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Workplace Hazards and Attitude Barriers: A Study on the Occupational Safety and Health Challenges Faced by Sanitary Workers

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Abstract
The article deals with occupational safety and health challenges in the case of sanitary workers, with particular emphasis on workplace hazards and attitude barriers. The paper will discuss the socio-demographic profile of hygienic workers and assess their knowledge and attitudes about occupational health. Most of the respondents were males, fell within the age group of 29-39 years, and a significant number had higher secondary education. One could cite the main discontents of low wages, lack of training for safety measures, and physical strains that play a significant role in their occupational health and satisfaction. As far as protective measures against health risks are concerned, the use of gloves, masks, and showers after work are followed; shortcomings in awareness and safety precautions persist. These findings indicate that targeted interventions should involve comprehensive training in safety, equitable wage policies, and the development of improved workplace safety provisions to enhance the health, well-being, and dignity of such workers.
Keywords: *-Occupational Health, Workplace Hazards, Chi-square, Anova*

Introduction

Sanitary workers are indispensable in maintaining public health and hygiene but oftenperform under hazardous and arduous conditions. They are exposed to many physical and chemical risks and biological hazards, including injurious and toxic garbage, communicable diseases, and musculoskeletal overexertion. The role is so critical, yet sanitary workers' negligence regarding safety measures at workplaces, appropriate training, and decent compensation goes on. This is about intervening in the workplace by ensuring safety and well-being are guaranteed and understanding the socio-demographic characteristics and attitudes of occupational health. More so, the attitude barriers related to limited awareness and misconceptions about personal protective equipment and hygiene further worsen the risks in the workplace. While measures like gloves and masks, combined with hygiene practices, can assure immense reductions in health risks, poor application and lack of training cover them in ineffectiveness. These form threats not only to the physical health but also to the workers' psychological and financial stability, creating a vicious circle of vulnerability and exclusion. Presently, this study tries to fill this knowledge gap by investigating the socio-demographic profile and assessing the level of knowledge and attitudes related to the occupational health of sanitary workers. The attempt in this article is to bring into the limelight their working conditions and barriers in adopting safety practices to inform the policies and initiatives that create a safer and more dignified work environment for this marginalized workforce.

REVIEW OF LITERATURE

- **Amritha L (2022)** The study aims to examine the morbidity profile and variables influencing it among sanitation workers in Kancheepuram district. This study provides insights into sanitation workers' working circumstances, health issues, and risk factors. Sanitary staff are now trained

before starting their jobs and have access to health care. In terms of systemic diseases, 47.1% had ocular problems, 25.4% had oral cavity problems, 19.7% had ENT problems, 28.6% had respiratory problems, 16.7% had gastrointestinal problems, 20.7% had genitourinary problems, 58.2% had musculoskeletal problems, 23.1% had skin problems, and 28.8% had injuries in the past 3 months.

- **Girish D et.al (2021)** The study recommends adopting core occupational health services, such as enforcing personal protective equipment and regulating solid waste collectors. The research had a response rate of 91.2%, with females accounting for around 80%. The research samples had a median age of about 30 years. Almost 75% of survey participants reported strong awareness in preventing occupational health hazards. The majority of research participants had a positive attitude, but only 10% demonstrated effective practices for preventing occupational health dangers. Despite receiving basic personal protection equipment, job discontent and the usage of PPE were shown to be significant barriers to establishing effective practices and work patterns among sanitation workers.
- **Hemali H et.al (2021)** the study highlights a total of 65 studies (9 cohort studies and 56 cross-sectional studies) satisfied the inclusion criteria. One-quarter of the studies (n = 15) were from middle-income nations. Few studies directly investigated occupational risk factors, instead relying on the sanitation worker's employment as a surrogate. The majority of studies had a "high risk of bias" when assessing exposure and outcomes. Despite limits, data shows that sanitation workers are more likely to experience gastroenteritis, respiratory diseases, musculoskeletal illnesses, and mental/social health issues. The pooled odds ratio for hepatitis A, the sole outcome acceptable for meta-analysis, was 2.09 (95% CI: 1.39-3.00, 12 studies). Studies found inconsistent indications of an increased risk of death.
- **Fazle S et.al (2022)** The study found that COVID-19 exacerbated waste management difficulties and created significant health concerns for workers. Conservancy departments lacked proper cleaning procedures and equipment, as well as restricted budgets for garbage worker training. This resulted in poor occupational safety. This vulnerable worker category faced inadequate employment facilities, low pay, insufficient protective equipment, and limited company assistance for health issues. Employees lacked knowledge of occupational safety and hygiene, as well as access to proper handwashing facilities to prevent infectious infections like COVID-19. The research examined the countercomplaint and analysed present arrangements from the perspectives of both city officials and sanitary workers

OBJECTIVES OF THE STUDY:

1. To study the socio-demographic profile of the sanitary workers.
2. To assess the level of knowledge and attitude towards occupational health of sanitary workers.

METHODOLOGY FOR THE STUDY

Research design is a framework of methodologies and procedures a researcher adopts to logically combine diverse research components to address the research problem efficiently. It explains "how" to do research using a specific approach. Every researcher has a list of research questions that need to be assessed, which can be done with study design. Data was collected from respondents using a structured questionnaire and direct interview method.The research was conducted among sanitary workersin Kattakada talukinThiruvananthapuram District. The Samples for this study were collected from 58 respondents. The Reliability analysis shows that Cronbach's Alpha for the scaled item is 0.778.

HYPOTHESES OF THE STUDY

- H_0: - There is no significant association between Gender and Years of experience
- H_0: - There is no significant relationship between Gender and Monthly Income

- H_0: - There is no significant difference between Knowledge and Attitude of Workers and Educational Qualification

RESULTS AND DISCUSSIONS
FREQUENCY DISTRIBUTION OF RESPONDENTS

Table no. 1

Variables	Frequency	Percent
AGE		
18-28	5	8.6
29-39	24	41.4
40-50	7	12.1
Above 51	22	37.9
Total	58	100.0
GENDER		
Male	40	69.0
Female	18	31.0
Total	58	100.0
MARITAL STATUS		
Unmarried	12	20.7
Married	35	60.3
Divorced	11	19.0
Total	58	100.0
EDUCATIONAL QUALIFICATION		
Secondary	16	27.6
Higher Secondary	33	56.9
Graduation	9	15.5
Total	58	100.0
YEAR OF EXPERIENCE		
Below 5	10	17.2
5-10	17	29.3
11-15	11	19.0
16-20	11	19.0
Above 20	9	15.5
Total	58	100.0
MONTHLY INCOME		
Less than 15000	5	8.6
15000-20000	20	34.5
20001-25000	7	12.1
25001-30000	22	37.9
Above 30000	4	6.9
Total	58	100.0

The demographic profile of the respondents indicates several categories in terms of age, sex, marital status, education, work experience, and income levels. The highest number of respondents falls within the 29-39 age bracket at 41.4 percent, while a good number falls above 51 years at 37.9 percent. Most are

males at 69.0 percent, and the most extraordinary marital status among them is married at 60.3 percent. For educational qualification, more than half have completed higher secondary education, 56.9 per cent, and 27.6 percent have secondary education. Work experience is diverse, with 29.3% falling in the 5-10 years category, while other categories constitute a minority. Regarding income, the most dominant group falls between an income of ₹25,001-₹30,000 per month at 37.9%, while just 6.9% earn above ₹30,000. This shows that work elements and earnings suggest a working population with diversified backgrounds and indicate a judicious mix of stability and challenge in their socioeconomic environment.

TESTING OF HYPOTHESIS

CHI-SQUARE TESTS

H_0: - There is no significant association between Gender and Years of experience

Table no. 2

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.524[a]	4	.163
Likelihood Ratio	6.855	4	.144
Linear-by-Linear Association	.098	1	.754
N of Valid Cases	58		
a. four cells (40.0%) have an expected count of less than 5. The minimum expected count is 2.79.			

From the chi-square test statistics, it can be observed that no significant relationship could be established between gender and years of experience for the respondents. The Pearson Chi-Square has a value of 6.524 with a significance level of 0.163, more significant than the generally accepted 0.05 level. Similarly, the likelihood ratio reveals this to be statistically insignificant at 6.855, p = 0.144, and the linear-by-linear association at 0.098, p = 0.754. This means there's no significant difference in the distribution of years of experience across gender groups in the sample of 58 respondents.

H_0: - There is no significant relationship between Gender and Monthly Income

Table no. 3

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17.795[a]	4	.001
Likelihood Ratio	22.897	4	.000
Linear-by-Linear Association	.942	1	.332
N of Valid Cases	58		
a. six cells (60.0%) have an expected count of less than 5. The minimum expected count is 1.24.			

The chi-square test results indicate a statistical relationship between the respondents' gender and monthly income variables. The Pearson Chi-Square value is 17.795 with a p-value of 0.001, hence statistically significant at the 0.05 level. The likelihood ratio further noted the same result, 22.897, p = 0.000. However, the linear-by-linear association is 0.942 with a p-value of 0.332, showing no statistically

significant linear trend between these variables. These findings indicate that income distribution between genders is wildly unequal; however, this inequality is non-monotonic across income groups.

ANOVA

H_0: - There is no significant difference between Knowledge and Attitude of Workers and Educational Qualification

Table no. 4

ANOVA				
		df	F	Sig.
Wearing gloves & mask can reduce damage to your hands & face	Between Groups	2	5.199	.009
	Within Groups	55		
	Total	57		
Wearing an apron & boot can reduce physical damage to the body.	Between Groups	2	1.027	.365
	Within Groups	55		
	Total	57		
Washing hands after work can prevent diarrheal diseases.	Between Groups	2	1.620	.207
	Within Groups	55		
	Total	57		
Eating while working leads to several diseases.	Between Groups	2	1.518	.228
	Within Groups	55		
	Total	57		
Showering after work reduces diarrheal diseases.	Between Groups	2	3.857	.027
	Within Groups	55		
	Total	57		
Working with clean clothes can prevent dermal diseases.	Between Groups	2	2.678	.078
	Within Groups	55		
	Total	57		
Changing clothes after work gives you esthetical satisfaction	Between Groups	2	.309	.735
	Within Groups	55		
	Total	57		
Insufficient or inconsistent provision of personal protective equipment (PPE)	Between Groups	2	2.010	.144
	Within Groups	55		
	Total	57		
Exposure to hazardous materials and chemicals	Between Groups	2	.390	.679
	Within Groups	55		
	Total	57		
Low wages and financial instability	Between Groups	2	7.616	.001
	Within Groups	55		
	Total	57		
Inadequate training on workplace safety measures	Between Groups	2	7.720	.001
	Within Groups	55		
	Total	57		
Physical strain and workload.	Between Groups	2	6.512	.003
	Within Groups	55		
	Total	57		
Poor working conditions (e.g., lack of clean facilities, improper waste disposal)	Between Groups	2	.910	.408
	Within Groups	55		
	Total	57		

The results of the ANOVA revealed a significant difference between the variables that were surveyed: damage to hands and faces is reduced if one wears gloves and masks; this shows a significant reduction in damage with $F = 5.199$, $p = 0.009$, and showering after work significantly reduces diarrheal diseases with $F = 3.857$, $p = 0.027$. All other hygiene practices, such as wearing an apron and boots, washing hands, eating while working, and working with clean clothes, have shown no significant difference across the groups. Regarding organizational problems, statistically significant differences were found in the perception of wages and income below expectations ($F = 7.616$, $p = 0.001$), bad conditions at work, and lack of training about safety measures at work; physical demands and workload, with $F = 6.512$ and $p = 0.003$. The other organizational problems - inappropriate working conditions, exposition to toxic substances, and difficulties with personal protective equipment distribution - did not present statistical differences. These findings point out the interventions that are very important to improving workers' health and satisfaction, especially in terms of financial stability, safety training, and workload management.

Findings of the Study

The research portrays a heterogeneous group of respondents. Most respondents are 29-39 (41.4%) and are predominantly male (69.0%). The highest percentage of qualification is higher secondary education (56.9%). Also, the work experience for the respondents is quite heterogeneous, with 29.3 percent of the experience falling in the 5-10 years category and a considerable fraction of the respondents earning ₹25,001-₹30,000 per month (37.9%). The chi-square test on gender and years of experience shows no significant relation between the two variables ($p = 0.163$). There is an essential relationship between gender and monthly income at $p = 0.001$, showing a difference in income between the genders. ANOVA results on perceptions of the effectiveness of certain safety practices reveal that Wearing gloves and masks reduces the damage to hands and faces; ANOVA showed a significance of $p = 0.009$. Showering after work decreases diarrheal diseases; ANOVA showed a significance of $p = 0.027$. Other practices, such as putting on aprons, boots, and clean clothes, had no significant association. Major occupational concerns include low wages or financial instability $p = 0.001$; training on safety, $p = 0.001$; physical strain and workload, $p = 0.003$, while poor conditions of work, risk of exposure to hazardous materials, and poor distribution of PPE had no significant association.

Conclusion

The present study brings to the fore some vital information regarding demographic and occupational characteristics for respondents, whereas income disparities between genders and occupational severe concerns such as wages, safety training, and physical demands were key concerns; not all workplace issues have come out as statistically significant. The practical measures of personal hygiene practices, such as wearing gloves and masks and showering after work, significantly reduced health risks. Promotion would be essential to assist these hygiene practices. Along with this, financial instability should be addressed, and training and specific measures for keeping the worksite safe will be of great help in making the working environment healthier and fair for all.

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