

The impact of ergonomics on the productivity and performance of hotel housekeepers

Rita Mitra ¹, Sohini Basu Mukhopadhyay ²

Abstract. Ergonomics as explained by Pamela McCauley, Ph.D. CPE an expert in the field has conducted research on hospitality environments is to minimize work-related risk factors, check injuries, reduce slips, trips and falls etc. as well as reducing musculoskeletal disorders(MSD) caused by sudden and repetitive exposure to force, vibration, motion, awkward posture and static postures etc. Housekeeping department is a backbone for any organization. The department is responsible for maintaining hygiene and sanitation in the entire property. Hence housekeepers do a lot of physical tasks to clean and sanitize the areas to ensure safety, security and comfort of the guest. Hence there are high risks associated with hotel housekeeping staffs that usually go unnoticed. The housekeeping tasks include dusting, lifting and dragging vacuum cleaners, pushing and pulling bed, lifting bundle of linen, undo and redo bed, moving chambermaids' trolley thoroughly cleaning bathrooms and cleaning public areas, and disposing of trash etc. most of these tasks are done repeatedly and frequently in a eight hour shift. Such vigorous task may lead to Musculoskeletal Disorders (MSD). MSD can arise due to sudden exertion (for e.g. lifting a heavy object like), or it can happen due to repetitive movements which usually strains your wrist/arms/neck/waist, or from repeated exposure to exerting force, exposure to continuous vibration, or standing in awkward posture for long hours. At times individual risk factors can also lead to MSD like poor work practices, poor fitness and poor/bad habits. Hence the importance of ergonomics. Ergonomics is a science of designing the workplace suitable to user's need keeping in mind the capabilities and limitations of a worker to increase efficiency and productivity and considerably reduce time and effort. It's extremely important to ensure that the workplaces and equipment are designed accordingly and people trained well to reduce these risks. The research methodology was based on primary data collection, which was collected by circulating a well-structured questionnaire to housekeepers from various hotels for near perfect analysis whereas the secondary data

¹ Mrs. Rita Mitra,
Head of Department, Institute of Hotel Management, Kolkata, India.
E-mail: ritamitra@ihmkol.org

² Mrs. Sohini Basu Mukhopadhyay,
Lecturer, Institute of Hotel Management, Kolkata, India.
E-mail: Sb8846@gmail.com

was curated from previously generated reports, journals, research papers and other information materials that serves the need of the data accordingly.

Keywords: Ergonomics, risks factors, Musculoskeletal Disorders (MSD), efficiency and productivity.

1 INTRODUCTION

Ergonomics is the study of the design of a workplace area, equipment, machines and tools, work environment, and standard operating procedure which is related to worker's physical and physiological capacity and its effect on productivity standard while ensuring the safety, health, and wellbeing of the workers (Fernandez, 1995). Hotel Housekeeping is a highly demanding job. Housekeepers are expected to clean and sanitize different areas of the hotel for safety, security and comfort of guest. There are several risks related with housekeeper that always go unnoticed. Housekeeper's tasks include regular pulling, pushing, lifting, and dragging heavy machineries from room to room and from floor to floor all the time. The purpose of this study is to identify ergonomics risk factors related with housekeeping tasks, human factor and the type of work they are involved in the hotel. Basically, the most common ergonomics risk factors associated with housekeepers of any hotel is working in awkward position for long hours, applying force to perform a task repeatedly and repetition of particular movement plus operating equipment which vibrates while in use for long hours.

Many risk factors related to work increase the probability that some housekeepers/individuals may develop a MSD (Musculoskeletal Disorders).



This study will enhance the awareness amongst students, faculties and common people of the risk factors which may occur in the hotel housekeeping.

2 REVIEW OF LITERATURE

The major workplace ergonomic risk factors to consider are:

- High Task Repetition
- Forceful Exertions

- Repetitive/Sustained Awkward Postures
- Contact stress
- Static loading
- Vibration

2.1 High Task Repetition

Many tasks are repetitive in nature, and are often controlled by daily targets and work processes. Repetition of task, when combined with high force or working in awkward postures, can lead to MSD. A job is measured highly repetitive when the cycle time (repeated) is 30 seconds or less.

2.2 Forceful Exertions

Many tasks require high force loads on a worker. In such condition muscle effort increases to support high force required to perform a task, increasing fatigue level which can lead to MSD.

2.3 Repetitive task performed In Awkward Postures

Performing tasks continuously in awkward postures puts excessive pressure on joints, muscles and tendons. Risks of MSD is increases when joints are moved outside the mid-range repeatedly for long hours without adequate rest or recovery time.

2.4 Contact stress

The term 'contact stress' is highlighted pertaining to computer users and it is identified as a risk factor. "Internal stress arises when a tendon and nerve is stretched or bent around a bone or tendon. External contact stress occurs when part of your body rubs against a part of the work area, such as wrist against a table while working on keyboard for long hours.

2.5 Static loading

When forces and torques (it is a measure of how much pressure or force is applied on an object to rotate in its own position) are applied continuously for long duration of time without enough rest may lead to fatigue, lower performance standard along with tension in muscles as well hence it should be minimized.

2.6 Vibration

Vibration reduces tactility which affects the pressure exerted to hold an object in its original position. For restricted vibration exposure of either hand or arm the hand must get a grip of the vibrating object.

Symptoms may be numbness, tingling sensation, and loss of nerve sensitivity as well. The hand-arm vibration syndrome (HAVS) is quite painful and potentially disables the condition of the fingers, hands, and arms the cause being vibration. (raghubalan, n.d.). Two most common injuries that occurs with housekeepers are slips & trips, and falls leading to musculoskeletal disorders.

Some tips to reduce such injuries

Slips, trips and falls do not cause musculoskeletal disorders. Time is a constraints in most hotel so the workers/employees are always in hurry which leads to slips, trips, falls and accidents.

Hence-

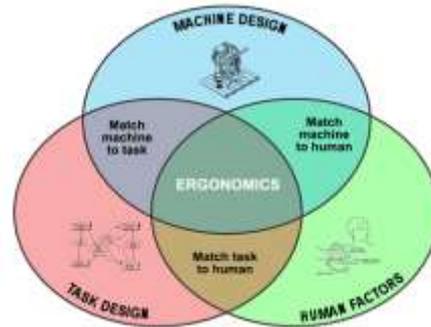
- Ensure that floors in public areas are dry
- Use/ Display signage for wet floor
- Move aside obstacles in pathways, corners and near staircases to avoid tripping.
- Ensure that the staffs are wearing anti-skid footwear to avoid slipping.
- Clean up spillages as soon as possible.
- Move away the cables from regular pathways or stick it to floor to avoid tripping and falling.
- Employers should find out from staffs about frequent accident points and take precautionary action to prevent such accidents.

Musculoskeletal Disorders.

Some of the common injuries that may happen when staff twist their backs frequently while performing a task, raise their arms above their shoulders many time to reach out to an object, bend their wrists or necks repeatedly to perform a task, or stand for long hours on duty in the same spot. These tasks when done with extra force exertion, or done repeatedly or for long hours have a great impact on the worker.

Following are the steps to check or minimize such injuries.

- Train the staffs to follow he best methods/ Standard Operating Procedure (SOP) to complete task.
- Heavy equipment may be lifted or shifted with the help of another colleague or use some mechanism to avoid lifting the equipment.
- Rotate staff from time to time where they will do different set of tasks. (htt3)



By the term ergonomics common people who were not aware about this term about till date presume that it is designed chair/desk/computer/keyboards etc.

Ergonomics isn't only about chair and tables; it is about the relation between human factors, machine design and task design/ SOP.

Truly speaking poor work conditions can lead to high staff turnover. Hence it's very important to ensure that the area of an organization and equipment designed and provided to staff are free of the risks involved with MSD

Major issues in hotels

. Repetitive tasks and continuous physical strain are the major issues for lifetime injury and hotels are the center of these problems.

Housekeeping department is the heart for smoothly operating any hotel/property. Most hotel employees report work related pain just not from housekeeping but from all the other departments as well. Research says that about 62% of housekeeping related injuries are identified as musculoskeletal disorder.

Over a period of time the work conditions have improved but yes still a long way to go. As per research done by S. Buchanan, S Buchanan (Buchanan, 2010) and many stated that till date housekeeping staffs are five time more at risk than others like chefs, dishwashers' etc. major complaints are related to upper and lower back pain and also pain in upper arms, neck, ankles.

Most housekeepers stated that linen cart and vacuum cleaners are usually quite heavy and are always in poor condition in fact even broken making their job harder instead of making it easier. Although it's just not with housekeeping department. There are major issues with kitchens as well like carrying heavy utensils, slipping because of wet floor which is another major problem in kitchen and even repeatedly stirring movement in kitchen etc. all of these may lead to some or the other injuries.

Ergonomic Helps

. By investing in proper ergonomics one can reduce on condensation cost related with on duty injuries. Increase in productivity and performance standards.

Some change in housekeeping process may be solution. For e.g. two housekeepers working together in a venue, like alternatively servicing bedroom and bathroom will surely reduce the repetition of task and make the process comfortable and efficient

leading to better performance and productivity standard. Simple changes in purchasing tools and equipment with ergonomic grips can considerably reduce the undesirable strain on wrists.

Digital technology can help in ergonomics as well. One of the areas where hospitality industry is doing a great job is in check-in process. As stated by McCauley. “hotels now use tablet devices for check-in process for guest, so you need not have the staffs standing behind reception counter all day long.

Pedrette stated that one should look at the larger picture when we talk about ergonomics –hotels should commit to invest in for long-term gain and look after the community for future.(Gross, 2019)

Workers in most organization are exposed to a variety of risk factors that usually affect their health. Whether one is sitting and working or lifting heavy object they have the right to work in a working condition which is free of risk. Protecting your employees from injuries at workplace should be a top priority for all organizations. Although I cannot be injury-proof, and mishaps can happen even after the proper safety measures are taken and staffs are well trained.

2.7 Examples of Common Ergonomic Injuries:

Risk factors, over time, can lead to acute pain, severe injury, and in many case disability plus many more health issues can leave an impact on staff

- **Carpal Tunnel Syndrome (CTS):**. Related to pain and weakness of wrist and hand.
- **Tendinitis:** Tendinitis is inflammation or irritation of a tendon.
- **Lower Back Injuries:** About 80% of working class people experience lower back pain at least once in their lifetime.
- **Epicondylitis (Tennis Elbow):** Tennis elbow is the pain or soreness in the outer part of the elbow.

Signs of an Ergonomic Injury-

. Some ergonomic injury symptoms are stated as follows:

- Piercing pain in fingers/wrists/other body parts
- Tingling pain or numbness in body parts.
- Growth, stiffness and inflammation of joints
- Loss of muscle control at times.
- Loss of body and mind coordination etc.

Many times ergonomic injuries progresses with stages from mild to severe. When an employee complains of discomfort, it is extremely important to try and prevent any such injury right away. This will help in quicker relieve from pain.

2.8 How to Reduce the Risk of Ergonomic Injuries

- Identify ergonomic injury risk factors early on and improve them. Work with new and current employees to ensure their workstations are not only comfortable, but also safe. If employees are working with heavy materials, make sure they are equipped with aids that will assist them or relieve some of that weight.
- Encourage employees to occasionally stand up, stretch, and walk around when their job requires sitting for an extended amount of time.
- If any procedures require repetitive or awkward motions, attempt to eliminate that by making job design adjustments or encourage short breaks every 30 minutes to an hour.
- Regularly update training courses for the employees to reflect any changes and to keep ergonomics fresh within employees' minds. (Resources, n.d.)

Layout plays an important role and the interiors of any hotel/ restaurant have become more than just visual appeal. Well-designed space always enhances the purpose of using an area. Layout of either guestroom, kitchen or even restaurant are directly connected with ergonomics (Giving space to perform a task comfortable). However hotels specifically in India are yet to recognize the benefits of ergonomics fully.

Ergonomically designed areas/layout, furniture, tools and equipment enhances the worker's productivity, performance/efficiency and safety which ultimately also enhances revenue for the organization. Nonetheless it also includes using the correct material/ raw material as well.

Some specimens of ergonomic designs depending upon the hotels positioning-

2.9 Interiors of the building or room-

- Vinyl flooring are more durable compared to carpets and much easier to clean and maintain. Carpet requires more attention and manpower and carpets also attracts dust which may lead to allergies.
- Shower cubical instead of bath tubs are more space saving and easy to clean and maintain.

2.10 Lighting in different part of hotel-

Lighting adds to huge recurring expenses. LED over traditional lighting will consume much less energy and is highly durable plus easy to maintain hence very cost effective too. Motion sensor lighting is a great alternative to minimize the recurring cost of energy consumed.

2.11 Dynamic Spaces

- Curating room for specially abled guests like low level furniture like wardrobe, bed, chair and table, low magic eye, non-skid flooring in room and bathroom, wider door for wheelchair to move freely etc.

3 A common and effective program is “Lean Management”.

Lean Management enhances the flow of services through an efficient process which needs minimum human effort, less space, least capital as well as time. The intention behind this is to increase performance and productivity with minimum cost and time involved and very importantly minimize/ eliminate wastage and at the same time increase profitability. (Sethi, 2020)

Ergonomics refers to techniques and actions to fit the workers need. In housekeeping, it refers to for e.g. designing the chambermaid’s trolley or vacuum cleaner user-friendly for the employee so that it can be used effortlessly.

Ergonomics helps in improving human safety, their health and wellbeing. While using the vacuum cleaner for example, safety means that the cord coils up automatically inside the device to avoid tripping. Ergonomics derives from the Greek words ‘ergo’, means ‘work’, and ‘nomos’, means ‘natural law’. Housekeepers are always physically active. Hence they need to be in good physical health in terms of respiratory system. Housekeepers are always on their feet and they hardly have any time to relax. Their task involves pushing, pulling, stretching and exerting force too. It is suggested that housekeeper wear flexible, light and breathable to help housekeeper move and perform their task freely. Few safety gears like knee and elbow pad, waist belt and comfortable shoes with anti-skid sole etc. can be of good support. (2020)

Many tasks performed by ground level staffs need to put pressure or force to perform most task which increases fatigue which can lead to MSD. Some of the control measure that may be taken-

Using mechanical assistance, height adjustable worktables, electronic equipment and ergonomically designed tools will reduce much effort and to maintain optimal joint movements. Staffs should be well trained on Standard Operating Procedure (SOP)/work technique. Job rotation is one of the best way to reduce risks factors that can lead to MSD. Implementing rest or breaks give an opportunity to recover. A job is considered highly repetitive if the cycle time is 30 seconds or less. (Middlesworth, n.d.)

4 OBJECTIVES

- In the light of the topic of discussion the following objectives are pursued:
- To emphasize the importance of ergonomics.
- To create awareness about the health hazards caused by poor ergonomics.
- To suggest ways and means to implement good ergonomic practices in the house-keeping department.

5 HYPOTHESIS

- Whether ergonomics create health hazards.
- Whether organizations do focus on a wholesome approach on ergonomics for a better and healthy workspace for their employees.

6 RESEARCH GAP

After a detailed overview of the Literature where experts and other sources have expressed their point of view, the gap in previously done research work was observed:

- The research work conducted in this particular field is found to be less in India exclusively regarding ergonomics practices in hotel. Many research works have been done in this field but following variables are still unexplored in the context of hotel industry.
- Also, the disastrous effects of poor ergonomics on the health of the housekeeping staff has not much been highlighted in any of the previously done research works.
- Our research work is to highlight the importance of ergonomics amongst housekeeping staff and to suggest ways and means to enlighten the decision makers of the hospitality sector to create good ergonomic situation for the staff to prevent them from suffering from musculoskeletal diseases in future.

7 RESEARCH METHODOLOGY

7.1 RESEARCH DESIGN

- The methodology of the research project is entirely based on **Survey Method**.
- The data will be collected from the stakeholders in form of survey and through a well-structured questionnaire.
- The questionnaire consists of both open and close ended questions.
- The name of the individuals and the organization selected for data collection will be exhibited as sample A, B, C, D and so on.

8 DATA COLLECTION

A total of 64 samples were recorder. Various mathematical charts have been used to compile the data.

Secondary Data- Includes past references from books, papers, websites and journals.

Primary Data- Includes results we have gathered by circulating the structured questionnaire.

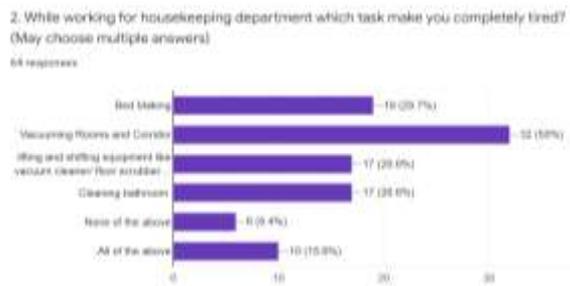
9 DATA ANALYSIS

1. Are you aware of the term Ergonomics? Do you think ergonomics is only related to design of equipment, chair and work tables or is it also related to human factor, task design and machine design? State your opinion.



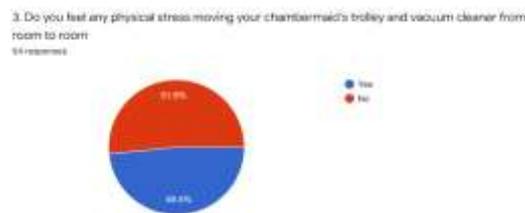
Most of the respondents are aware of the term Ergonomics and they know that it is not just related to the design of equipment, chair and work tables but also related to the concept of making the workspace more comfortable and efficient.

2. While working for housekeeping department which task make you completely tired? (May choose multiple answers).



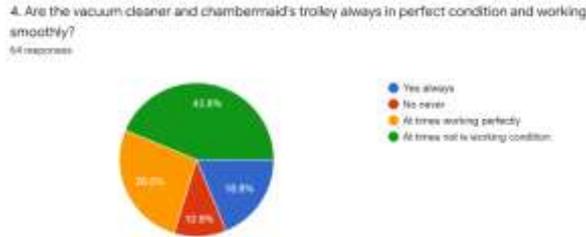
50% of the respondents feel tired while vacuuming rooms and corridor while 29.7% feel tired while doing bed-making. Rest considerable amount of staff feel also feel tired while lifting and shifting heavy equipments or cleaning bathroom.

3. Do you feel any physical stress moving your chambermaid's trolley and vacuum cleaner from room to room?



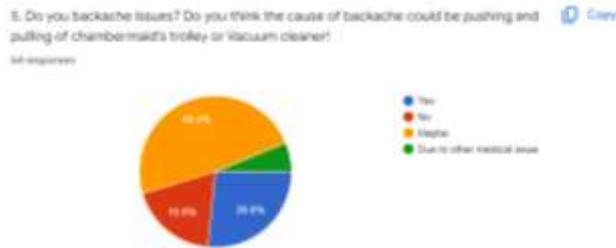
Majority of the housekeepers don't feel any physical stress while moving the chambermaid's trolley and vacuum cleaner from one place to another which indicates that these are ergonomically well designed and easy for the staff to carry around.

4. Are the vacuum cleaner and chambermaid's trolley always in perfect condition and working smoothly?



About 43.8% of the housekeeping staff have stated that the vacuum cleaner and chambermaid's trolley they use are not always in the perfect working condition. This is one of the biggest reason of musculoskeletal diseases amongst housekeeping staff.

5. Do you backache issues? Do you think the cause of backache could be pushing and pulling of chambermaid's trolley or Vacuum cleaner!



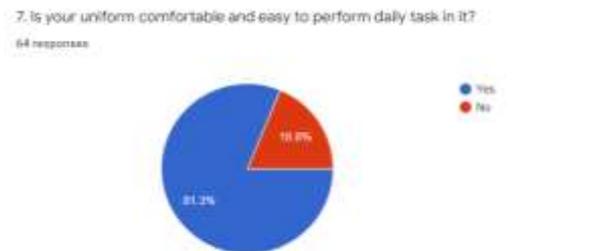
Majority of the housekeepers have backache issues and the probable reason of it is because of pulling the chambermaid's trolley or vacuum cleaner. This is because of poorly designed equipment that put stress on the back.

6. Do you do tasks which is involved with- (May choose multiple answers)



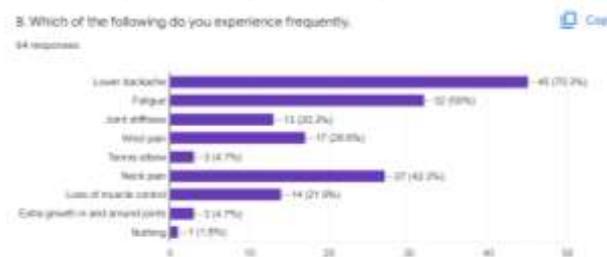
Majority of the housekeepers are involved with tasks like pushing and pulling of heavy objects, bending frequently to perform tasks standing for long hours and lifting heavy objects frequently. These are the major causes of musculoskeletal disease.

7. Is your uniform comfortable and easy to perform daily task in it?



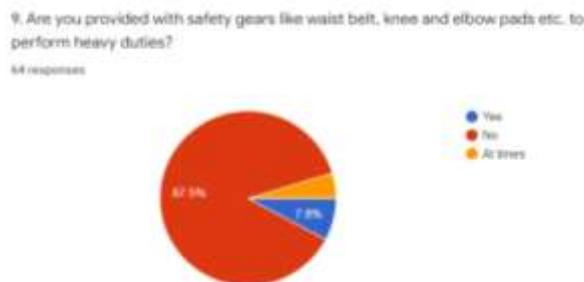
Organizations do realize the importance of comfortable uniforms especially for the housekeepers who do a lot of hardcore physical activities throughout the day. And comfortable uniforms give them the ease to perform these heavy tasks without any discomfort.

8. Which of the following do you experience frequently.



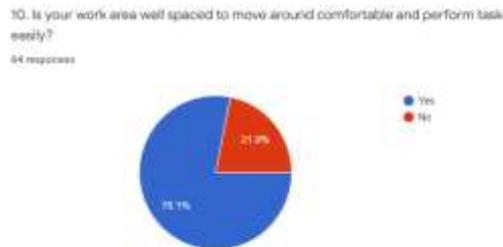
Most housekeepers responded that due to the heavy load of work that they perform everyday they experience lower backache, fatigue, neck pain wrist pain etc. These symptoms are a clear indication that the workplace is not designed ergonomically.

9. Are you provided with the safety gears like waist belt, knee and elbow pads etc. to perform heavy duties?



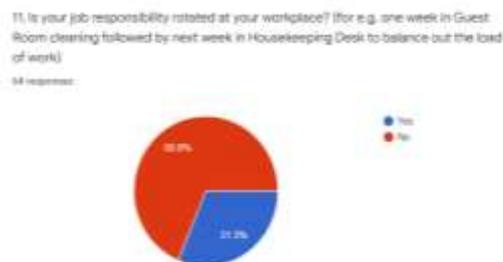
Hotels and hospitality sectors of our country do not realize the importance of safety gears and their role in preventing MSD for a better future of the housekeepers. Thus a clear majority of 87.5% have responded that they are not provided any safety gears for work.

10. Is your work area well-spaced to move around comfortable and perform task easily?



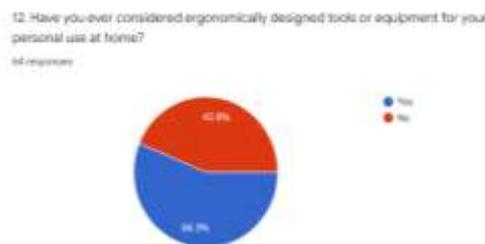
It is a positive change brought about in organizations where workers are offered spacious and comfortable areas to perform their daily tasks.

11. Is your responsibility rotated at your workspace? (for e.g. one week in Guest room cleaning followed by next week in housekeeping desk to balance out the load of work)



Majority of the organizations aren't aware that if an employee is performing the same task for a considerable length of time it may lead to serious consequences and can give them injuries in the nerves, muscles and spinal cord and the damages can be as grave as a lifelong injury.

12. Have you ever considered ergonomically designed tools or equipment for your personal use at home?



Majority of the respondents do consider ergonomically designed tools and equipments for their personal use but a big section of people are there who don't consider this and this leads to health disorders in future.

13. Are you aware that exerting excessive force, task performed repeatedly (every 30 seconds) and task involving continuous vibration may lead to Musculoskeletal Disorder [MSD]

13. Are you aware that exerting excessive force, task performed repeatedly (every 30 seconds) and task involving continuous vibration may lead to Musculoskeletal Disorder (MSD)
44 responses



53.1% of the employees are aware that excessive force, and tasks involving continuous vibration may lead to musculoskeletal disorder. But a large no of people are completely unaware of the fact and thus do not take any precautions while performing such tasks.

14. Are you aware that Musculoskeletal Disorders (MSD) are the injuries and disorders of the muscle, nerves, tendons, joints, cartilage and spinal discs etc which is caused due to poor ergonomics?

14. Are you aware that Musculoskeletal Disorders (MSD) are the injuries and disorders of the muscles, nerves, tendons, joints, cartilage, and spinal discs etc, which is caused due to poor ergonomics?
44 responses



Majority of the respondents are aware of the term musculoskeletal disorders and its consequences caused by poor ergonomics.

15. Do you think bringing few changes in designing your workspace, tools and equipment can help in reducing the health risk of workers in your organization?

15. Do you think bringing few changes in designing your workspace, tools and equipment can help in reducing health risk of workers in your organization? If yes, share your opinion what changes can be done to achieve the goal.
44 responses

Yes

No

Safety gear can be provided. Simple instructions and tutorials can be given to help the employees get acquainted.

Yes using ergonomically shaped equipment could be very beneficial for work environment and also help the worker.

More ergonomically related approach will be better.

According to me,

Designing the entire design can help to a great extent.

Periodic maintenance and proper cleaning of electronic equipment based on the nature their requirements can help to increase the efficiency of the worker that will help to achieve the goal indirectly.

Some common opinions received from respondents are as follows:

- Safety gears can be provided. Ample rest periods and alternate shifts can be given to help employees get ample rest.
- Ergonomically shaped equipment could be beneficial for work environment and also help the worker.
- Engineering the uniform design can help it to a great extent.
- Changing workspace layout helps improve productivity, employee morale and individual organization. With a space management tool we can easily switch up our floor plan in real-time to keep our organization energized and productive.
- Having vacuum cleaner in working condition at all times and being able to adjust their lengths. More bigger work space to have an ease for movement.
- Yes I think bringing practical ergonomics in use can make the workload of the housekeeping staff much less, and make their work easier. For example the chambermaid's trolley being used in my organization is wooden and heavy and the uneven ground surface due to carpets and marble floors make it difficult for us to push and pull around. Also in my organization extra beds are stored in one floor pantry only so whenever it is required in other floors it has to be dragged around and lifts have to be used for transporting them.
- Yes definitely, for example if the neck of the vacuum cleaner is long enough so that the housekeeper doesn't have to bend to vacuum the room, the risk of backache can be avoided to some extent. Also, the retractable handle of the vacuum cleaner should be long enough so that the housekeeper doesn't have to bend which will provide ease of movement and faster movement.
- Yes, indeed it can. The in room dustbin can be a bit lighter in weight. The furniture used only if we would talk about the heavy chair along with the foot rest could be lighter then vacuuming would be easier. If the carpets would be used of darker color then vacuuming if done in two strokes, (I meant not in one continuous stroke) the uniformity of the carpet as well as the ambience of the room would be maintained.
- It would reduce the physical stress a bit (vacuuming would be easier). There should always a trolley in the soiled linen area such that at the later stage after making of rooms it is easier to remove those soiled linen in bulk at once.
- Mainly the work on one a particular employee should be reduced and distributed equally among all the people. It's often seen that often when hotels get fully sold out and some employee's don't come for work in housekeeping all their work has to be done by people present there and it becomes a huge stress for an individual to make numerous rooms.

10 DATA INTERPRETATION

After analyzing the data collected from the survey it gives us a clear picture that employers do realize the importance of ergonomics in the housekeeping department. While certain positive points got highlighted in the survey, certain negative points also came up which are alarming signs and need immediate check.

Amongst the positive points we see that a lot of work has been done to make the work-space ergonomic. For e.g. chambermaid's trolley and vacuum cleaners have been chosen to be less stressful on the physique that doesn't create any stress on the muscles and joints.

Also comfortable uniforms are provided to make the staff feel comfortable and easy to move around in. But the housekeeping staffs do report that they feel fatigued and face issues like body ache, wrist pain, back and neck pain after their shifts.

They also use equipment which are not in the best of the conditions and this causes them to put more pressure while handling them.

Housekeepers are also aware of the serious health conditions like musculoskeletal disorders that are caused because of poor ergonomics but do not take much effort to improve the situations.

Not much use of safety gears like waist belts, knee pads, elbow pads etc. clearly show that preventive measures are not taken to prevent these above mentioned diseases. This could lead to lifetime damages and sufferings for the housekeeping staff.

11 REMEDY

- How to implement reskilling or upskilling into a system-
- Every organization has its own ways and methods to implement ergonomics in their workspace strategies. Here are some suggestions:
- The housekeeping staffs should monitor the warning signs in their bodies like fatigue, body aches, stiffness in joints etc.
- Avoid extreme joint positions like stressing the neck, hands etc. beyond mid-range.
- Changing work postures frequently
- Use of safety gears.
- Taking short breaks in between tasks for resting the muscles and joints
- Using electronic devices to lift heavy objects.
- Rotating jobs and shifts within the department to provide ample rest to the body
- Keeping the equipment in mint conditions for smooth operations.
- Follow the employer's occupational safety and health instructions.

12 LIMITATIONS OF THE STUDY

The survey has been subjected to biasness and prejudices from the respondents. Thus 100% accuracy of the data collected cannot be assured.

Secondly respondents may be unwilling to disclose information with utmost confidence as they think they might be talking negatively about their organization.

Comparatively smaller sample size as the survey has only been restricted to house-keeping operational staff.

Respondents may have been reluctant to disclose internal information about their organizational SOPs.

13 CONCLUSION

Many areas are still to discover regarding ergonomics practices which need to cover by researchers so that issues and challenges of hotel housekeeping employees will be addressed. Employees have to be aware regarding these practices at work place as well as employer; both sides have to acknowledge importance of ergonomics practices. In Indian hospitality industry, employers need to prepare action plan for implementing these practices. Thus to prevent a lifetime suffering of the housekeepers the action plans need to be implemented with strict vigilance and audit from time to time because as the saying goes 'Health is the greatest wealth'.

References

1. (n.d.). Retrieved from <https://solusgrp.com/blog/post/ergonomics-in-the-entertainment-and-hospitality-industries.html>
2. (2020). Retrieved from https://ttk.fi/files/7569/Improwing_the_ergonomics_of_hotel_housekeeping_202035.pdf
3. Buchanan, S. (2010). Retrieved from https://deohs.washington.edu/sites/default/files/seminar-envhlth/speaker_pdfs/Arti_Buchanan.pdf
4. Gross, L. (2019, october 16). Retrieved from <https://partner.booking.com/en-gb/click-magazine/hotel-ergonomics-essentials-staff-welfare>
5. Middlesworth, M. (n.d.). Retrieved from <https://ergo-plus.com/ergonomic-risk-factors/>
6. raghubalan. (n.d.).
7. Resources, S. I. (n.d.). Retrieved from <https://societyinsurance.com/blog/importance-of-ergonomics/>
8. Sethi, R. (2020, November 11). Retrieved from <https://www.hvs.com/article/8925-ergonomic-design-and-lean-management-in-the-hospitality-industry-in-india>