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Barriers on Implementing Ergonomic Practices in Hotel Housekeeping

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Abstract *Many hotel organizations have developed ergonomic policies and programs to prevent workplace injuries and provide safe and healthful conditions for their workers. Few multiple workplace studies have examined housekeepers' perceptions of these policies and programs. The World Health Organization (WHO) recommends that workplace musculoskeletal illnesses (MSDs) be addressed through long-term health promotion, training, and prevention measures. The goal of these treatments should be to change pain and health-related behavior, aside from improving working conditions (Burton, 2010). The World Health Organization (WHO) suggests a "healthy workplace framework and model" that includes a broader view of workplace health, such as treating physical and mental difficulties, as well as increasing access to healthcare resources and community help. The purpose of this paper is to identify those elements that hinder (barriers) or facilitate (facilitators) the application of ergonomic measures in hotel housekeeping. Results reveal that the employee barriers and risk assessment and control are found to be significantly associated with each other. Risk assessment & control was found to be directly linked with the absence of ergonomic practices, whereas working conditions do not have significant relationship with the ergonomic practices. Authors even found that working conditions of housekeeping employees do not have significant relationship with employee barriers.*

Keywords: *Ergonomic Practices, Barriers, Housekeepers, Health, Musculoskeletal Illnesses*

INTRODUCTION

The hospitality business employs a large number of low-wage workers for housekeeping (Krause, Rugulies & Scherzer, 2005). One of the most essential service requirements demanded by guests in most hotels is the cleanliness of guestrooms. The features of a job or task that impose stress and health dangers on employees are known as ergonomic risk factors. The act of maintaining a clean, pleasant, safe, organized, and comfortable environment to increase patronage and profitability in a business is known as housekeeping. The role of the housekeeper is thus critical to service provision and hotel profitability, and return patronage by customers (Faulkner & Patiar, 1997). Housekeeping is a physically difficult job. For the comfort and convenience of guests, housekeepers clean and sanitize spaces. The majority of the time, there are a lot of concerns linked with hotel maintenance that go unreported. Dusting, vacuuming, pulling bed linens, and making beds are all responsibilities of the housekeeping staff. Cleaning restrooms and other areas, squeezing spray bottles and disposing of waste. Housekeepers are the most vulnerable since their injuries and illnesses are higher than the national rate for other service professionals (Buchanan et al., 2010) several studies have discovered that physically demanding work situations, such as those involving twisted or twisted postures, static or repeated duties, and a quickened work speed, are occupational potential causes associated to musculoskeletal issues and illnesses (Kerstin Ekberg et al., 1995). Cleaning services provided by hotel housekeepers are required by all accommodation establishments. Depending on the sort of accommodation facility in issue, this service differs (Raghubalan & Raghubalan, 2009). Housekeeping services are required 24 hours a day, 365 days a year at five-star hotels (Jones, 2007). One of the most significant service requirements demanded by guests in most hotels is

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the cleanliness of guestrooms. As a result, the housekeeper's function is crucial to providing excellent service and maximizing hotel profits (Faulkner & Patiar, 1997), because they have little control over their work and there is a lack of productive engagement with leadership, housekeeping employees are excluded from the formulation of these standards (Woods & Viehland, 2000). According to studies, supervisors are unfriendly to woman housekeepers, with several of them breaching females' job roles (Kensbock, Jennings, Bailey & Patiar, 2013; Sonmez et al., 2013). Other studies have revealed unbalanced pay for housekeepers' contributions. Their qualms might be justified, as multiple types of research have shown that coercive managerial behavior alleviates housekeepers' anxiety about job performance. Occupational safety and health practices were found to be poor in hotel industry in India (Ambardar & Raheja, 2017). If these issues had been addressed, hotel operations could have improved (Kensbock, Jennings, Bailey & Patiar, 2013; Krause, Rugulies & Maslach, 2010). Supervisory actions toward housekeepers who work in hotels include marginalization and oppression. According to Sturman (2006), housekeepers utilize cleaning chemicals regularly, and their performance is measured in terms of how much cleaning chemicals they use. The amount of chemicals employed, on the other hand, varies depending on the room type, whether the guest is staying or leaving, the number of rooms cleaned, and other external factors. Knoweldge enhancement and awareness of the risk factors required for better employee health and well-being in the hotel industry (Singh, Singh, Rawal & Paul, 2021).

Management defines the number of rooms to be cleaned, which varies from hotel to hotel due to labor contracts (Krause et al., 2005). Housekeepers are prone to suffer a variety of ailments if their workload surpasses the daily limit of 15 rooms to clean (Mest, 2013). There is a strong correlation between shoulder discomfort and mental occupational qualities, (Burgel, White, Gillean & Krause, 2010). Work-related stress, time restrictions, and payment systems are all important predictors of musculoskeletal injury risk factors. (Oxenbridge & Moensted, 2011). Musculoskeletal problems are common among hotel housekeepers (Montross, 2013). Prior research has been dedicated to well-being requirements, but little has been done on management's compliance with these standards. Furthermore, few studies have been conducted on the occurrence of pain among hotel housekeepers based on race. The social atmosphere, ergonomics, and workplace safety hazards are all influenced by ethnic background, gender, and the employer (Buchanan et al., 2010). The hotel's rooms and communal areas are cleaned by housekeepers. Hotel housekeepers are responsible for meeting visitors' demands and providing amenities 24 hours a day, which involves a three-shift schedule and a huge staff. Because cleaning departments directly lead to hotel expenses and revenue, they become more efficient when their quality is consistent (Hsu, Ho, Tsai & Wang, 2011). Cleaning is a low-skilled job that demands meticulous attention to detail, client connection, and a lot of physical effort to complete tasks. Any hotel's housekeeping department is its backbone. Cleaning chemicals for bathroom basins can exasperate the skin and cause breathing difficulties (Sonmez, Hsieh & Apostolopoulous, 2013).

Ergonomic issues at the workplace, as well as poor work organization, are contributory potential risks to occupational health and safety issues. Using control measures, on the other hand, is advantageous not just to workers. The advantages to companies are also substantial. Employees who are in good health can be roughly three times more productive than those who are not. Such advantages for employees and companies are both obvious and quantifiable. Employee turnover, poor quality, and other expenses of neglecting these basic principles could be incurred (Shengli Niu, 2010).

Barriers to Implementing Ergonomics Practices

The execution of workplace health programs may face challenges at different levels of the organization, for example: According to a recent literature analysis, management commitment is the most significant facilitator for the effective implementation of a workplace health program since management can ensure the availability of the necessary resources (Burgess-Limerick, 2018).

When implementing an intervention to prevent MSD, a variety of difficulties and obstacles occur. In all of the literature, the word "barrier" is interchangeable. These concepts are referred regarded as obstacles to the implementation of MSD prevention measures (Koppelaar et al., 2009). Organizations could experience intimidation and be reluctant to take action or create an MSD prevention program. The scientific literature also identified enablers for the effective implementation of MSD prevention initiatives. Facilitators are factors that make it easier to apply MSD prevention strategies (Koppelaar et al., 2009).

The incorporation of MSD prevention into management systems and the potential benefits it may have in lowering workplace injuries were emphasized by Yazdani et al., in 2015a and 2015b. These studies contend that a greater comprehension of the difficulties and impediments that businesses encounter when integrating MSD prevention actions and initiatives into management systems is necessary. Therefore, the goal of this analysis was to identify the typical challenges encountered in the execution of MSD preventive initiatives as well as to offer potential solutions. Additionally, we looked at how the obstacles found in this analysis linked to those experienced in broader Occupational Health and Safety (OHS) initiatives. In addition, potential solutions to these problems were investigated and addressed.

Table 1: Constructs on Barriers to Implementing Ergonomics Practices by Authors

Nanette Lashuay MA (2006), Elisabeth Björk Brämberg et al. (2017), Robin Burgess-Limerick (2018), Martin Cherniack (2018), Bauba S. Komaa (2019), Whysall et al. (2006); Whysall et al. (2004)	Organizational Culture
Maurice T Driessen (2014), Fred Straub (2018), Fassier et al. (2015); Masi and Cagno (2015); Bauba S. Komaa (2019), Katarina Wijk and Svend Erik Mathiassen (2011), Viner D. (1996), Ridley (1990)	
International Institute for Labour Studies (ILO) Publications (1988), International Labour Organization (2001)	Implementation Barriers
Patrick G. Dempsey (2007), Masi and Cagno (2015); Whysall et al. (2004); (Rothmore et al. (2015), Whysall et al. (2004); (Garrido et al., 2019, Törner et al., 2020)	Lack of knowledge and skills regarding practice or employee barrier
Self-Authored	Absence of ergonomics policies of the regulatory body (HRACC) in the execution of ergonomic practices in five-star hotels

CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

The present study aims to discover barriers to implementing ergonomics practices in a five-star hotel. Based on the review of literature, four variables of housekeeping ergonomics practices in the hotel are examined, that is workplace conditions, risk assessment, and control,employee health and safety, and pandemic response plan. The impact of these variables on employee retention and employee efficiency is assessed. Based on the above, the following hypotheses have been developed:

H1: There is a relationship between the implementation of appropriate working conditions and employee barriers.

H2: There is a relationship between the implementation of risk assessment and controland the absence of ergonomics policies of the regulatory body (HRACC).

H3: There is a relationship between the implementation of appropriate working conditions and the absence of ergonomics policies of the regulatory body (HRACC).

H4: There is a relationship between the implementation of risk assessment and control and employee barriers.

RESEARCH METHODOLOGY

The population chosen for this study was hotels situated in the National Capital Region (Delhi, Ghaziabad, and Gurugram) which included five-star hotels in the relevant cities. For the present study, the total sample size was 10 hotels in all, including 5 hotels in Delhi, 2 hotels in Ghaziabad, and 3 hotels in Gurugram. A total of 240 filled questionnaires were collected from the Cleaning staff of different hotels out of the 6 incomplete questionnaires. The study was conducted from October 2021–April 2022. The scales used for the study were prepared based ona review of literature from previous studies. The constructs used in the study i.e., Organizational Culture, Implementation barriers, Lack of knowledge and skills regarding practice and the Absence of ergonomics policies of the regulatory body (HRACC), was prepared based onprevious work. All the statements based on the above constructs were measured on a 5 - point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

DATA ANALYSIS AND RESULTS

Structural equation modelling (SEM) technique has been used to analyze the data. SEM is also known as a second-generation technique that offers simultaneous modelling of relationships among multiple independent and dependent constructs. Partial least square (PLS) based software Smart PLS 2.0 was used for interpreting the results. The measurement model and structural model are the two models used for assessing the data. The measurement model is used to express the relationship between latent constructs and their related variables, while the structural model represents the causal relationship among the constructs (Chin, 1998).

Measurement Model: Table 2 shows the results of the measurement model based on the PLS algorithm. Convergent validity and internal consistency are assessed based on the output obtained from the analysis. Convergent validity is estimated by using average variance extracted (AVE), while the internal consistency is assessed by using composite reliability (CR). Fornell and Larcker (1981) recommended that the value of CR must be equal to or greater than 0.7 to achieve internal consistency. A value of AVE less than 0.5 is not acceptable because it cannot explain more than half of the variance by its items or variables (Henseler, Ringle & Sinkovics, 2009). Therefore, some items from the constructs are deleted to gain the AVE value of 0.5. The item deleted from the working conditions construct is OC 1 & OC 2 (Pay is less and Qualification is low). Table 2 shows that the AVE value is greater than 0.5 for all constructs. Similarly, all constructs have a CR value greater than 0.8. Hence, internal consistency, reliability, and convergent validity are established in the model.

Table 2: Measurement Model

Construct	Item	Loading	AVE	CR
Employee's barriers	I fear losing my job if I report any injury/health issues.	0.816	0.687	0.899
	I do not have enough knowledge of ergonomics practices.	0.870		
	I am not comfortable adopting new standard operating procedure.	0.800		
Absence of ergonomics policies of the regulatory body (HRACC)	Lack of ergonomics policies in HRACC guidelines.	0.878	0.665	0.887
	Lack of active involvement of government with employers.	0.816		
	Absence of an appropriate vision for occupational safety and health programs.	0.697		
	Failure to establish a culture of prevention in the field of occupational health and safety.	0.857		
Working conditions	I feel stressed out when dealing with work issues.	0.84	0.543	0.845
	My supervisors take appropriate action after reporting injury/hazards.	0.821		
	My supervisor leads by setting an example for all employees.	0.828		
	Hotel policies promote work-life balance.	0.733		
Risk assessment and control	Chemicals are tagged and stored properly.	0.735	0.765	0.901
	Proper training is given to the employees regarding the safe use of cleaning agents.	0.771		
	Proper training is given to the employees about the safe use of cleaning equipment.	0.825		
	Supervisors are responsible for correcting unsafe working conditions.	0.783		
	I frequently have work-related insomnia (sleep disorder).	0.709		
	The organization has zero-tolerance for employee abuse and harassment.	0.755		
	Employee health, safety, and well-being are addressed in the organization's policies.	0.728		

Table 3: Discriminant Validity

Construct	Employee's Barriers	Absence of Ergonomics Policies of the Regulatory Body (HRACC)	Risk Assessment & Control	Working Conditions
Employee's Barriers	0.815			
Absence of Ergonomics Policies of the Regulatory Body (HRACC)	0.640	0.828		
Risk Assessment & Control	0.480	0.542	0.759	
Working Conditions	0.818	0.668	0.643	0.764

Discriminant validity is performed to check the dissimilarity between the different constructs. Fornell and Larcker (1981) suggested that if the inter-construct correlations are less than the square root of AVE, then discriminant validity is achieved. It is shown in Table 3. In Table 3, the diagonals represent the square root of the AVE, while the off-diagonals represent the correlations between the constructs. The square root of AVE is greater than the inter-construct correlations. Hence, the measurement model represents a sufficient amount of discriminant validity.

Structural Model: The structural model is given in Fig. 1. The model represents the relationship between the various constructs. These relationships are tested by running the bootstrapping procedure in SmartPLS 2.0 software.

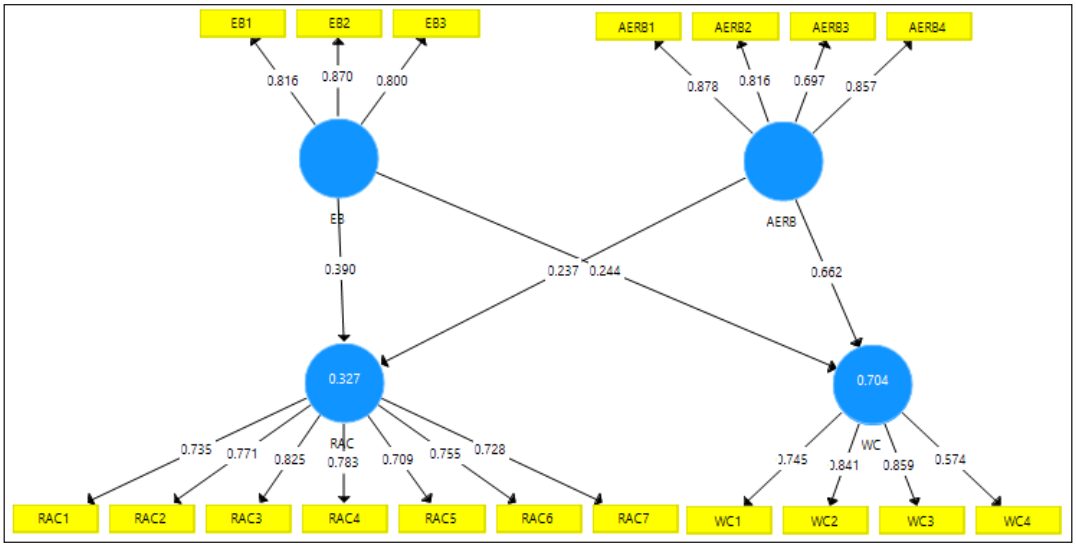

Fig. 1: Structural Model Results

Table 4: Results of Hypotheses Testing using Structural Model Analysis

Hypothesis Path	Path Coefficient	Standard Deviation	T Statistics	P-Value	Decision
EB → RAC	0.692	0.131	5.293	0.000	Supported
EB → WC	0.509	0.127	4.011	0.000	Supported
AERB → RAC	0.221	0.167	1.309	0.191	Not Supported
AERB → WC	0.123	0.121	1.017	0.309	Not Supported

The path coefficients generated by SmartPLS along with their t-values are given in Table 4. The t-values are provided by the software by using the bootstrapping procedure. The hypotheses developed in the study are tested and their results are given in Table 4. The standardized path coefficients should be at least 0.2 and if possible, greater than 0.3 (Chin, 1998).

DISCUSSION

The data were collected from the housekeeping staff of hotels in the National Capital Region (NCR). Organizational Culture, Implementation barriers, Lack of knowledge and skills regarding practice and the Absence of ergonomics policies of the regulatory body (HRACC), was prepared based onprevious work were used as constructs for the study. Four variables of housekeeping ergonomics practices in the hotel are examined, that is workplace conditions, risk assessment, and control, employee health and safety, and pandemic response plan. Hypotheses formed based on relationships between constructs are tested and the results are obtained. The measurement model and structural model are the two models that are used for assessing the data. Based on the results obtained in Table 4, the following findings are discussed. Employee barriers (fear of losing job, not having enough knowledge of ergonomics practices & not comfortable adopting new standard operating procedure) and risk assessment & control (Chemicals are stored properly, proper training regarding safe use of cleaning agents and equipment's, work-related insomnia, zero-tolerance for employee abuse and harassment, safety and well-being are addressed in organisation policy) are found to be significantly associated with each other (H1). Risk assessment & control is directly linked with the absence of ergonomics practices in the regulatory body (HRACC) (lack of active involvement with employers, absence of occupational safety and health, failure to establish culture of health and safety in organisation) whereas working conditions (Feel stressed dealing with work issues, appropriate reporting of injury/ hazards, hotel policies promote work-balance) do not have a significant relationship with the absence of ergonomics practices in the regulatory body (HRACC), as well as working conditions, do not have a significant relationship with employee barriers.

RESEARCH IMPLICATIONS

Academicians and hospitality practitioners throughout the world are likely to benefit from the study's findings, which are expected to bring crucial new insights and consequences. In today's hotel sector, the housekeeping department is

regarded as one of the most important supporting business departments. Employee retention is a big challenge for the hotel industry; many employees leave their job because of non-monetary reasons i.e., working conditions, and the behavior of peers and seniors. In this process, the hotel has to meets expenditure and manpower for hiring and training new employees. The findings of this study will aid decision-makers of hotel operation companies to understand the significance of working conditions, and pandemic response plans i.e., COVID-19 handlings of a hotel's most important department, housekeeping. Guests are constantly on the lookout for clean, germ-free, and appealing surroundings, and if a hotel is facing employee retention and employee efficiency issues then who will handle guests? It is a burning question in the context of the current scenario. Some of the recommended changes in operational procedures for hotels are discussed below:

For HRACC: The Hotel and Restaurant Approval and Classification Committee (HRACC) inspects and rates hotels based on their amenities and services. As per this study, it has been found that most of the points of the checklist (used for hotel classification) are dedicated to amenities and services provided to external guests. We would like to urge add more points toward employee health and safety to the current checklist, as of now under the heading of staff welfare only four points have been mentioned.

Staff Welfare Facilities: It should include facilities like staff rest rooms, staff locker rooms, toilet facilities and separate dining area & facility.

Hence as this study's recommendations to all concerned stakeholders i.e., Ministry of Tourism, Hotel Companies, Employees, guests, etc., we would like to suggest adding the following points from my study to the current HRACC checklist of employee health and safety at the workplace so that hotel's classification can be done from both perspectives i.e., guest as well as employees.

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