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**ANALYSIS ON ROLE OF ERGONOMICS IN CREATING WORK SATISFACTION AMONG HEALTHCARE PROFESSIONALS**

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**ABSTRACT:**

*Ergonomics is defined as "designing the job to fit the worker, not forcing the worker to fit the job." The ergonomic stressors in the healthcare professionals were not been identified and addressed effectively in facilities of safety and health program. Ergonomic includes the two aspects of the job*

*- physical stressors and environmental stressors. Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) is an international accreditation organisation focuses on various standards for safety, health & security of the healthcare workforce. The human resource management team and quality team combines to perform periodic evaluations on safety efforts and measure process in safety management*

**KEYWORDS:** Ergonomics, Healthcare Professionals, Work Satisfaction.

**INTRODUCTION:**

According to the dictionary the word "Ergonomics" comes from two Greek words "ergon", meaning work, and "nomos" meaning "laws". Thus ergonomics is defined as "designing the job to fit the worker, not forcing the worker to fit the job." Health care professionals expose to various work related ergonomic stressors ever before due to the reasons are as follows

- Increased demand for healthcare professionals
- Low patient and health

care professional ratio  
 - Increased workload without proper monetary/nonmonetary benefits  
 - Increased customer/patient centric approach  
 - Increased population (India <1.21 billion)  
 The ergonomic stressors in the healthcare professionals were not been identified and addressed effectively in facilities of safety and health program. Over an average of \$18000 has been claimed for various musculoskeletal diseases according to the National Institute of Occupational Safety & Health (NIOSH) report. Moreover, hospital sector is the

second highest number of illness with an incident rate of 8.8 per 100 workers compared to 5.7 in all other industries (US Department of Labour Bureau of Labour Statistics, 2002). Ergonomic includes the two aspects of the job  
 Physical stressors such as pain in joints, bones, muscles etc which is caused due to the repetitive motions of the human body parts, for example Carpal tunnel syndrome, lumbar sodalities and varicose veins in long standing nurses.  
 Environmental stressors such as congestion, fatigue, headaches which are caused due to the work place environment, for example radiation exposure of radiologist over a long period of time causes

cancer.

Mohan et al. explain that multiple musculoskeletal problems affects the health care professionals significantly which impair their daily activities. The study reveals that, the Indian Government Workers were exposed to more pain when compared to the Private hospital Workers. The author reveals that the major reasons for the musculoskeletal problems in healthcare professionals are due to poor hospital layout and infrastructure, due to improper work plan, increased percentage of inpatient and outpatient admissions, duty timings and the wrong placement of the equipment. The author advices that each hospital needs a comprehensive ergonomic plan and the necessary resources to support the same. Thus the risk of health problems in healthcare professionals can be reduced drastically.

Anjali Joseph (2006) states that the work place of health care professionals frequently causes injuries, infections, errors and operational failures wastages etc. The physical environment plays an important role in improving the health and safety for staff, increasing effectiveness in providing care, reducing errors, and increasing job satisfaction. The author explains that improvement in physical environment is not the only strategy to improve the ergonomics of the healthcare professionals, it should also be complemented with the work culture and work practices. She also emphasized on core systemic and facility design factors that lead to failures and wastage in healthcare, thereby developing new solutions (e.g. acuity adaptability, standardized rooms) that address these problems within the context of culture changes and evolving models of care.

### ROLE OF HUMAN RESOURCE MANAGEMENT

The Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) is an international accreditation organisation focuses on various standards for safety, health & security of the healthcare workforce.

The primary nature of JCI is to

- Provide a safe, functional, and effective environment of care for patients, visitors, medical and nursing staffs, vendors, volunteers, students, etc.
- Focuses on Surveillance, Prevention, & Control of Infection by identifying the organization's infection risks, and taking the necessary risk-taking steps.
- **Legal Requirements for Safety & Health of the employees**
- Employers contribute to insurance fund to compensate employees for injuries received while on the job
- Employers' accident rates drive up premium paid
- Some states include emotional impairment
- Consider complexity of telecommuting employees
- Some employers have policies run concurrently with any workers' compensation leave
- **Occupational Safety and Health Act of 1970**

To assure safe and healthful working conditions and to preserve human resources.

The basic provisions of OSHA are as follows:

- General duty - employer has a "general duty" to provide safe and healthy working conditions, and is held accountable when it knows or should have known of unsafe or unhealthy working conditions
- Notification and posters - employers required to inform their employees of health & safety standards established by OSHA, and must display OSHA posters
- Healthcare organizations cannot bar workers from occupations that may threaten reproductive health
- Healthcare employers must protect themselves from liability by informing employees of risks:
  - Maintain safe workplace by seeking safest methods
  - Comply with all federal safety laws

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- Inform employees of any known risks
  - Document employee acceptance of any risks
- Other safety considerations that can be emphasized by the organisation are as follows
- Safety policies and Disciplines
  - Safety committees
  - Safety training and communication
  - Employee safety motivation and incentives
- Thus the human resource management team and quality team combines to perform the following actions
- Inspections should be done internally, as well as by OSHA.
  - Accident Investigations Process.
  - Investigate accident scene.
  - Interview the injured employee, his/her supervisor, and any witnesses to the accident.
  - Complete an accident investigation report.
  - Make recommendations on how the accident could have been prevented.

Evaluations should be done periodically to evaluate safety efforts and measure process in safety management.

### **NEED OF STUDY**

The major purpose of ergonomics is to keep the worker safe, comfortable, and productive condition are Adapt the workplace to the worker, Support work in the way it is done, optimize support for the primary task, provide appropriate user control, emphasize ease of use, provide for Personalization of Space, Train people in the proper use of equipment. The study tries to focus on the role of ergonomics in creating work satisfaction among healthcare professionals

### **OBJECTIVES OF STUDY**

The major objectives of the study are:

- To study the concept of ergonomics and its role in employee satisfaction
- To study the various stressors among health care professionals
- To study the efforts taken by the health care professionals to manage their stress level
- To provide the measures and suggestions thereby improve their patient care.

### **RESEARCH METHODOLOGY**

The study involves a descriptive and fundamental research design, about the role of ergonomics in employee satisfaction among health care professionals; the study was confined to employees working among high risk patients in various multi-speciality departments of a private multi-speciality hospital Chennai. The various stressors of health care professionals are collected through MSCEIT closed ended questionnaire. Simple Random Sampling technique has been used for the selection of employees. The sample sizes of the study are 80 health care providers from Nephrology, Orthopaedics, Oncology, Obstetrics and gynaecology outpatient department. The data has been evaluated by using the statistical tools such as percentage analysis and Pearson's coefficient correlation determine the various outcomes of the study.

## RESULTS AND DISCUSSION

### PERCENTAGE ANALYSIS

**Table 1: Distribution of Employees Age**

| Age          | Frequency | Percentage |
|--------------|-----------|------------|
| <20 yrs      | 6         | 7.5        |
| 20 to 39 yrs | 71        | 88.75      |
| 40 to 59 yrs | 3         | 3.75       |
| 60 to 80yrs  | 0         | 0          |
| <b>TOTAL</b> | <b>80</b> | <b>100</b> |

Table-1 shows that 88.75% of employees are found under the range of 20 to 39 years, followed by 7.5% of employees are the age group of 20 years.

**Table 2: Distribution of Employees Gender**

| Gender       | Frequency | Percentage |
|--------------|-----------|------------|
| Male         | 6         | 7.5        |
| Female       | 74        | 92.5       |
| <b>Total</b> | <b>80</b> | <b>100</b> |

Table-2 depicts that 92.5% of target employees are females and remaining 7.2% of employees are male.

**Table 3: Employees Experience with Service Industry**

| Experience   | Frequency | Percentage |
|--------------|-----------|------------|
| <1yr         | 18        | 22.5       |
| 1 to 5yrs    | 44        | 55         |
| 5 to 10yrs   | 16        | 20         |
| 10 to 15yrs  | 1         | 1.25       |
| 15 to 20yrs  | 1         | 1.25       |
| <b>TOTAL</b> | <b>80</b> | <b>100</b> |

Table-3 indicates that 55% of employees had an experience of one to five years with service industry, followed by 22.5% of employees had an experience of less than one year.

**Table 4: Reasons for Stressors in Employees**

| Reasons               | Frequency | Percentage |
|-----------------------|-----------|------------|
| Work Load             | 24        | 30         |
| Personnel Commitments | 23        | 28.75      |
| Unrecognised Work     | 3         | 3.75       |
| Don't Know            | 30        | 37.5       |
| <b>Total</b>          | <b>80</b> | <b>100</b> |

Table-4 reveals that 37.5% of employees are unaware about their emotional instability followed by 30% of employees emotional instability is due to work load.

**Table 5: Efforts To Control The Stressors**

| Efforts                           | Frequency | Percentage |
|-----------------------------------|-----------|------------|
| Proceed with work                 | 43        | 53.75      |
| Self-motivation                   | 21        | 26.25      |
| Involved in things that they like | 10        | 12.5       |
| Take a pause and get back to work | 1         | 1.25       |
| Others                            | 5         | 6.25       |
| <b>TOTAL</b>                      | <b>80</b> | <b>100</b> |

Table-5 infers that 53.75% of employees' proceed with work and 26.25% of employees' keep themselves self-motivated to control their emotional instability.

**Table 6: Pearson's Coefficient Correlation**

| Employees Emotional Intelligence                         |  | 'r'  | t-value    | Inference                       |
|--|--|------|------------|---------------------------------|
| Pride to work in healthcare sector                       | Disciplined and punctual in caring patients      | 0.95 | Sig @ 0.05 | Highly positive correlation     |
| Feel stimulated and encouraged when helping the patients | Disciplined and punctual in caring patients      | 0.93 | Sig @ 0.05 | Highly positive correlation     |
| Strive to achieve goals and objective as a team          | Support employees genuine needs and requirements | 0.99 | Sig @ 0.05 | Highly positive correlation     |
| Awareness of emotional conditions                        | Difficult to regulate the emotions               | 0.30 | Sig @ 0.05 | Mild positive correlation       |
| Understanding of emotions of people around oneself       | Coordinated care among departments               | 0.90 | Sig @ 0.05 | Highly positive correlation     |
| Age of employees   | Emotional intelligence score of employees        | 0.27 | Sig @ 0.05 | Mild positive correlation       |
| Gender of employees                                      | Emotional intelligence score of employees        | 0.25 | Sig @ 0.05 | Mild positive correlation       |
| Marital status of employees                              | Emotional intelligence score of employees        | 0.35 | Sig @ 0.05 | Mild positive correlation       |
| Income of employees                                      | Emotional intelligence score of employees        | 0.30 | Sig @ 0.05 | Mild positive correlation       |
| Experience in service industry                           | Emotional intelligence score of employees        | 0.57 | Sig @ 0.05 | Moderately positive correlation |

Table-6 shows that the correlation between the various parameters of employees emotional intelligence score. All the above parameters have a positive correlation with each other. Thus the parameters increases in rate when it is mutually increased.

### SUMMARY AND SUGGESTIONS

When the management understands that the health workforce is an important financial stakeholder of an organisation, they have to promote the employees' health at all level. The healthcare human resource professionals may lead the way in making more comprehensive changes that implant healthy behaviours into the ordinary course of working life and they also begin to revive the debate on the role that preventative health care plays in responding to the health care crisis.

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