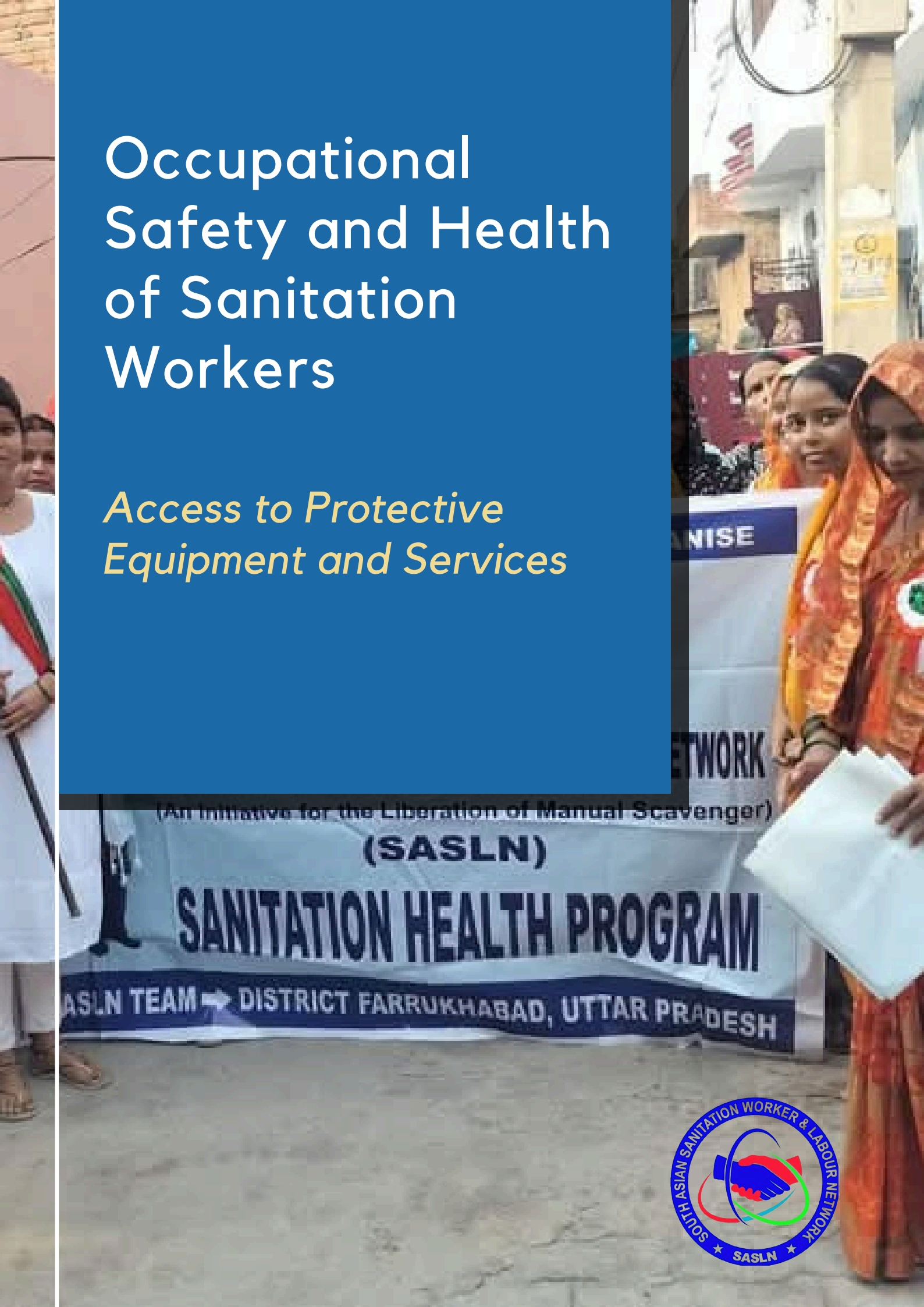
Occupational Safety and Health of Sanitation Workers

Access to Protective Equipment and Services



Based on a study led by:

South Asian Sanitation Worker and Labour Network (SASLN)

Acknowledgements

The South Asian Sanitation Worker and Labour Network (SASLN) extends its heartfelt gratitude to all the sanitation workers and their families who generously gave their time, shared their experiences, and contributed to the development of this report.

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Background

Sanitation work in India has long been tied to caste, making it critical to acknowledge this connection in order to address the challenges faced by sanitation workers in the country. This historic system of social differentiation ranks individuals based on birth, creating a rigid hierarchy that has perpetuated oppression and denied equal access to resources - whether material, social, educational and political across generations.

The caste system classifies people into four hierarchically ranked castes or varnas according to occupation and determines the individual's access and privilege. The four varnas hierarchically are - Brahmin (priests and scholars), Kshatriya (political rulers and soldiers), Vaishya (traders and merchants) and Shudra (laborers, peasants, artisans). At the bottom of the caste chain, not included in the ranked castes is the Dalit community - people engaged in occupations considered "unclean", "impure" or "polluting" according to the Hindu notions of purity and pollution linked with the caste system. These beliefs play a major role in perpetuating generational oppression of the "polluted castes" who are forced to undertake sanitation occupations including sweeping, drain cleaning, septic tank desludging, fecal sludge handling, domestic work, railway track cleaning including others.

The Constitution of India recognises certain castes, races and tribal groups as Scheduled Castes (anusoochit jati) and Scheduled Tribes (anoosuchit janjati, including the adivasi community) under Articles 341 and 342. These castes and communities have suffered age-old practices of untouchability, social and geographical isolation, persecution and oppression and whose interests need to be safeguarded.

But despite these constitutional and legal safeguards, deep-rooted social and systemic discrimination has resulted in the violation of the Dalit community's right to education, health, property, choice of employment and equality before law. Most members of this community are relegated to sanitation work and hence the community is called the "Swachhakar samuday". They mostly work for minimum or daily wages and are often trapped in cycles of generational poverty and debt. They remain vulnerable to attacks on their dignity, physical safety, mental health

and even their lives. The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 is an act which prohibits manual scavenging in the country. This act came into effect from 6th December, 2013. It defines hazardous cleaning by an employee in relation to a sewer or septic tank as its manual cleaning without the employer fulfilling his obligation to provide protective gear and other cleaning devices and ensuring observance of other safety norms and precautions. Employers are obligated to provide 44 items enlisted in the protective gear and safety devices list mentioned in Rule 4 of Prohibition of Employment as Manual Scavengers & their Rehabilitation Rules, 2013.

Sanitation workers need protection from bacterial and viral infections, dirt and filth exposure, noxious gasses in sewers and septic tanks, physical injuries and accidents, exposure to heavy metals and other toxins in water and toxic hospital waste.

Despite these occupational risks and promised provisions, sanitation workers continue to work without adequate safety gear or protective equipment. Media sensitivity and widespread societal attention only occur when there are unfortunate episodes of deaths during sewer or septic tank cleaning. However, these fatalities form only the tip of the iceberg. The absence of proper sanitation systems and non-availability of mechanized emptying and cleaning can further affect the vulnerability of sanitation workers.

Currently, there is no robust data quantifying the number of sanitation workers in India who suffer from occupational health-related illnesses or deaths. The vulnerabilities of various types of sanitation workers and their communities, during their day-to-day lives and work, go unseen, including the woes of the families who lose their breadwinners to the hazards of this work. To assess the current provisions and support available to safeguard sanitation workers' health at work, the South Asia Sanitation Workers and Labour Network (SASLN) conducted a pilot study across 10 states in India.

The aim of this study was to assess the health risks faced by sanitation workers and identify gaps in current occupational health practices of employers.

Objective

This study aims to assess the occupational safety and health (OSH) risks that sanitation workers face on a daily basis, with a particular focus on identifying gaps in employer practices.

By examining the current provisions and understanding where employers fall short in providing adequate safety measures, the research hopes to identify critical areas for improvement. One key aspect of this study is evaluating the accessibility and quality OSH services available to sanitation workers.

By gathering data from diverse regions across India, the South Asia Sanitation Workers and Labour Network (SASLN) aims to inform future interventions. The goal is to advocate for stronger safety measures and better health standards for sanitation workers across the country.

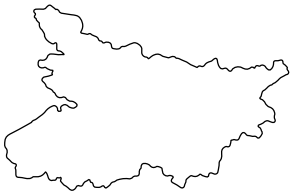
The study ultimately seeks to drive systemic change, ensuring that sanitation workers are not only recognized for their vital role in public health but also provided with the protections and support they deserve.

Timeline

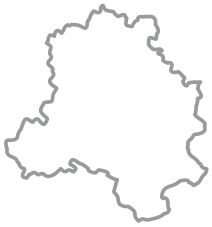
Description of Work	Start Date	End Date
PHASE 1		
• Questionnaire Development	June'24	June'24
• Tool Pre-testing	June'24	June'24
• Data Collection Training	June'24	June'24
PHASE 2		
• Data Collection	1st July'24	25th July'24
PHASE 3		
• Transcription and Translation	August	September
• Data Analysis	September 2024	October 2024

Geography

ASSAM
49 Participants

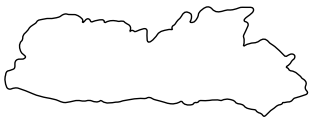


BIHAR
55 Participants



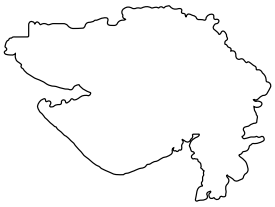
DELHI
50 Participants

MANIPUR
51 Participants



MEGHALAYA
50 Participants

PUNJAB
50 Participants



GUJARAT
55 Participants

WEST BENGAL
50 Participants

UTTAR PRADESH
52 Participants

UTTARAKHAND
50 Participants

Methodology

A **mixed methods cross-sectional study** was conducted across 10 states in India. The survey design, as well as the localization and translation of the questionnaire, was carried out in collaboration with key partners.

These partners ensured that the survey was accessible and understandable for participants across various regions, helping to address linguistic and regional diversity.

Sampling

Purposive sampling was done to include at least 49 participants from each state. Inclusion criteria for the study were participants who were above 18 and those who were employed as sanitation workers in one or more of the following categories - sewer cleaning and emptying, latrine cleaning, fecal sludge handling, septic tank desludging, sewage treatment plant/dumping area work, community and public toilet keeping, school toilet cleaning, sweeping and drain cleaning, railway track cleaning and domestic work.

Tool Development

A structured questionnaire was developed using literature review and expert consultation. It included **39** close-ended questions and **2** open-ended questions. This approach allowed for a balance between quantitative data and more detailed, qualitative insights. The tool was pretested on **10** people for face validity following which necessary modifications were made.

Data Collection

Training for data collection was conducted online across **5** sessions in June 2024. Data collection was done by SASLN team members across **10** states from 1st to 25th July, 2024. The survey was conducted both online and in person to ensure maximum accessibility and participant convenience. Data was recorded using KOBO Toolbox. Verbal consent was sought from the study participants and their responses were recorded.

Data Analysis

Quantitative Data

Descriptive statistical methods were used (frequencies, percentages, means, and standard deviations, median and inter quartile range) depending on whether the variables were categorical or continuous.

Mean and standard deviation (SD) was used for variables with a Gaussian distribution and median and interquartile range (IQR) for variables with a skewed distribution. All analysis was done in SPSS Ver 25.0.

Qualitative Data

The interviews were transcribed in Hindi and then translated into English following which thematic analysis was conducted. To analyze the in-depth interviews, a coding scheme was developed based on the themes emerging from the data to examine the challenges faced by patients in completing the diagnostic process and starting treatment across different healthcare settings in the Indian health system. Coding was done manually.

Key Findings

Demographics and Socioeconomic Characteristics

Age of Participants

Age Group	Frequency (Percentage)
20 to 29	76 (14.84%)
30 to 39	202 (39.45%)
40 to 49	178 (34.77%)
50 to 59	47 (9.18%)
⩾ 60	9 (1.76%)
Mean (SD)	38.69 ± 8.65

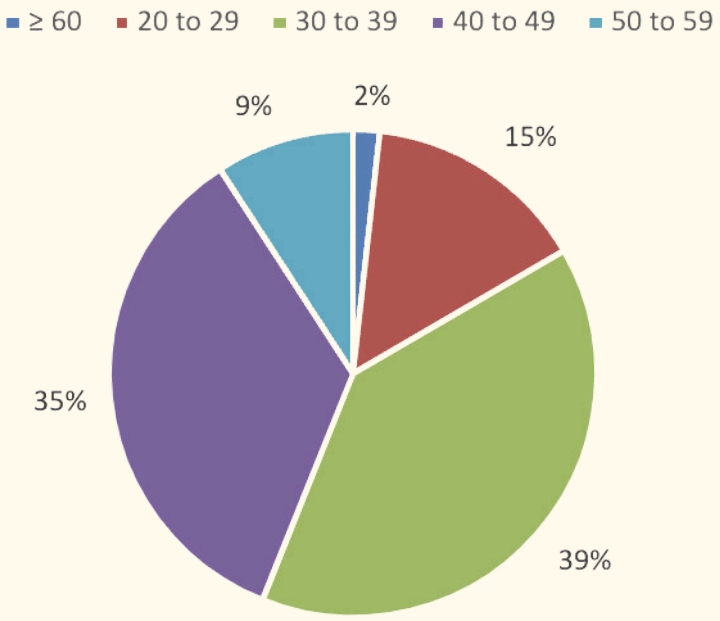


Fig.1: Distribution of participants by Age Groups in years (N=512)

The age distribution of respondents in the study reveals a significant concentration in the 30 to 39 age group, which accounted for **39.45%** of the total respondents. This was followed by the 40 to 49 age group, representing **34.77%**. A smaller proportion of participants were in the 20 to 29 age group (**14.84%**), while only 9.18% were aged 50 to 59. The number of respondents aged 60 and above was relatively low, comprising just **1.76%** of the total sample. The mean age of the participants was **38.69** years, with a standard deviation of **8.65**, indicating a moderately varied age range among the respondents.

Gender

The gender distribution of respondents shows a slightly higher proportion of male participants, who made up **55.66%** of the total sample. Female respondents accounted for **44.34%**, indicating a fairly balanced representation, with a marginal difference between the two genders.

This suggests a relatively equal participation of both male and female sanitation workers in the study.

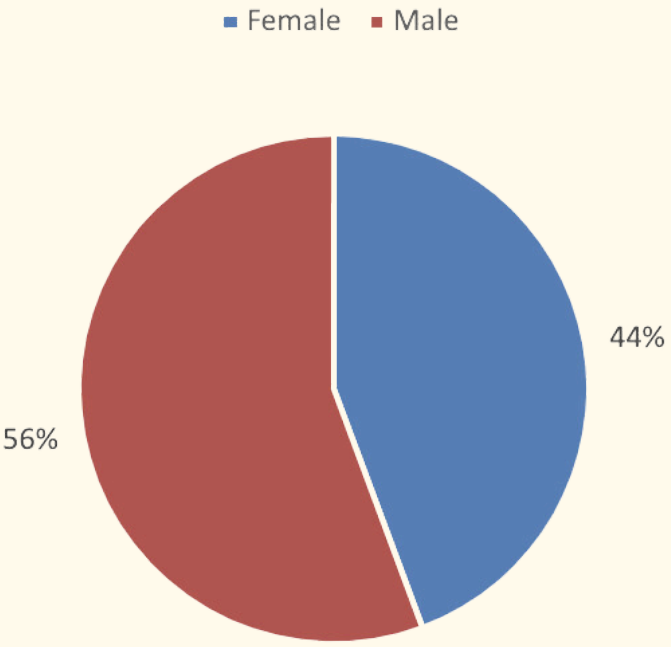


Fig.2: Distribution of participants by Gender (N=512)

Marital Status

Marital Status	Frequency (Percentage)
Divorced/ Separated	6 (1.2%)
Married	420 (82%)
Unmarried	55 (11%)
Widow/ Widower	31 (6.1%)

The marital status of the respondents reveals that the majority were married, comprising **82%** of the total sample.

A smaller proportion of participants were unmarried, accounting for **11%.** Additionally, **6.1%** of respondents were widowed or widowers, while a minority of **1.2%** were either divorced or separated.

Age of Participants

Number of Family Members	Frequency (Percentage)
⩽ 5	316 (61.72%)
6 to 10	188 (36.72%)
> 10	8 (1.56%)
Mean(SD)	5.29 (1.90)

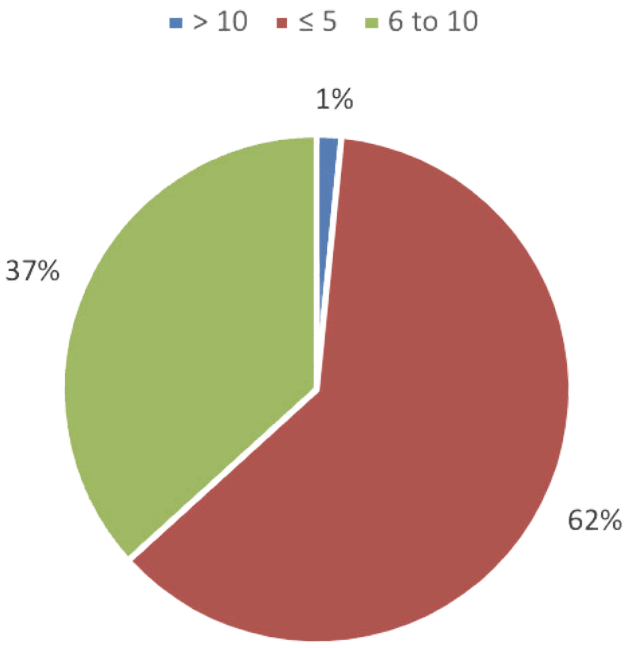


Fig.3: Distribution of participants by the number of family members (N =512)

The number of family members living with each respondent varied, with the majority of participants (**61.72%**) having five or fewer family members. A smaller proportion of respondents (**36.72%**) reported having between six to ten family members. Only **1.56%** of respondents had more than ten family members. The mean number of family members per respondent was **5.29**, with a standard deviation of **1.90**, suggesting that most participants lived in smaller household units.

Number of Children

The number of children per respondent varied, with a majority of participants (**59.18%**) having two or fewer children. A smaller proportion (**40.82%**) had more than two children. The mean number of children across all respondents was **2.29**, with a standard deviation of **1.47**, indicating that most participants had a moderate number of children, with a few having larger families.

Number of Children	Frequency (Percentage)
⩽ 2	316 (61.72%)
> 2	188 (36.72%)
Mean(SD)	5.29 (1.90)

Employment Status and Type

Number of Employment Years

Number of Years	Frequency (Percentage)
⩽ 10	284 (55.47%)
11 to 20	169 (33.01%)
> 20	59 (11.52%)
Mean (SD)	11.91 (7.45)

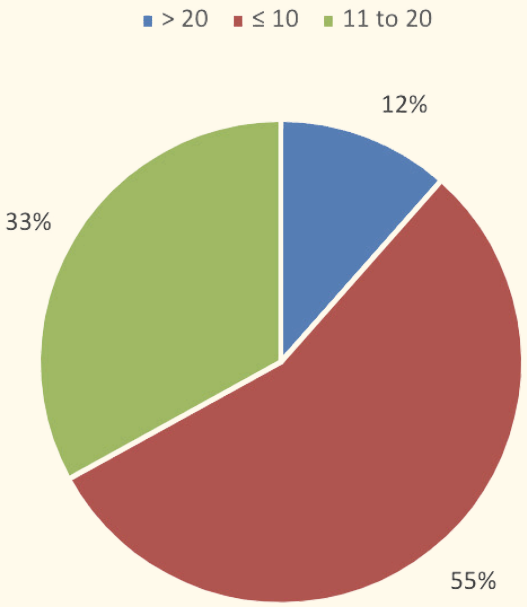


Fig.4: Distribution of participants by the number of years worked

The number of years respondents had worked in sanitation varied significantly.

The majority of participants (**55.47%**) had been employed for 10 years or less. A substantial portion (**33.01%**) had between 11 and 20 years of experience, while **11.52%** had been working in sanitation for more than 20 years. The average length of service was **11.91** years, with a standard deviation of **7.45**, suggesting a broad range of experience levels among the workers.

Employment Type

The employment type of sanitation workers shows that the majority are employed in the private sector, with 8**1.64%** of respondents working for private companies.

A smaller portion, **11.72%**, are employed in semi-government roles, while just **6.64%** work for government organization

Employment Type	Frequency (Percentage)
Government	34 (6.64%)
Semi-Government	60 (11.72%)
Private	418 (81.64%)

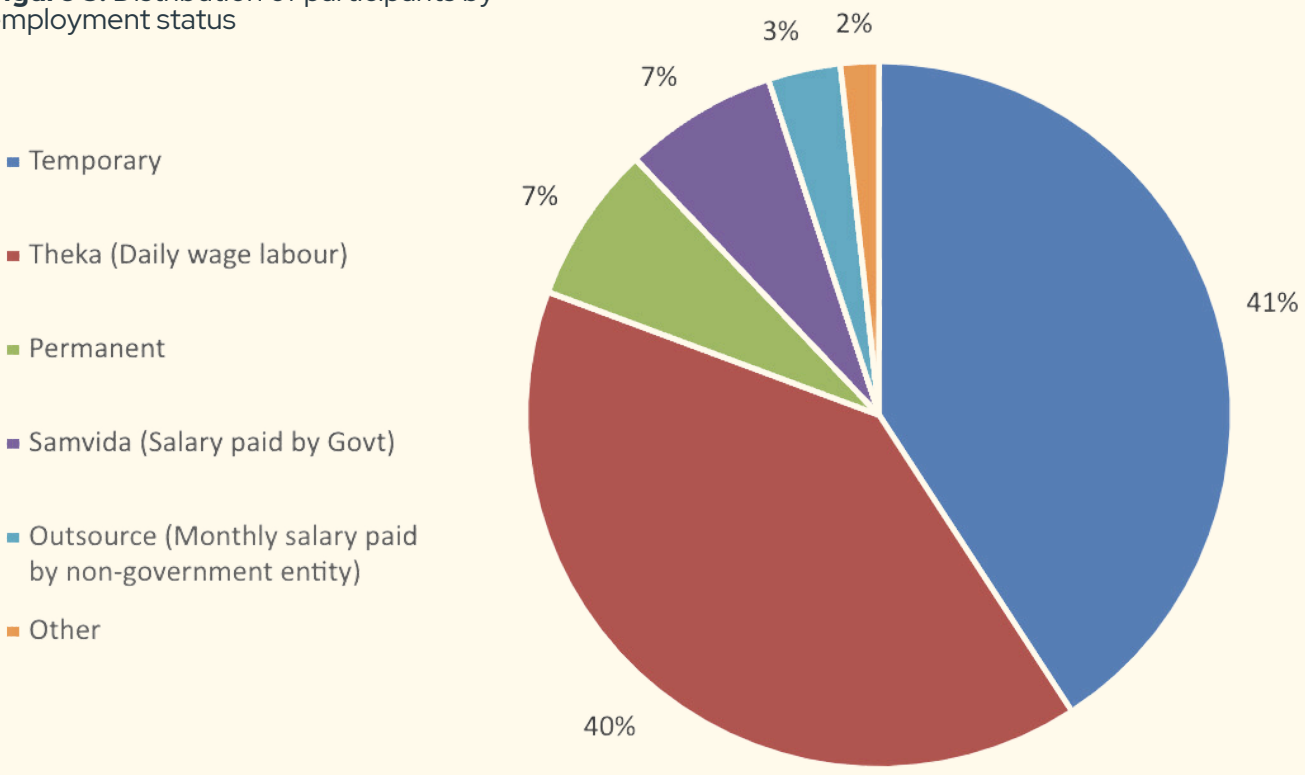
Employment Status

Employment Status	Frequency (Percentage)
Temporary	209 (40.82%)
Theka (Daily wage labour)	204 (39.84%)
Permanent	37 (7.23%)
Samvida (Salary paid by Govt)	36 (7.03%)
Outsource (Monthly salary paid by non-government entity.	17 (3.32%)
Other	9 (1.76%)

The employment status of sanitation workers varied widely. The majority were employed on temporary contracts (**40.82%**) or as daily wage laborers (**39.84%**), reflecting the prevalence of unstable and informal employment in the sector. A smaller proportion held permanent positions (**7.23%**) or worked as government employees (**7.03%**).

Additionally, **3.32%** were outsourced employees under non-government entities, while **1.76%** fell into other employment categories. This highlights the precarious nature of employment for many sanitation workers, with most facing irregular or non-permanent job conditions.

Figure 5: Distribution of participants by employment status



Monthly Income

The monthly income of sanitation workers varies significantly, with the majority (**64.84%**) earning between 5,000 and 10,000 INR. A smaller proportion of workers earn less than 5,000 INR per month (**20.70%**). Only **11.33%** of respondents have a monthly income between 10,000 and 20,000 INR, while just **3.13%** earn more than 20,000 INR.

This distribution highlights that most sanitation workers receive low wages, with only a small percentage earning higher amounts.

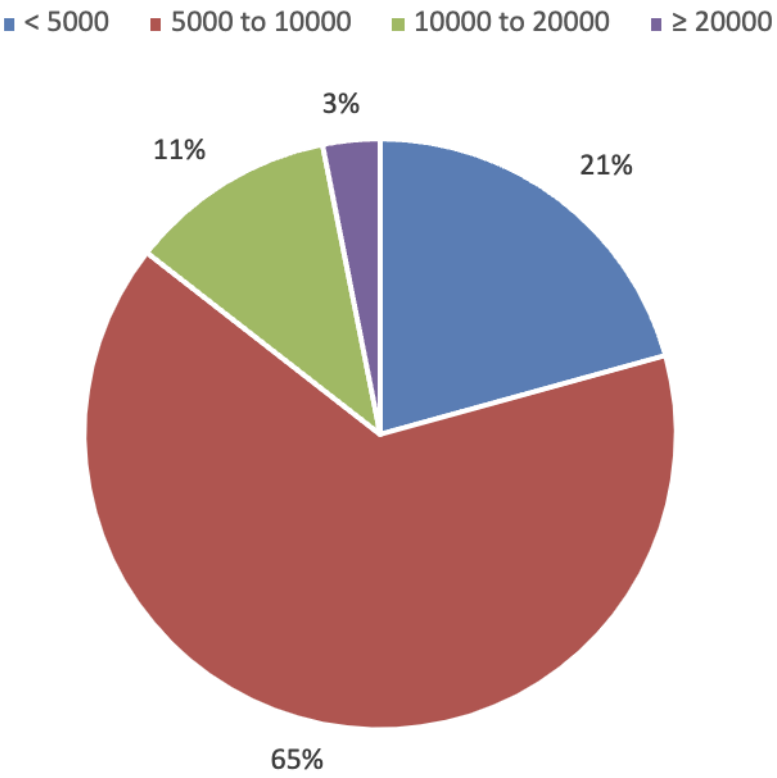
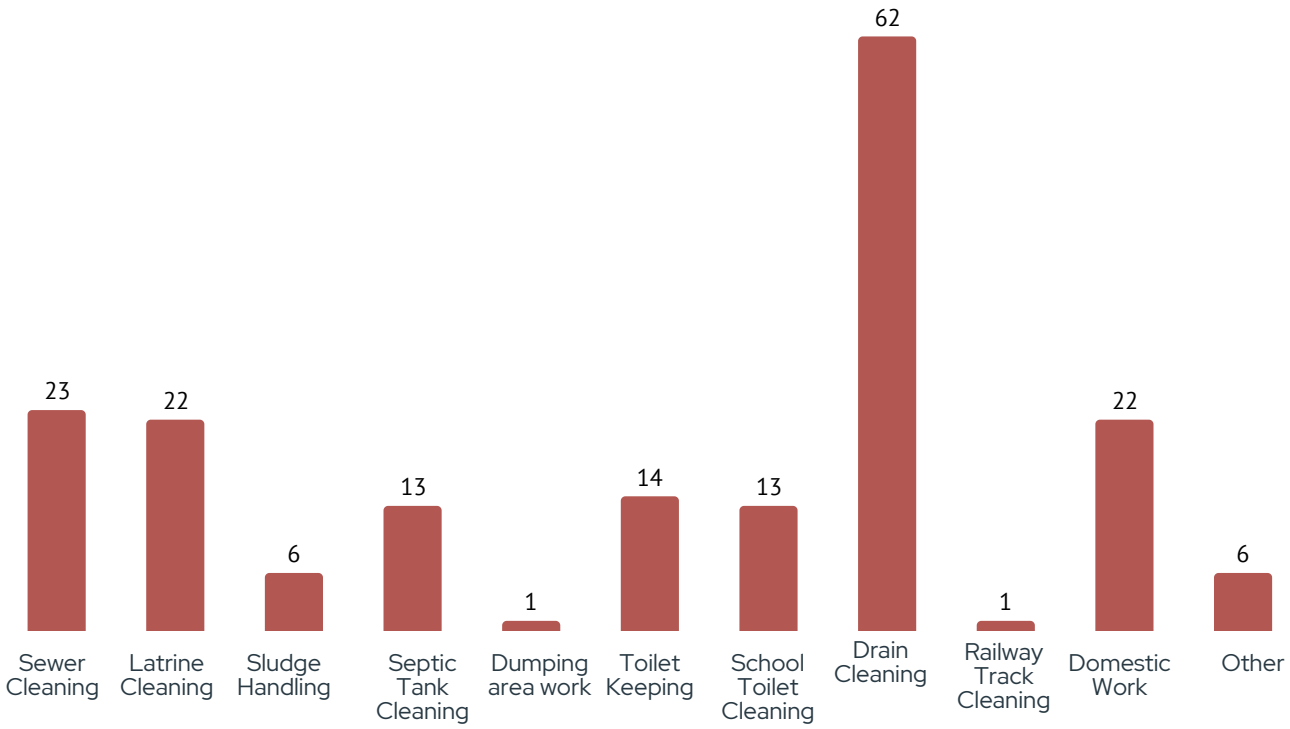


Figure 6: Distribution of participants by their monthly income

Type of Sanitation Work

The type of sanitation work undertaken by participants varied widely, with many workers engaged in multiple tasks. The most common activity was drain cleaning, performed by **62.30%** of respondents, followed by sewer cleaning (**22.85%**) and latrine cleaning (**22.46%**). Septic tank cleaning was reported by **13.09%** of workers, while toilet keeping and school toilet cleaning were each performed by around **13%** of respondents. Other tasks included sludge handling (**6.25%**), domestic work (**22.46%**), and dumping area work (**1.37%**). A small number of workers (**0.98%**) were involved in railway track cleaning, and **6.25%** undertook other unspecified sanitation tasks. The data is non-mutually exclusive and many participants engaged in multiple forms of sanitation work.

Figure 7: Distribution of participants by their type of work* (N = 512)



*Not mutually exclusive

Access to Social Security Measures

Access to Social Security

Access to social security measures among sanitation workers was notably limited, with the majority (**71.09%**) reporting the absence of such benefits. Only **28.91%** of respondents had access to some form of social security, highlighting a significant gap in support for workers in the sanitation sector.

This disparity underscores the vulnerability of sanitation workers, who often lack essential safety nets that could provide financial security and protection against health risks.

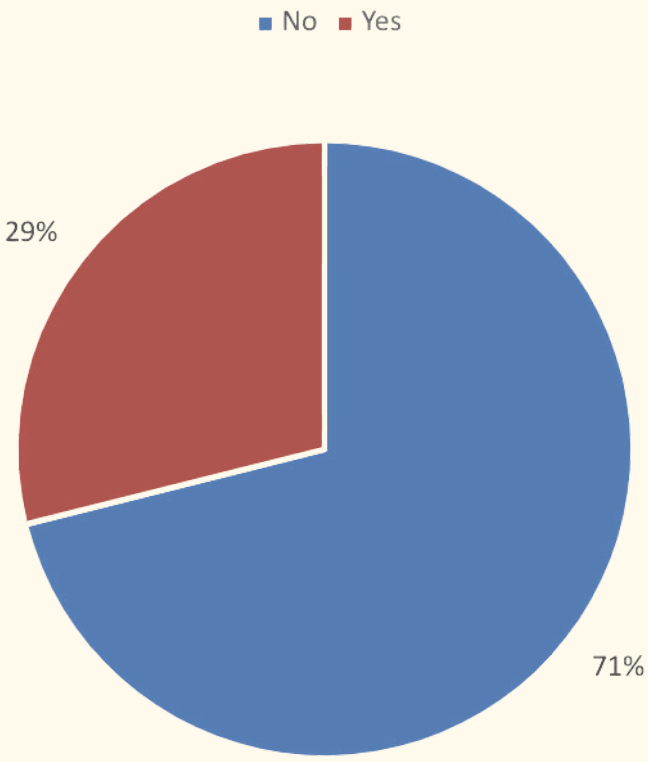


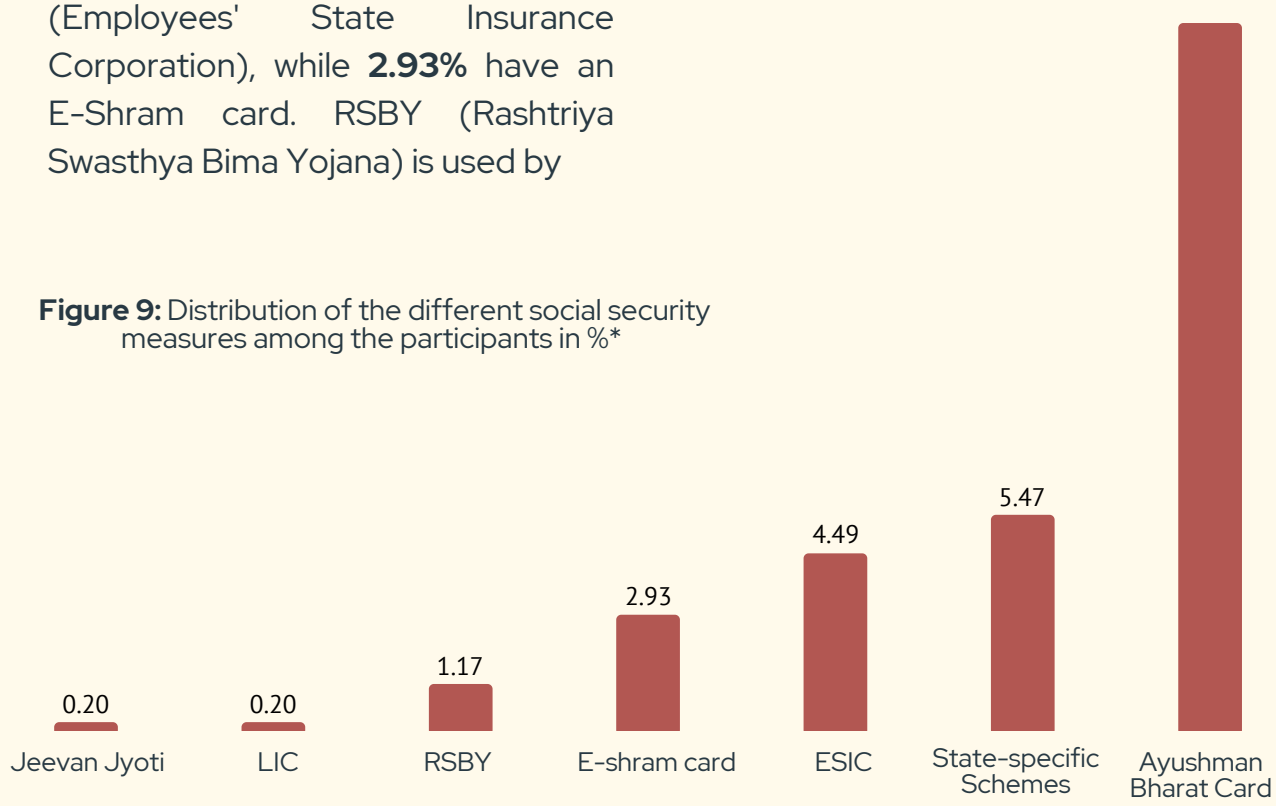
Figure 8: Access to social security among the study participants

Social Security Schemes Utilised

Sanitation workers utilize a variety of social security schemes, though participation in these programs is relatively low. The most commonly used scheme is the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), which **17.97%** of workers have access to. Other state-specific schemes were utilized by **5.47%** of respondents. Additionally, **4.49%** of sanitation workers benefit from ESIC (Employees' State Insurance Corporation), while **2.93%** have an E-Shram card. RSBY (Rashtriya Swasthya Bima Yojana) is used by **1.17%** of respondents, and a very small number of workers (**0.20%**) benefit from Jeevan Jyoti or LIC (Life Insurance Corporation) schemes.

This non-mutually exclusive data shows that while some sanitation workers access various social security programs, a significant portion still lacks coverage.

Figure 9: Distribution of the different social security measures among the participants in %*



*Not mutually exclusive

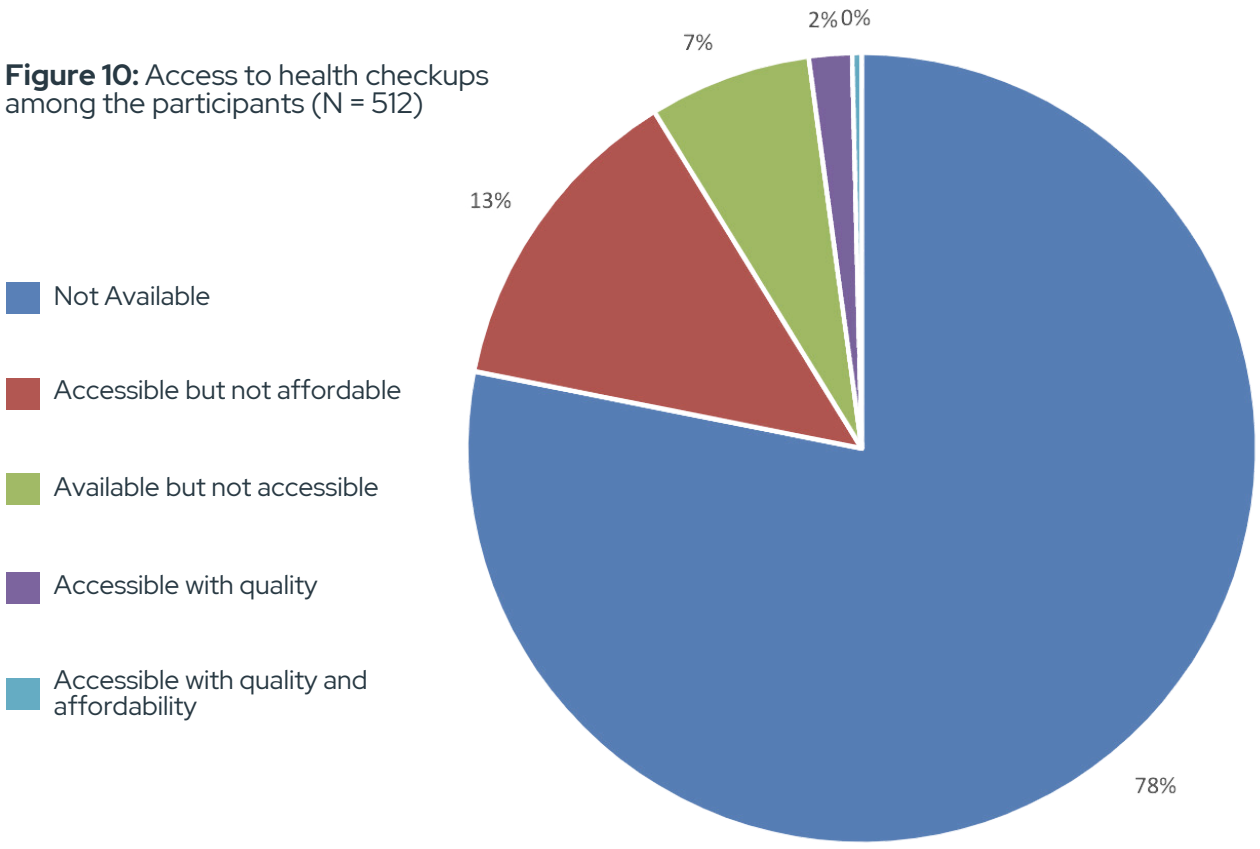
Access and Barriers to Healthcare Services

Health Checkups

Access to health checkups for sanitation workers is largely limited. A significant majority (**78.13%**) reported that health checkups were not available to them. For those with some form of access, **13.09%** found health services to be accessible but not affordable, while **6.64%** noted that services were available but not accessible due to geographical or logistical barriers.

Only a small fraction (**1.76%**) had access to quality health checkups, and an even smaller number (**0.39%**) had access to both quality and affordable health services. This data underscores the substantial challenges sanitation workers face in obtaining adequate healthcare, with the majority unable to access essential health services.

Figure 10: Access to health checkups among the participants (N = 512)



Mental Health Counselling

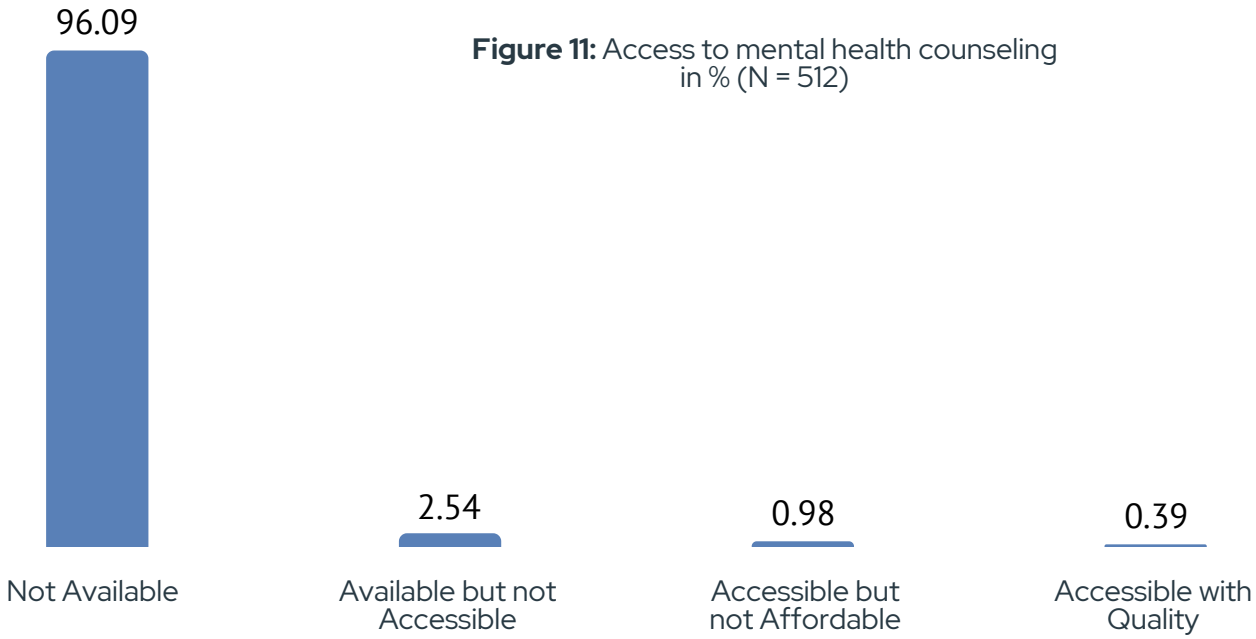


Figure 11: Access to mental health counseling in % (N = 512)

Access to mental health counseling for sanitation workers is extremely limited. The vast majority (**96.09%**) reported that mental health counseling was not available to them. A small portion (**2.54%**) indicated that such services were available but not accessible, likely due to geographical or logistical barriers. Even fewer (**0.98%**) noted that mental health services were accessible but not affordable, while only a tiny fraction (**0.39%**) had access to quality mental health counseling. This data highlights the significant gap in mental health support for sanitation workers, with most lacking both availability and access to essential mental health services.

Frequency of Health Check-ups Provided by Employer

The frequency of medical health check ups provided by employers to sanitation workers is overwhelmingly infrequent. A large majority of respondents (**87.30%**) reported never receiving medical checkups through their employers. For those who did have access to health checkups, **9.57%** only received them when they fell ill. A very small proportion (**1.76%**) had checkups once a year, while only **1.18%** reported receiving checkups on a more regular basis—either once every three months (**0.98%**), every six months (**0.20%**), or even monthly (**0.20%**). This data highlights the inadequate provision of regular health checkups for sanitation workers, with most of them left without routine medical care.

Health Check ups Provided by Employer	Frequency (Percentage)
Never	447 (87.30%)
Whenever fall sick	49 (9.57%)
Once in a year	9 (1.76%)
Once in 3 months	5 (0.98%)
Once in 6 months	1 (0.20%)
Monthly	1 (0.20%)

Frequency of Health Check-ups Availed by the Participants

Health Check Ups Availed by Participants	Frequency (Percentage)
Never	7 (1.37%)
Monthly	1 (0.20%)
Once in 3 months	8 (1.56%)
Once in 6 months	5 (0.98%)
Once in a year	9 (1.76%)
Whenever fall sick	482 (94.14%)

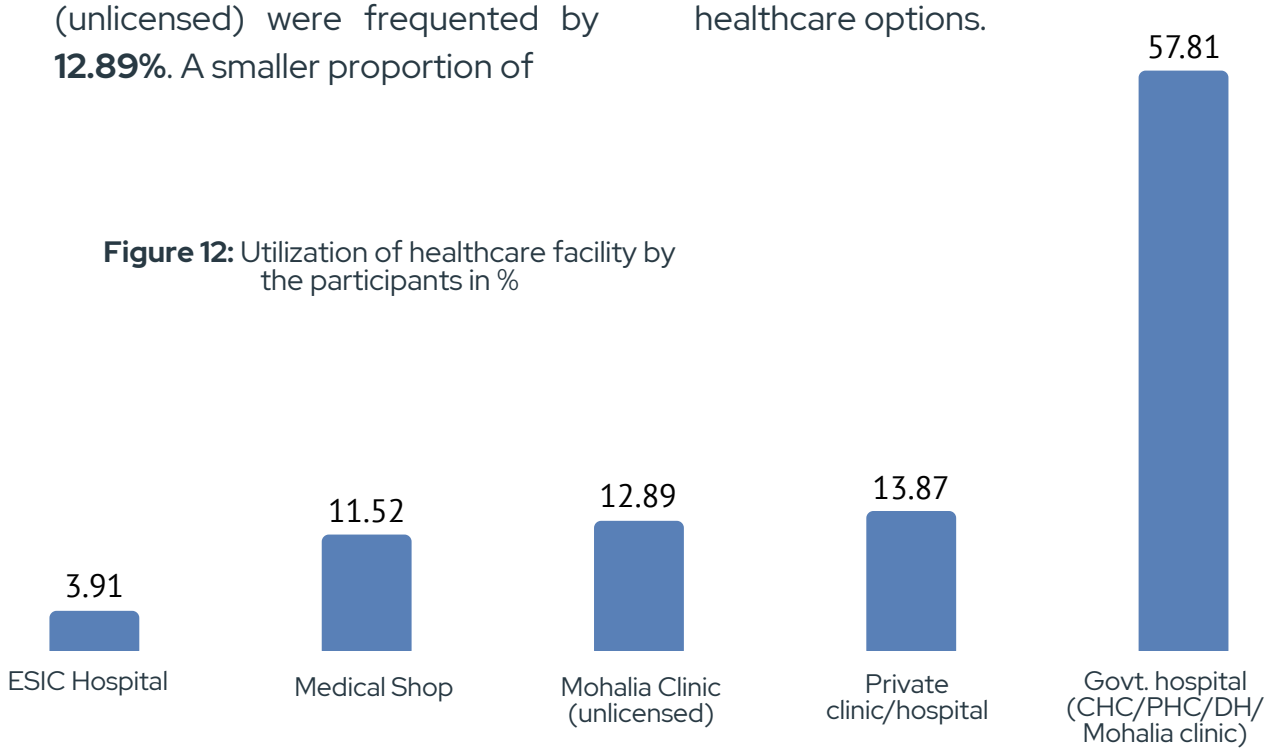
The frequency with which sanitation workers avail health checkups is largely dependent on illness. A vast majority (**94.14%**) reported seeking medical care only when they fell sick. Very few participants had regular health checkups, with only **1.76%** having check ups once a year, **0.98%** once every six months, and **1.56%** once every three months. A tiny fraction of workers (**0.20%**) sought monthly checkups, while **1.37%** had never availed any health checkups.

This data reveals that most sanitation workers lack access to regular preventive healthcare, often resorting to seeking care only when health issues arise.

Facilities used for Health Check-ups

Sanitation workers utilize a variety of healthcare facilities for their health checkups, with government hospitals (including CHCs, PHCs, district hospitals) being the most common choice, accessed by **57.81%** of respondents. Private clinics or hospitals were used by **13.87%**, while mohalla clinics (unlicensed) were frequented by **12.89%**. A smaller proportion of workers relied on medical shops (**11.52%**) for health needs, and only **3.91%** used ESIC hospitals. This distribution suggests that while government healthcare facilities are the primary source of medical services for most sanitation workers, there is also significant reliance on private and informal healthcare options.

Figure 12: Utilization of healthcare facility by the participants in %



Provision of Information about Healthcare Services by Employers

The information related to healthcare and check-ups provided by employers to sanitation workers is largely limited. A significant majority (**82.62%**) reported that they rarely received information about healthcare services or check-ups from their employers. A smaller proportion (**8.59%**) indicated that such information was provided sometimes, while **8.40%** reported receiving it frequently. Only a very small percentage (**0.39%**) stated that they never received any information. This data highlights the lack of consistent communication from employers regarding healthcare services, which may further contribute to the limited access and awareness among sanitation workers about healthcare services.

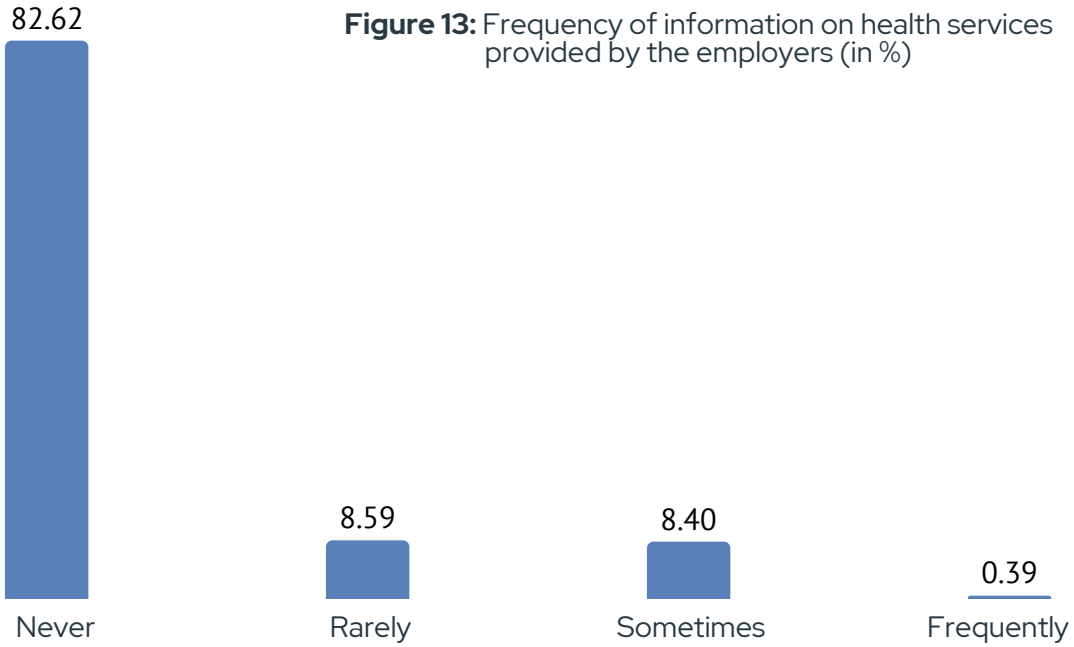


Figure 13: Frequency of information on health services provided by the employers (in %)

Barriers to Availing Healthcare Services

Sanitation workers face several barriers when attempting to avail healthcare services. The most common barrier is a lack of awareness, reported by **52.34%** of respondents, indicating that many workers are unaware of available healthcare options. Inconvenient hours for accessing healthcare were cited by **24.41%**, while stigma and discrimination were experienced by **10.94%** of workers, making it harder for them to seek medical help. A smaller proportion (**0.59%**) identified other barriers, and **11.72%** of respondents reported facing no barriers to accessing healthcare.

These findings underscore the need for increased awareness, better access, and more inclusive healthcare services to remove the obstacles sanitation workers face in seeking medical care.

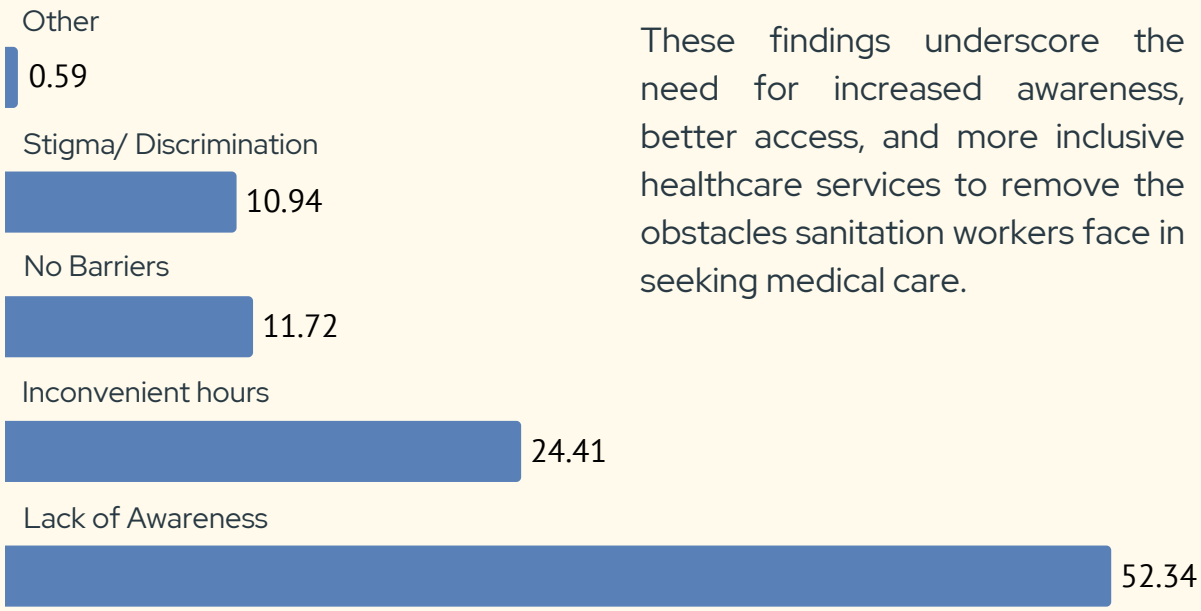


Figure 14: Barriers to availing healthcare services (in %)

Access to Hygiene and Health Amenities

Access to Clean Water

Access to clean water for hygiene purposes during work or at their workplaces is a significant issue for sanitation workers. While a little over 44% (**44.14%**) of workers reported having access to clean water, a considerable portion (**42.58%**) indicated that they do not have access to clean water at all. Additionally, **13.28%** mentioned that clean water is sometimes available. This data highlights the challenges sanitation workers face in maintaining proper hygiene during their duties, underlining the basic need for consistent access to clean water.

Access to Clean Water	Frequency (Percentage)
No	218 (42.58%)
Sometimes	68 (13.28%)
Yes	226 (44.14%)

Access to Soap

Access to Soap	Frequency (Percentage)
No	336 (65.63%)
Sometimes	56 (10.94%)
Yes	120 (23.44%)

Access to soap for hygiene purposes among sanitation workers is notably limited. A significant majority (**65.63%**) reported not having access to soap, while **10.94%** stated that soap is available only sometimes. Only **23.44%** of workers indicated that they have consistent access to soap. This data highlights a serious gap in basic hygiene provisions for sanitation workers.

Access to Paper Towels

Access to paper towels for hygiene purposes is extremely limited for sanitation workers. A vast majority (**88.67%**) reported that they do not have access to paper towels, while 6.25% indicated that they have access to them only sometimes.

Only a small fraction (**5.08%**) stated that paper towels are consistently available to them.

Access to Paper Towels	Frequency (Percentage)
No	454 (88.67%)
Sometimes	32 (6.25%)
Yes	26 (5.08%)

Access to First Aid Kits

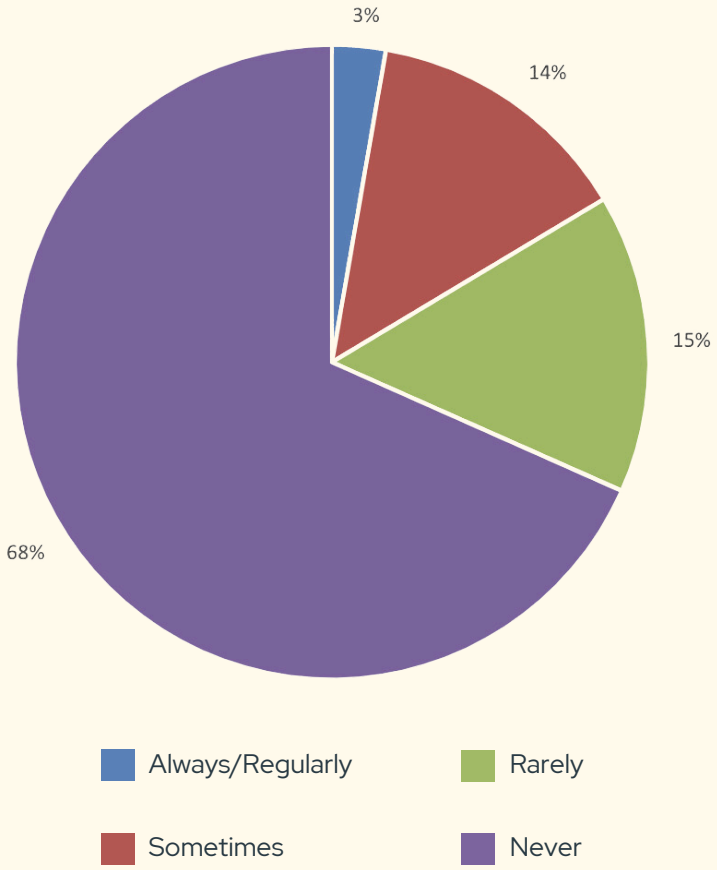
Access to First Aid Kits	Frequency (Percentage)
No	418 (81.64%)
Sometimes	33 (6.45%)
Yes	61 (11.91%)

Access to first aid kits is alarmingly scarce among sanitation workers. A significant majority (**81.64%**) reported that they do not have access to first aid kits, highlighting the lack of basic medical supplies in their workplaces. A smaller proportion (**6.45%**) indicated that first aid kits are available only sometimes, while **11.91%** stated that they have consistent access to them. This data underscores the urgent need for employers to provide essential health and safety resources, such as first aid kits, to better protect sanitation workers in case of injuries or emergencies on the job.

Protective Equipment

Availability of Equipment

Figure 15: Availability of equipment



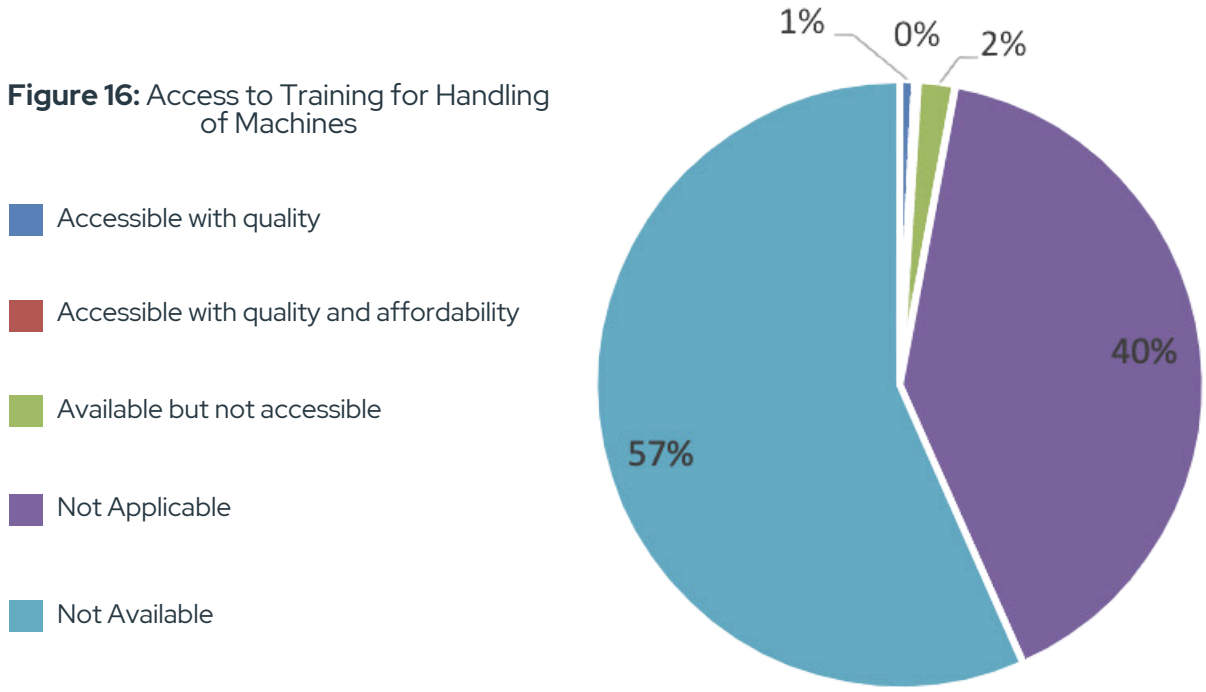
The availability of proper equipment and tools for sanitation workers to perform their duties safely and efficiently is highly inadequate. A significant majority (**68.36%**) reported that they never have access to the necessary tools and equipment, while **15.23%** stated they rarely have them. Only **13.67%** indicated that equipment is available sometimes, and a very small proportion (2.73%) reported having regular access to the proper tools.

This data highlights the critical need for improved provision of proper equipment and tools to ensure that sanitation workers can carry out their work without compromising their health and safety.

Provision of Training

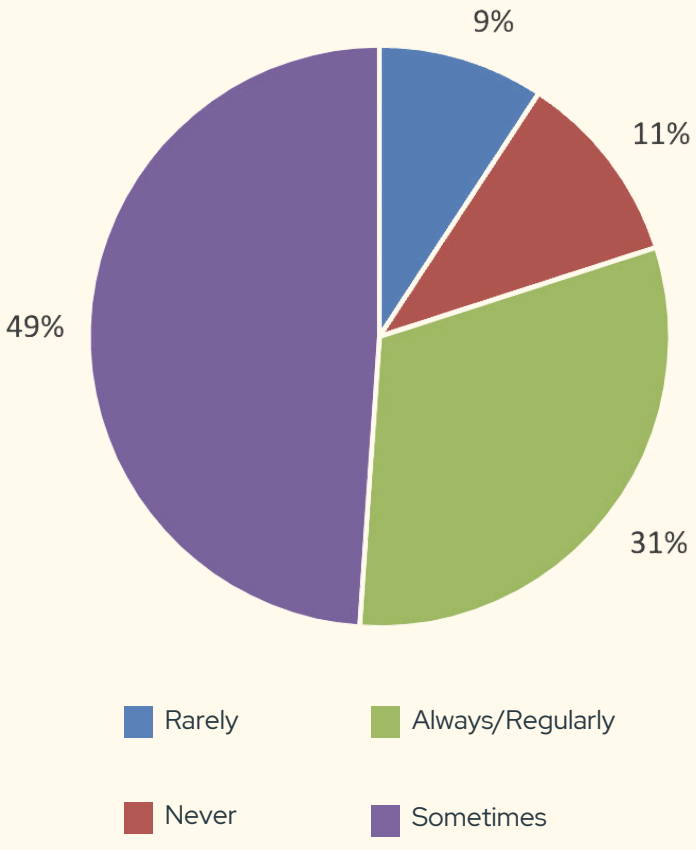
Training for sanitation workers to operate machines and tools is largely inadequate. A vast majority (56.64%) of workers reported that such training is not available to them. For those who had some access to training, 1.95% indicated that it was available but not accessible, while only 0.78% found it accessible with quality. A tiny fraction (0.20%) reported that training was both accessible and affordable. Additionally, 40.43% of respondents indicated that training was not applicable to their roles. These findings highlight a significant gap in skill development and safety training for sanitation workers, which is essential for ensuring their ability to use machinery and tools properly and safely.

Figure 16: Access to Training for Handling of Machines



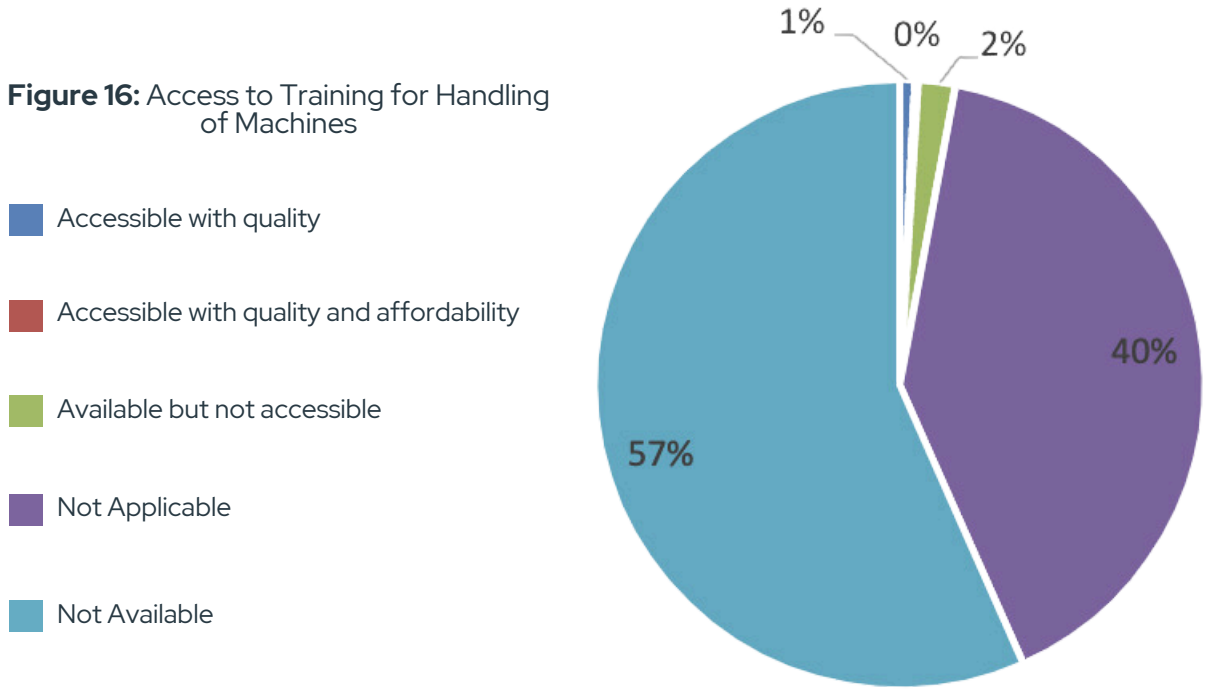
Frequency of Occupational Hazards

Figure 17: Exposure to Occupational Hazards.



Sanitation workers face occupational hazards frequently, with nearly half (48.92%) reporting that they experience these hazards sometimes. A significant proportion (31.04%) stated that they face occupational risks regularly or always, underscoring the constant danger they are exposed to in their work. Fewer workers (9.23%) reported encountering these hazards rarely, while 10.81% indicated that they never face any occupational hazards. This data highlights the high level of exposure to risks and the urgent need for improved safety measures to protect sanitation workers from the dangers inherent in their jobs.

Figure 16: Access to Training for Handling of Machines



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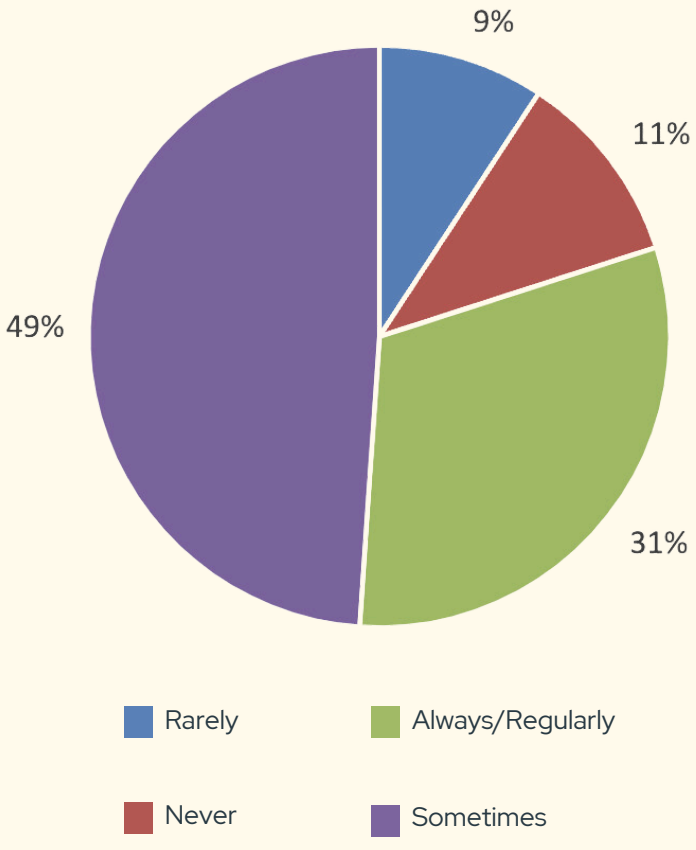

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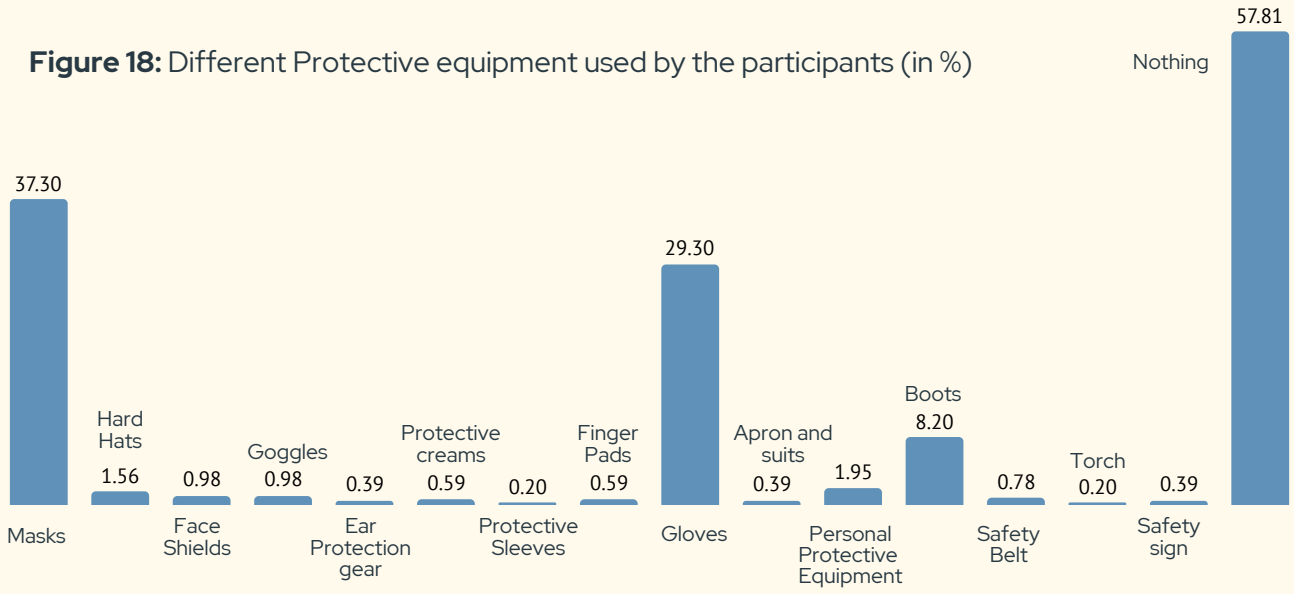
Access to Protective Equipment

The availability and use of protective equipment among sanitation workers is extremely limited. A majority of workers (57.81%) reported having no protective equipment at all. Among those who do have access to gear, masks were the most common, with 37.30% of workers using them. Gloves were used by 29.30% of workers, while boots were reported by 8.20%. Some workers had access to other protective items, such as hard hats (1.56%), face shields (0.98%), and goggles (0.98%), though these were used in very small proportions. Other equipment like ear protection gear (0.39%), protective creams (0.59%), and PPE kits (1.95%) were used by even fewer. There was also limited access to aprons, safety belts, torches, and safety signs, with each item being reported by only a small fraction of workers. This data highlights the critical lack of adequate protective equipment available to sanitation workers, putting their health and safety at significant risk.

Figure 18: Different Protective equipment used by the participants (in %)

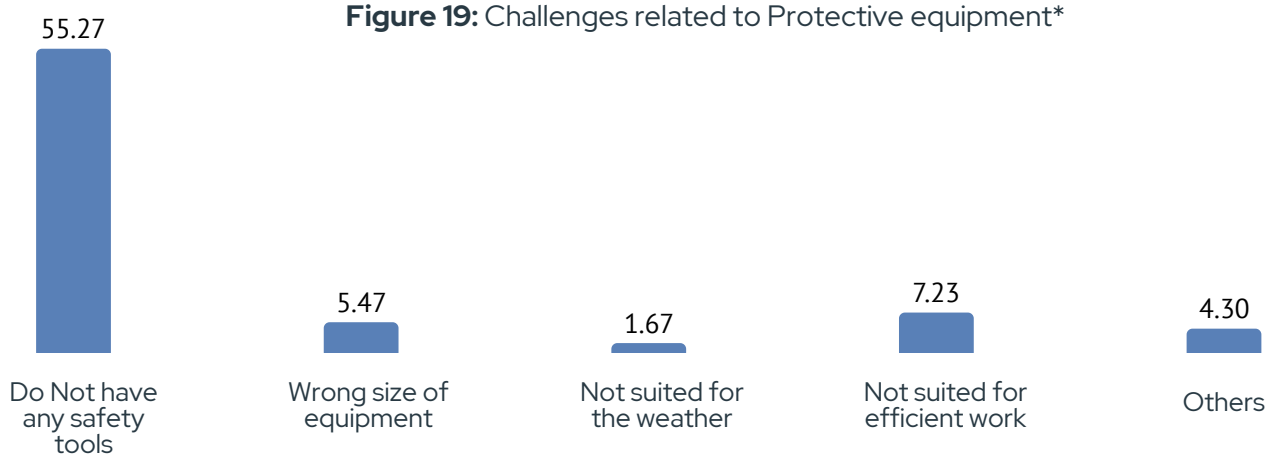


Main Challenges Faced with Protective Equipment

Sanitation workers face several challenges in handling safety equipment and work-related tools. A majority (55.27%) reported not having any safety tools at all, highlighting a significant gap in protective measures. Among those who did have equipment, 7.23% found the tools were not suited for efficient work, 5.47% mentioned the equipment was the wrong size, and 1.76% indicated the tools were not suitable for the weather conditions. Additionally, 4.30% cited other challenges. As this is a non-mutually exclusive data set, it's important to note that workers have .

reported multiple issues, underscoring the complex and multifaceted nature of the difficulties they face. These issues highlight the urgent need for appropriate, well-fitted, and effective safety gear to protect sanitation workers in their daily tasks

Figure 19: Challenges related to Protective equipment*



*Not mutually exclusive

Correlation between Exposure to Hazards and Provision of Protective Equipment

The relationship between exposure to environmental hazards and the provision of protective equipment by employers was found to be surprisingly inverse. While **31%** of respondents reported being exposed to various environmental hazards during their work, only a small fraction (**3%**) of these workers were provided with any protective equipment. This alarming discrepancy highlights a serious gap in employer responsibility and the safety measures required to protect sanitation workers from health risks associated with their daily tasks.

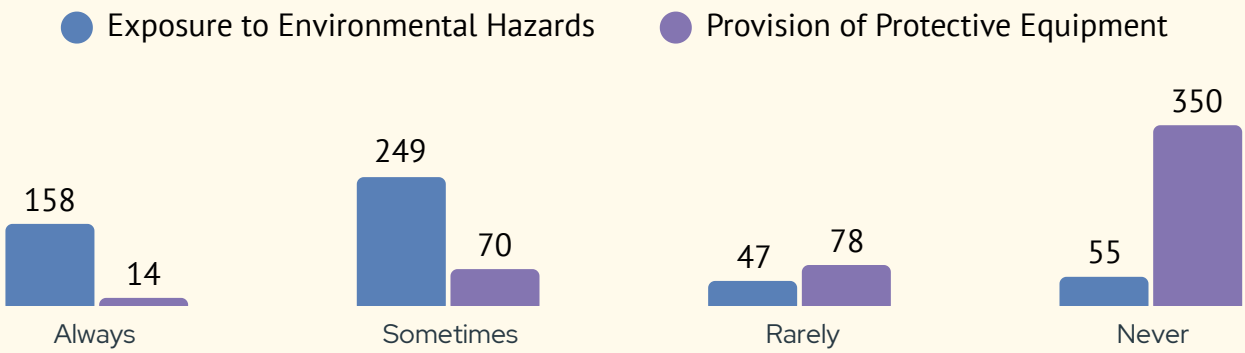


Figure 20: Correlation of Exposure to Hazards and Provision of Protective Equipment

Challenges with Tools and Machines

Different Tools Available for Work

Sanitation workers have access to a range of tools to perform their duties, though their availability varies widely. The most commonly provided tool is the broom, reported by **92.38%** of workers, followed by buckets (**78.91%**) and shovels (**48.44%**). Kaata (**27.34%**) and spades (**41.60%**) are also frequently available, while bamboo sticks are reported by **48.63%** of workers. Some workers (**5.76%**) use specialized equipment like suck machines, although these are less common. Additionally, **58.58%** of workers mentioned the use of other unspecified tools, while a small proportion (**0.78%**) reported having no tools at all. This data highlights the varied access to essential tools and equipment, with certain workers relying on basic implements, while others have access to more specialized tools, which may influence the efficiency and safety of their work.

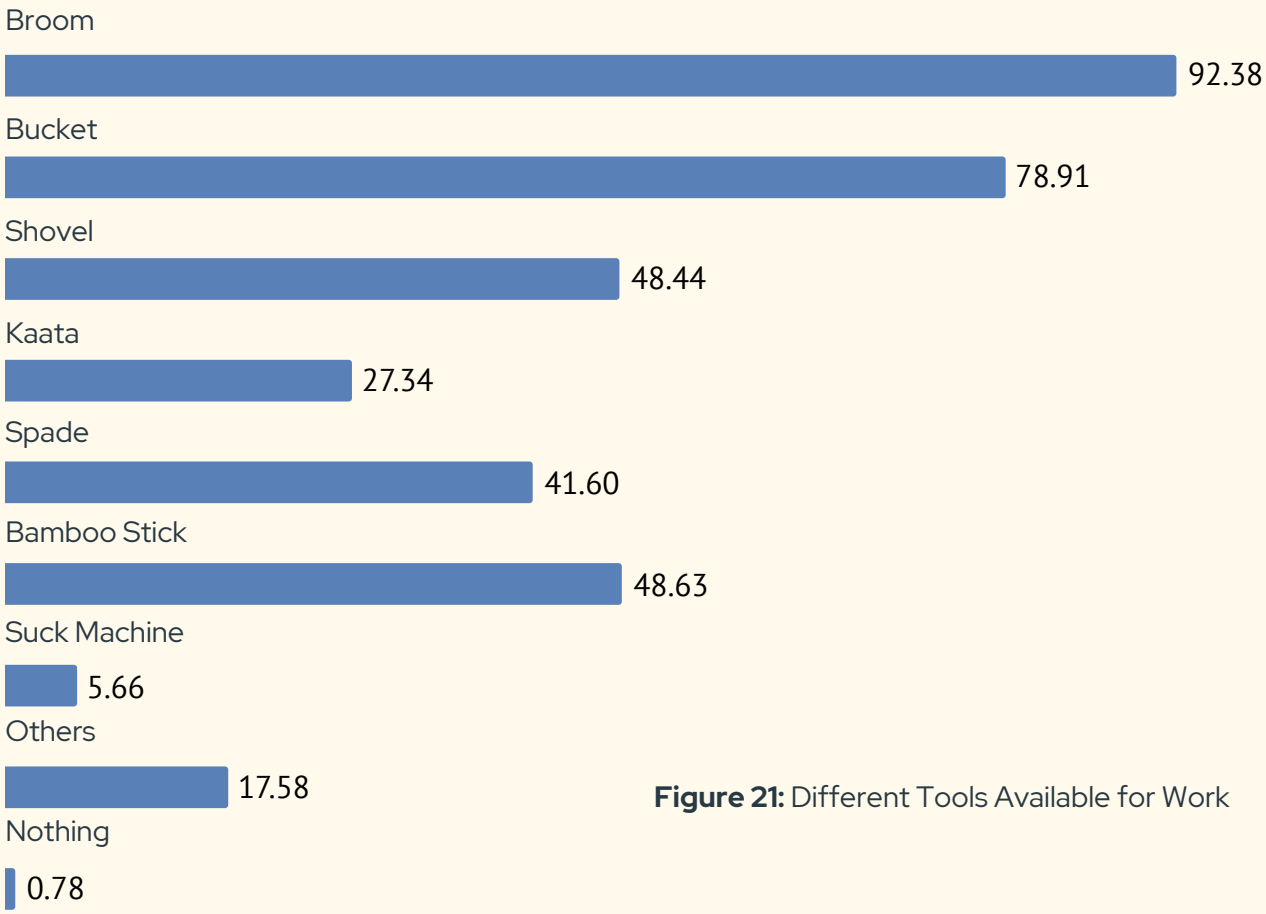


Figure 21: Different Tools Available for Work

Challenges with Handling Tools

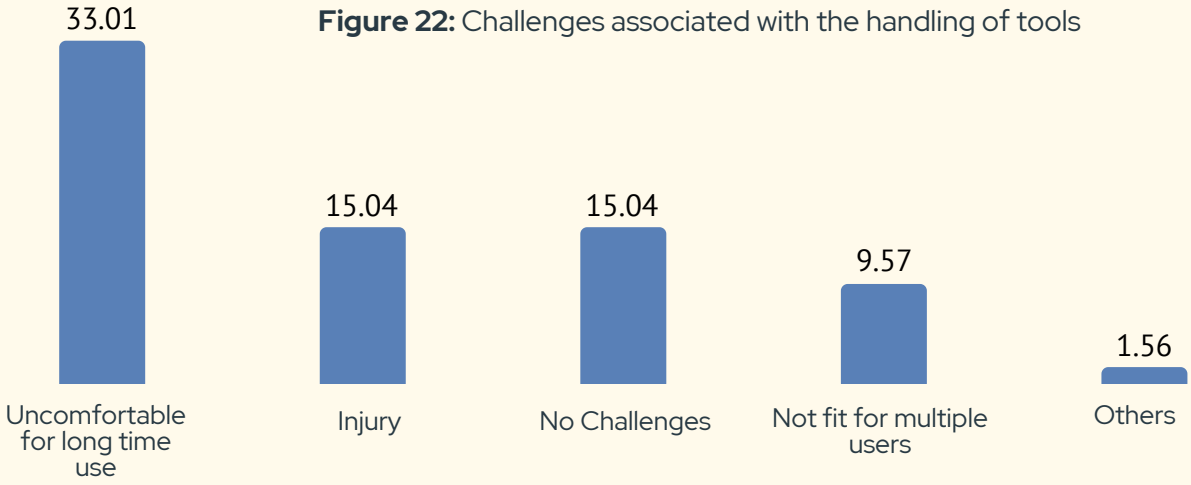


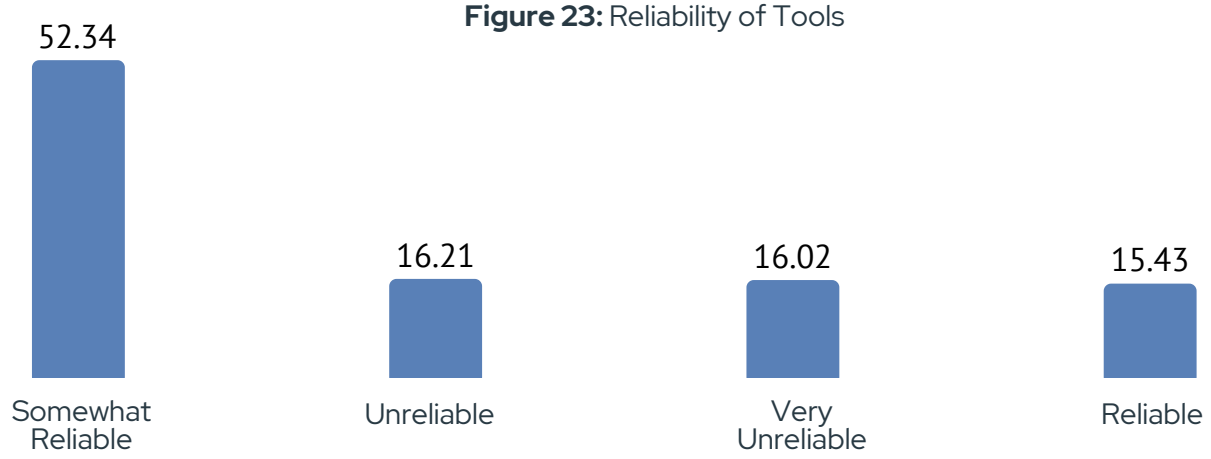
Figure 22: Challenges associated with the handling of tools

Sanitation workers have access to a range of tools to perform their duties, though their availability varies widely. The most commonly provided tool is the broom, reported by **92.38%** of workers, followed by buckets (**78.91%**) and shovels (**48.44%**). Kaata (**27.34%**) and spades (**41.60%**) are also frequently available, while bamboo sticks are reported by **48.63%** of workers. Some workers (**5.76%**) use specialized equipment like suck machines, although these are less common. Additionally, **58.58%** of workers mentioned the use of other unspecified tools, while a small proportion (**0.78%**) reported having no tools at all. This data highlights the varied access to essential tools and equipment, with certain workers relying on basic implements, while others have access to more specialized tools, which may influence the efficiency and safety of their work.

Reliability of Available Tools

The reliability of the tools currently available to sanitation workers varies widely. A significant proportion (52.34%) of workers described the tools as somewhat reliable, indicating mixed experiences with their effectiveness. However, a notable percentage of workers found the tools to be unreliable (16.21%) or very unreliable (16.02%), suggesting that these tools often fail to meet the necessary standards for consistent performance. Only a small fraction (15.43%) considered the tools to be reliable.

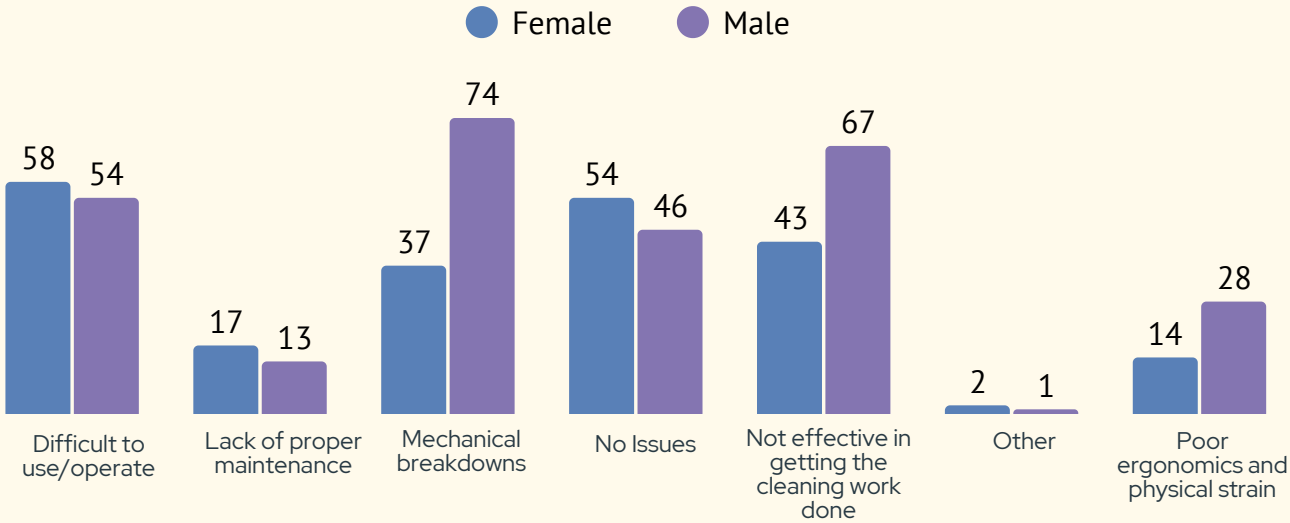
Figure 23: Reliability of Tools



Gender Breakdown of Challenges Faced with Equipment

The data reveals that more women than men faced difficulties in operating sanitation equipment and tools, as well as challenges related to the lack of proper maintenance. A significant factor contributing to this could be the absence of adjustable features in the tools, making them uncomfortable and difficult to use for women workers. In contrast, male respondents reported issues primarily related to frequent mechanical breakdowns, ineffective tools that did not adequately complete cleaning tasks, and physical strain resulting from poorly designed tools with inadequate ergonomics. This gender disparity in tool-related challenges highlights the need for more inclusive, ergonomic designs and better maintenance to improve the working conditions for all sanitation workers.

Figure 24: Gender Breakdown of Challenges Faced with Equipment



Inference and Learnings

The findings from the survey reveal significant challenges related to employment conditions, safety, healthcare, and overall well-being of sanitation workers. These challenges highlight systemic issues that need to be addressed to improve their working conditions and protect their rights, dignity and physical safety.

A critical factor that emerges from the data is the intersection of caste-based discrimination with the sanitation work sector. Sanitation work in India has long been tied to caste, with Dalits and other marginalized groups predominantly performing these tasks. This deep-rooted caste-based discrimination has compounded the already precarious working conditions, exposing sanitation workers to multiple layers of oppression. The caste system, which traditionally devalues the work associated with cleaning and waste management, not only relegates these individuals to the lowest rungs of society but also subjects them to stigmatization, exploitation, and lack of opportunities for social mobility. The oppression faced by sanitation workers often leaves them trapped in generational cycles of poverty, further limiting their access to resources like education, healthcare, and economic opportunities.

One of the most prominent insights is the lack of job security and the widespread reliance on temporary, daily wage, and non-permanent forms of employment. The majority of workers are employed under insecure conditions, which not only contributes to financial instability but also limits access to benefits such as healthcare and welfare. This employment structure creates a cycle of vulnerability, poverty and insecurity.

A major concern that emerges from the data is the insufficient provision of safety measures and protective equipment. Despite being regularly exposed to hazardous environments —such as exposure to toxic substances, infections and physical injuries —sanitation workers are rarely provided with adequate protective gear. This gap in safety provision is particularly troubling, considering the fact that legal mandates stating employer obligations exist. The lack of access to appropriate and complete safety equipment and training further exacerbates the

exposure to occupational hazards, underscoring a critical failure in employer responsibility. In addition to physical safety, the mental health of sanitation workers also appears to be largely neglected. The vast majority of respondents reported that mental health support is either completely unavailable or not accessible. This lack of mental health care creates a hidden crisis that demands attention. Workers face long-term psychological strain, which goes unaddressed leading to further exacerbation and deterioration.

Healthcare access is another area where workers face substantial barriers. Many workers report difficulty accessing regular health checkups or affordable healthcare services. Even when healthcare services are available, they are often not affordable, further restricting sanitation workers from obtaining the necessary care. This compounds the already precarious health status of many workers, leaving them vulnerable to undiagnosed or untreated illnesses.

The absence of comprehensive training programs is another critical issue. Many sanitation workers report receiving little or no formal training on the use of tools and machinery, which increases the risk of accidents. The lack of training also extends to the proper use of safety equipment, contributing to the higher incidence of mechanical failures, poor ergonomics, and physical strain. Gender disparities also emerge in the findings, with women reporting more difficulty in using tools and operating equipment, which may be attributed to the lack of ergonomic adjustments. This highlights the need for more inclusive design of tools and machinery that account for gender and body-type differences, ensuring that all workers, regardless of gender, can perform their duties safely and effectively.

Finally, despite the existence of various governmental health and welfare schemes, many sanitation workers remain excluded from these programs due to limited access and awareness.

In conclusion, the data highlights the systemic neglect of sanitation workers' welfare across multiple dimensions: from employment conditions to safety, healthcare, training, and health and welfare security. The findings also underscore how caste-based discrimination amplifies the challenges sanitation workers face, leaving them vulnerable to even greater exploitation and oppression. Addressing these gaps is essential to improving the lives of sanitation workers and ensuring they are treated with the dignity and respect they deserve.

Key Recommendations

Access to Healthcare Services

The survey highlights a significant gap in access to healthcare services for sanitation workers, with many reporting limited access to medical checkups and a lack of timely healthcare provisions. To ensure the long-term health and safety of workers, employers must provide comprehensive healthcare services. This should include regular medical checkups, access to primary healthcare, and treatment for work-related injuries or illnesses.

Governments and employers must collaborate to establish mobile health clinics or partner with local health organizations to provide these services directly at the workplace or in nearby locations, making healthcare more accessible and affordable. Additionally, workers should be informed about available healthcare schemes and benefits, and barriers to accessing these services should be addressed.

Hygiene and First-Aid Care at Workplace

Sanitation workers are exposed to a range of hazardous substances and environments, yet many lack access to basic hygiene and first-aid facilities at their workplaces. Given the high physical and environmental risks they face, it is essential to ensure that sanitation workers have access to clean water, soap, and towels at all times. These basic facilities promote hygiene and can also protect workers from preventable diseases and infections. Additionally, all workstations should be equipped with well-maintained first aid kits to provide immediate relief in case of injuries.

Provision of Complete and Adequate Safety Gear

The survey data indicates that workers often go without adequate protective equipment, which puts them at high risk for occupational injuries and illnesses. It is crucial for employers to provide complete and regularly maintained safety gear, including gloves, boots, face masks, goggles, and other personal protective equipment (PPE). Special

attention should be given to workers performing particularly hazardous tasks, ensuring that the gear is specific to the risks involved in their . daily work. Employers must also ensure that all safety equipment meets industry standards and is replaced or repaired as needed

Adequate Training

The survey revealed that many sanitation workers have not received proper training on the use of tools and safety equipment. To address this, employers should implement structured training programs that teach workers how to safely operate machinery, use protective equipment, and handle hazardous materials. Additionally, training should include information on ergonomics to reduce physical strain, particularly for women workers who may face specific challenges with ill-suited tools. Training should be provided at regular intervals to ensure workers stay informed about new safety standards and best practices.

Modern Machinery and Maintenance

Sanitation work often requires the use of specialized tools and machinery, many of which are outdated, difficult to operate, or prone to frequent breakdowns. To improve efficiency and safety, employers should invest in modern, easy-to-use machinery that reduces physical strain and enhances productivity. Regular maintenance of these machines is essential to ensure they function correctly and safely. Establishing a proactive maintenance schedule, along with timely repairs, will help prevent mechanical breakdowns that disrupt workers' tasks and put them at risk.

Provision of Complete and Adequate Safety Gear

The survey data indicates that female sanitation workers face unique challenges, particularly when it comes to using equipment that is not ergonomically suited for them, or having limited access to essential facilities like clean water and toilets. To address these needs, employers must ensure that women workers have access to gender-sensitive provisions, including clean water, soap, and private toilet facilities. Additionally, tools and equipment should be designed or modified to be more ergonomic and comfortable for female workers, enabling them to perform their tasks efficiently and safely.

Workers' Compensation Insurance

The absence of sufficient compensation mechanisms leaves sanitation workers vulnerable in the event of an accident or illness. Many workers do not have access to compensation schemes that protect them in case of work-related injuries. It is essential that employers provide workers' compensation insurance that covers the loss of income due to work-related accidents or illnesses. This insurance should be easily accessible and offer fair compensation for medical expenses, rehabilitation, and lost wages. Additionally, the claims process should be streamlined to ensure that workers are not burdened with bureaucratic delays when seeking compensation.

Employment Injury Insurance Schemes

Sanitation workers face a high risk of injury and exposure to hazardous environments. The lack of adequate safety measures and the physically demanding nature of the work make it essential for employers to provide employment injury insurance schemes. These schemes act as a safety net for workers, covering medical expenses and loss of income when workers are injured on the job. It is vital that all sanitation workers are enrolled in such schemes, and that the process is straightforward and transparent. Employers should ensure that the schemes are properly communicated to workers, and they should collaborate with relevant government bodies to ensure that workers receive timely and sufficient support in case of injury.

Based on a study led by:

South Asian Sanitation Worker and Labour Network (SASLN)

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