

Occupational Stress Levels Among Sanitation Workers – A Quantitative Study

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Abstract: Occupational stress is a common but often unnoticed problem among sanitation workers who perform physically demanding and socially challenging work every day. This study aimed to understand the level of occupational stress experienced by sanitation workers and to examine whether stress levels differ between male and female workers. A quantitative research design was used and data were collected from 200 sanitation workers using a survey method. The collected data were analysed using descriptive statistics and an unpaired t-test.

The finding revealed that most sanitation workers experience moderate to high levels of occupational stress. The analysis also showed that there was no significant difference in occupational stress levels between male and female workers. This indicates that occupational stress among sanitation workers is mainly influenced by the nature of the job rather than gender.

The study highlights the need for better working conditions, adequate safety equipment, regular health support and stress management initiatives for sanitation workers. Addressing their stress with care and understanding can improve their overall well-being and help create a healthier and more supportive work environment.

Keywords: occupational stress, sanitation workers.

I. INTRODUCTION

Sanitation workers are the backbone of every city. Before most people wake up they begin their day sweeping streets, collecting waste, cleaning drains and handling the dirt that society leaves behind. Their work

protects public health and also prevents the spread of disease and keeps our environment liveable. Yet, the people who keep our environment clean often remain unnoticed, unappreciated and unheard. They work in difficult conditions but their struggles stay hidden behind the routine rhythm of daily life.

Despite their essential contribution sanitation workers face a harsh reality every day. Their job exposes them to foul odours, hazardous waste, extreme weather and unsafe environment. Many work with minimal protective equipment, low wages, long hours and constant physical strain. Beyond physical challenges they experience a deep emotional burden, stigma from society, lack of respect, job insecurity and the fear of health problems. These continuous pressures slowly build up into occupational stress, affecting not only their mental well-being but also the quality of their lives. Research across India shows that sanitation workers belong to one of the most vulnerable occupational groups. However, while many studies talk about their physical hardships very few explore their mental health. Stress, anxiety and emotional exhaustion are often left unaddressed. In many places sanitation workers are not even recognised as formal employees leaving them without support systems that other workers receive. This neglect creates a silent suffering, a form of stress that grows quietly and remains unspoken. Understanding their stress is not just an academic exercise, it is a social responsibility. When the people who keep our cities clean struggle with high stress, it is a sign that the system needs

change. Their mental health must be viewed as a priority not as an afterthought. Recognizing their challenges is the first step toward ensuring dignity, safety and well-being for a group that serves the community selflessly.

Therefore, this study aims to explore and measure the occupational stress experienced by sanitation workers through a quantitative approach. The finding can help policymakers, organizations and society understand where change is needed and how support can be strengthened. Ultimately this study is not just about voices, experiences and lives that deserve attention.

II.NEED FOR THE STUDY

Sanitation workers play as essential role in protecting public health, yet the emotional and psychological challenges of their work often remain unnoticed. Continuous exposure to unsafe working conditions, heavy workload, low social recognition and limited support systems can gradually lead to occupational stress, affecting their well-being and quality of life. While some studies have discussed the physical difficulties faced by sanitation workers, research focusing on their occupational stress especially examining whether stress differs between male and female workers- is still limited. Therefore, the present study is needed to assess the level of occupational stress among sanitation workers and to understand whether gender plays as role in their stress experience, so that appropriate workplace support and interventions can be developed.

III.REVIEW OF LITERATURE

Sanitation workers (street sweepers, waste collector, sewer workers) face multi - dimensional hazards physical, chemical, biological, social (stigma, caste discrimination) economic insecurity all of which contribute to occupational stress and poor mental health. India has millions of sanitation workers with poor social protection which magnifies psychosocial risks.

- Parvin (2019) examined occupational stress among 210 municipal sanitation workers in Bangladesh and found that long working hours, poor facilities and exposure to waste significantly increased psychological strain. Workers reported fatigue, anxiety and lack of safety training.

- Srinivasan and Ramesh (2018) assessed stress level among 150 sanitation workers in Tamil Nadu and identified inadequate protective equipment and low wages as major sources of stress. The study showed high emotional exhaustion and moderate job dissatisfaction.
- Ali et al. (2017) surveyed 180 sanitation workers and found chronic stress associated with continuous exposure to waste. Lack of family support and occupational hazards contributed heavily to emotional distress.
- Cooper and Marshall (1976) identified occupational stressors such as role overload, poor working conditions, lack of job security and inadequate organizational support as major sources of work stress. Sanitation works fits many of these stress categories as workers often face heavy workload unclear job roles and minimal institutional support making them highly vulnerable to chronic stress.
- Bharathi (2015) Tamil Nadu studied 100 sanitation workers and highlighted that deep rooted social stigma and discrimination created low self- esteem and chronic stress among workers, especially those involved in manual cleaning.
- Thomas and Wilson (2019) Kerala then assessed sleep disturbances among 130 sanitation workers and found that irregular work timings and night shifts caused emotional instability, fatigue and higher stress levels.
- Gurung and lama (2021) Nepal those are examined 90 sanitation workers in Nepal and found severe psychological burden due to public disrespect, low salaries and lack of recognition. Chen et.al (2017) China surveyed 250 sanitation workers in China and discovered a strong association between exposure to toxic materials and chronic stress symptoms including headaches and irritability.
- Smith and Brown (2018) studied 140 public sanitation workers in the UK and found high emotional exhaustion due to public waste handling, poor job autonomy and low appreciation from society. Rajkumar (2016) found that among 160 sanitation workers musculoskeletal pain, respiratory issues and

physical overload resulted in high levels of stress and burnout especially among older workers.

Taken together these studies clearly indicate that sanitation workers face multiple stressors including hazardous working conditions, low income, social stigma, insufficient protective measures and lack of organizational support. This literature highlights the urgent need for structured quantitative research to assess occupational stress and identify solutions to improve the wellbeing of sanitation workers.

IV.OBJECTIVES OF THE STUDY

- To find out the level of occupational stress among the sanitation workers.
- To find out the significant difference in the mean score of occupational stress among sanitation workers based on gender.

V.HYPOTHESES OF THE STUDY

- There is no significant difference in the level of occupational stress among sanitation workers.
- There is no significant difference in the mean score of occupational stress among sanitation workers based on gender.

VI.METHODOLOGY

This study utilizes survey method to understand the occupational stress levels of sanitation workers. A total of 200 sanitation workers participated in the study. They were selected based on convenience sampling from different work locations. The survey included questions related to their work conditions, stress experiences and challenges they faced in their daily job. Participants were informed about the purpose of the study and assured that their answers would remain confidential. After getting their consent the survey was distributed and collected on the same day. Later the response organized and used to understand the overall stress levels among the sanitation workers.

Data Analysis

The collected data were entered into Microsoft excel and analysed using descriptive and inferential

statistics. Descriptive statistics such as mean, standard deviation, frequencies and percentages were computed to understand the overall level of occupational stress among sanitation workers. Additionally, an independent sample t-test was performed to examine whether occupational stress differed based on gender.

Descriptive statistics

- Mean
- Standard Deviation
- Minimum score
- Maximum score
- Low/moderate/high distribution

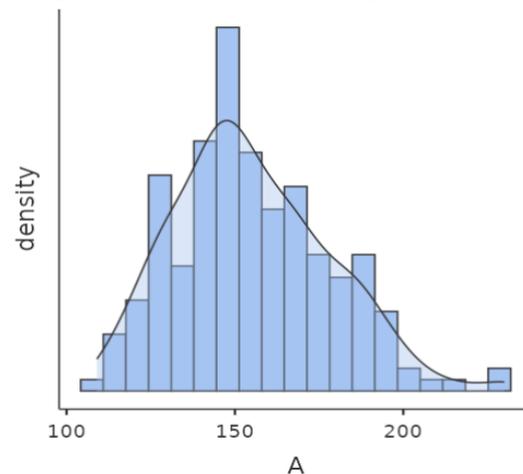
the overall occupational stress score ranged from above 116 to 161 with the mean score of 155.22 and a standard deviation of 23.01 based on the cut off values derived using the mean \pm SD method participants were categorized into low, moderate and high stress groups.

Stress level	Frequency	percentage
Low	5	2.5%
Moderate	122	61%
High	78	39%

The results indicate that a majority of sanitation workers fall under the moderate 61% category followed by low 2.5 and high 39% level of stress.

Normality curve

The Normality curve was conducted to examine whether the occupational stress scores followed a normal distribution. A histogram with a normal curve was plotted. The curve indicated that the distribution was approximately normal with slight variations.



ANALYSIS OF t- TEST

VARIABLE	GENDER	N	MEAN	SD	t-TEST	P Value
Occupational stress	Male	104	153.79	22.93	0.8418	0.4009
	Female	94	156.55	23.42		

At- test was conducted to find out the difference in the level of occupational stress among sanitation workers in which the categories are male and female respectively. In this analysis out of 200 respondents, 104 were male and 96 females. The mean score for male was 153.79 with standard deviation of 22.93 respectively. Similarly, the mean score for female 156.55 with standard deviation of 23.42 respectively. The obtained t-value for this independent samples 0.8418 indicating it is not statistically significant at 0.05 level. therefore, occupational stress level showed no significant difference based on gender. As a result, the stated hypothesis, “there is no significant difference in the mean score of occupational stress among sanitation workers based on gender” is accepted.

VII.DISCUSSION

The present study aimed to examine the occupational stress level among sanitation workers and to identify whether gender differences exist in their stress experience. The findings of the study indicate that both male and female sanitation workers reported similar levels of occupational stress and the independent samples t-test revealed a non-significant difference between the two groups. This suggest the gender may not be determining factor in the occupational stress experienced by sanitation workers.

One possible explanation for the absence of significant gender difference could be the similarity in works conditions. Both the similarity in work conditions, sweeping, segregation and handling unclean environments. since the nature of the job, workload and exposure to hazards are largely the same regardless of gender the stress experienced may also be similar.

Another reason may be related to the socio- economic background of the workers. Most sanitation workers come from economically disadvantaged communities where work demands, financial difficulties, family responsibilities and long working hours contribute to high levels of stress for everyone. therefore, the stress experienced may be more influenced by work

environment and socio- economic factors than by gender.

The finding of the study is consistent with earlier research which reported that sanitation work generally leads to high levels of physical and mental stress due to poor working conditions limited safety measures and social stigma related to the job. Studies have also shown that occupational stress among sanitation workers is influenced more by workload, lack of protective equipment and job insecurity than by demographic characteristics such as gender.

Overall, the result highlight that occupational stress is a common concern among sanitation workers irrespective of gender. This suggests the need for organizational and policy level intervention such as better safety equipment, regular health checkups, stress management training and improved working conditions to reduced stress and enhance the well-being of all sanitation workers.

VIII.CONCLUSION

This study was done to understand how much work-related stress sanitation workers experience and whether there is any difference between male and female workers. The finding showed that both men and women experience almost the same level of occupational stress. The statistical analysis also confirmed that the difference between male and female workers was not significant.

This means that stress among sanitation workers is mainly caused by the nature of their work rather than gender. Daily exposure to dirty environments, physical tiredness, long working hours, lack of proper safety equipment and low recognition in society seem to affect all workers equally. These conditions create continuous stress for sanitation workers regardless of whether they are male or female.

The study highlights the importance of improving working conditions for sanitation workers. Providing proper safety tools, regular health check - ups, rest break and emotional support can help reduce their stress levels. Small changes at the workplace can make

a big difference in their mental and physical well-being.

Overall, this study shows that occupational stress is a common and serious issue among sanitation workers. Addressing their problems with care and respect can improve not only their quality of life but also the quality of service they provide.

IX.SUGGESTIONS

Based on the finding of the study the following suggestions are offered to reduce occupational stress among sanitation workers.

BETTER SAFETY MEASURES

Sanitation workers should be provided with proper safety equipment such as gloves, masks, boots, and uniforms to protect them from health risks and reduce fear and stress at work.

REGULAR HEALTH CHECK UPS:

Periodic medical check-ups should be conducted to monitor both physical and mental health. Early identification of health problems can help reduce long-term stress.

REASONALBLE WORKING HOURS:

Work schedules should allow adequate rest break. Reducing long working hours and workload can help prevent physical exhaustion and mental fatigue.

PSYCHOLOGICAL SUPPORT:

Counselling services and stress management programs should be made available to help workers cope with emotional stress and work pressure.

TRAINING AND AWARENESS PROGRAMS:

Proper training on hygiene practices, safety procedures and stress coping techniques can improve confidence and reduce anxiety at the workplace.

RECOGNITION AND RESPECT

Sanitation workers should be treated with dignity and respect. Public awareness programs and recognition by authorities can improve their self-esteem and job satisfaction.

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