



RESEARCH ARTICLE

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LABOR GYMNASTICS: SPENDING OR INVESTING?

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ABSTRACT

Work can have a negative and direct impact on workers' health, in many different ways, especially in the posture and execution of repetitive movements. Thus, the purpose of this opinion article is to describe the benefits of an intervention within the workplace, the workplace gymnastics.

Key Words:

Labor gymnastics, Work, Health.

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INTRODUCTION

The practical implementation of Labor Gymnastics began in 1925, in Poland, where workers performed rest exercises according to their occupational area. This rest gymnastics (GP) was implemented in other countries such as the Netherlands and Russia, where it aimed at different exercises for each type of work tool (LIMA, 2004). In 1928 in Japan the Preparatory Gymnastics was performed in schools and companies with the purpose of reducing workers stress and contributing to the quality of life (RIMOLI, 2006). Faced with daily practice, they noticed an improvement in economic production, since workers were already easier at the time of execution, as well as improved motor coordination and reduced muscle fatigue (LIMA, 2004). In Brazil in 1962, was first introduced a Rhythmic Gymnastics by "Radio Taissô" during the working hours of the workers. Issues related to the importance of reducing occupational illnesses and higher corporate earnings were reported (LIMA, 2004). The Labor Gymnastics was established in 1969 in Rio de Janeiro, by the shipbuilding industry executed by the Japanese with the purpose of postural

reeducation and improvement in the cardiorespiratory pattern (DEUTSCH, 2012). During this period the company directors set up groups of 30 workers, where they established exercises to strengthen the spinal muscles, postural and respiratory correction. In these preparatory gymnastics, the employees were required to perform the exercises for 8 minutes before work (MENDES; LEITE, 2004). Fortunately, the self-perception of entrepreneurs and employees was satisfactory, as the practice contributed to improved quality of life, higher production and consequently more financial profits (RIMOLI, 2006). Labor Gymnastics can be understood as a modality that applies exercises specifically to workers, with the main objective of relieving injuries caused by repetitive movements and musculoskeletal disorders caused by work. These employees are directed to the practice of this gymnastics through stretching, relaxation and musculoskeletal strengthening and flexibility (OLIVEIRA, 2006). These exercises should be well planned, structured, and specific to the professional's performance in order to improve attention, self-esteem, social interaction both inside or outside the company, overall body stimulation thus favoring an improvement in quality of life (LIMA, 2004). This activity

must be performed with great creativity, making employees even more interested in relaxation, because the accumulation of working hours results in musculoskeletal pain, higher stress levels, thus impairing the health of the worker (MENDES; LEITE, 2004).

When the Labor Gymnastics is applied, it has the following classifications:

- a) **Preparatory Labor Gymnastics (LPG):** They are performed well before any job function as soon as the employee arrives at the company. These activities serve to warm up the muscles and improve joint movements that should be used in your work unit. It usually has a minimum duration of 5 minutes reaching a maximum of 15 minutes (LOPES; NOGUEIRA; MARTINEZ, 2008).
- b) **Compensatory Labor Gymnastics (GLC):** These are performed during office hours after three hours of work, with the purpose of compensating the muscles that were already worked during that time (LOPES; NOGUEIRA; MARTINEZ, 2008).
- c) **Relaxing Labor Gymnastics (GLR):** These are procedures performed at the end of the work in order to promote muscle relaxation in the places that were affected during the work period, through stretching and massage (RIMOLI, 2006).

Effects of Labor Gymnastics: Considering the significant increase in daily hours worked with production charges, there is a growing demand for workers with both physical and mental instabilities, which contributes to the development of occupational stress. Based on an experience report of an extension project that involved 18 employees, divided into two groups, 5 male and 13 female volunteers, aged 23 to 58 years and undergoing a 4-month labor gymnastics program applied 3 times a week for 20 minutes a day. It was noted that during the classes there was a new view of Labor Gymnastics by the study volunteers, and a significant improvement in various points of the study such as social interaction and physical aspects (MEDEIROS; TOMAZ; CARVALHO; SANTOS; ALMEIDA, 2019). Corroborating the results, Lourenço *et al.* (2019) counted on the participation of 54 workers from a higher education institution that already perform labor gymnastics through an extension project, it was observed that the collaborators reported pain reduction by 78% (n = 42) and increased the willingness to work. the work by about 74% (n = 40). Studies that investigated the effect of labor gymnastics in industries bring positive results of this intervention. Cardoso and collaborators (2019) carried out the research at a textile company in Monte Azul-MG, where there is already a compensatory and relaxation Workplace Gymnastics program. Forty employees from 20 to 63 years old were selected for the study, 37 female and 3 male. The implemented gymnastics program contributed to the improvement in the physical part, reducing the pain and avoiding injuries, besides the psychological, self-esteem, relationship and cooperation among the employees (CARDOSO *et al.*, 2019).

Souza *et al.* (2018) had a more robust design and aimed to analyze what were the effects of labor gymnastics (GL) on employees of a steel mill. During this study, 31 employees participated and were divided into two distinct groups: experimental (n = 16) and control (n = 15). Both groups underwent an assessment before and after the sessions using

the Nordic Musculoskeletal Questionnaire. Subsequently, the experimental group (EG) held 16 sessions of LG, being practiced twice a week and lasting an average of 15 minutes. In the EG they noted that the participants had a decrease in pain or tingling in the upper region and in the CG reported an increase in complaints of musculoskeletal pain in the lower back and wrists / hands. During the practice of housework or leisure GE reported that pain was reduced in the lower region and CG mentioned that there was a high incidence of pain in the same region. Given the sessions that were held in GL, they obtained excellent results in decreasing the pain of musculoskeletal pain in volunteers at work and in home or leisure environments. Diniz *et al.* (2008) investigated the main complaints of musculoskeletal pain and handgrip muscle strength in a food industry in the city of Recife. Participants were 55 workers divided into two opposite groups: test (n = 28), which were submitted to 45 sessions of labor gymnastics, and control (n = 27) without any intervention by these exercises. There was a 26.25% reduction in muscle pain in the test group, and the control did not obtain any differential. Interesting results presented by Laux *et al.* (2016), verified what implications of the practice of occupational gymnastics in reducing medical certificates in a company that deals with industrial waste in Chapecó/SC. The research consisted of (n = 31) individuals, 22 males and 9 females. The exercises were done twice a week for a period of 12 consecutive months. Results indicated a reduction in medical certificate requests, musculoskeletal and systemic pain.

In the educational field, Kolarik and other researchers (2015) analyzed a group of (n = 5) elementary school teachers in a Planaltina Municipal School of Goiás. Being applied a questionnaire for anamnesis, demographic social information to help identify participants and the Lipp test to assess stress level. These occupational gymnastics program was performed 3 times a week for 4 months. Based on the results presented, it was possible to observe that with the practice of labor gymnastics there was a reduction in the level of injuries resulting from the service, physical inactivity and improvement of the functional capacity of the worker. Interestingly, leaving a common branch of application of labor gymnastics Andrade *et al.* (2015), sought what were the effects of labor gymnastics (GL) in relation to the flexibility of employees of a hospital in the Rio Pardo Valley / RS. We evaluated (n = 42) females aged 22 to 58 years, from March 2014 to May 2015. We collected data from some sit / reach and rotator cuff tests. Being monitored at three different times: before the LG procedure, after the intervention and afterwards, three months. Among the benefits observed, we highlight the improvements in the flexibility between these three periods, even after 6 months of procedure. Corroborating these findings in the same field of work, Gondim *et al.* (2009), wrote a study that involved employees of a public hospital in Fortaleza and evaluated the performance of labor gymnastics in relation to quality of life. 22 employees participated in which they answered a questionnaire that addressed the practice of GL. Faced with these questions, employees noticed a positive and significant improvement in daily life and realized that the ergonomics of the workplace itself risks to worsening quality of life. Ferracini and Valente (2010) aimed to evaluate what are the musculoskeletal symptoms present in workers' health and what, the work gymnastics would result in. Fifteen employees of both sexes participated in the administrative sector of the Santa Casa de Misericórdia Hospital de São José do Rio Preto. Two questionnaires about the ergonomic

characteristics in the service and the personal identification form before and after GL were applied. Being held three weekly sessions lasting 10 minutes in a total of 24 consultations. Given the result, they identified that the most affected region were the upper limbs, where musculoskeletal pain represented 73.3%. After exercise, these pains decreased by 46.6% and 86.6% of employees reported improvement during work performance. We observed that occupational gymnastics can be seen by entrepreneurs as an investment, as well as contributing to the health of employees, leave them motivated and contributes to social interaction.

Final considerations

Based on the studies presented, it can be observed that the practice of labor gymnastics promotes several positive effects at work, regardless of the public, sector and field of work. In Brazil, occupational acquired diseases are the second major cause of distancing from the operational position in companies, being affected by the extremely high workload, repetitive movements, bad postures and by presenting musculoskeletal diseases acquired at work. Therefore, the literature is clear, and the evidence proves that occupational gymnastics is an investment and a positive intervention for both employer and employee.

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