40 - INTERFERENCE ANALYSIS OF LABORAL GYMNASTICS PRACTICE IN INDIVIDUALS WHO CARRY OSTEOMUSCULAR- LOMBAR DISTURBANCES

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INTRODUCTION

According to MENDES & LEITE (2004), the work itself is not considered damaging or dangerous, but its organizational influence in individuals' health, once it reaches the whole technical, social and economic process.

There is today a world trend to search for a better quality of living; this creates in enterprises the need to implement special programs for their employees, aiming to minimize the damaging effects of bad use of technologies, knowing that the improvement in human behavior will affect the company's reality and its productivity. Men are sentient beings, sensitive to reality, and the company's functioning depends on these human beings.

Adopting actions that improve satisfaction and well being for the employees, like the introduction of physical activities through planned gymnastics integrated to the work environment and during work hours, aiming to improve employees' health, has become essential; soon it will be as important to companies as its organization and competitivity, which is directly related to the group which develops it.

Laboral gymnastics is a quality of life program and leisure promotion that tries to neutralize the negative effect of work and inadequate use of technology on the human body, preventing the progression to occupational diseases that are the result of repetitive and monotonous work. It's a means to give value to and motivate the practice of physical activities as a way to promote health and improve professional performance (MENDES & LEITE, 2004).

However, the implementation of a laboral gymnastic program doesn't solve all the problems, since it isn't the solution to all the occupational diseases. However, the preventative approach must be spread among the workers; this will facilitate the maintenance of health. Through awareness we will succeed in changing habits.

Capitalism dynamics demand an increase in production, which generates more pressure on the worker due to high levels of demands regarding goals, achievements and work rhythm. This creates anxiety, suffering and tiredness, leading to mental and physical depletion. Thus, people are more susceptible to accidents, to developing or worsening diseases like osteomuscular disturbances.

Lombalgies, according to MENDES & LEITE (2004), are the most common cause of work disturbance, in a temporary or permanent way. The factors responsible for their start are age, posture, level of physical activities, body composition and psychosocial aspects.

The incorrect use of the body creates an unbalance and precocious osteomuscular degeneration. Since people spend most part of their lives at work, it becomes necessary to develop actions to reduce the bad effects of performing work activities inadequately and the stress of modern life. Laboral gymnastics is a way to prevent diseases related to work and improve employees' quality of life.

OBJECTIVE

The objective of this study was to investigate the levels of improvement of osteomuscular disturbances, especially lower back pain, after the implementation of a laboral gymnastics program .

SAMPLE USED

The sample was 52 employees (x=52) , males, selected from an engineering company in Timóteo - MG, aged from 19 to 55. The criteria to select the sample for this study were that all subjects were permanent employees and had worked for the company for at least 6 months, and didn't carry renal problems or disk hernias and also wouldn't be taking a vacation soon. All subjects were volunteers. Twenty-eight employees said they practice physical activities outside work and twenty-four are sedentary.

Procedures

In the first meeting was a lecture to emphasize the importance of an intervention program or laboral gymnastics. The program's goal and objectives and benefits were explained and the participants were asked to fill in the questionnaire nº01 which was answered before the program implementation. All questions were explained by the researcher before filling in the questionnaire. This was necessary due to the low education level of the participants. They were asked to, in case of any pain, to show the exact location.

The program lasted six months with a frequency of 3 sessions per week always at the beginning of the shift (7:15 am) .Each session had a duration of 15 minutes always supervised by the researcher. All stretching exercises were done in one series of 15 seconds. The stretching exercises were of global reach but with emphasis on the lower back musculature (area with more incidence of pain detected by questionnaire N1) and isquio-tibiais, aiming to reduce possible shortening and to stretch the musculature most required for work. The sequence of stretching exercises was the same during the study period.

After this period the participants were asked to fill in questionnaire nº 02 to be compared and analyzed. All questions were explained by the researcher before filling in the questionnaire. This was necessary due to the low education level of the participants. The questionnaires were filled by the participants without the researcher's interference.

There were no job rotations during the study period.

Instruments

An adapted LIMA (2003) questionnaire was used to evaluate the employees' pain index.

STATISTICAL TREATMENT

A descriptive analysis was done to characterize the sample. The results of the two adapted LIMA (2003) questionnaires, were presented based on percentual values. The percentual calculation was done by the EXCEL program.

RESULTS

As table I shows, the studied group was composed of 52 employees aged from 32,5 0,57 , having worked from 32 2,04 months, which shows a lot of experience in doing their daily activities and a long time with the company.

	Age (years)	Time at the job (months)
Average	32,5	32
DP	0,57	2,04

Table I - Sample characteristic

Table II presents the results of the first questionnaire, showing whether they feel pain or not and the major area of incidence.

	Feels pain		Area
	Yes	No	Column
Average	58%	42%	

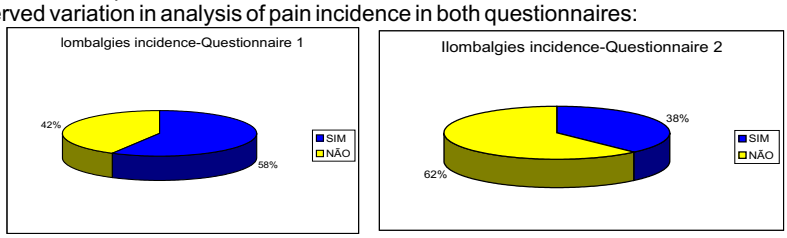
Tabela II - Results of 1st questionnaire

Table III presents results of the 2nd questionnaire showing if they feel pain and where.

	Feels pain		Area
	Yes	No	Column
Average	38%	62%	

Tabela III - Results of 2nd questionnaire

Figure I - Observed variation in analysis of pain incidence in both questionnaires:



DISCUSSION

The implementation of preventive measures is incontestable and the best action to be taken by companies. There is a need to improve worker's education, with behavior orientation, recommendation and communication form the health professional's experience (MARTINS, 2001).

Osteomuscular diseases originate from the bad use of the body generating an unbalance and precocious degeneration. The factors that accelerate this weariness are physical inactivity, disk overload, and daily body posture, like sleeping, and sitting and carrying objects in an inadequate way. At work, repetitive movements, static posture and the handling of heavy loads worsen the posture problems and make them the most frequent cause of traumas in the workers. The most common symptoms are: pain, fatigue, low energy, numbness, constant self massage, among others (MENDES & LEITE, 2004).

To MACHADO LIMA (2004), are work related problems, mechanical problems ,muscle lesions, tendons, fascias, nerves and/or articular bags causes by biometrically incorrect use of superior limbs, that result in pain, fatigue, reduction of work performance, temporary incapacity and in some cases, can evolve into chronic painful syndrome , which can limit

Lombalgies present prevalence in 80% of the general population in some phase of their lives. The most frequent causes are muscular contractions and disk diseases. They are the main reason for work capacity reduction, in a temporary and permanent way (MENDES & LEITE, 2004).

The best way to treat lombalgies is with preventative actions, which include adequate information for the employees, ergonomic behavior, activity rotation and practice of laboral gymnastics, which will be the starting point for employees to create healthier habits, preparing the musculature for work, increasing its aerobic capacity and reducing stress.

According to ZILLI (2002), there is a beneficial influence for the employees when their companies adopt physical activities, since the majority of the exercises executed during the class have the goal of reducing the impact of muscular stress that falls on the employee during a day of work.

According to this, laboral gymnastic effects were studied to reduce lower back pain, which was the area with the most incidences among the subjects. It was possible to notice a 20% reduction in pain, which can indicate the positive effects of the intervention program, its practice conducive to behavior change, meaning, it will motivate employees to adopt a more active and healthier life style, minimizing the impact of this disease.

CONCLUSION

Laboral gymnastics, which were made up of a sequence of specific stretching exercises for employees, was an effective tool to improve the quality of life in the company, and its effects were confirmed to reduce the incidence of lombalgies among the employees.

Thus the laboral gymnastics contribute to improving the employees' physical, mental and social condition and also to increasing their level of awareness regarding the necessity of regular practice of physical activities as a means of improving their health and well being.

By this study it is possible to affirm that all investment by the company was worth it , since a reduction in the incidence of pain was reported, improving employee's satisfaction, which directly impacted their professional performance and productivity, improving the link between work and leisure .

Laboral gymnastics comes as a way to humanize the organization, promoting employee - company integration and contribute significantly to promoting health and quality of life because physical exercises applied correctly are considered by themselves the best non medicinal health promoters (LIMA,2003).

Health maintenance is based on the lifestyle chosen by each individual, represented by attitudes, values and daily opportunities (MENDES & LEITE, 2004).

LIMA (2004) says that employees' quality of life should be taken in consideration at the same level as production, in other words, both are the responsibility of everyone in the organization and must be valued by all.

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INTERFERENCE ANALYSIS OF LABORAL GYMNASTICS PRACTICE IN INDIVIDUALS WHO CARRY OSTEOMUSCULAR- LOMBAR DISTURBANCES

ABSTRACT

Work related diseases are becoming more worrying to companies' managers, since they provoke temporary leaves causing losses to both companies and employees. Thus research is being done to minimize them. One of the possible solutions is to invest in programs that promote employees' health and quality of life. Laboral gymnastics is one example, which is capable of tuning and fortifying muscular structures required for work and contributing to improving interpersonal relations reducing the incidence of osteomuscular diseases.

This study aims to evaluate the level of improvement in the incidence of osteomuscular diseases, especially lombalgies after the implementation of a laboral gymnastic program.

A sample of 52 male employees was selected from an engineering company. The data were measured from two questionnaires filled in by the subjects before and after the 6 month program. The values found were the average age of 32,5 0,57 and the average work period within the company was 32 2,04 months and a reduction of 20% in the incidence of lombalgies.

The conclusion is that laboral gymnastics can be an effective means of preventing column related problems and rehabilitating individuals carrying lombalgies. Also it improves employees' quality of life since it is a way to neutralize the negative effects of work and the inadequate use of technologies on the body. KEYWORDS: lombalgies, osteomuscular diseases, laboral gymnastic

ANALYSE DE L'INTERFÉRENCE DE LA PRATIQUE DE LA GYMNASTIQUE DU TRAVAIL CHEZ DES INDIVIDUS AYANT DES TROUBLES OSTÉOMUSCULAIRES - LOMBALGIE

RESUMÉ

Les maladies occupationnelles préoccupent de plus en plus les dirigeants d'entreprises, puisqu'elles normalement évoluent vers le congé temporaire, ce qui gère des troubles et des pertes aussi bien pour l'entreprise que pour l'employé. On cherche alors une forme efficace de les minimiser. L'une des solutions trouvées est l'investissement dans des programmes qui contribuent à la promotion de la santé et de la qualité de vie des employés. Parmi ceux-ci, on peut souligner la gymnastique du travail, qui est capable de tonifier et allonger les structures musculaires engagées dans le travail, en plus de contribuer au développement de relations interpersonnelles, reduisant pour autant les taux de maladies ostéomusculaires. Les objectifs de cette étude ont été d'évaluer les taux d'amélioration des épisodes de troubles ostéomusculaires, specialement les lombalgies, après l'implantation du programme de gymnastique du travail. L'échantillon (n=52) employés du genre masculin a été sélectionnée dans une enterprise d'ingénierie. La mensuration des données a été faite à travers des questionnaires appliqués avant l'implantation du programme et 06 mois après son implantation. Les valeurs trouvées ont été un âge moyen de 32,5 ± 0,57 ans, un temps de service dans l'entreprise de 32 ± 2,04 mois et une réduction de 20% dans l'incidence de lombalgie. On conclue que la gymnastique du travail peut constituer un moyen efficace pour la prévention et réhabilitation des individus ayant des événements aigus d'algies relationnés au travail, en ce qui concerne la colonne vertébrale, ameliorant la qualité de vie des employés, puisqu'elle actue comme une forme de neutraliser les effets négatifs du travail et de l'utilisation inadéquate de la technologie sur le corps humain. MOTS CLEFS: lombalgie, maladie ostéomusculaire, gymnastique du travail

ANÁLISIS DE LA INTERFERENCIA DE LA PRÁCTICA DE LA GIMNASIA LABORAL EN INDIVIDUOS PORTADORES DE DISTURBIOS OSTEOMUSCULARES - LOMALGÍA

RESUMEN

Las enfermedades ocupacionales preocupan cada día más a los dirigentes de empresas, pues generalmente evolucionan para los alejamientos temporales, generando transtornos y prejuicios tanto para las empresas cuanto para el empleado. Por ello, la búsqueda de una forma eficaz de la minimizar vien siendo estudiada. Una de las soluciones encontradas es la de inverter en programas que contribuyen a la promoción del salud y de la calidad de vida de los empleados. Entre ellos, podemos subrayar la gimnasia laboral, que es capaz de tonificar y alargar las estructuras musculares implicadas en el trabajo, además de contribuir para el desarrollo de relaciones interpersonales, disminuyendo así los índices de enfermedades osteomusculares. El objectivo de este estudio fue avaliar los índices de mejora de los episodios de disturbios osteomusculares, especialmente las lomalgías, después de la implantación del programa de gimnasia laboral. La muestra (n=52) empleados de género masculino fue seleccionada en una empresa de ingeniería. La mensuración de los datos fue hecha a través de cuestionarios aplicados antes de la implantación del programa y 06 meses después de su implantación. Los valores encontrados fueran una edad mediana de 32,5 ± 0,57 años, tiempo de servicio en la empresa de 32 ± 2,04 meses y una reducción del 20% en la incidencia de lomalgías. Se puede concluir que la gimnasia laboral puede constituir un medio eficaz para prevenir y rehabilitar los individuos portadores de eventos agudos de algías en lo que respeta la columna vertebral, relacionados al trabajo, mejorando la calidad de vida de los empleados, pues actúa como una forma de neutralizar los efectos negativos del trabajo y de la utilización inadecuada de la tecnología sobre el cuerpo humano. PALAVRAS CLAVES: lomalgía, enfermedad osteomuscular, gimnasia laboral

ANÁLISE DA INTERFERÊNCIA DA PRÁTICA DA GINÁSTICA LABORAL EM INDIVÍDUOS PORTADORES DE DISTÚRBIOS OSTEOMUSCULARES - LOMBALGIA

RESUMO

As doenças ocupacionais estão a cada dia preocupando mais os dirigentes das empresas, pois geralmente evoluem para afastamentos temporários gerando transtornos e prejuízos tanto para a empresa quanto para o funcionário. Destarte, a busca de uma forma eficaz de minimiza-las vem sendo estudada. Uma das soluções encontradas é investir em programas que contribuam para a promoção da saúde e da qualidade de vida dos funcionários. Dentre eles, podemos destacar a ginástica laboral, que é capaz de tonificar e alongar as estruturas musculares envolvidas no trabalho além de contribuir para o desenvolvimento de relações interpessoais diminuindo assim os índices de doenças osteomusculares. Os objetivos deste estudo foram avaliar os índices de melhora dos episódios dos distúrbios osteomusculares, especificamente as lombalgias, após a implantação do programa de ginástica laboral. A amostra (n=52) funcionários do gênero masculino foi selecionada em uma empresa de engenharia. A mensuração dos dados foi feita através de questionários aplicados antes da implantação do programa e após 06 meses de sua implantação. Os valores encontrados foram média de idade 32,5 ± 0,57 anos, tempo de serviço na empresa de 32 ± 2,04 meses, e uma diminuição de 20 % na incidência de lombalgia. Conclui-se que a ginástica laboral pode constituir um meio eficaz para é prevenir e reabilitar os indivíduos portadores de eventos agudos de algias no que concerne a coluna vertebral relacionados ao trabalho, melhorando a qualidade de vida dos funcionários, já que atua como uma forma de neutralizar os efeitos negativos do trabalho e da utilização inadequada da tecnologia sobre o corpo humano. PALAVRA CHAVE: lombalgia, doença osteomuscular, ginástica laboral.