



Review Article

A Review: Opportunities, Challenges and Recommendations for an Ergonomic Tool

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ABSTRACT	Manuscript Information
<p>These days, office employment is extremely stressful, and the strain of the job can seriously jeopardize one's health. Therefore, ergonomics made significant strides in the workplace culture to address this issue. Numerous products are made using ergonomics principles to lower work-related stress, boost productivity, prevent major health problems, and lower absenteeism. We want to know why working professionals are switching to ergonomic items, and we want to find out how long lasting these products are. Both primary and secondary data are used in this descriptive study.</p>	<ul style="list-style-type: none"> ▪ ISSN No: 2583-7397 ▪ Received: 15-03-2024 ▪ Accepted: 20-04-2024 ▪ Published: 27-04-2024 ▪ IJCRM:3(2);2024:183-185 ▪ ©2024, All Rights Reserved ▪ Plagiarism Checked: Yes ▪ Peer Review Process: Yes
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KEYWORD: Ergonomics, Work Environment, Human Aspect Engineering, Tangible Ergonomics, Analytical Ergonomics, Managerial Ergonomics.

1. INTRODUCTION

The study of human interactions with other system components is the focus of the scientific field of ergonomics. Ergonomics is a professional occupation that uses theoretical work, concepts, statistics, and strategy to develop systems that maximize many aspects of a person's life and quality of life and overall system performance. Ergonomics and human aspects are nearly associated fields. Human factor engineering, as it is commonly called, focuses mostly on psychological aspects of engineering. This factor's primary objectives are to lower personnel error, boost productiveness, and improve user security and well-being

when using the apparatus. Designing furniture and/or equipment with human factors in mind has a significant impact since it reduces the risk of musculoskeletal diseases and repetitive strain injuries. A fundamental idea in human aspect engineering is fit, which can be defined as fit among the consumers, fit in the work, and fit in the condition. Modern ergonomics is a science that encompasses all labor kinds. Production engineers, commercial medical doctors, safety engineers, and many others study analytical ergonomics, which covers human behavior, decision-making processes, perception in relation to design, etc., and industrial ergonomics, which deals with physical aspects of the

workplace, human physical abilities, etc. Today, ergonomics is ingrained in almost every area of modern life. Ergonomic design is employed in the construction of office seats and workstations, kitchen appliances, car interiors, and other commonly used products

2. LITERATURE REVIEW

Narayan *et.al* (1993) deals that by addressing ergonomic difficulties as uncomfortable positions and body pain, revamping machines and tools and enhancing lighting and ventilation in a medical device assembly factory reduced accidental situations and workers unhappiness. White Wilson (1995) suggests that an ergonomic management program prioritizes employees' well-being in the workplace by involving them in job planning and control to accomplish desired results. Sumit (1997) indicated that Putting an emphasis on ergonomics at work improves output and job satisfaction. Riel and Imbeau (1997) felt that appropriate setup is necessary in a helicopter manufacturing plant to handle large dies and avoid injuries from strain and overexertion. Mangesh Joshi and Vishwas Deshpande (2019). An organized summary of the results of ergonomic evaluation methods across several industrial domains is given in this article. Kuok Ho Daniel Tang (2020) advocates an integrated method for ergonomic assessment that combines general and specific techniques with, if allowed, direct measurements. It highlights improvements to methods and approaches in ergonomic evaluation and helps in the appropriate selection of postural analysis instruments by methodically presenting their features and limits. Alison Alfred Klein and Maria Lucia Leite Ribeiro Okimoto (2023). This study aimed to map out the ergonomics tools that are most frequently mentioned in the scientific literature in order to distinguish and describe their key features.

3. OBJECTIVES OF THE STUDY

The research aims to achieve the following:

Determining the reasons for the shift in working professionals or workers' usage of ergonomic products.

To determine the degree to which ergonomic items outlast regular products.

Strategy of Research

Descriptive research was the form of research used in this particular investigation. The secondary data used in this study. Data are gathered from many research papers, articles, and journals, among other sources.

Significant Challenges

The important challenges are as follows –

Price: Specialized materials and design considerations are frequently needed for ergonomic items. It may result in greater production costs and ultimately higher consumer pricing.

Education: It is possible that many people are unaware of the value of ergonomic items or how to use them. Currently, this leads to the incorrect use of ergonomic products.

Market Glut: As the market for ergonomic items grows, it has been more saturated, making it harder for new products to stand out.

Technological Advancement: It can be challenging ergonomics product designers to stay up with the quick speed of technological development, especially when it comes to integrating intelligent characteristics.

Significant Opportunities

Innovation: To further innovate in ergonomic design of products, new materials are investigated, cutting-edge technologies are integrated, and flexible solutions are developed to enhance functionality and user experience.

Sustainable Design: A growing emphasis in ergonomics product design is sustainability. It offers chances for environmentally beneficial, long lasting, recyclable, or constructed from recycled materials ergonomic products.

Boost Comfort: With customizable features, customized support, and specific demands, ergonomic furniture enhances comfort and promotes job satisfaction and morale.

Boost Productiveness: It lessens throbbing, exhaustion, disturbance, and inefficiency, which increases performance and productivity at work.

4. RECOMMENDATIONS

A few recommendations for additional enhancement have been made:

- Offices would greatly benefit from the broad availability of ergonomic items due to their more affordable prices, which would alleviate the financial burden of having to acquire ergonomic solutions.
- Conduct in-depth training sessions for staff members to educate them on proper ergonomic procedures and the benefits of utilizing ergonomic items to prevent pain and harm.
- To evaluate the work environment and identify ergonomically problematic areas, do an ergonomic evaluation.
- In order to support further acceptance, the product need more creativity and a new viewpoint.

5. CONCLUSION

Based on current research, we can say that our primary goal is to satisfy the public's perception that our product is the most stress relieving and pleasant option available when compared to generic alternatives. Aside from that, the typical number of people employing this ergonomic product makes it quite popular in the economy. It is also evident that this is the most authentic product in terms of value for money. Furthermore, compared to a generic product, this ergonomic one is more beneficial. We can infer from the study that it boosts organizational efficiency and helps to lower workplace absenteeism.

Constraints of this survey

The constraints of this survey are as follows -

- We were unable to use or access the techniques for gathering personal data.
- Inaccessibility of pertinent data.

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