

Ergonomics

Subjects: Behavioral Sciences

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People differ significantly hence the need to consider these differences when designing workplaces to ensure employee safety and equipment as well. ergonomically friendly machinery promotes productivity, employee motivation, safety, and extended equipment life amongst others.

Keywords: Ergonomic ; Injuries ; Safety ; Workplace

1. Abstract

People in all businesses come in a variety of forms, sizes, heights, and weights. Consider these several individuals of differing structures working on the same piece of equipment for the duration of the shift. Such people will be forced to compromise their natural selves in order to adapt to the working environment and keep production processes running. Such movements are likely to result in repetitive strain injuries and musculoskeletal problems immediately or, in most instances, over time. This system of fitting various varying individuals into the work environment is not sustainable, resulting in lower productivity, increased injury rate, lower employee morale, higher turnover, higher medical costs, and so on. In addition, such machinery or equipment is overwhelmed by oversized employees, resulting in failures and associated costs. There is no such thing as one size fits all.

As a result, as far as feasible, a positive interaction between an individual employee and the work environment is desired. To do this, an ergonomic assessment should be performed using accessible employee data to aid in designing or redesigning the workplace. Ergonomics assessment should be incorporated and integrated into larger organizational risk management systems, processes, and policies. Anthropometry, when used correctly throughout the workplace, product, and machinery design phases to develop ergonomically pleasant workplaces, can significantly improve the quality of life.

2. Background

Unlike all other hazards and related dangers that can be isolated to specific industries and sectors, machines, and ergonomics is central to human beings and a persistent threat wherever human existence and activities exist.

Many countries do not have ergonomics legislation; thus many organizations do not have processes in place to handle such hazards. Employees are at risk of accompanying injuries as a result of a lack of awareness and precautionary measures. It should also be mentioned that even in some countries where such legislation exists, legislators are ill-equipped to implement it.

3. Introduction

Ergonomics, according to The International Ergonomics Association, is a scientific discipline concerned with the understanding of interactions between humans and other elements of a system, as well as a profession that applies theory, principles, data, and methods to design in order to optimize human well-being and overall system performance. Physical ergonomics (human anatomy), Cognitive ergonomics (mental processes), and Organizational ergonomics (socio-technical systems) are the three main pillars of ergonomics.

The ultimate purpose of ergonomics is to design tasks and workplaces for specific employees who will be exposed to that work environment. Ergonomics is described as the science of tailoring a workplace to the demands of the user. Ergonomics seeks to promote efficiency and productivity while decreasing discomfort. A thorough grasp and use of ergonomics concepts would most likely prevent the majority of workplace injuries, increase organizational profitability, and boost employee morale.

The purpose of this article is to increase awareness of ergonomics in all aspects of life, assisting in the prevention of related incidents and contributing to the enhancement of quality of life, particularly in later stages of our lives, i.e. old age.

| 4. Why Ergonomics is Important

In general, all countries' legislation requires companies to provide and maintain a safe and healthy work environment for their employees. Employers have an obligation to prevent ergonomic injuries even in the absence of explicit ergonomic legislation. As a result, labor authorities are always empowered to intervene and enforce employee protection.

Similarly, international standards such as ISO 45001 encourage thorough risk management processes that are consistent with other international best practices, including ergonomics. Internationally certified organizations are thus likely to be obliged to comply and protect their personnel thoroughly by empowering organizations and customers.

Furthermore, because turnover is reduced, ergonomic compliance is likely to increase production through improved staff morale, employee training, and competency. Such organizations are less likely to draw the notice of authorities and face fines for injury. High ergonomic injuries raise expenses in terms of insurance premiums, medical costs, and employee replacement costs.

Employees who are frustrated and weary as a result of ergonomic deficiencies are unlikely to execute their ergonomically demanding task satisfactorily or as well as they were trained. This will result in product or service shortcomings owing to quality issues, resulting in consumer unhappiness and organizational failures.

| 5. Road to Ergonomic Compliance

Everyone has a part to play in our global quest for ergonomically pleasant workplaces and environments. The most crucial component of this adventure is to have a sufficient understanding of ergonomics and best practices. Competent personnel is more likely to be positively influenced and hence change their behavior.

Legislators and authorities must also protect workers through appropriate legislation and enforcement. Such an inspectorate must be adequately equipped, given ergonomics is a relatively new and rapidly increasing discipline across the spectrum. They are also responsible for guiding the industry toward compliance.

Organizations must also play a role by staffing and properly training their health and safety departments. Larger firms are better positioned to acquire an ergonomist to create and implement ergonomic initiatives. Consultants are also an excellent resource for businesses that lack local expertise.

| 6. Conclusion

As our aging population becomes more sensitive to such injuries, ergonomics will continue to be a major present and future concern for the worldwide workforce. Employees who are fit and healthy are inadvertently subjecting their bodies to additional ergonomic pressures. When such injuries affect personnel, governments and communities will likely face significant pressure through welfare and disability resources. Organizations are also likely to bear the brunt of such lawsuits and claims for workplace injuries at later stages.

As a result, adequate strategies to manage ergonomic exposures are required in the aim of increasing quality of life. Legislation, standards, and policy are likely to be among these measures.

To handle such hazards, organizations must design an ergonomic program that includes, among other things, employee training, ergonomic assessments, medical surveillance, control measures, and so on. The program should encompass all three critical factors rather than just physical ergonomics. For effective hazard control, ergonomic programs should be integrated into organizational risk management strategies. The control principle of the hierarchy must also be used, with ergonomic hazard elimination through design being emphasized.