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ANALYSIS OF ERGONOMIC FITNESS WORKPLACE FOR A CREDIT CARD ADMINISTRATIVE COMPANY IN IMPERATRIZ-MA.

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SUMMARY

The present work aims to analyze how the results of an organization can be influenced by the ergonomic adequacy in a company that operates in the credit card administration sector in Imperatriz-MA. The intense use of computers, sitting posture and performing repetitive movements are characteristic of the company's workstations. As a result of these aspects, the ergonomic factor becomes essential to increase productivity and well-being of workers, thus promoting quality of life at work. This is a bibliographic and field research with a quantitative and qualitative approach. The results show that the ergonomic devices offered are regular, so there are factors to be improved, concerning furniture and support equipment,

Key words:Ergonomics. Workstation. Quality of life at work.

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1. INTRODUCTION

In view of the constant changes in the global economy, the work environment undergoes frequent transformations, subjecting individuals to carry out activities without the necessary adaptations. Starting from the need to study the relationship between man and the work environment, a scientific discipline called Ergonomics emerged, which according to the Brazilian Ergonomics Association (ABERGO, 2012) derives from the Greek Ergon [work] and Nomos [norms, rules, laws].

The focus of ergonomics is on the interaction between man-machine-environment, in view of which the optimization of the ways of working directly benefit employees, increasing productive performance and providing greater comfort during organizational processes.

Currently, the search for raising the quality of life at work is leading companies to direct greater investments in programs that favor the health of employees. According to Lida (2002), "[...] ergonomics seeks safety, satisfaction and the well-being of workers in their relationship with production systems". From this context, the work environment should be conducive to the development of activities safely, reducing the risks of accidents or the emergence of occupational pathologies in the long term, directly influencing the productivity and satisfaction of employees.

By offering working conditions based on ergonomic concepts, negative factors are reduced, such as the adoption of inappropriate posture, absenteeism, physical inactivity, fatigue and stress, which consequently favors the well-being of employees, making them more motivated and committed to the results of the organization. .

The research was conducted in a company that operates in the Credit Card Administration sector in Imperatriz-MA, with the aim of analyzing how the proper use of ergonomics can influence the results of the organization, increasing productivity and quality of life at work . As specific objectives it is intended to analyze which ergonomic devices the company has for employees, how they use them and how the quality of life at work occurs through these devices.

2 Ergonomics concepts and their functions

Analysis of Ergonomic Adequacy in the Workplace of a Credit Card Management Company in Imperatriz-MA

It can be said that ergonomics has existed since the beginning of human existence on earth about three or four million years ago, when the oldest hominids, the Australopithecians, already transformed raw materials into tools such as drills, scrapers and cutters, objects that facilitated their daily activities.

Industrial development in the 19th century was a milestone in history, great inventions revolutionized the production of textiles, metals and transport. Until then, the factories were dirty, poorly lit, noisy and dangerous, that is, they did not have any aspect that would benefit employees who arrived to work up to 16 hours a day in unsanitary conditions.

According to Slack; Chambers and Johnston (2009, p.249), "Ergonomics is primarily concerned with the physiological aspects of the work project, that is, with the human body and how it adjusts to the environment".

The routine work process, when developed without the proper adaptation of the environment, can trigger serious risks to the worker's health. In view of the consequences arising from poorly appropriate work, ergonomics is proposed in order to seek safety, well-being and employee satisfaction in the workplace.

For the study of Ergonomics, it is important to know the characteristics: of man (physical, physiological, psychological, social aspects, as well as age, sex, training and motivation); the machine (equipment, tools, furniture and installations); the worker's physical environment (temperature, noise, vibrations, light, colors, gases, etc.), in addition to the consequences of the work, among others (VASCONCELOS et al, 2009, p.04).

Weedmeester (1995) conceptualizes ergonomics as "the application to the design of machines, equipment, systems and tasks with the aim of improving safety, health, comfort and efficiency at work".

In this sense, ergonomics is concerned with the interaction of man with the equipment, furniture and instruments that are available during the performance of its activities.

[...] machines, equipment, devices and even a simple hand tool must be designed taking into account the dimensions of the human body, ensuring that the postures, movements and forces required during the operation respect the limitations of the individual [...] (CORRÊA, L. and CORRÊA, A. 2009, p.241).

Ergonomics comes precisely to study these comfort measures, with the aim of achieving greater performance at work, preventing accidents and promoting greater personal satisfaction among employees. It is then up to ergonomics, offering collaborators working conditions adjusted to their needs, and it is expected that the results of ergonomic projects will be reflected in both the increase in individual employee productivity and the company's profitability.

2.1 Ergonomic risks

Ergonomic risks are related to the absence or poor adequacy of the work environment for men, which can cause psychological and physiological problems to workers, thus reducing their safety and consequently their productivity. The following elements are considered ergonomic risks:

- Intense physical effort;
- Inadequate posture;
- Work overload / excessive pace;
- Prolonged working hours;
- Monotony / repetitive activities; and
- Situations that produce physical / psychological stress.

If these aspects are not observed, ergonomic risks can cause changes in the body and emotional state of employees, such as: tiredness, stress, muscle pain, tension, sleep disorders, spinal problems, fatigue and increased risk of employees developing diseases occupational disorders known as RSI / WRMD (Repetitive Strain Injuries / Work-Related Musculoskeletal Disorders).

According to Viudes (2010), these diseases (RSI / WMSD) mainly affect the upper limbs and in some cases they even make it impossible for employees to perform their daily tasks in the work environment, even interfering in daily activities and personal life. .

Today, there are still few companies that adopt a new behavior with regard to workers' health, but these few are not only thinking about productivity, but about the whole of the worker, and for that, employers invest a small part of their profits from practices to improve the physical, psychological, and social status of employees [...] (CARDOSO, 2012, p.06).

Based on this context, it is possible to verify the importance of investments aimed at the well-being of employees, reducing risk factors and creating an environment

conducive to the development of activities with security so that they are more motivated in their work environment.

2.2 Ergonomics versus Productivity

With global globalization, the market has reached its peak of competitiveness, therefore, company managers in its most diverse segments seek to accelerate the pace of work in order to increase production and make the most of their human capital.

Competitiveness means the ability of an organization to offer better and cheaper products and services, better suited to the needs and expectations of the market, bringing innovative solutions to the customer [...] (CHIAVENATO, 2008, p. 562).

It is perceived that the improvement and innovation of products and services is the main objective of competitiveness. In the face of this highly dynamic business environment, the application of ergonomic concepts in workplaces is a relevant issue, since concerned only with maximizing profits, some companies end up not turning to the physical arrangements offered to employees, compromising individual productivity and generating employee dissatisfaction.

Ergonomics aims to conceive and / or transform work in order to maintain the integrity of the health of operators and achieve economic goals. Ergonomists are professionals who have knowledge about human functioning and are ready to act in the design processes of work situations, interacting in the definition of work organization, in the selection and training modalities, in the definition of furniture and physical work environment. (SANTOS AND ZAMBERLAN, 1992).

From this context, it is possible to notice the importance of ergonomics in the interaction between man and his work, providing benefits such as safety and physical and mental comfort and also contributing to increased productivity. From this conception, the prevention of accidents or occupational pathologies is obtained, risk factors that, if not observed, negatively affect the organization's results.

Effective prevention is only achieved if all actors in the company had a guaranteed and effective space for discussion, debate, explanation of the problems and difficulties experienced in the normal work routine and participation in the search for solutions to the problems encountered and also in decision making (VILELA; MENDES and GONÇALVES, 2007, p. 33).

In order to minimize the rate of absenteeism related to absences from Ler / DORTS, ergonomic projects are strong allies and can solve problems even in the initial phase, avoiding future inconveniences for both the employee and the company, which gains from increased productivity and lower costs for employees on leave due to temporary disability.

3 QUALITY OF WORK LIFE

The quality of life at work is directly related to motivation, the more motivated the employee is, the greater his performance at work. According to Barret (1998) “All human motivations are based on self-interest. We are motivated to do something only when it benefits us in some way”. In this sense, two important aspects stand out: the concern for the employee's well-being and organizational effectiveness.

Since it is within organizations that employees spend most of their time, everything that happens there can influence their behavior, performance, and especially their health. From this context, it is up to companies to ensure the general well-being of workers.

For France (2010, p.167):

Quality of life at work is the ability to manage all actions, including diagnosis, implementation of managerial, technological and structural improvements and innovations in the work environment, aligned and built in the organizational culture, with absolute priority for the well-being of people in the organization.

QVT programs are implemented in order to offer improvements in human relations, productivity and company image, helping employees to detect potential health risks and encouraging them to change their lifestyle and exercise, thus promoting personal development and professional. All of these factors directly contribute to the workers' personal satisfaction, making them more motivated and consequently more productive.

According to Chiavenato (1999), Quality of Life at Work represents the level at which the members of the organization are able to satisfy their personal needs through their experiences in the organization. From this context, it can be said that QVT has its concern for the general well-being of employees in carrying out their tasks.

It is then clear that there is a need to maintain a healthy workforce, motivated and prepared to remain firm in the face of a highly competitive business scenario. In this context, ergonomics is focused on the health of people within organizations and establishes parameters necessary to improve their quality of life, presenting them with solutions in the face of difficulties encountered during organizational processes.

4 METHODOLOGY

For Vergara (2005: 49), research “is not mutually exclusive”. Based on this statement, it is observed that in this work different types of classification were approached regarding the research. The methodological procedures included bibliographic and field research, with a qualitative quantitative approach. The research can be classified as bibliographic, as it is based on the theory found in publications such as books, scientific articles and internet sites.

It is also classified as field research, since the phenomenon was observed in the place where the facts happen. It is a quantitative approach, as it is a statistical study that is intended to describe the characteristics of a given situation, it is still considered a qualitative approach as its main objective is to interpret the observed phenomenon.

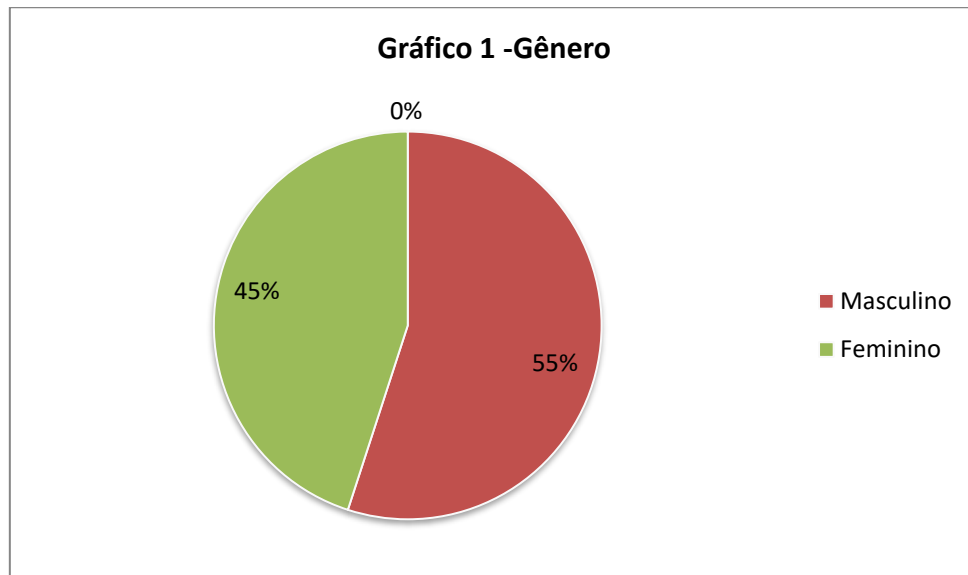
Information was collected through observations recorded in a field diary and the application of a questionnaire containing 10 objective questions and 1 subjective question. The sample used corresponded to all company employees, making a total of 40 people.

5 RESEARCH PRESENTATION AND ANALYSIS

The company in which the research was conducted, was founded in November 1999 and operates in the credit card management sector, its main areas of activity are the north and northeast regions of the country. In Imperatriz-Ma the company has a staff of 40 employees, for the present analysis of its ergonomic environment, data collection was carried out among all employees.

5.1 Employee profile

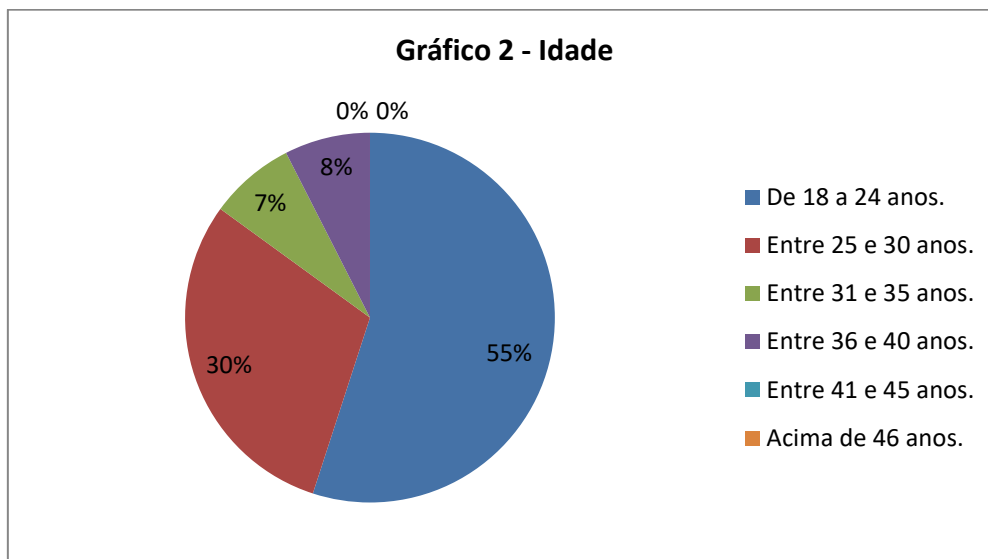
Initially, we sought to identify the profile of the participants in this study. The graphs 1 to 4 presented below are intended to provide prior knowledge about employees, corresponding to gender, age, education and daily working hours. Next, graph 1 can be seen in which the data are tabulated as a percentage.



Source: Research data carried out between 28 and 29 September 2015

As shown in Graph 1, it is clear that the percentage of men working in the company is balanced, with 55%, and women 45% of the total, this situation is due to the fact that the tasks performed in the company basically require independent psychological capacity. of the genre.

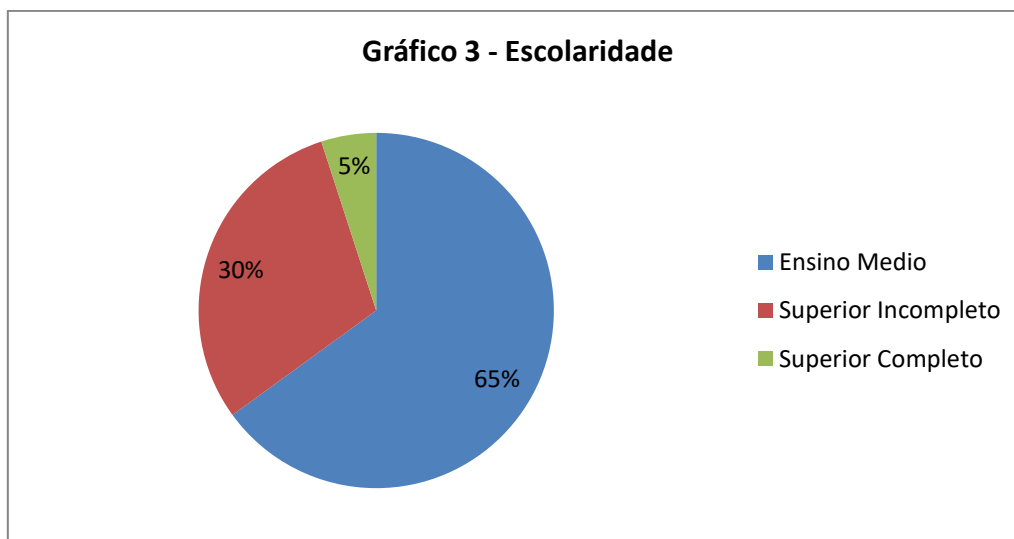
The second aspect observed was the employees' age group, as shown in Graph 2:



Source: Research data carried out between 28 and 29 September 2015

Analyzing the results obtained, we note a higher percentage among employees aged 18 to 24 years, with a percentage of 55% of the total, while between 25 and 30 years correspond to 30% of the total of participants, between 31 and 35 years represent only 7% of the total and between 36 and 40 years old reach 8%. It is noticed that none of the interviewees is over 40 years old, which shows the joviality of the company's employees.

Regarding the level of education of the company's employees, it was found whether the results expressed in graph 3:

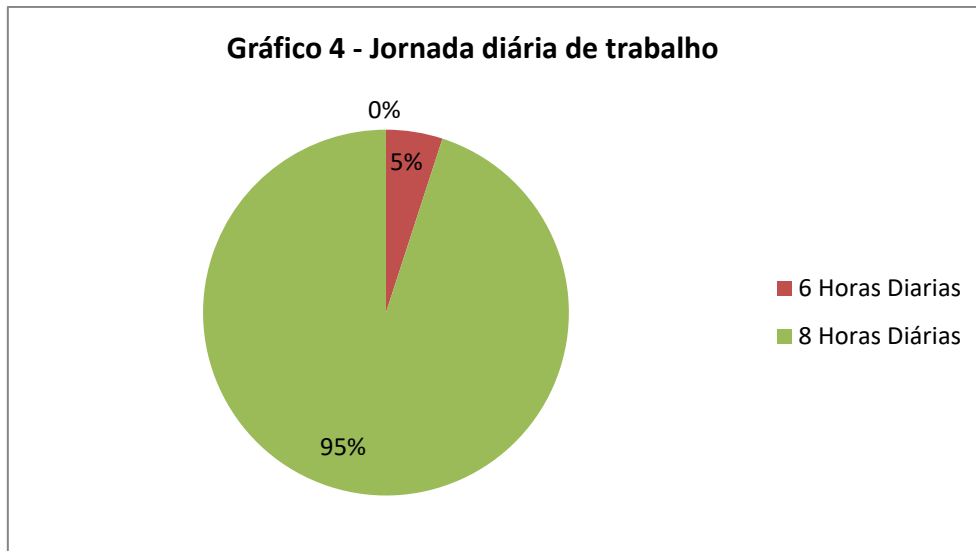


Source: Research data carried out between 28 and 29 September 2015

Analyzing the data, it is understood that the number of employees with an average level of education is higher in relation to the other aspects, corresponding to

65% of the research participants, while 30% have incomplete higher education and only 5% have complete higher education. It is important to note that the average level of education is a basic prerequisite for working in the company.

Graph 4 reports the employees' daily work hours:



Source: Research data carried out between 28 and 29 September 2015

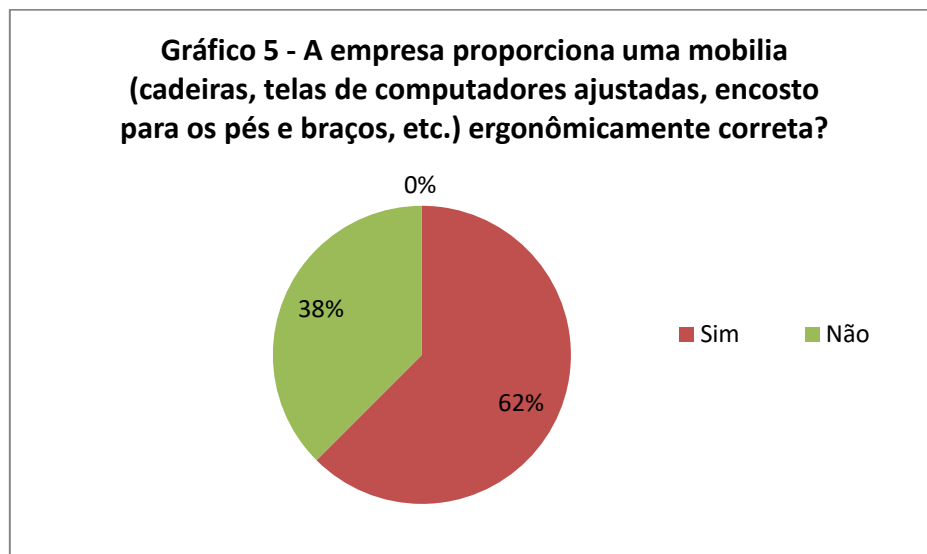
The survey data shows that 95% of employees work 8 hours a day and only 5% of the total participants work only 6 hours because they are hired on an internship basis.

This prior knowledge of the employees' profile is necessary to understand the data collected and analyze the environmental ergonomics in a credit card management company in Imperatriz - MA.

5.2 Evaluation of Employee Performance in relation to Ergonomic Projects.

For the development of activities with excellence, it is essential to adapt the work environment to the needs of the employee. Aiming at this interaction, physical ergonomics turns to the jobs, seeking to develop techniques and equipment that will facilitate the performance of tasks and reduce the risks to the health of employees.

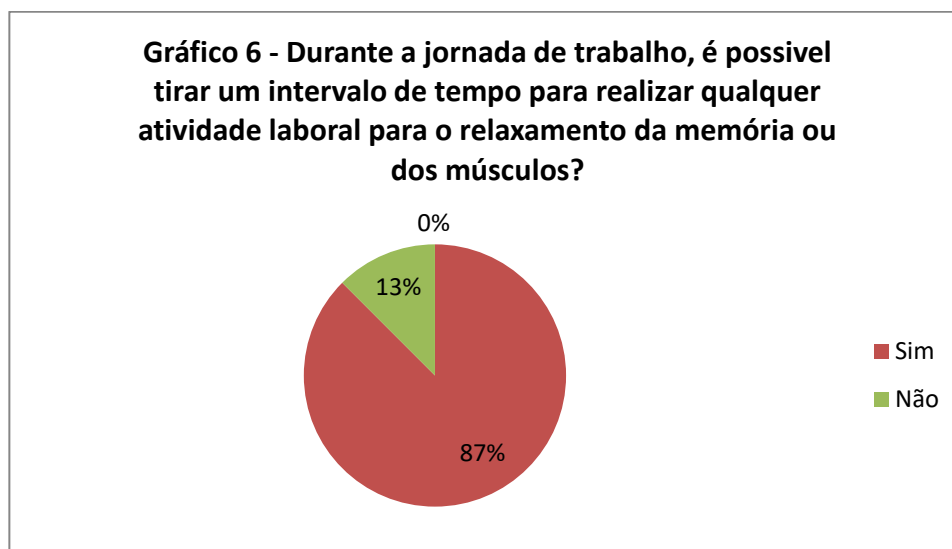
In view of this concern, Graph 5 shows the perception of employees regarding the furniture offered by the company:



Source: Research data carried out between 28 and 29 September 2015

In this case, it is noted that 62% answered yes, however 38% answered no, this shows that the furniture offered is not entirely within the criteria of ergonomics, but the company is looking for new equipment adjusted to the needs of employees.

As it is a company with the majority of sectors (Commercial, Customer Service, Technical Support and Billing) aimed at serving the public, the activities often become repetitive and stressful, in view of the psychic effort required, the chart 6 shows whether it is possible or not to take a time out during working hours to relax memory or muscles:



Source: Research data carried out between 28 and 29 September 2015

Through the data obtained in Graph 6, it can be seen that 87% of people answered yes, it is possible to take a break for relaxation, while 13% answered no, since

in some sectors the number of employees is reduced, which makes it impossible for employees to get away from their activities, even for a short time.

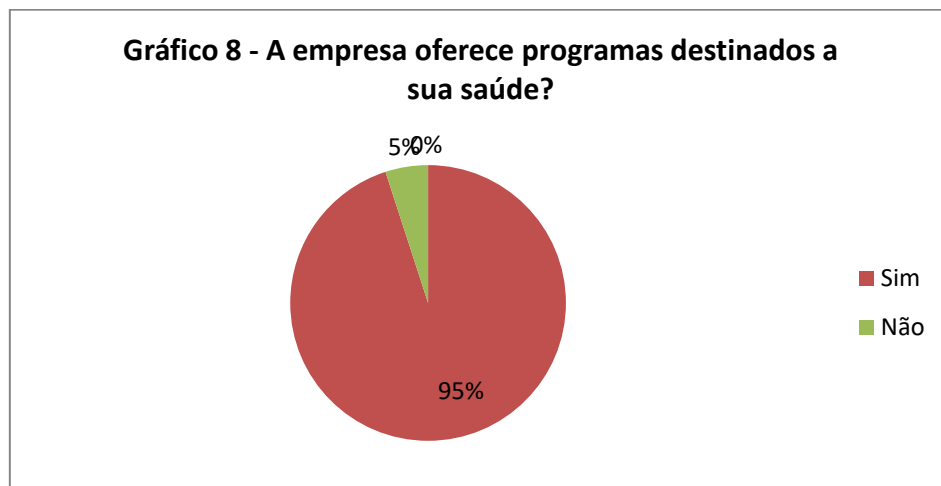
Graph 7 shows the data that reveal whether the company's autonomy for employees to express their opinions regarding well-being in the workplace:



Source: Research data carried out between 28 and 29 September 2015

As explained data, it is observed that 87% of the employees answered that yes, the company had the opportunity to solve problems related to well-being in the work environment, while 13% answered that no, this minority can be attributed to a small part of the participants of the research that during the application of the questionnaire questioned what ergonomics was, demonstrating lack of knowledge about the topic addressed.

Graph 8 shows the data obtained in relation to programs aimed at the health of employees:



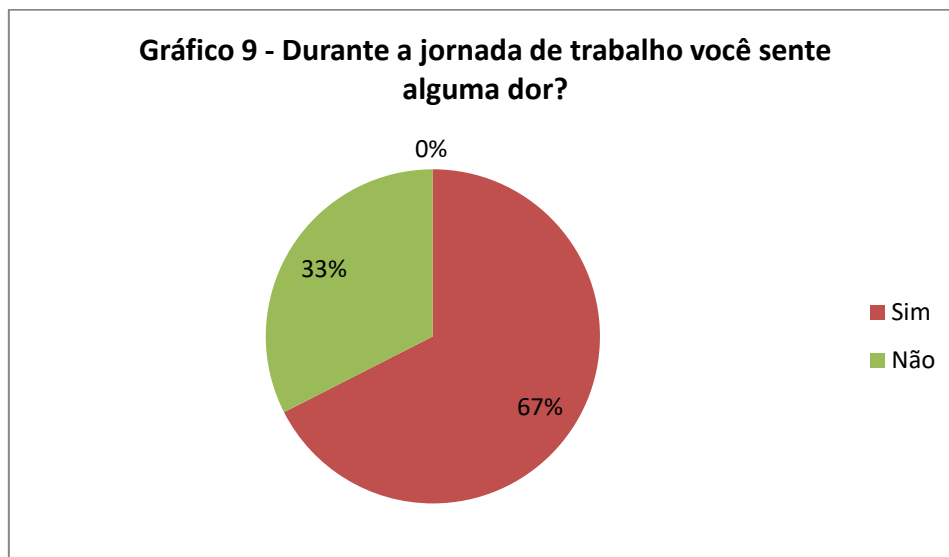
Source: Research data carried out between 28 and 29 September 2015

Through the data presented in Graph 8, it can be seen that the majority of people, 95%, stated that yes, the company offers programs aimed at the health of employees, being gymnastics at work (two sections per week, lasting 15 minutes) each and actions to encourage the practice of exercise (health circuit, held once a year) while only 5% answered no, which is acceptable in view of the high rate of participants who answered yes.

5.3 Pain / Physical discomfort

In computerized environments, the work performed while seated can cause physical discomfort if the proper posture for the performance of activities is not observed, the importance of basic ergonomic equipment that helps in performing tasks positively, offering more comfort and safety for employees.

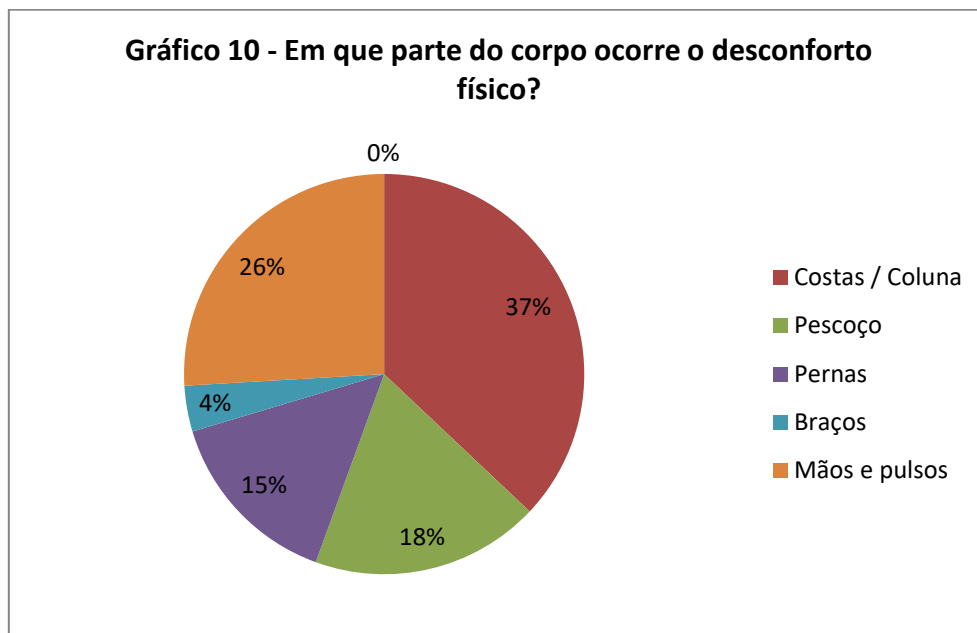
The following graphs 9 and 10 show the data obtained regarding the occurrence of pain / physical discomfort arising from work activities:



Source: Research data carried out between 28 and 29 September 2015

Comparing the data obtained in Graph 9 with Graph 8, it can be seen that the answers are divergent, since at first 95% of employees affirm that the company offers programs aimed at employee health, however as shown in Graph 9, 67 % of employees reported that they feel pain during the workday, which clearly shows that the ergonomic measures adopted are ineffective because the physical pain / discomfort affects most employees.

The study also reveals where this physical pain / discomfort manifests itself, based on the data shown in Graph 10:



Source: Research data carried out between 28 and 29 September 2015

The first symptom analyzed refers to the spine, where 37% of the survey participants stated that they feel pain in that region. These pains may have their origin due to the bad postures in which they get used or because they do not have appropriate chairs to carry out the activities.

Regarding the hands and wrists, 26% said they feel pain in this location, this is due to the repetitive movements that employees perform during their duties, it was observed that few employees have specific support for hands and wrists and many of those who do not use correctly.

Another symptom analyzed refers to the part of the neck, where 18% of employees said they felt pain in that location. These pains can be caused by the tasks they perform, since practically all the functions developed in the company require the intense use of computers many times without the proper observation of the posture adopted during the workday.

Regarding the lower limbs, 15% responded that they feel localized pain in the legs, this type of discomfort occurs due to the fact that they spend most of the time developing jobs that require posture in poorly-fitting seats, as well as the lack of adequate equipment. (footrest).

Regarding the upper limbs, 4% reported feeling pain in the arms, this concerns the lack of exercises to relax the muscles since the gymnastics is only performed twice a week with a duration of 15 minutes each section, which is equivalent to 30 weekly minutes of physical exercise, for 44 weekly hours of work.

It appears that there is a diversity of changes (pain) suffered by employees of the company surveyed, this data corresponds to the reality of 67% of employees who claim to feel some type of pain / discomfort during their workday regardless of the function.

The following is a table, in which some suggestions from employees were presented regarding what can be implemented in the workplace so that they develop their activities in a healthier and safer way.

Table 1: Suggestions made by employees

SUGGESTIONS	
1	Footrest
2	Support for hands and wrists
3	More comfortable chairs
4	Various physical activities

Source: Research data carried out between 28 and 29 September 2015

It is noted that some ergonomic measures still need to be implemented in the company in order to achieve an entirely adequate physical environment and provide employees with better working conditions. With regard to support for the feet, hands and wrists, these basic instruments can ease the contractions felt by employees in the upper and lower limbs.

Another important aspect is the monitoring of ergonomic projects that are already being developed in the organization, considering that, as shown in Graph 10, the ineffectiveness is evident through the affirmation of 67% of the employees who report feeling pain during working hours.

5 FINAL CONSIDERATIONS

Organizations that are aware of the benefits obtained with the adoption of ergonomic projects and measures that improve the quality of life at work, have achieved positive results.

Based on this approach, it was firstly found that with regard to the ergonomic devices offered to workers, there are some factors that need to be improved with regard to furniture and support equipment such as foot support, hand support, monitor screens adjustable and more comfortable chairs.

Another relevant factor highlighted was the lack of knowledge about the topic addressed by some employees. In this sense, it is necessary to apply an ergonomic project aimed at raising awareness, teaching employees how to enjoy the benefits of their workplace.

Analyzing the quality of life at work through ergonomic devices, it was noted that a very expressive percentage of employees reported the occurrence of some type of physical pain / discomfort, although programs aimed at their health are offered, this could be minimized with the expansion of the workplace gymnastics program and the adaptation of all work instruments to ergonomics, thus reducing risk situations that may compromise the health and safety of employees in the long term.

Therefore, the importance and need to offer programs directed to the well-being of employees was evidenced, being necessary that there is a monitoring of the results obtained, considering that the more satisfied the worker is, the greater his income will be.

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