insecurity, inadequate compensation, and exposure to occupational hazards, which significantly impact their quality of life. Various studies highlight these systemic challenges, including the gap between knowledge of occupational safety and its actual implementation. Despite their essential contributions, sanitation workers continue to experience limited access to protective resources, benefits, and technological advancements that could improve their working conditions. This study seeks to address these gaps by exploring how technological interventions can enhance the quality of work life, occupational safety, and job satisfaction among sanitation workers.

Objectives of the Study

- To analyze the occupational hazards, working conditions, and health issues faced by sanitation workers.
- To assess the availability, usage, and effectiveness of personal protective equipment (PPE) in ensuring worker safety

Research Methodology

Research Design

This study employs a descriptive research design to examine the challenges, job satisfaction, and well-being of sanitation workers. A quantitative approach was adopted to collect and analyze data systematically.

Sample Selection

A total of 100 sanitation workers were selected using the stratified random sampling method to ensure fair representation. The sample was drawn from sular taluks in Coimbatore district, with workers categorized based on factors such as employment type (contract/permanent) and work environment (urban/rural).

Data Collection

Primary data were collected through structured questionnaires designed to assess various aspects of job satisfaction, occupational hazards, and well-being. The questionnaire included both closed-ended and Likert scale questions to gather measurable insights.

Data Analysis

The collected data were analyzed using descriptive statistics (percentages, mean, standard deviation) to summarize findings. Additionally, correlation analysis was conducted to examine relationships between influencing factors and job satisfaction.

Analysis and interpretation

Table 1 : Socio economic details

Socio economic factor	Percentage
Gender	
Male	58.41
Female	41.59
Age	
Below 30	17.58
30-40	37.43
40-50	26.84
Above 50	18.15
Educational Qualification	
Primary education	31.57
High school	37.05
Higher secondary	18.15

Graduate	13.23
Marital status	
Married	81.47
Unmarried	14.56
Widow/Widower/Divorced	3.97
Type of family	
Joint family	66.35
Nuclear family	33.65

Source: primary data

The majority of respondents are male (58.41%), while 41.59% are female. This indicates that sanitation work in the given area is male-dominated but also has significant female participation. Most respondents fall in the age groups of 30-40 years (37.43%) and 40-50 years (26.84%). Only 17.58% are below 30, while 18.15% are above 50. 37.05% have completed high school, while 31.57% have only primary education. 18.15% have completed higher secondary education, and only 13.23% are graduates.

81.47% of respondents are married, while 14.56% are unmarried. A small percentage (3.97%) are widowed, widowers, or divorced. 66.35% of respondents live in joint families, while 33.65% live in nuclear families.

Table 2: Working profile

	Percentage
Nature of Work	
Sweepers/Scavengers	47.26
Drainage and Sewage Cleaner	27.59
Garbage Collector	25.15
Number of years working	
Less than 5 years	22.5
5-10 years	48.77
Above 10 years	28.73
Availability of Holidays	
Government Holidays only	20.42
Sundays only	27.79
Government Holidays and Sundays	48.01
No Holiday	3.78
Working hours per day	
Below 8 hours	8.51
8-10 hours	61.44

Above 10 hours	30.05
Monthly Salary (in Rs.)	
Below Rs.16,000	21.74
Rs.16,000-17,000	48.77
Rs.17,000 and above	29.49

Source : primary data

The majority of sanitation workers are Sweepers/Scavengers (47.26%), followed by Drainage and Sewage Cleaners (27.59%) and Garbage Collectors (25.15%). These roles involve exposure to hazardous environments, requiring proper safety measures. Nearly half of the workers (48.77%) have been in the job for 5-10 years, while 28.73% have worked for over a decade. A significant proportion (22.5%) are relatively new to the profession, indicating potential workforce turnover.

Most workers (48.01%) receive both government holidays and Sundays, while 27.79% only get Sundays off. A small percentage (3.78%) do not receive any holidays, which may contribute to work-related stress and exhaustion. A majority (61.44%) work 8-10 hours per day, while 30.05% exceed 10 hours, indicating long working hours. Only 8.51% of workers have shifts below 8 hours, suggesting limited flexibility in work schedules. Nearly half (48.77%) earn between Rs.16,000-17,000, while 29.49% earn above Rs.17,000. A notable 21.74% earn below Rs.16,000, reflecting financial constraints despite the physically demanding nature of their work.

Table 3 Health problems during work

	Percentage
Face any health problems during work	
Yes	69.76
No	30.24
Meet any accidents during work	
Yes	64.46
No	35.54

Source: Primary data

A majority (69.76%) of sanitation workers experience health issues due to their job. This indicates high exposure to occupational hazards, including infections, respiratory issues, and physical strain. 64.46% of workers have encountered accidents while on duty. This suggests inadequate safety measures, lack of proper protective equipment, and high-risk working conditions.

Table 4: Ranking for usage of safety equipment by workers

		Garrett Score	Total	Garrett Score	Mean	
Sl. No	Safety equipment					Rank
1	Face Mask	28460		53.79		II
2	Body protection Coats/PPE	26795		50.65		III

3	Hand Gloves	30215	57.12	I
4	Helmet	26325	49.76	IV
5	Shoes	24025	45.42	V

Source: Primary data

The dataset evaluates the ranking of safety equipment based on sanitation workers' preferences using Garrett scores.

- 1. Hand Gloves (Rank I, Mean Score: 57.12)**
 - Considered the most important safety equipment.
 - Essential for protecting workers from direct contact with waste, chemicals, and hazardous materials.
- 2. Face Mask (Rank II, Mean Score: 53.79)**
 - Highly valued due to exposure to dust, bacteria, and harmful fumes.
- 3. Body Protection Coats/PPE (Rank III, Mean Score: 50.65)**
 - Important but ranked lower than gloves and masks, indicating possible discomfort or limited access.
- 4. Helmet (Rank IV, Mean Score: 49.76)**
 - Recognized as necessary but might not be a top priority compared to other equipment.
- 5. Shoes (Rank V, Mean Score: 45.42)**
 - Least prioritized, but still crucial for protection against sharp objects and wet/slippery surfaces.

2. FINDING AND CONCLUSION:

The study highlights the numerous challenges faced by sanitation workers, including long working hours, low wages, and inadequate access to holidays. The demographic data reveals a gender disparity, caste-based representation, and low educational levels, which may impact career mobility and access to better opportunities. Additionally, the declining number of younger workers suggests concerns regarding the sustainability of the workforce in this sector. Occupational health risks remain a significant issue, with a high percentage of workers experiencing health problems and workplace accidents. The prioritization of hand gloves and face masks as essential protective gear underscores the importance of ensuring accessibility to high-quality safety equipment. To improve the well-being and job satisfaction of sanitation workers, enhancing wages, ensuring better work conditions, implementing comprehensive health policies, and providing adequate safety training and protective measures are crucial. Addressing these concerns will not only improve workers' quality of life but also contribute to a more sustainable and dignified sanitation workforce.

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