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Review of Literature on Organizational Ergonomics

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Abstract: Today working environment and Employee is the Key aspects of any organization. Employee health and well-being will enable employers to build up a more productive workforce. The purpose of this paper is to review the findings of research papers of various authors to develop the factors that impact employee and Ergonomics in a work environment. This study examines the following factors: Work Environment, Work Posture, Office design, Productivity, Employee Health, and Ergonomics Furniture. There are no one fixed practices which show the importance and significance of the influence of all these above broad points because different organizations lay different emphasis on these pointers depending upon their suitability impacting Employee Ergonomics. Based on understanding of the papers reviewed by researcher, suggestions are drawn which give a complete view on the various practices that organizations should adopt to keep the Organizational Ergonomics.

Keywords: Ergonomics, Office design, Employee health, Work environment, Work place injury

I. INTRODUCTION

Organizations are rapidly changing to accommodate expanding markets, increasing diverse workforce, and increasing public consciousness about how businesses should operate. Consequently, Ergonomics practices are receiving increasing attention. Who needs Employee Ergonomics practices? If you work in an office or a worksite or are a member of a company who spends a considerable amount of time at work, you will benefit from a well-designed worker Employee Ergonomics Practices. Employees spend a minimum of about 200 hours a month at work – a considerable amount of time. Furthermore, physiological injury, distractions and the pressures of the job can take its toll on the worker, which makes it important that an Employee Ergonomics Practices is started. Today, all across America, Canada, Europe and Asia, top Employee Ergonomics Practices are being used to help improve worker conditions at work and reduce the cost of worker injuries. It is just not benefiting to the employees but also the organization to a larger extent in bringing about organizational effectiveness.

Ergonomics can be defined simply as the study of work. More specifically, ergonomics is the science of designing the job to fit the worker, rather than physically forcing the worker's body to fit the job. Adapting tasks, work stations, tools, and equipment to fit the worker can help reduce physical stress on a worker's body and eliminate many potentially serious, disabling work-related musculoskeletal disorders (MSDs). Ergonomics draws on a number of scientific disciplines, including physiology, biomechanics, psychology, anthropometry, industrial hygiene, and kinesiology.

According to **OSHA** "Ergonomics is the science of matching the job to the worker and the product to the user that may contribute to injury" This section covers situations such as lifting, lighting, office/desk set up, etc.

(**Chartered Institute of human factor**) "Ergonomics is about designing for people, wherever they interact with products, systems or processes."

Human factors and ergonomics (HF&E), "Organizational ergonomics is concerned with the optimization of socio-technical systems, including their organizational structures, policies, and processes."

Ergonomics is the science of fitting jobs to people. Ergonomics encompasses the body of knowledge about physical abilities and limitations as well as other human characteristics that are relevant to job design. Ergonomic design is the application of this body of knowledge to the design of the workplace (i.e., work tasks, equipment, and environment) for safe and efficient use by workers. Ergonomics is an applied science concerned with designing and arranging things employee use so that the employee and things interact most efficiently and safely. Look at ergonomics as a way to improve productivity.

Benefits of ergonomics

While ergonomic improvements to the work environment are primarily used to create a safer and more healthful work environment, your company may experience other benefits, including:

- » Increased productivity
- » Increased work quality
- » Reduced turnover
- » Reduced absenteeism
- » Increased morale
- » Reduce health insurance charges.
- » Reducing fatigue and discomfort that plague relatively sedentary workers.

Some of the top Ergonomics PRACTICES CURRENTLY in use today include:-

Employee Work-Life Support Services

OSHA's Ergonomics Program

In this review paper researcher study about the various Organizational Ergonomics practices that help employee well-being and productivity in the organization. Today employee ergonomics practices are the highest primacy of organizations due to increasing health problem of the employee.

II. OBJECTIVE

Objective of this review paper is to identify the best practices and methods adopted by various organizations across industries about Employee Ergonomics.

III. LITERATURE REVIEW

The Authors focus on the Human factors and ergonomics that deal with fitting the job to the worker. Congenial workplace conditions support the cognitive tendencies of employees. This study is to determine the essential factors of cognitive ergonomics and employee well-being. Sanil, S K; Nair, Vinith Kumar; Ramanathan, Hareesh N(1998)

The ergonomics process at Ford has been successful at altering the engineering process to better involve the human element in job design. Reducing ergonomic risk on jobs has been correlated with a subsequent increase in product quality. Launching a new vehicle assembly line required less re-work of the workstations and an overall reduction in worker absenteeism and worker injury. Bradley S. Joseph (2003)

The employees perceived work in the oilrig in the desert environment as work in extreme environmental conditions and with a diverse schedule. Major ergonomic issues identified were adverse environment, long shifts, a diverse schedule, and hard physical work Workers were extremely tired at the end of the workday and they considered work to exceed their capacity. Ashraf A. Shikdar(2004)

In this paper it has been observed that companies begin to tackle the work-related musculoskeletal issue, they go through three levels of maturity: Reactive, Proactive and Advanced. This view of ergonomics prevents company managers from benefiting from what true ergonomics can do for them, their people and their profits. Mallon, James (Jan 2010)

Experiments revealed that ergonomic changes are able to bring about an improvement in job accuracy by over 25% in the errors committed which is quite high, while this was not observed in the control group. The impact of environment on performance is found to be in the form of lowered accuracy, whereas, certain researchers hitherto believed that only the rate of work may suffer. Not only does the human body go through wear and tear due to improper working conditions, it also affects the performance adversely. Alok Saklani & Shweta Jha (2011)

The Author focuses that after implementation of ergonomics in the organization performer job easier and keeps your workforce healthy. Safer Roth, Cynthia (2011)

The results of these survey showed that nine out of ten believed that a workspace quality affects the attitude of employees and increases their productivity. Employees in different organizations have different office designs, every office has unique furniture and spatial arrangements, lighting and heating arrangements and different levels of noise. The purpose of this study is to analyze the impact of the office design factors on employees' productivity. The study reveals that good office design has a positive effect on employees' productivity. Shruti Sehgal (2012)

Sustainable ergonomic program, from our perspective, is seen as an extension of ergonomics which it enriches about the philosophy of corporate social responsibility. The expected benefit of the application of sustainable ergonomic program in company practice is creating such working conditions, where employees will be able to submit the required work performance in a long term sustainable standard. Successful sustainable ergonomic program based on the participating principle can on the one hand improve efficiency of human work, and on the other hand it can reduce occurrence of health problems and diseases as associated with cumulative trauma disorders (CTDs). Petra Marková, Rastislav Beňo, Karol Hatiar (2012)

The results from the study confirm that office ergonomics deficiencies at the Petroleum House are impacting negatively on the performance of the employee. From the findings of the study, which identifies substantial office ergonomic lapses such as inadequate office illumination, use of un-ergonomic furniture, appreciable noise levels and pockets of safety hazards, it is obvious that GNPC is yet to leverage on its workplace environment as a means of motivating and enhancing the performance of its employees. Asante Kingsley (2012)

The study is emphasized on employees' views on nature of job, work environment and their present work postures at work. It interprets that employees of Puducherry manufacturing concerns are provided with best working environment but they also confront with works involving vibrations and static sitting postures for longer duration. It reveals that employees are moderately satisfied with the present ergonomics at their workplace.

Mr. Baig Mansur Ibrahim, Dr.K.Tamizhjothi (May 2013)

The research paper focus on employee health and well-being will enable employers to build up a more productive workforce. This study is to provide a larger framework on the relevance of ergonomics in Indian financial sector keeping in view the modern technological and infrastructural changes. Sanil, S K; Nair, Vinithkumar (2013)

IV. DISCUSSION

There are best practices of employee ergonomics in different organization that shows relation between the employee ergonomics and productivity. Different types of organization have different office set up so as per that structure adoption employee ergonomics is taken care of. Those organization adopting ergonomics practices they are not only getting better productivity but it enhances Profit of the organization.

1. Organizations more think on Employee Ergonomics Practices. Organization's not only focus on Profit but also focus on employee well-being.
2. Organizations can conduct ergonomics Program to keep employees motivated. If done in proper method such programs can keep employees determined and enthusiastic about their jobs.
3. Employers Provide continues training on Organizational Ergonomics so automatically reduce employee work place injury and organizations will get happy workforce.
4. The principles of ergonomics can be applied to a variety of functions, but in the office setting, most typically the focus is on work performed while sitting at a desk and operating computers or other electronic equipment.
5. Organizations are created Ergonomics work station. So employee are more aware about proper work posture automatically get rid of work place injury.
6. Array type of organizations should Established policies, procedures and protocols on ergonomics practices so employee follows the guidelines.
7. Work Practice Controls are controls that reduce the likelihood of exposure to MSD hazards through alteration of the manner in which a job or physical work activities are performed.
8. Organizations get more benefited if they are providing proper organizational ergonomics practices to their employees

V. CONCLUSION

Through this review research paper researcher observe that different type of organization implemented different types of organizational practices. If organizations want survive in this competition world so they have follow the Ergonomics practices and make their work force healthier and happier.

References

1. Ergonomics: The Study of Work U.S. Department of Labor Occupational Safety and Health Administration OSHA 3125 2000 (Revised)
2. Sanil, S K; Nair, Vinith Kumar; Ramanathan, Hareesh N Cognitive Ergonomics and Employee Well-Being in Financial Companies, Journal of Strategic Human Resource Management, ISSN: 22772138.
3. Bradley S. Joseph Corporate ergonomics programmer at Ford Motor Company, Applied Ergonomics 34 (2003) 23–28, Ford Motor Company, Health Protection Services, WHQ 532-B6, P.O. Box 1899, Dearborn, MI 48120-1899, USA
4. Ashraf A. Shikdar, Identification of Ergonomic Issues that affect Workers in Oilrigs in Desert Environments, *International Journal of Occupational Safety and Ergonomics (JOSE)* 2004, *UES IN OILRIGS* 169, Sultan Qaboos University, Sultanate of Oman
5. Mallon, James, Ergonomics - What's Real and What's Not, Penton Media, Inc., Penton Business Media, Inc., Occupational Health and Safety, Environmental Studies ISSN: 19459599, Jan 2010
6. Alok Saklani & Shweta Jha, Impact of Ergonomic Changes on Office Employee Productivity, 2011, Vol. 2, No. 1.
7. Shruti Sehgal, Relationship between Work Environment and Productivity, International Journal of Engineering Research and Applications (IJERA) ISSN: 2248-9622 www.ijera.com Vol. 2, Issue4, July-august 2012, pp.1992-1995
8. HaPetra Marková, Rastislav Beňo, Karol tiar, Sustainable ergonomic program -Basic condition for implementation of Corporate Social Responsibility, 2012
9. Asante Kingsley, The impact of office ergonomics on employee performance; a case study of the Ghana National Petroleum Corporation (GNPC), September 2012
10. Mr. Baig Mansur Ibrahim, Dr.K.Tamizhjothi, Evaluating Workplace Ergonomics of Manufacturing Sector at Union Territory of Puducherry, Volume: 2 | Issue: 5 | May 2013 • ISSN No 2277 – 8179
11. Sanil, S K; Nair, Vinithkumar, A study on Relevance of Ergonomics in Indian Financial Service Organizations, Business And Economics—Management, ISSN: 09739785, Copyright: Copyright PSG Institute of Business Oct-Dec 2013
12. Roth, Cynthia, The Importance of ergonomics for the Safety Professional, Publication Occupational Health and Safety, Environmental Studies ISSN: 19459599 Source type: Trade Journals, Feb, 2011

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Dr. E. B. Khedkar He is Recognised PhD guide in the area of commerce and management & has guided 20 research students. Published more than 35 research papers at National & International Journals of repute. Published 8 books.

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Hon. Dr. E.B. Khedkar has held several key positions at Savitribai Phule Pune University. Has been honored and awarded with many prestigious awards such as ‘Glory of India’, Shikshan Bhushan Award’, ShubhamSamajRatna Award’, “RashtriyaShikshaRatan Award” etc. for outstanding contribution in education & social work.



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