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THE RELATION BETWEEN ERGONOMICS AND QUALITY OF LIFE AT WORK: A LITERATURE REVIEW

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Abstract: This article is a literature review which examined 23 other studies on the relationship between ergonomics and quality of work life, and concepts covered on health practices carried out in the workplace. Through ergonomics, changes are carried out in the conditions and in the workplace, adapting to the tools and tasks according to the needs of workers, and it is these adaptations that result from improving the quality of life at work, essential to the success of an organization. The company has entered beyond gymnastics, relaxation techniques and preventive health practices in the workplace, to stimulate higher quality of work life. Thus, using ergonomics as a tool of quality of work life obtained significant gains both for the employee and for the organization.

Keywords: quality of work life, ergonomics; working environment.

1. INTRODUCTION

The labor market, with its main tool: the worker (according to Ferreira (2012) and Fernandes and Machado (2007), is the main focus of organizations to increase competitiveness and productivity. This portrait of the current scenario ends up transforming man into a commodity, focused on profitability, the main objective of organizations. It is in this context that ergonomics emerges, to mediate the actions of employers, and guarantee the adaptation of the work environment to man.

Ergonomics, according to Ferreira (2011), has the function of generating the development of work situations, both in material aspects and in social and organizational tools, achieving the greater objective of health, safety, comfort, satisfaction and effectiveness in the performance of tasks. worker activities.

Moreno, Fischer and Rotenberg (2003) report that it is through ergonomic studies that changes in working conditions and the work environment are made possible. Based on the individual's physical and psychological conditions, machines, equipment and furniture that are essential for the adequate performance of the task are improved and adapted. Carrying out the actions suggested by ergonomics result in a series of benefits for the quality of life at work, which, described by Moreno, Fischer and

Rotenberg (2003) apud Bom Sucesso (1997), is the primary factor for the success of an organization .

In this way, quality of life at work, highlighted by Moretti (2012), is essential for the growth of companies, as it interconnects people, work tasks and the organization, focusing on achieving positive results for both companies, as well as the personal development of each worker.

Today, the quality of life at work has reached dimensions that, according to Ferreira (2011), to become truly effective it is necessary to develop actions focused on the causes of compromising the worker's quality of life, and not just with the function of mitigating the effects existing negatives. Furthermore, the focus is no longer just on the individual, but on acting on organizational needs, according to assumptions indicated by ergonomic practices.

With this vision, different practices are being approached in organizations with the aim of relating ergonomics and quality of life. Moser and Kerhig (2006) mention, in addition to preventive practices - such as health education at work - actions carried out by the company such as compensatory work exercises, or break gymnastics. These authors also report that these business programs also aim to make workers responsible and interactive in matters related to their health.

This article aims to establish the

relationship between ergonomics and quality of life at work, as well as reflect on the concepts that support health practices at work based on health concepts in force in the world of work.

The relevance of carrying out this research is to approach the functionality of ergonomics, by deepening the topic that discusses the relationship between ergonomic actions and the quality of life of workers. Furthermore, in the context of healthcare, the aim is to demonstrate the action of ergonomics as a key factor in the growth of organizations.

2. MATERIAL AND METHODS

This work is an observational study of the bibliographic type (GOLDIM, 1997), whose methodological trajectory was based on the exploratory and selective reading of research material on the influence of ergonomics on workers' quality of life.

The descriptors for the bibliographic research will be: quality of life at work, ergonomics, job satisfaction, work environment, working conditions, according to DECS descriptors.

The bibliographic survey itself will be carried out using databases such as LILACS (Latin American and Caribbean Literature in Health Sciences), SCIELO, PUBMED, MD

CONSULT and BIREME where

articles published from 2000 to March 2014 will be listed.

As inclusion criteria for selecting articles, the following parameters will be analyzed:

- a) Year 2000 to 2014;
- b) Portuguese and English languages;
- c) Articles that deal with ergonomics and quality of life at work;
- d) Articles in their full version;
- e) Articles that deal with quality of life not related to the work environment will be excluded.

To facilitate reading and interpretation of the articles, a table will be created with the following topics:

Author and year of the article published.

- 1) Title of the article.
- 2) Type of study.

The selected material will be read, grouped and summarized in the form of a file. Afterwards, the main concepts will be classified around central axes to carry out the discussion and, finally, a conclusion will be made through the points of convergence and divergence found.

3. RESULTS

24 articles were found in the databases consulted that dealt with ergonomics and

quality of life at work, according to the inclusion criteria. These are bibliographical reviews, case studies and health research focusing on the central theme of this study.

3.1. Caracterização do Estudo

Author(s)	Year of Publication	Article Title	Kind of study
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Abrahão	2000	Productive Restructuring and Work Variability: An Ergonomics Approach	Literature review
Assunção	2003	A contribution to the debate on the health and work relations	Literature review
Brandão, Andrade e Pedroso	2008	Ergonomics as an influencing factor in organizational change: A case study in the Library of Faculdade Sete de Setembro – Façate	Estudo de caso
Brusiquese e Ferreira	2012	Technological and organizational innovations in offices and the impacts on quality of life at work	Literature review
Carregaro et al.	2013	Association between work engagement and perceived exertion among healthcare workers	Pesquisa Científica
Célia e Alexandre	2003	musculoskeletal disorders and quality of life in workers involved in patient transport Efetividade do	Pesquisa de Campo através de questionário
Coury, Moreira e Dias	2009	physical exercise in an occupational environment to control neck, low back and shoulder pain: a systematic review	Literature review
Fernandes e Machado	2007	A importância da qualidade de vida no trabalho no paço municipal de Gaspar	Pesquisa de Campo através de questionário
Ferreira	2012	Ergonomia da Atividade Aplicada à Qualidade de Vida no Trabalho: Saúde e Promoção do Bem-Estar dos Trabalhadores em Questão	Literature review
Ferreira	2011	A Ergonomia da Atividade pode Promover a Qualidade de Vida no Trabalho? Reflexões de Natureza Metodológica	Ensaio Teórico
Ferreira, Alves e Tostes	2009	Gestão de Qualidade de Vida no Trabalho (QVT) no Serviço Público Federal: O Descompasso entre Problemas e Práticas Gerenciais	Pesquisa de Campo através de análise documental e entrevista semi-estruturada
Filho	1993	Ergonomia Participativa: Uma Abordagem Efetiva em Macroergonomia	Literature review

Grande et al.	2013	Determinantes da qualidade de vida no trabalho: ensaio clínico controlado e randomizado por clusters	Pesquisa Experimental
Leite, Ferreira e Mendes	2009	Mudando a Gestão da Qualidade de Vida no Trabalho	Estudo de caso
Luz	2013	A influência da ergonomia para o desempenho no trabalho: um estudo em uma agência bancária na cidade de picos – PI	Monografia
Moreno, Fischer e Rotenberg	2003	A Saúde do Trabalhador na Sociedade 24 horas	Revisão Bibliográfica
Moretti	2012	Qualidade de vida no trabalho x auto-realização humana	Literature review
Moser e Kerhig	2006	O conceito de saúde e seus desdobramentos nas várias formas de atenção à saúde do trabalhador	Literature review
Plattsab et al.	2013	Physical occupational exposures during working life and quality of life after labour market exit: results from the GAZEL study	Estudo de coorte
Silva e Lucas	2009	Abordagem ergonômica do ambiente de trabalho na percepção dos trabalhadores: estudo de caso em biblioteca universitária	Case study
Silva, Souza e Minetti	2002	Assessment of worker profile and working conditions in carpentry shops in the municipality of Viçosa – MG	Pesquisa de Campo através de questionário
Soares, Assunção e Lima	2006	Low adherence to the workplace exercise program: looking for work elements to understand the problem	Pesquisa de Campo através de questionário
Villarouco e Andreto	2008	Evaluating the performance of workspaces from the perspective of ergonomics in the built environment	Case study

Source: Own.

4. DISCUSSION

Among the many changes that globalization has brought about, according to Ferreira (2012), Fernandes and Machado (2007) and Luz (2013), work relations

and productivity had great relevance, and it was from this reconstruction of the labor market, of which men are currently becoming the protagonist, that is, the main focus for an organization's policies. The globalized competition scenario focused on high productivity intensifies work and, to guarantee survival in this environment, Brandão, Andrade and Pedroso (2008) report that organizations need to promote adaptation to changes both in the company's internal and external environment, changes These are essential for organizational growth.

Faced with this need to adapt the work environment, ergonomics, according to Silva, Souza and Minetti (2002), works with the objective of promoting transformations in the conditions and spaces of organizations, according to the individual needs of workers, both physical and as psychic. Silva and Lucas (2009) also report that ergonomics is the scientific study that relates man to his means, methods and work spaces, and its application results from the interaction of several scientific disciplines that, integrated, provide better adaptation to man technological means, work and living environments.

From this perspective, Abrahão (2000) mentions that ergonomics, initially, represented the fight for workers' health against accidents and demands for better working conditions; With its development, it has provided contributions to the adaptation of organizational systems, resulting in financial advantages through the introduction of new technologies, according to each business demand. The contributions of ergonomics, with the qualification of work situations, are the result of ergonomic actions that enable the activities of individuals in different work situations, aiming both at quality of life at work and improving production performance.

For Silva, Souza and Minetti (2002), this ergonomic practice aimed at quality of life at work results in greater safety, health and comfort for professionals, as well as greater efficiency in their work and the success of the organization. Brandão, Andrade and Pedroso (2008) also add that, for organizations, ergonomics should not be seen just as a result, but rather as simple and useful techniques that favor the company's effectiveness, productivity and quality of life at work. .

In this way, the objectives of ergonomics, according to Ferreira (2012) and Fernandes and Machado (2007) are summarized in humanizing the socio-technical work context, adapting it to the needs of the subject and/or group, tasks and work situations. . Villarouco and Andreto (2008) and Brandão, Andrade and Pedroso (2008) also mention that there is a gain in productivity when a quality interaction is obtained between the work environment and man, as this interaction ends up providing a greater sense of comfort to the worker. , facilitating the performance of work activities. From this perspective, when it is possible to transform the physical environment into an environment adapted to the functional (physical/cognitive) and formal (psychological) characteristics of users, the result is the performance of work activities with quality.

In Brazil, the action of ergonomics is guaranteed, according to Villarouco and Andreto (2008), through the institution by the Ministry of Labor and Social Security, of Ordinance number 3,751 on 11/23/90, which describes the Regulatory Standard NR17, establishing permeating parameters adaptation of working conditions to the psychophysiological needs of workers, in order to

safety and efficient performance for the individual.

It is in the work environment that several conditions are evident that ergonomics is capable of adapting, favoring the quality of life at work. Brandão, Andrade and Pedroso (2008) define the work environment as a set of interdependent factors that influence both people's quality of life and the results of the work itself. Among working conditions, Leite, Ferreira and Mendes (2009) describe the physical environment (signage, space, air, light, temperature, sound); work instruments / tools; architectural arrangement of furniture; equipment; organizational support (information and technologies) and personal development (remuneration policy, benefits, etc.).

Following these concepts, according to Silva and Lucas (2009), ergonomic practices essentially focus on removing the negative aspects of work, which could cause harm to the worker and reduce their performance. Inadequate ergonomic conditions represent situations in which the work performed is incompatible with the physical and/or mental capacity of workers, which can cause discomfort, fatigue, injuries and illnesses. However, it is through conditions

to result in maximum comfort,

adequate ergonomics that this

injury can be prevented.

According to Ferreira (2012) and Silva and Lucas (2009), a business Quality of Life at Work program comprises dynamic management, which encompasses a set of standards, guidelines and practices focused on physical, technological and socio-psychological factors, capable of change the culture and enrich the organizational climate, adding to gains in worker well-being and productivity. In this way, quality of life at work integrates the interests of individuals and organizations: worker satisfaction, productivity growth in the company, in addition to promoting individual and collective well-being, the personal development of individuals and the exercise of organizational citizenship in work environments.

Business work aimed at quality of life at work, according to Vasconcelos (2001), apud França, (1997), begins when the worker receives an approach with a biopsychosocial focus by the company, through the implementation of services and projects that seek preservation and development of people, while carrying out their activities in their workplace. Vasconcelos (2001) also describes that the quality of life at work is influenced

by variables to be analyzed, including working conditions, physical

environment, working hours, opportunities for growth in the company and security, social integration, etc.

Ferreira, Alves and Tostes (2009) summarize in their article that, within the theme “quality of life at work”, different variables are addressed: reconciling the interests of organizations and individuals; health; Lifestyle; security; hygiene at work; interpersonal relationships; business indicators (biological, psychological, social and organizational) and critical management factors, among others. Thus, the approach to a quality of life program, as described by Brusique and Ferreira (2012), needs to be a task shared by both the organization and the individual, with the objective of achieving and maintaining harmony between well-being, efficiency and effectiveness at work, not restricting the focus just to productivity.

For the authors Villarouco and Andreto (2008), currently, quality of life at work is receiving greater focus within organizations, promoting the performance of different types of activities and behaviors, in order to trigger greater involvement and motivation in the work environment. and thus increase productivity. O

The environment has the power to catalyze behavior, being able to induce or inhibit a certain action, and the variables

present in this environment - already mentioned by other authors - have the important function of being able to modify the worker's performance; representing the share of influence that the work environment has on the well-being of individuals and the quality of services. Brandão, Andrade and Pedroso (2008) also add that the technical and organizational adaptation of work, in addition to being durable and non-harmful, is capable of building an area of life in which the worker can find recognition, self-esteem and the possibility of interaction Social.

Making the work environment humanized becomes the main objective of actions that transform quality of life at work, which, according to Moretti (2012), enables the incorporation of a non-oppressive, participatory internal climate, with well-developed interpersonal relationships. To this end, Ferreira (2011) portrays that quality of life at work needs to encompass two interdependent perspectives: for organizations, as a precept of organizational management that aims to promote individual and collective well-being; for workers, as the means in which they build their well-being.

being at work, are recognized and demonstrate prospects for professional growth and respect for individual characteristics. The latter author also

reports that, in this way, since organizations and workers are interconnected, it is possible to act on the causes of the factors that compromise the quality of life at work, seeking to transform the variables in the organizational context that are generating workers' discomfort.

Thus, the results of quality of life programs offer improvements for both parties involved. According to Villarouco and Andreto (2008), the benefits achieved are the growth in the company's productivity, both directly (reduction of time, movements and resources) and indirectly (reduction in rates of absenteeism, leaves of absence, turnover). Assunção (2003) adds that, for workers, health is being built in the workplace, contributing to the development of worker skills and safety in the organization.

Entry into productive life, described by Moser and Kerhig (2006), is characterized by activities with repetition of gestures, postures and mental sequences that reflect the adaptation of the body to the demands of the productive system, imposing

workers a new rhythm and lifestyle, which can generate negative impacts on the family and social spheres, as large periods are dedicated to work activities to the detriment of health and leisure. For the worker, the quality of life at work,

according to Silva, Souza and Minetti (2002), can directly affect social life and personal relationships, while for the company, the quality of the products produced and/or services provided are also influenced by working conditions, due to stress, tiredness and fatigue generated by inadequacy in the work environment.

It is important to highlight that both psychosocial and organizational factors - as described by Carregaro et al. (2013) and Célia and Alexandre (2003) - strongly influence the genesis and evolution of musculoskeletal complaints and, therefore, the interaction between cognitive and physical components must be part of the ergonomic approach; including subjective perceptions, physical load, environment and previous professional experiences, so that global and effective preventive actions can be carried out in the workplace. Assunção (2003) describes in his study that the organization of work is capable of reaching the individual, and changing the way they face risks, resulting in

health effects not yet fully known.

Célia and Alexandre (2003) also report that the Ministry of Health establishes, in its Protocol for Investigation, Diagnosis, Treatment and Prevention of Repetitive Strain Injuries, that the clinical-occupational diagnosis of

these pathologies must be carried out by a team of health professionals based on the history of the current injury, work equipment (ergonomic assessment), relevant behaviors and habits, worker's history, occupational history, detailed physical examination and complementary exams if necessary. Thus, a study carried out by Célia and Alexandre (2003) with workers who presented musculoskeletal symptoms obtained the results that, among the factors that interfere with the individual's quality of life, pain was identified as the aspect with the most influence on life activities. and, consequently, the participants' quality of life, in addition to compromising the individual's integration into social activities and reducing "vitality", which considers energy and fatigue levels in their physical abilities and overall health.

Therefore, prevention programs in organizations, established

by the concept of quality of life at work, as explained by Soares, Assunção and Lima (2006), they need to prioritize aspects of the work environment, acting according to the specificities of each work activity. Ferreira (2012) also recommends that these programs have the function of recovering the ontological meaning of work as a producer of well-being, of a preventive and health-promoting nature.

Within ergonomic performance, it is necessary to bring together all the main elements (skeletal disorders, improvement of production, execution of tasks and factors of the work environment), and from there establish the forms of prevention to be addressed in the team, not acting in a reductionist way to a work situation, but rather encompassing behavior, real attitudes at work, in addition to the individual characteristics of each component of the work.

From this perspective, Grande et al. (2013) says that health interventions are increasingly gaining ground in the workplace, with the potential to encourage the practice of healthy habits and behaviors, as well as to prevent pathologies. The evaluation of indicators in the company (stress level, for example), the regular practice of physical activities, nutrition, balanced interpersonal relationships are important factors that have proven to influence quality of life at work.

Physical exercise programs carried out in the occupational environment, according to Coury, Moreira and Dias (2009), aim to gain muscle strength and improve muscular flexibility and cardiovascular conditioning, resulting in improved health, work capacity and quality of life. workers' lives. For Luz (2013), companies must include medical assistance services and relaxing practices

in their organization in the development of activities, resulting in benefits for the organization and employees.

Among the quality of life activities, Fernandes and Machado (2007) describe workplace gymnastics, training and development of activities, carrying out performance assessments and structuring career plans. Moser and Kerhig (2006) also mention preventive practices, such as anti-smoking, anti-alcoholism campaigns, control and prevention of metabolic diseases, high blood pressure, nutritional guidance, and encouragement of physical activity inside and outside the company. For Moser and Kerhig (2006), companies are increasingly concerned

more with the prevention of Work-Related Musculoskeletal Disorders (WMSDs), through policies aimed at protecting and caring for workers' health, compensatory work exercises or break gymnastics - activities guided by the Regulatory Standards (NRs) in Health and Safety of Labor, from the Ministry of Labor.

In this context, Ferreira (2011) highlights that quality of life programs at work have been recognized as synonymous with anti-stress activities, with the function of increasing workers' physical and psychological resistance to work stressors. Presenting a preventive and intervention approach, Moser and Kerhig (2006) report

that physiotherapy is gaining ground through quality of life projects and programs implemented in companies, demonstrating the main results: the reduction of pain and fatigue; improvement of physical capacity for work; reduction in absenteeism and spending on health treatments and, also, growth in productivity; promoting worker participation in health care.

Thus, the new era of work demands from companies, as described by Vasconcelos (2001), that the quality of life at work, through ergonomic actions, needs to be incorporated into business practices to obtain the best results. Plattsab et al. (2013) adds that adverse physical working conditions result in negative consequences for the worker's health and quality of life in the long term. It is within organizations that people spend most of the time of their lives, and making this environment pleasant and pleasurable only promotes personal gains and the company's profitability and growth, as people become satisfied with their work.

5. CONCLUSION

The entire scope of Quality of Life at Work, combined with the role of ergonomics in organizations, portrays the importance of including health practices within the work environment. It is by using

ergonomics as a tool that Quality of Life at Work can be reflected in experiences of well-being at work, recognition of the professional in action, perspective of professional growth and respect for the individual characteristics of each worker. This relationship between ergonomics and quality of life at work translates into the current need for organizations to reduce human costs, paying attention to physical and psychological needs of individuals, essentially reflecting gains on both sides, worker and company.

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