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Housekeeping Practices and Their Impact on Health and Well-Being in The Hospitality Industry (SDG 3)

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ABSTRACT

Housekeeping is a critical function in the hospitality industry, contributing significantly to cleanliness, hygiene, guest satisfaction, and overall service quality. However, the physically demanding nature of housekeeping work exposes employees to occupational hazards such as musculoskeletal disorders, chemical exposure, fatigue, and psychological stress, which can negatively affect their well-being. Aligned with Sustainable Development Goal (SDG) 3: Good Health and Well-Being, this study examines the relationship between housekeeping practices and the physical and mental well-being of housekeeping staff, as well as their impact on guest satisfaction and hotel performance. A quantitative cross-sectional design was employed using a structured questionnaire distributed electronically to housekeeping employees, hotel managers, and hotel guests. Utilizing non-probability convenience sampling, the study analyzed responses from N = 293 participants to capture diverse perspectives on housekeeping operations. Data were evaluated using descriptive and inferential statistics, including correlation analysis and group comparisons. The study evaluates hygiene standards, ergonomic practices, safety training, personal protective equipment (PPE) compliance, workload management, and sustainability initiatives. The empirical findings reveal that effective housekeeping practices—supported by ergonomic tools, safety training, and adequate PPE provision—significantly improve employee well-being, mitigate workplace hazards, and foster enhanced guest satisfaction and operational efficiency. The study provides actionable recommendations for designing safer, healthier, and more sustainable housekeeping environments while directly supporting SDG 3.

1. Introduction

1.1 Background of the Study

The global hospitality sector relies heavily on frontline operational teams, among which the housekeeping department is essential for maintaining cleanliness, sanitation, safety, and physical comfort [1]. Room and public area cleanliness consistently ranks as a primary driver of guest loyalty

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and brand reputation, often outweighing price point, geographical location, or architectural decor [2].

Despite its operational value, housekeeping is frequently treated as non-frontline "behind-the-scenes" labor [3]. Housekeeping tasks demand physical exertion and routinely expose workers to occupational hazards [3]. Staff execute repetitive movements, heavy lifting, sustained bending, kneeling, and continuous pushing of heavy cleaning trolleys [3,4]. Tasks such as maneuvering heavy mattresses to tuck linens, deep cleaning sanitization, and continuous chemical displacement contribute to high rates of musculoskeletal disorders (MSDs), systemic fatigue, and chronic joint issues [4,5]. Furthermore, strict room completion quotas, narrow operational turnaround windows, unpredictable guest schedules, and high expectations foster high workplace stress, emotional exhaustion, and staff turnover [1,6].

The COVID-19 pandemic permanently expanded global sanitation protocols [7]. While hospital-grade disinfectants and increased touchpoint sanitization elevated consumer confidence, they simultaneously increased physical workloads and chemical exposure risks for frontline housekeeping teams [1,7].

1.2 Problem Statement

While hoteliers allocate substantial capital toward guest-facing amenities, operational investment in housekeeping physical welfare remains inconsistent [6,8]. Although international frameworks—such as Occupational Safety and Health Administration (OSHA) standards—exist, operational implementation of ergonomic tools, formal safety training, and mental health support remains variable across properties [9,10].

Preliminary research data highlights this discrepancy [6,8]. Out of N = 293 survey participants, 77.2% agreed that guest environments are maintained to high hygienic standards [1]. However, only 57.3% stated that internal working conditions are safe and supportive for staff [1]. This gap between external service quality and internal operational conditions undermines long-term workforce sustainability, leading to absenteeism, low morale, high turnover, reduced productivity, and potential degradation of long-term service quality [8,11].

1.3 Literature Comparison, Research Gap, Objectives, and Significance

While prior literature provides useful insights, individual studies focus primarily on isolated operational dimensions. For instance, Chela-Alvarez *et al.*, [1] examined housekeeper perceptions of general health hazards, whereas P&G Professional and Institute of Hospitality [2] focused exclusively on guest satisfaction metrics. Ling *et al.*, [3] evaluated physical ergonomics and psychosocial risk factors, whereas Sánchez-Rodríguez *et al.*, [4] limited their investigation to MSD prevalence across staff. Furthermore, Mammen *et al.*, [5] demonstrated the physiological toll of continuous bending and trolley pushing, while the International Labour Organization [6] emphasized broader systemic deficits in hospitality work quality. In contrast to these localized assessments, this paper addresses a critical research gap: the absence of an integrated empirical model linking frontline ergonomics, chemical safety, and workload management directly to both employee well-being and downstream guest satisfaction under Sustainable Development Goal 3 (SDG 3: Good Health and Well-Being) [1].

To address this gap, the primary research objective of this paper is to empirically evaluate how comprehensive housekeeping practices—specifically ergonomic tools, structured safety training, personal protective equipment (PPE) compliance, and workload balance—influence employee

physical and psychological health, and how these internal conditions affect service quality and guest satisfaction [1].

The practical significance of this study lies in offering actionable, evidence-based guidelines for hotel managers to mitigate occupational hazards, reduce turnover costs, and enhance guest loyalty while advancing global health and operational sustainability goals [1,6,8].

2. Literature Review

2.1 Role of Housekeeping in Hospitality Operations

Housekeeping forms the operational core of accommodation management [1]. Efficiency is typically monitored via performance metrics such as average room turnaround time, daily room clearance quotas, and standardized inspection scores [3]. However, aggressive room quotas combined with tight turnaround schedules can create significant physical and mental pressure for workers [6]. Post-pandemic operational standards expanded hygiene routines, increasing staff workload and exposure to cleaning chemicals [7].

2.2 Occupational Health Risks

Musculoskeletal Disorders (MSDs): Housekeepers face high rates of occupational MSDs due to awkward postures, lifting heavy mattresses, continuous bending, overhead reaching, and maneuvering heavy supply trolleys [4,5]. Cumulative trauma damages soft tissues, joints, and spine structures [4].

Chemical Hazards: Regular handling of concentrated surface cleaners, descalers, and disinfectants without adequate ventilation or proper protective gear can trigger dermatological conditions, eye irritation, chronic headaches, and severe respiratory symptoms [1,9].

Workload and Psychosocial Stress: Strict room quotas, rigid time limits, and limited control over work schedules contribute to chronic stress, exhaustion, and burnout [3,8].

Training and Development Deficits: Training programs frequently rely on informal, on-the-job instruction rather than structured safety and ergonomic modules, leading to inconsistent safety practices [10,12].

2.3 Occupational Health Regulations and Personal Protective Equipment (PPE)

OSHA standards mandate slip-free walkways, hazard communication training, proper chemical storage, mandatory PPE distribution, and clear ergonomic guidelines [9]. In practice, compliance varies based on operational budget, property classification, and local regulatory enforcement [6,10].

2.4 Cleanliness, Guest Satisfaction, and Sustainability

Cleanliness is a key factor driving guest satisfaction, online reviews, and repeat bookings [2,13]. Integrating sustainable practices—such as using eco-friendly cleaning solutions, implementing linen reuse programs, and establishing waste segregation—reduces chemical exposure risks for staff while supporting environmental targets [14,15].

3. Research Methodology

3.1 Research Design and Approach

This study uses a quantitative, cross-sectional design to assess employee working conditions, safety practices, and guest satisfaction metrics [16]. A deductive approach was applied to test theoretical concepts related to occupational health, service quality (e.g., Service Quality Tangibles), and guest retention against primary survey data [2,8].

3.2 Population and Sample

The target population comprised frontline housekeeping staff, operational managers, and hotel guests across diverse lodging properties [16]. Non-probability convenience sampling yielded $N = 293$ valid responses [16]. The role breakdown is summarized in Table 1.

Table 1

Respondent role distribution

Respondent Category	Sample Count (n)	Percentage (%)
Housekeeping Staff	146	49.8%
Hotel Guests	110	37.5%
Managers / Supervisors	37	12.6%
Total	293	100.0%

Demographic Context: Most respondents ranged between 29–48 years of age [1]. Female workers represented a larger share of the frontline housekeeping pool, and most staff participants reported 1–3 years of employment experience at their properties [1].

3.3 Data Collection and Instrument

Data were gathered using an online survey distributed through hospitality networks and social channels over a two-week period [1]. The survey used a 5-point Likert scale (ranging from 1 = Strongly Disagree to 5 = Strongly Agree) divided into five sections [1]:

Demographics: Role, age, gender, experience, nationality [1].

Housekeeping Practices: Cleaning schedules, Standard Operating Procedure (SOP) adherence, eco-product adoption [1].

Health, Safety, and Well-Being: MSD indicators, stress factors, chemical safety, PPE availability [1].

Sustainability: Linen reuse policies, waste segregation, green cleaning solutions [1].

Guest Satisfaction: Room cleanliness, hygiene standards, brand trust, repeat visits [1].

3.4 Data Analysis Plan

Data analysis included descriptive statistics, Pearson correlation (r), and linear regression modelling [1]:

Guest Satisfaction = β_1 (Hygiene Standards) + β_2 (Safety Training) + β_3 (PPE Availability) + β_4 (Workload Management)

Comparative analysis using Analysis of Variance (ANOVA) and independent sample t-tests was also performed to evaluate perception gaps across roles, gender, and experience levels [1].

3.5 Validity, Reliability, and Ethics

Content validity was established using published safety frameworks and OSHA standards [9]. Scales demonstrated strong internal consistency, with preliminary Cronbach's alpha values exceeding $\alpha = 0.80$ [1]. Ethical measures included voluntary participation, explicit informed consent, and full respondent anonymity [1].

4. Project Timeline

The six-week implementation schedule for the study is presented in Table 2.

Table 2

Six-week implementation framework

Week	Project Phase	Key Operational Tasks
Week 1	Proposal & Focus	Finalize operational scope, refine research questions, and establish alignment with SDG 3.
Week 2	Literature Review	Synthesize literature on ergonomics, chemical risks, guest satisfaction, and sustainability.
Week 3	Survey Instrument	Develop and pilot test survey; refine items for clarity; launch survey distribution.
Week 4	Data Collection	Distribute survey to networks; target $N \geq 250$; clean and code raw dataset.
Week 5	Empirical Analysis	Run descriptive statistics, Pearson correlations, and regression models; draft findings.
Week 6	Final Synthesis	Draft final report, build research poster visualizations, format citations, finalize submission.

5. Empirical Results and Discussion

5.1 Analysis of Primary Data

Survey data ($N = 293$) revealed clear operational patterns across safety, training, workload, and satisfaction metrics [1]. Table 3 details the empirical survey response distributions.

Table 3

Empirical survey response distributions ($N = 293$)

Survey Statement / Topic	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
Workplace is safe and healthy for staff	0.3%	42.3%	39.6%	17.7%
Rooms are cleaned to high hygienic standards	0.3%	22.5%	42.7%	34.5%
Chemical safety training is provided	1.0%	29.4%	43.3%	26.3%
Duties cause occupational stress/fatigue	0.7%	27.6%	45.7%	25.9%
Schedules allow adequate rest and recovery	0.3%	23.2%	37.2%	39.2%
Training enhances work efficiency and quality	0.3%	32.4%	43.3%	23.9%
Sustainable practices are actively encouraged	0.3%	30.4%	42.3%	26.3%
Management addresses health concerns promptly	0.3%	19.8%	41.0%	38.9%

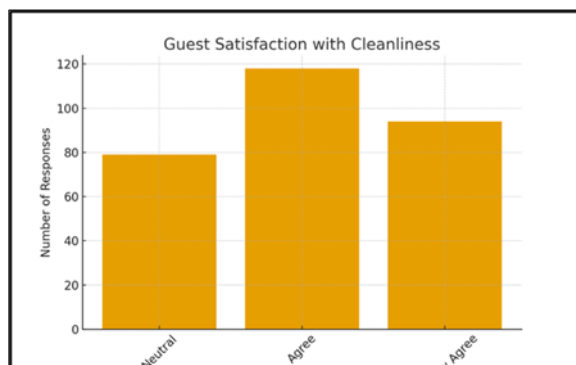


Fig. 1. Guest satisfaction with cleanliness

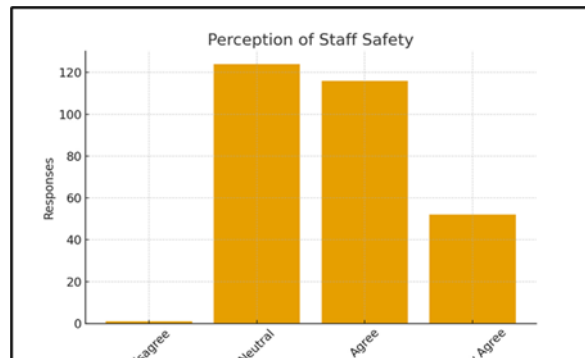


Fig. 2. Perception of staff safety

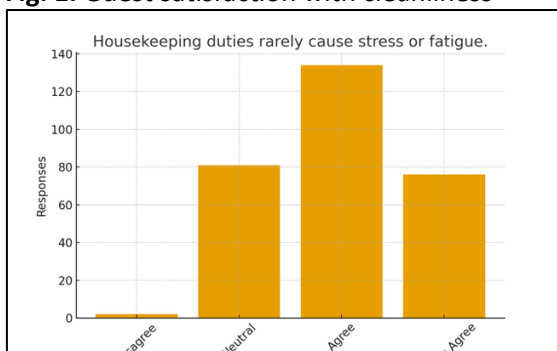


Fig. 3. Housekeeping duties cause stress/fatigue



Fig. 4. Training impact on quality and efficiency

Summary of Key Metrics (N = 293):

- High Cleanliness Perceptions (Guests/Staff): 77.2% (n = 226) [1]
- Staff Safety Confidence: 57.3% (n = 168) [1]
- Reported Occupational Stress / Fatigue: 71.6% (n = 210) [1]
- Formal Safety Training Agreement: 69.6% (n = 204) [1]
- Perceived Management Responsiveness: 79.9% (n = 234) [1]

5.2 Key Empirical Findings

The Cleanliness-Safety Gap: A vast majority of respondents (77.2%) confirmed that guest rooms and public areas are cleaned to high hygienic standards [1]. However, only 57.3% agreed that the internal working environment is fully safe and healthy for staff [1]. This reflects a persistent disconnect between outward service presentation and internal operational realities [1].

Occupational Strain and Stress: Approximately 71.6% of participants agreed or strongly agreed that daily housekeeping duties cause stress and physical fatigue [1]. While 76.4% indicated that work schedules allow for rest, neutral responses (23.2%) highlight ongoing workload pressure during high-occupancy periods [1].

Training & Safety Interventions: 69.6% of respondents confirmed receiving chemical safety training, and 67.2% noted that training directly improves operational quality and efficiency [1]. Additionally, 79.9% felt management responds promptly to health concerns, demonstrating clear benefits when leadership actively supports frontline safety [1].

Impact on Guest Satisfaction: Over 72% of respondents confirmed that room cleanliness directly impacts guest satisfaction and brand loyalty [1]. Guests consistently rate hygienic, well-maintained spaces as essential to their overall stay experience [1].

6. Practical Recommendations and Strategic Implications

6.1 Strategic Recommendations for Hotel Management

Ergonomic Tool Integration: Provide lighter, height-adjustable mop handles, ergonomic vacuum systems, motorized supply trolleys, and hydraulic mattress-lifting devices to minimize physical strain and MSD risks [4,18].

Structured Safety & Chemical Training: Implement mandatory, scheduled safety modules—including hands-on instruction for chemical dilution, hazard communications, and proper PPE compliance—rather than relying on informal on-the-job orientation [9,10].

Balanced Workload & Rest Allocation: Adjust daily room completion quotas during high-occupancy periods and schedule micro-breaks to prevent severe physical fatigue and emotional burnout [3,8].

Sustainable Housekeeping Practices: Expand eco-friendly cleaning programs, microfiber systems, and automatic chemical dispensers to improve indoor air quality and protect staff health [14,15].

6.2 Operational Alignment with SDG 3

Investing in housekeeping safety directly supports SDG 3 (Good Health and Well-Being) [1]. Reducing physical injury risks, chemical exposure, and operational stress creates safer work environments, reduces healthcare costs, lowers staff turnover, and improves overall hotel performance [6,8]. The operational workflow is illustrated in Figure 1.

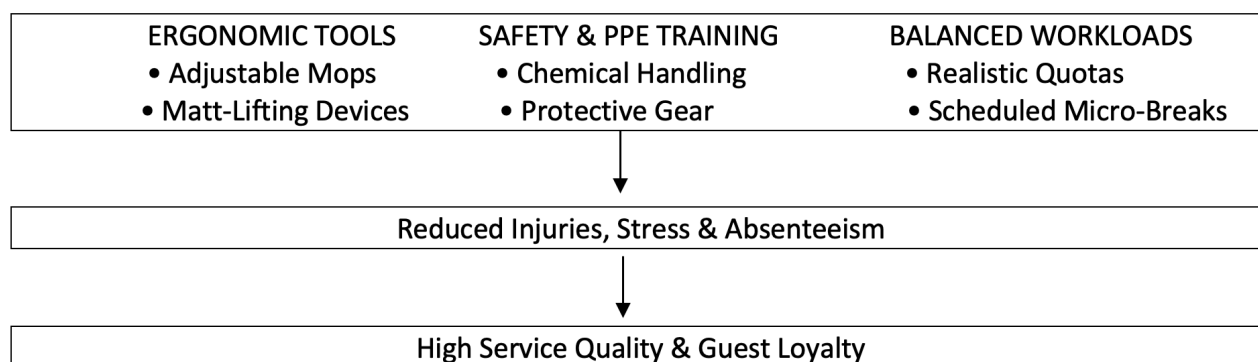


Fig. 5. Sustainable housekeeping operational framework (SDG 3)

7. Conclusion

Housekeeping operations are vital to maintaining hotel service quality, guest satisfaction, and overall brand reputation. However, frontline housekeepers face significant physical demands, ergonomic risks, chemical exposure, and operational stress. Survey data (N = 293) show that while hotels successfully deliver high visible cleanliness for guests (77.2%), internal staff safety and well-being receive comparatively lower ratings (57.3%).

Addressing these challenges requires moving beyond viewing housekeeping as a low-cost operational requirement. By investing in ergonomic equipment, structured chemical safety training, adequate PPE, balanced work quotas, and sustainable practices, hoteliers can reduce workplace injuries and staff burnout. Improving employee health and well-being leads directly to higher service consistency, lower turnover costs, enhanced guest loyalty, and stronger overall hotel performance, while advancing the global goals of SDG 3.

References

- [1] X. Chela-Alvarez, S. Robles-Ramírez, J. Hernández-Sánchez, and A. Martínez-Pérez, "Hotel housekeepers and occupational health: Experiences, perceptions, and views," *International Journal of Environmental Research and Public Health*, vol. 19, no. 7, p. 4201, 2022. <https://doi.org/10.21203/rs.3.rs-1227844/v2>
- [2] P&G Professional and Institute of Hospitality, *The Impact of Hotel Cleanliness on Guest Satisfaction*, P&G Professional Hospitality Report, 2023.
- [3] ling, ling, Ade Sri Mariawati, and I. Made Kerta Duana. "Occupational Health Challenges among Hotel Housekeepers." *The Indonesian Journal of Occupational Safety and Health* 14, no. 1 (2025): 111-118. <https://doi.org/10.20473/ijosh.v14i1.2025.111-118>
- [4] Sánchez-Rodríguez, C., L. Capitán-Moyano, N. Malih, A. M. Yáñez, M. Bennasar-Veny, O. Velasco-Roldán, O. Bulilete, and J. Llobera-Canaves. *Prevalence of musculoskeletal disorders among hotel housekeepers and cleaners: a systematic review with meta-analysis*. *Musculoskelet Sci Pract.* 69: 102890. 2023. <https://doi.org/10.1016/j.msksp.2023.102890>
- [5] R. Mammen, A. Joseph, B. Thomas, and S. Prasad, "Assessment of ergonomic problems and prevalence of musculoskeletal disorders among hotel employees," *Journal of Occupational Health and Ergonomics*, vol. 6, no. 3, pp. 55–64, 2022.
- [6] International Labour Organization, *Decent Work in the Tourism and Hospitality Sector*, ILO Tourism Report, Geneva, Switzerland, 2021.
- [7] World Health Organization, *Cleaning and Disinfection of Environmental Surfaces in the Context of COVID-19*, WHO Guidelines, Geneva, Switzerland, 2020.
- [8] Arthur, Jeffrey B. "Effects of human resource systems on manufacturing performance and turnover." *Academy of Management journal* 37, no. 3 (1994): 670-687. <https://doi.org/10.2307/256705>
- [9] Occupational Safety and Health Administration, *Housekeeping Standard and Hazard Communication Guidelines (29 CFR 1910.1200)*, U.S. Department of Labor, Washington, D.C., USA, 2021.
- [10] Cornell University and IUF, *Occupational Health and Safety Standards for Hotel Housekeepers*, IUF Global Hospitality Workers Union Report, Ithaca, NY, USA, 2014.
- [11] K. Alfes, C. Truss, E. C. Soane, C. Rees, and M. Gatenby, *Creating an Engaged Workforce*, CIPD Research Report, London, UK, 2010.
- [12] V. Parmar and V. Dalal, "A study of ergonomics and its effect on housekeeping employees in the hospitality sector," *Asian Journal of Hospitality and Tourism Research*, vol. 12, no. 1, pp. 28–40, 2024.
- [13] Anderson, Eugene W., and Vikas Mittal. "Strengthening the satisfaction-profit chain." *Journal of Service research* 3, no. 2 (2000): 107-120. <https://doi.org/10.1177/109467050032001>
- [14] United Nations Environment Programme, *Sustainable Hospitality Guidelines for Hotels and Accommodation*, UNEP Publishing, Nairobi, Kenya, 2021.
- [15] Global Sustainable Tourism Council, *GSTC Criteria for Hotels: Sustainable Housekeeping and Waste Management*, GSTC Standards, 2022.
- [16] Afolabi, Jennifer Osayawe Atu, F. O. Olatoye, E. O. Eboigbe, A. A. Abdul, and H. O. Daraojimba. "Revolutionizing retail: HR tactics for improved employee and customer engagement." *International Journal of Applied Research in Social Sciences* 5, no. 10 (2023): 487-514. <https://doi.org/10.51594/ijarss.v5i10.635>
- [17] AHS Hospitality, *The Psychology Behind Hotel Room Cleanliness and Guest Satisfaction*, AHS Hospitality Insights Report, 2023.
- [18] Switch Hotel Solutions, *Hotel Housekeeping Ergonomics: Tips for Safer Work*, Switch Hospitality Industry Report, 2025.