



EPIDEMIOLOGY OF OCCUPATIONAL INJURIES AND HAZARDS IN, INDIAN HOSPITALITY: A STUDY REPORT

Rohit¹, Sethi Kapil², Singh Dilbagh^{3*}, Sharma Milan⁴

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Abstract

Introduction: This Paper is all about the work environment of hotel housekeepers in Indian hospitality, who are illiterate or less educated & those are working from a long time which told us the effects on workers health & impact on their work performance. In hotel industry, the 'metropolis' has progressed and demanding to provide more exotic services to its guest, There are more physically stressed work which results in stress among employees and most of staff enduring significant pains and injuries .Due to over burden and working environment injurious in workers is common health issue, and little is known about it in the hotel industry. The purpose of research is to investigate the epidemiology of injuries & hazards in housekeeping workers, particularly in the Indian hospitality.

Method: A cross-sectional industrial research involving 330 workers was carried out utilizing a tool like SPSS and EpiData by using systematic random sampling, in which data is filed and evaluated. It is triangulated along results of qualitative data to the quantitative data, and compromised odd ratio and the 94-95% confidence interval were presented and used to explain the final conclusions.

Conclusion: -The current research revealed a very high occurrence rate. There are many reason of injuries as such low training session conducting about equipment's operating, less knowledge of chemicals hazards, low educational background having two years or less of work experience, working in long shifts, which cause sleep disorders or issues were statistically significant. The results shows that the execution level of safety practice were poor in housekeeping department To raise awareness and better comprehend the risk elements at work, it is advised that health and safety training should conducted on time to time to create the awareness among workers.

Keywords: Epidemiology, occupational injuries, hospitality sector, confidence interval, metropolis, volatile organic compounds

¹School of Hotel management, Airline and Tourism, CT University, Ludhiana, Punjab, India

²Computer science and engineering, Bahra university, Shimla hills, wagnaghat , solan himachal pardesh

^{3*}School of Hotel management, Airline and Tourism, CT University, Ludhiana, Punjab, India

⁴Faculty of hotel and Tourism management, SGT University , Gurgaon ,India

^{3*}**Corresponding Author:** Singh Dilbagh

*School of Hotel management, Airline and Tourism, CT University, Ludhiana, Punjab, India

Email id – dilbagsingh23021@ctuniversity.in

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Introduction

One of the areas with the highest growth in Delhi hotel business in India, the travel and tourism industry accounted for 9% of all employment possibilities created in 2016, providing jobs for about 38.4 million people. The high turnover rate of personnel, staff retention, training issues, and following strict health and safety regulations are among the challenging issues facing the hospitality industry. There are many professions and duties in the fast-paced hotel business that can present various risks and workplace health and safety hazards. Hotels are typically divided up into many sections that offer visitors specialized services.⁶ In this fastest growing hotel industry, workplace safety is a major source of worry. A good working environments always motivate to employee for better performance. Evidence suggested that a workplace injury's direct costs can reach 15% to 16% of permanent employee cost and its hidden costs can reach 41%–47% of costs.⁷ A study in US hotels on housekeeping workers determined the injury rate 52 % of trauma patient, 39% of musculoskeletal diseases, with the upper extremity being the most often injured body part.⁸ Practicing cleaning is a basic service employment which is practiced all around the world to upkeep and maintain the hygiene service in hospitality sector. Since they typically come from disadvantaged socioeconomic and educational backgrounds, cleaners frequently have low occupational skill levels.⁹⁻¹⁰ According to this research we understand the Professional health related practices in housekeeping department of Indian hospitality. The management must deal with a wide range of safety related risks that arise in the working area because of the nature of job and extended working shifts. When compared to other industrial workers in the nation, Employee in the hospitality sector have been found to be understudied and underserved, and their health outcomes are unevenly distributed.

Employee retention and motivation is very difficult and challengeable task for any organization). Housekeeping staff members engage in a variety of jobs that demand different postures and entail the use of hazardous chemicals and cleaning agents, necessitating suitable training and guidelines.

An occupational injury is an unanticipated event that causes harm to housekeeper's health, death, or economic ruin to their families, businesses, and communities ²⁻⁵ Housekeeping staff frequently recognize stress in the job as a very significant cause of harm to their physical and mental health.

Therefore, The motive of this work to evaluate the prevalence of housekeeping injuries & hazards among hotel workers in India. This work provides a thorough analysis of the risks of task which is performed by housekeeping workers which cause physical, chemical & biological, risk factor and soundness of body like eye itching, body pain, skin allergy and kidney failure for Indian hotel cleaners, in the context of their particular socio-cultural settings. To reduce potential hazards at work and avoid accidents, it is critical that management and staff are knowledgeable about occupational safety procedures. Reasons for job accidents and illnesses. For the hospitality workers, to follow safety practices and guidelines is important to prevent the losses of working condition.

Literature review

According to the previous study, It has been demonstrated that different industrial employees experience this damage at a similar level. It can be prevented and modified by addressing issues like the usage of personal protective equipment (PPE), job rotation, the delivery of safety training programs, extra working hours, a lack of following guidelines, and job unhappiness²⁰⁻²¹.

It is the science of the Prospect, opinion; assessment and control of side effects arising that exist at workplace (R. Muthuviknesh, K. Anil Kumar). Liladrie (2010)¹³ reported that hotel workers are 48% more likely than any other service injury employees to become injured while working. Tired activities were linked by Faulkner and Patiar (1997) to spine and joint ailments. Similar to this, Liladrie (2010)¹³ noted that more physical demands placed on GRAs have resulted in the majority of workers experiencing an increase in aches and injuries.

Housekeeping in Hotels: Occupational Risks

Hotel maids may deal with variety of Traditional (unsafe for the environment) cleaning supplies including R3, R6, laundry agents, and Dscale and so on chemicals that could be harmful to employee .¹⁴ These solvents can cause a variety of health problems, ranging from short-term ailments like asthma, heart failure, renal failure, sterility, or even cancer, to long-term ones like skin and eye irritation¹⁵. Due to the caustic chemicals used on linens, hotel cleaners have frequently reported an outbreak of rashes¹³



Biological Effects

According to (OSHA), organic threats are infectious agents like plasma, viruses, fungi, or parasites that can spread by contact with diseased persons, infected objects, tissue, or fluids. Hotel cleaners may come into contact with biological agents that are contaminated with germs while performing their duties through items like broken glass, infected needles, and other medical waste (leftover medicines) left behind by visitors, as well as human excretions, mould, and microbial contaminants. Any of these things could cause hotel cleaners to become ill or expose them to diseases like hepatitis B and others.

Psychosocial effects

WHO has identified several risk factors for psychological workplace risks like

- (i) Increased ambiguity
- (ii) High degrees of time pressure and task overload
- (iii) A rigid work schedule and lengthy hours
- (iv) Low involvement in decision-making.

Their safety, health, and productivity may all be at danger if they are exposed to these psychosocial threats on a regular basis.

Negative Effects on the Cleaners' Health muscular-skeletal conditions

Various provocation and degenerative illness and conditions that can affect the body pain like shoulders, elbows, backbone, and hands and cause pain and functional impairment are included in the category of work-related musculoskeletal disorders.¹⁷ Employees experiencing physical

discomfort due to their jobs, such as low back pain, neck pain, or shoulder difficulties

Respiratory conditions

Numerous cleaning products contain dangerous chemicals that produce large amounts of (VOCs), which can cause the ENT related problems. Some VOCs are linked to long-term respiratory issues and allergic reactions¹⁸. According to studies, occupational asthma and other respiratory disorders are linked to exposure to the chemicals in cleaning products. Employees who have asthma wheeze, cough, feel tight in the chest, have difficulties breathing, and if their asthma is not adequately treated, they may potentially encounter a fatal allergic reaction.¹⁶.



Allergies Conditions

Cleaning staff in hotel work with the liquid chemicals which can be absorbed via the skin. Systemic toxicity and occupational skin illnesses are just two examples of occupational diseases and disorders that can develop as a result of dermal exposure to hazardous substances. Dermatitis symptoms can include itchiness, discomfort, red spot, and skin rash. Employees' domestic, job, or recreational activities may be hampered by severe occupational skin diseases.¹⁹



Methodology

Sample size

An industrial based study was conducted on the base of descriptive and analytical method among the hospitality in Delhi NCR, a capital city of India. Injuries that happened within the previous two years of data collecting are included in the time frame. The data was collected from various hotels brands. The process data of the study was drawn from the source population while being chosen housekeeping workers of the hotels who were eligible during the study period. Administrative personnel, including HR officers, safety officials, managers, staff clinic doctors, and

nurses, were consulted for qualitative data. Systematic random sampling was introducing to the samples, and a lottery was used to choose the first case. A formula is being used to get the desirable results = total population / sample size. *N*-values were determined for each. According through random sampling 330 samples was selected from different hotels. Six key informants were chosen for the qualitative study, as such the manager of the department supervisor and security directors.

Data collection

Data were collected through questionnaire in conventional language from hotel to hotel visit. Both qualitative and quantitative data were gathered by personally for some descriptive information. Questionnaire was prepared and accepted by the ethical research committee. Both during and after the data collection period, guidance and checks data quality were performed.

EpiData and SPSS Version 23.01 were used to enter and analyze the data. To determine the determinants influencing occupational injuries, logistic regression analysis was performed on the variables that met the chi square assumption. The odds frequency was calculated to assess the level of relationship between the dependent variable and explanatory factors. In bivariate analyses,

variables with *N*-values 0.25 were candidates for multivariate analysis, and variables with *N*-values 0.05 were deemed statistically significant. The means of (VIFs) on the linear regression approach were used to test multicollinearity; the VIF value of 1.00 showed that there was no substantial interexplanatory collinearity in the logistic regression model. The final model's was examined as a measure of the model's suitability, and it was found to be significant (*N*-value 0.5) The compromised odd ratio (AOR) and confidence interval (CI) were reported 94%-95.% together with the final results and discussed.

Results

With a response rate of 98.8%, 330 people were questioned and taken into account in the study. Respondents' ages ranged from 36.1 to 6.94 years in mean (SD) age more over two-thirds, or 69.1%, of research participants had four family members, and more than half of them (58.3%) were married. According to this study, the prevalence of occupational injuries during the past two years was 37.9% (94%-95% CI (32.7%, 43.8%)), with the back, hands, fingers, legs, and arms being the most commonly injured body parts. Similarly, burn (11.2%), laceration (12.0%), sprain-sprain (26.4%), and fall injury (12.8%) were the most frequently observed injuries (Table A).

Variables	Variable category	Frequency	%
Age	>35years	104	31.5
	≤35years	226	68.5
Educational/qualification	Degree/Diploma completed	232	70.3
Family size	≤ Four members	228	69.1
	≥ Five members	102	30.9
Sleep disorder/Problem	Yes	72	21.8
	No	258	78.2
Work Tenure	≤2years	14	4.2
	>2years	316	95.8
Service duration	≤2years	31	9.4
	>2years	299	90.6
Safety inspection (supervision)	Yes	304	92.1
	No	26	7.9
Safety training	Yes	285	86.4
	No	45	13.6
Occupational injury	Yes	125	37.9
	No	205	62.1
Injuries in the hotels	Yes	110	88.0
	No	15	12.0
Injuries outside the hotel	Yes	15	12.0
	No	110	88.0
PPE use	Yes	206	62.4
	No	124	37.6

Education/qualification(*N*-value = 0.001), Salary (*N*-value = 0.001), and Factors linked to

occupational injuries included shift work (*N*-value = 0.001), family members (*N*-value = 0.041),

sleeping disorder or problem (N-value = 0.035), work tenure (N-value = 0.007), PPE use (N-value = 0.061), and family size (N-value = 0.041). The multivariable binary logistic regression analysis only considered variables with N-value less than 0.25. Family size, level of education, and

employment history. Workplace injuries and shift work are still statistically significant (N 0.05). The predictors and risk variables for occupational injuries included low qualification status, sleep disorders, low work experience, and working hours.(Table-B)

Variables value	Hazards/injuries		COR (94-95% CI)	AOR (94-95% CI)	N-
	Yes%	NO %			
Family size					
Less than 4 members	78(34.2)	150 (65.8)	0.609 (0.378, 0.979)	0.484 (0.286, 0.818)	0.007
More than 5 members	47(46.1)	55 (53.9)	1	1	
Qualifications					
Degree/Diplomas and Certificate	79(36.8)	153 (63.2)	1	1	
	46(47.0)	52 (53.0)	0.609 (0.378, 0.979)	1.466(1.098,1.959)	0.010
Sleep disorder/problem					
No	90(38.8)	168 (61.2)	1	1	
Yes	35(48.6)	37 (51.4)	1.766	(1.041, 2.995)	1.792(1.025,3.151) 0.041
Work Tenure					
>2years	117(37.3)	199 (62.7)	1	1	
≤2years	8(57.1)	6 (42.9)	1.051 (1.014, 1.090)	1.065 (1.023, 1.108)	0.002

Conclusion

The current research revealed a very high occurrence rate. There are many reasons of injuries as such low training session conducting about equipment's operating, less knowledge of chemicals hazards, low educational background having two years or less of work experience, working in long shifts, which cause sleep disorders or issues were statistically significant. The results found that the execution level of OS&H practices were poor in housekeeping department. To raise awareness and better comprehend the risk elements at work, it is advised that health and safety training should be conducted on time to time to create the awareness among workers.

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