OCCUPATIONAL STRESS LEVEL AMONG CLEANLINESS WORKERS OF INDORE MUNICIPAL CORPORATION ACROSS DIFFERENT GRADES

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ABSTRACT

The Quantitative study investigates the significant difference in occupational stress among cleanliness workers of Indore Municipal Corporation across different grades. Administering a survey by opting a occupational stress index developed by Dr. A K Shrivastava and Dr. Ashok Pratap Singh specifically for this research. The Null Hypothesis ($H_0 1$) states that There is no significant difference in occupational stress among cleanliness workers of Indore Municipal Corporation across different grades. We measured the occupational stress levels among 384 cleanliness workers of Indore Municipal Corporation during the cleanliness drive.

The assumption checks indicate that the normality assumption for Occupational Stress is violated, as evidenced by the Shapiro-Wilk test (W = 0.938, p < .001), suggesting that the data significantly deviates from a normal distribution. Additionally, Levene's test for homogeneity of variances (F(3, 377) = 29.3, p < .001) reveals a significant violation, indicating unequal variances across groups.

The results of Welch's One-Way ANOVA indicate a statistically significant difference in Occupational Stress among cleanliness workers across different grades, F(3, 113) = 46.9, p < .001. Given that Welch's ANOVA is robust to violations of normality and homogeneity of variances, this result confirms that at least one group differs significantly from the others. Since the p-value is less than .05, we reject the null hypothesis, which states that there is no significant difference in occupational stress among cleanliness workers across different grades. This suggests that occupational stress levels vary significantly among the different grades of workers. To further examine which specific groups differ, a post hoc analysis such as Games-Howell should be conducted. Let me know if you need help with post hoc comparisons or further interpretation.

The Tukey post-hoc test results indicate significant differences in occupational stress among different grades of cleanliness workers. Specifically, Grade-I workers experience significantly different levels of occupational stress compared to Grades II, III, and IV (p < .001 for all comparisons). However, no significant differences are observed among Grades II, III, and IV, as their p-values are above 0.05. Since Welch's ANOVA indicated a significant overall difference, the post-hoc results help identify where these differences exist. The significant differences between Grade-I and the other three grades suggest that occupational stress is notably higher or lower in Grade-I compared to the rest. However, the non-significant comparisons among Grades II, III, and IV imply that their stress levels are relatively similar.

Thus, the null hypothesis ("There is no significant difference in occupational stress among cleanliness workers across different grades") is partially rejected, as significant differences exist between Grade-I and other grades, but not among Grades II, III, and IV.

1. INTRODUCTION

Indore has maintained its number one position consistently from last seven years. This success also has ingredients as occupational stress and wellbeing. Indore Municipal Corporation (IMC) was able to achieve this target because of active and dedicated role played by the cleanliness workers of corporation. We can see the shine and glitter of success however their lies a huge impact on level of Occupational stress and wellbeing to perform this job. Even Cleanliness workers of Indore Municipal Corporation cleaning roads day and night, working on holidays even on days like Diwali, Dusshera too. So, to understand their Occupational stress Wellbeing, researcher conducted this study which will become referral for further research and understanding at different levels. When whole world is looking towards the achievement of Indore Municipal Corporation same manner, they will be very much eager to understand the current mental health of employees of corporation, which will be measured in this study using the construct of Occupational stress and wellbeing.

Occupational stress stressors are those extremely demanding but short-lived events that require your body to mobilize its energy supplies to help you cope with the situation. Occupational stress is a concern for both employees and employers because stressful job conditions are related to employees' emotional well-being, physical health, and job performance. As per study by World Health Organisation (WHO) and international labour Organisation (ILO), "Exposure to long working hours, which are theorized to operate through increased psycho-social stress, is the risk factor with the largest attributable burden of disease", Wellbeing and occupational stress can be managed by understanding what the stressful conditions at work are and taking steps to remediate those conditions. The active pursuit of activities, choices and lifestyles that lead to a state of holistic health". Wellness is a modern word with ancient roots.

Cleanliness workers play an essential role in the success of these initiatives, yet they often work under challenging conditions. They are typically required to work long hours, engage in physically demanding tasks, and handle hazardous materials. The nature of their work exposes them to various occupational hazards, including potential physical injuries and health risks from exposure to waste and harmful substances Chigwedere et al. (2021). Cleanliness workers often face societal stigma and lack of recognition, which can exacerbate their stress and negatively impact their mental health. Understanding the mental health of cleanliness workers during cleanliness drives is crucial. Increased levels of stress, anxiety, and depression can impair their ability to perform their duties effectively, leading to decreased productivity and higher rates of absenteeism.

2. SIGNIFICANCE OF THE STUDY

The significance of conducting a detailed study on the occupational stress of the Indore Municipal Corporation (IMC) staff engaged in cleanliness maintenance is multifaceted and extends to various crucial dimensions. Firstly, understanding the occupational stress of IMC staff is paramount for assessing worker satisfaction and overall job contentment. By understanding level of occupational stress, we can plan intervention to reduce the same. A workforce that experiences positive mental health is more likely to be engaged, productive, and committed to their roles, directly impacting the efficiency and effectiveness of cleanliness maintenance

operations. This, in turn, can contribute to reduced turnover rates and an improved quality of work life for the employees.

3. THEORETICAL FRAMEWORK

Empirical studies have demonstrated that cleanliness workers are particularly vulnerable to these adverse conditions. Research by Dos Santos (2015) found that sanitation workers experience high levels of occupational stress, contributing to significant anxiety and depression Dos Santos (2015). Studies on occupational health have shown that workers exposed to hazardous environments, such as those handling waste, are at higher risk for both physical and mental health problems WHO (2019), ILO (2017). This body of literature underscores the importance of investigating the specific mental health impacts of cleanliness drives on workers and highlights the necessity for organizational and policy-level interventions to mitigate these effects Kelloway et al. (2023). By situating the study within these established theoretical frameworks, it is possible to better understand the mechanisms through which cleanliness drives affect the mental health of workers. This understanding can inform the development of effective support systems and interventions aimed at reducing psychological distress and enhancing the overall well-being and productivity of cleanliness workers.

Oza et al. (2022) conducted a systematic review with the primary objectives of identifying such risk factors and evaluating the impact of exposure to human fecal sludge and wastewater on specific health outcomes among these workers. Through comprehensive searches spanning four databases from inception to January 01, 2020, they sought to include studies encompassing workers aged ≥15 years involved in various sanitation-related tasks. Comparisons were drawn with workers from different professions or the general populace, while outcomes of interest ranged from mortality to various health conditions such as gastroenteritis, respiratory diseases, and mental well-being.

Asplund (2022) investigates the organizational and psychosocial work environments, work-related stress, and health among municipal employees in rural northern Sweden. Quantitative analysis (Studies I and II) involving 1093 employees revealed a significant association between self-rated exhaustion disorder (s-ED) and various health-related factors such as cognitive and sleep problems, stress, and depressive symptoms. Qualitative analysis (Studies III and IV) through interviews highlighted the adverse impact of high demands and low resources, as well as conflicting demands on employees' and managers' well-being. The findings emphasize the importance of supportive leadership, adequate resources, and work-life balance in mitigating work-related stress and improving occupational well-being. These insights can inform interventions to enhance work performance and well-being in municipal organizations, particularly in rural settings.

4. METHODOLOGY

Research Design: Descriptive research has particularly apt for a study on occupational stress among cleanliness workers of the Indore Municipal Corporation due to its ability to provide a comprehensive and detailed understanding of the current state of affairs within this specific context. This research design allows for a systematic exploration of the workers' occupational stress differentiating in terms of gender and grade level (1,2,3, and 4).

Given the nature of the study, a descriptive approach enables the researchers to collect and present data in a holistic manner, capturing the nuanced aspects of cleanliness workers' lives. Through surveys, the study can unveil the prevalent stressors, and can give some coping mechanisms for their well-being.

Sampling Method: This study opted a purposive sampling method to select cleanliness workers actively involved in cleanliness drives. This method ensures that the sample is representative of workers experiencing the specific conditions and challenges associated with this drive.

Sample Size: Data was collected from at least 500 employees of Indore Municipal Corporation Cleanliness Staff, so that after filtration a total of sample size-384 (Raosoft software) was involved for final calculation. The present study was conducted on two sample groups follows: 384 employees (222 Males & 162 Females).

Geographic Location: The study have been conducted in the municipal range of Indore Municipal corporation. The data was collected from different wards selecting them on random basis.

Research Tool: Primary data has been collected through questionnaire. Mainly Occupational Stress Index (Hindi-English)-2019 design by Dr A.K. Srivastava was administered. To study occupational stress the tool will be Occupational Stress Index (Hindi-English)-2019 design by Dr A.K. Srivastava and Dr. Ashok Pratap Singh. This scale consists of 46 items divided into twelve sub areas:

1) Role Overload
2) Role ambiguity
3) Role Conflict
4) Unreasonable group and political Pressure
5) Responsibility for persons
6) Under Participation
7) Powerlessness
8) Poor Peer Relations
9) Intrinsic Impoverishment
10) Low status
11) Strenuous Working Conditions
12) Unprofitability

Scoring Method:

Occupational Stress

The scale used Likert scale rating from 1 to 5 which contains total 46 items (Table 1).

Table 1

Table 1 Occupational Stress Scale		
Response	**Positive**	**Negative**
Strongly Agree	5	1
Agree	4	2
Undecided	3	3
Disagree	2	4
Strongly Disagree	1	5

5. DATA COLLECTION

The material required for data collection includes bilingual biodata forms (in Hindi and English), an Occupational Stress Index so that respondents can easily participate according to their preferred language. A limited number of employees was requested to complete the biodata sheet, with the sample selection based on the information provided in these forms. Prior to participation, written informed consent was obtained from each participant.

Upon consent, participants were received the Occupational Stress Index (online and offline mode), ensuring confidentiality and anonymity throughout the process. Clear instructions were provided to aid participants in completing the scales. Ethical guidelines were strictly adhered to during the study's execution to protect participants' rights and ensure integrity.

6. DATA ANALYSIS
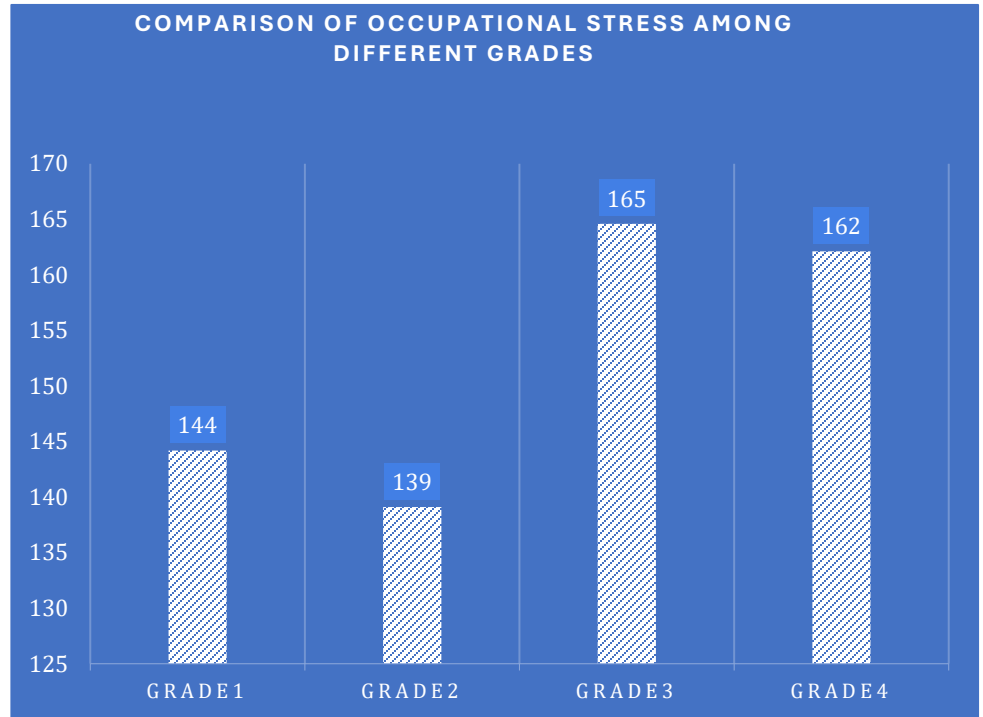
Heading	Grade1	Grade2	Grade3	Grade4
Occupational Stress	144	139	165	162
Status	Moderate	Moderate	High	High

This bar graph compares occupational stress levels among different employee grades. Grade 3 employees experience the highest stress at 165, closely followed by Grade 4 at 162. Grade 1 shows moderate stress at 144, while Grade 2 has the lowest stress level at 139. The data in table suggests significant variations in workplace

stress across different employee grades, with higher-grade employees generally facing more occupational stress.

7. ASSUMPTION CHECKS

Normality Test (Shapiro-Wilk)

	W	p
Occupational Stress	0.938	<.001

Note. A low p-value suggests a violation of the assumption of normality

Homogeneity of Variances Test (Levene's)

	F	df1	df2	p
Occupational Stress	29.3	3	377	<.001

One-Way ANOVA (Welch's)

	F	df1	df2	p
Occupational Stress	46.9	3	113	<.001

Tukey Post-Hoc Test – Occupational Stress

		Grade-I	Grade-II	Grade-III	Garde-IV
Grade-I	Mean difference	—	0.501***	0.5495***	0.4020***
	p-value	—	<.001	<.001	<.001
Grade-II	Mean difference		—	0.0485	-0.0991
	p-value		—	0.980	0.626
Grade-III	Mean difference			—	-0.1476
	p-value			—	0.512
Garde-IV	Mean difference				—
	p-value				—

Note. * p < .05, ** p < .01, *** p < .001

8. INTERPRETATION

The assumption checks indicate that the normality assumption for Occupational Stress is violated, as evidenced by the Shapiro-Wilk test (W = 0.938, p < .001), suggesting that the data significantly deviates from a normal distribution. Additionally, Levene's test for homogeneity of variances (F(3, 377) = 29.3, p < .001) reveals a significant violation, indicating unequal variances across groups.

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of normality and homogeneity of variances, this result confirms that at least one group differs significantly from the others. Since the p-value is less than .05, we reject the null hypothesis, which states that there is no significant difference in occupational stress among cleanliness workers across different grades. This suggests that occupational stress levels vary significantly among the different grades of workers. To further examine which specific groups differ, a post hoc analysis such as Games-Howell should be conducted. Let me know if you need help with post hoc comparisons or further interpretation.

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Therefore, we reject the null hypothesis that There is no significant difference in occupational stress among cleanliness workers of Indore Municipal Corporation across different grades.

9. DISCUSSION

The findings from this quantitative study unearth the occupational stress faced by employees of Indore Municipal Corporation across grades. Though there is a significant difference of occupational stress at different grade level. Grade 3 employees experience the highest stress at 165, closely followed by Grade 4 at 162. Grade 1 shows moderate stress at 144, while Grade 2 has the lowest stress level at 139. The data in table suggests significant variations in workplace stress across different employee grades, with higher-grade employees generally facing more occupational stress even same supported by Oza et al. (2022) and can mental wellbeing impact in the research of Asplund (2022).

The findings support and create an alarm that though Indore is number one in cleanliness from last seven years but need to pay attention for better mental health of employees. Better mental health will obviously result in better productivity and reduction in conflict not onlt among employees but with citizens too which are there end customers.

10. IMPLICATIONS

These findings have very much important implications for policymakers and organizations involved in the sphere of planning and executing cleanliness drives. We need to start with the intervention for the employees to reduce the occupational stress level, even need to go deep for grade 3 and 4 employees as they have high level of stress. We can observe a clear need for the strategies that addresses mental health and well-being of cleanliness workers. Potential interventions could include:

Stress buster activity on regular basis: Making sure that the workers get necessary tools, protective equipment, and training to safely and efficiently perform their tasks. Mental Health Support is must i.e. Offering them access to counseling services, stress management programs, and other mental health resources. Recognition & Appreciation: Implementing of programs that makes sure of acknowledgement and reward for their efforts so can boost morale and reduce feelings of undervaluation. Workload Management: Ensuring reasonable working hours and manageable workloads to prevent excessive physical and mental strain.

11. CONCLUSION

This study highlights the significant impact of cleanliness drives on the mental health of cleanliness workers in Indore. This study focuses that Indore is number in cleanliness however make sure that it should not be at the high cost of employees mental health mainly at the lower grades. Leadership have to plan intervention technique to improve the mental health across grades.

CONFLICT OF INTERESTS

None.

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