128 - FEEL PAIN REDUCTION OF BODY THROUGH PHYSICAL EXERCISE IN MAKING EMPLOYEES OF CLOTHING IN JOINVILLE / SC.

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INTRODUCTION

The stitching is a work done in the sitting position, which causes physiological changes that occur in the musculoskeletal system, causing overload in certain regions. As quoted by Chan & Wong (1999, apud PRADO, 2006, p. 14) "operation seam complex consists of repetitive actions that are necessary in sewing operations, there is a need for coordination between the trunk and upper limbs and lower for the operations to take effect. " The repetitive actions over time may result in the incidence of localized pain or radiated to other regions.

The pain or injuries caused by repetitive movements work has been a major cause of absenteeism in companies. This is because the employees are subjected to a large load of repetitions of the same movement, in a short period of time. The lesions are known as Repetitive Strain Injury - RSI or work-related musculoskeletal disorders - WMSD, RSI and WMSD usually settle slowly and are also healed slowly, these pathologies can affect muscles, tendons and nerves (LECH, 1998).

Excess load on the job can normally be found in regions with fewer resources to the practice and concept of occupational health are not known or are ignored (RIO 2001). This excess charge may be materials characterized by large or heavy, which makes handling the material, increasing the force exerted by the worker.

According to Rio (2001, p. 81), "activate mechanisms the body, making you tense, more energized than in its equilibrium state, disrupting homeostasis, increasing its ability to produce energy to consume." Thus the body is on alert, keeping his body tense and contracted, or stressed and that the excess cause the pain sensation.

To compensate and alleviate this pain can apply countervailing force exercises and stretches, designed to strengthen and decrease muscle tension in this area compromised, causing the reduction of these tender points. Therefore it is necessary to implement these strength exercises and stretching, reducing not only the local pain, but also increasing the range of motion and especially acquiring knowledge about maintaining musculoskeletal health both at work and in your day-to-day .

Therefore the aim of this study was to analyze the influence of a physical exercise program in reducing pain sensation employees of a body in making clothes aged from 29 to 62 in Joinville / SC, besides verifying reduced sensation of bodily pain, through strengthening and stretching exercises, analyze the effectiveness of exercise in reducing pain sensation; characterize the sample according to marital status and professional position and correlate data according to the statistical treatment.

METHODS

The sample consisted of 17 females aged between 19 and 62 years and were divided into groups between job and marital status: seamstresses (n = 12), expert review (n = 5), married (n = 13) and divorced (n = 4), being composed of all employees of a company making clothes in Joinville-SC.

All project participants signed an informed consent and a consent form for the use of images and testimonials.

For the research was completed a form containing personal data and physical: body weight and height, and blood pressure. Next to this form was shown a picture of the human body in standing back and front, so that each individual noted the points referred pain in your body.

For measurement of pain was applied to Borg CR10 (Table-1) according to Borg (2000, p. 17th) "to CR10 is an intensity scale that can generally be used to estimate most types of intensities perceptive. Currently, this scale is commonly used to assess pain intensity, such as angina or musculoskeletal. "

Data collection was conducted in the cafeteria of the confection, which was named one individual at a time, not to have interference in the results and responses reported. We measured body weight and height, and blood pressure of each individual. After collecting these data the individual research pointed to a picture of the human body points where I felt the pain and discomfort then applied a subjective pain scale of Borg CR10.

The materials that were used for data collection were: pen, scales, stadiometer and sphygmomanometer.

After taking all the necessary step for the implementation of the research, the sample was instructed to attend classes consist of strength exercises that aimed to strengthen muscle, ligament and joint, and stretching exercises. Classes were held in the workplace, five times per week (Monday through Friday) with duration of 15 minutes per day, totaling twenty weeks of action.

Table 01 - Subjective Pain Scale – Borg

The Borg CR 10 Scale		
0	Nothing at all	“No P”
0.3		
0.5	Extremely weak	Just noticeable
1	Very weak	
1.5		
2	Weak	Light
2.5		
3	Moderate	
4		
5	Strong	Heavy
6		
7	Very Strong	
8		
9		
10	**Extremely strong**	**“Max P”**
11		
•	Absolute maximum	Highest possible

Source: Scale CR10 de Borg © Gunnar Borg, 1981, 1982, 1998, p. 55

For practical classes materials were made available with regard accessible workplace research as piping (fabric

material used in the finishing of the garment) and elastic these materials were used in the early implementation of the classes, because they have lower voltage causing the initiation of sample activities is made less intense. To increase tension and stress level were acquired surgical rubbers which provided higher voltage to the exercises, radio, flash drive and CDs containing various songs.

The research was underway soon after collection and analysis described above, compounds being conducted exercises in lesson plans developed according to the following order: heating, activity itself and returns to calm.

The exercises of the activities were:

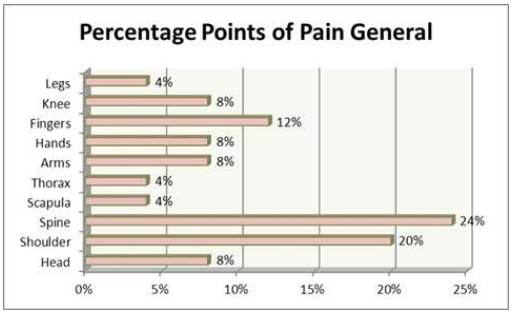
- Static Stretching obeying the runtime by a series of 15 second resistance for upper and lower limbs and trunk.
- Dynamic Exercises for large and small muscle groups, which followed the daily order alternating upper and lower limbs in another session. Being two sets of 15 repetitions for each movement.
- Stretches, emphasizing the return of resting conditions, was applied at the end of each exercise session. We used popular music requested by the group, which is not aimed relaxation due to possible decrease of productive performance.

The data pre-and post-test were tabulated and analyzed in Excel for Windows 2003, using descriptive statistics and t-test confidence p <0.05.

ANALYSIS OF RESULTS

This study evaluated 17 females with a mean age of 46.76 ± 10.07 years, divided into subgroups, married (n = 13) and divorced (n = 4), seamstresses (n = 12) and expert review (n = 5).

To obtain the data were performed pre-and post-test. In applying the pretest was researched major pain points of the sample being identified ten points of pain: legs, knees, fingers, hands, arms, thorax, scapula, spine, shoulders and head (Graph-1).



Graph 1 - Percentage Points of Pain General
Source: The search itself, 2010.

Comparing pre-and post-test was reached the following information: general data analysis of the sample was observed to increase from 1.07% in SBP, 3.97% increase in DBP, which shows that the pressure reduction blood depends on other factors besides the exercises and stretches worked as the project progresses. Now with regard to body weight there was a change of 0.16%, noting that the collection of data from pre-test was carried out during the summer and post in the middle of the winter season, a variable that may have influenced the research. But when comparing the results obtained with the Borg CR10 scale for level of pain reduction found subjectivity of 3.06 considered moderate to strong intensity to 1.56 (p <0.05) from very weak to weak. The reduction in the total sample is 49.04%. This research has proved effective implementation of a program of exercises and stretches to the investigated population, the variable reduction of bodily pain sensation. Table 2 provides a comparison of the data and their changes.

Dado esta pesquisa que mostrou ser eficaz a aplicação de um programa de exercícios físicos e alongamentos para a população investigada, na variável redução da sensação da dor corporal. A tabela 2 refere o comparativo dos dados, e suas respectivas alterações.

Table 2 - Comparative pre-and post-test average total sample

Variable	Pre	Post	Δ	p
PAS	126,47±21,20	127,82±22,12	1,07%	0,6547
PAD	74,12±11,76	77,06±13,00	3,97%	0,2944
Weight (Kg)	69,93±13,23	70,04±13,39	0,16%	0,7666
Borg Scale	3,06±1,78	1,56±1,12	**-49,04%**	0,0001

Δ - difference found between pre-and post-test, p = 0.05. SBP - systolic blood pressure, DBP - diastolic blood pressure, Scale CR-10 Borg for pain.

Source: The search itself, 2010.

As cited Nahas (2001, p. 60) "a good muscular condition provides greater ability to perform activities of daily living, with more efficiency and less fatigue," which makes the tasks of day-to-day become more easy, occurring at reducing pain and injury. For Geoffroy (2001) stretches are important in preventing injury and muscle discomfort, aid in the recovery and maintenance of muscles worked, increasing the level of knowledge of the individual.

Table 3 below shows the difference (Δ) found between the values of each variable, also containing the t test of significance (p <0.05) for each result. The variable with the largest reduction was the Borg Scale, with the highlight subgroups of seamstresses with a reduction of 53.23% and 44.87% of divorcees feeling of bodily pain.

Table 3 - Comparative pre-and post-test of the population selected by position and marital status.

Variable	Weight		PAS		PAD		Borg Scale	
	Δ	p	Δ	p	Δ	p	Δ	p
Seamstresses	0,17%	0,7643	0,19%	0,9407	6,59%	0,0892	-53,23%	0,0040
Expert review	0,12%	0,9318	3,57%	0,5870	-2,86%	0,7780	-42,86%	0,1523
Married	0,03%	0,9614	-0,42%	0,8661	2,53%	0,5793	-44,87%	0,0150
Divorced	1%	0,4624	6%	0,3910	9%	0,1941	-62%	0,0405

Δ - difference found between pre-and post-test, p = 0.05. SBP - systolic blood pressure, DBP - diastolic blood pressure, Scale CR-10 Borg for pain.

Source: The search itself, 2010.

CONCLUSION

Comprovando que um programa de exercícios físicos na redução da sensação de dor corporal é viável pela sua aplicabilidade e resultados esperados.

Through the data analyzed and found it was possible to observe the improvement in pain sensation in the investigated population, reaching 49.04% reduction ($p < 0.05$) the level of the pain rating scale used by the subjectivity of pain. Proving with a program of physical exercise in reducing pain sensation body is viable for their applicability and results.

In some variables observed no alterations or modifications even on rising values such as blood pressure and body weight. It can be concluded from the fact that they require a longer time to exercise, and it is necessary for the implementation of aerobic activities that can help reduce them.

The findings on the reduction of pain sensation body seem to have their modification due to the fact that most participants did not exercise regularly. This information has not been raised, but was reported by individuals researcher will informally.

For the continuity of the work and it becomes more interesting would require deeper levels and causes of pain points, diagnosing the cause of the appearance thereof, if by bad posture and bad work and resources or just by excessive movements repetitive overload and tension throughout the workday. It is this analysis of the level of humor of the participants, because we do not use a tool to measure this important variable in motivating results.

It was found that the total group decreased their pain sensations, and the divorced and seamstresses have benefited from the program, as reported better response to the activities developed for this purpose. And by the data obtained can answer our initial question in a positive way, because the program has enabled the group to reduce the pain sensation body through physical exercise.

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FEEL PAIN REDUCTION OF BODY THROUGH PHYSICAL EXERCISE IN MAKING EMPLOYEES OF CLOTHING IN JOINVILLE / SC.

ABSTRACT

The long-term repetitive actions in the work environment may increase the incidence of localized pain or referred to. Physical activity directed in a systematic and targeted seems to show a resource available to all workers, which in turn arming of information and attitude, can benefit from preventive treatment to avoid the conditions related to work activity. And through this problem that was conducted a survey of employees of a clothing industry in the city of Joinville / SC, whose research aimed at reducing the sensation of bodily pain through exercise. The survey sample consisted of 17 females with a mean age of 46.76 ± 10.07 years, divided by subgroups, married (n = 13) and divorced (n = 4), seamstresses (n = 12) and expert review (n = 5). Besides the analysis of anthropometrics profiles applied to CR-10 scale of Borg for the subjective interpretation of pain. We used descriptive analysis and significance level ($p < 0.05$) in Student's t test.Activities were developed as a localized low-intensity exercises designed to increase blood supply and venous return and increased the muscle tension using static stretches.It was found that the differences in analysis between the intensity of pain in the married (3.00 ± 1.95) and divorced (3.25 ± 1.26) was 44.87% ($p < 0.05$) for married and 62% ($p < 0.05$) for divorced women, being divorced for further reduction. Expert review (4.2 ± 2.28), seamstresses (2.58 ± 1.36) reduction of 42.86% and 53.23% for expert review ($p < 0.05$) for dressmakers, seamstresses and reported a greater reduction. The pain reduction in the total sample investigated was 49.04% between pre-and post-test ($p < 0.05$). It was found that the total group decreased sensations of pain, and divorced women and seamstresses the most benefited, reporting improved response to pain reduction through the activities.

KEY WORDS: stretching, localized exercise, sensation of pain.

FEEL RÉDUCTION DE LA DOULEUR DES CORPS PAR EXERCICE PHYSIQUE DANS LA FABRICATION EMPLOYÉS D'UNE TEP À JOINVILLE / SC.

RÉSUMÉ

Les actions répétitives à long terme dans l'environnement de travail peut augmenter l'incidence de la douleur localisée. L'activité physique dirigé systématiquement orientée et semble montrer une caractéristique à la portée du travailleur, à condition que l'information puisse bénéficier d'un traitement préventif, précautionneux, les conditions liées à l'activité professionnelle. Avant ce problème a été procédé à un sondage auprès des employés de l'industrie de couture à Joinville / SC, dont l'objectif était de réduire la sensation de douleur du corps par l'exercice physique. L'enquête était composé de 17 femmes âgées de 46,76 ± 10,07 années, divisées en sous-groupes, marié (n = 13) et divorcé (n = 4), des couturières (n = 12) et expert examen (n = 5). En plus de l'analyse anthropométrique des profils utilisés pour CR-10 échelle de Borg pour l'interprétation subjective de la douleur. Nous avons utilisé une analyse descriptive et niveau de signification ($p < 0,05$) test t de Student. Activités ont été développées comme de faible intensité localisée exercices et des étirements statiques. I a été constaté des différences d'analyse entre l'intensité de la douleur chez les femmes mariées (3,00 ± 1,95) et divorcé (3,25 ± 1,26) de 44,87% ($p < 0,05$) et 62% de femmes mariées ($p < 0,05$) pour les femmes divorcées, être divorcé d'une réduction supplémentaire. Avis d'experts (4,2 ± 2,28) et (2,58 ± couturières 1,36) réduction de 42,86% et de 53,23% pour les experts ($p < 0,05$) pour les couturiers, les couturières

et avec une plus grande réduction .Réduction de la douleur dans l'échantillon total était de 49,04% entre le pré-et post-test (p <0,05). Il a été constaté que le groupe a diminué sensations de douleur, et les personnes divorcées et couturières ont le plus bénéficié, meilleure réponse aux rapports réduction de la douleur à travers les activités.

MOTS-CLÉS: d'étirement, exercices localisée, sensation de douleur.

REDUCCIÓN DE SENTIR DOLOR DE CUERPO A TRAVÉS DE EJERCICIO FÍSICO EN LA TOMA EMPLEADOS DE ROPA EN JOINVILLE / SC.

RESUMEN

A largo plazo, las acciones repetitivas en el ambiente de trabajo puede aumentar la incidencia de dolor localizado. La actividad física dirigida sistemáticamente orientada y parece mostrar una característica dentro del alcance del trabajador, armado con esta información, usted se beneficia de un tratamiento preventivo prevenir afecciones relacionadas con la actividad laboral. Antes que este problema se realizó una encuesta entre los empleados de la industria de confección en Joinville / SC, cuyo objetivo era reducir la sensación de dolor del cuerpo a través del ejercicio físico. La encuesta constaba de 17 mujeres de 46,76 ± 10,07 años, divididos en subgrupos, casados (n = 13) y divorciadas (n = 4), costureras (n = 12) y de revisión de expertos (n = 5). Además del análisis antropométrico de perfiles aplicados a CR-10 escala de Borg para la interpretación subjetiva de dolor. Se utilizó el análisis descriptivo y el nivel de significación (p <0,05) prueba de la t de Student. Las actividades se desarrollaron como localizada de baja intensidad y ejercicios de estiramientos estáticos. Se ha encontrado en las diferencias entre el análisis de la intensidad del dolor en las mujeres casadas (3,00 ± 1,95) y divorciados (3,25 ± 1,26) de 44,87% (p <0,05) y se casó con un 62% (p <0,05) para mujeres divorciadas, estar divorciado de una mayor reducción. Examen de expertos (4,2 ± 2,28) y (2,58 ± costureras 1,36) de reducción de 42,86% y 53,23% para la revisión de expertos (p <0,05) para modistas, costureras y la reducción adicional de . La reducción del dolor en la muestra estudiada fue del 49,04% entre pre-y post-test (p <0,05). Se encontró que el grupo disminuyó sensaciones de dolor, y los divorciados y costureras que más se beneficiaron, reportando una mejor respuesta a la reducción del dolor a través de las actividades.

PALABRAS CLAVE: estiramiento, ejercicios localizados, sensación de dolor.

REDUÇÃO DA SENSAÇÃO DE DOR CORPORAL POR MEIO DE EXERCÍCIOS FÍSICOS EM FUNCIONÁRIAS DE UMA CONFECÇÃO DE ROUPAS NA CIDADE DE JOINVILLE/ SC.

RESUMO

As ações repetitivas em longo prazo no ambiente laboral podem aumentar a incidência de dores localizadas ou referidas. A atividade física direcionada de forma sistemática e orientada parece mostrar um recurso ao alcance de todo o trabalhador, que por sua vez se munindo de informações e atitude, pode se beneficiar de um tratamento preventivo para se precaver de afecções relacionadas à atividade laboral. E por meio deste problema que foi realizado uma pesquisa com funcionárias de uma confecção de roupas na cidade de Joinville/SC, cujo objetivo da pesquisa foi à redução da sensação de dor corporal por meio de exercícios físicos. A pesquisa foi composta por amostra de 17 indivíduos do sexo feminino com idade média de 46,76±10,07 anos, divididas por subgrupos, casadas (n=13) e divorciadas (n=4), costureiras (n=12) e revisoras (n=5). Além das análises dos perfis antropométricos aplicou-se a escala CR-10 de Borg para interpretação subjetiva da dor. Utilizou-se análise descritiva e nível de significância (p<0,05) no test t de Student. Foram desenvolvidas atividades como exercícios localizados de baixa intensidade direcionados ao aumento da irrigação sanguínea e retorno venoso além de diminuir a tensão muscular utilizando alongamentos estáticos. Verificou-se em análise que a diferenças entre a intensidade da dor nas casadas (3,00 ±1,95) e divorciadas (3,25±1,26) foi de 44,87% (p<0,05) para casadas e 62% (p<0,05) para as divorciadas, sendo maior redução para divorciadas. Revisoras (4,2±2,28) e costureiras (2,58±1,36) redução de 42,86% para revisoras e 53,23% (p<0,05) para costureiras, sendo as costureiras relatadas maior redução. A redução da dor na amostra total investigada foi de 49,04% entre pré e pós-teste (p<0,05). Constatou-se que o grupo total diminuiu as sensações de dor, sendo as divorciadas e as costureiras as mais beneficiadas, relatando melhor resposta a diminuição da dor por meio das atividades.

PALAVRAS-CHAVE: alongamento, exercícios localizados, sensação de dor.