

# INFLUENCE OF OCCUPATIONAL GYMNASTICS ON MUSCULOSKELETAL SYMPTOMS AND QUALITY OF LIFE IN WORKERS AT A FOAM COMPANY

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## Background and Aims

Workers are subject to high demands that can cause musculoskeletal symptoms and reduce their quality of life. Workplace Gymnastics (WG) emerges as a health promotion tool with benefits for physical, mental, economic, and social well-being. Aim: Evaluate the influence of workplace gymnastics on musculoskeletal symptoms and the quality of life of blue-collar and white-collar workers in a foam company, as well as quantify the pressure pain threshold.

## Methods

Pre-experimental study with a sample of 92 workers, including blue-collar (n=68) and white-collar (n=24). A WG program was implemented, (strengthening, stretching, and coordination for 10 minutes exercises). Initially (M0) and after 13 months (M1), the NMQ, the SF-36, and the Algometry test were applied. Was used descriptive and inferential statistics, with a significance level of 0.05. For data analyze used the SPSS version 29.0.

## Results

After 13 months of intervention, blue-collar (M0:33.8%; M1:20.6%) and white-collar (M0:37.5%; M1:12.5%) workers showed significant improvements in neck symptoms over the last 7 days ( $p=0.050$  and  $p=0.034$ ). Blue-collar workers showed significant improvements in wrist/hands (reduced pain,  $p=0.049$ ), hips/thighs (less activity limitation,  $p=0.021$  and pain,  $p=0.041$ ), knees (fewer symptoms in 7 days,  $p=0.033$ ), and ankles/feet (fewer symptoms in 12 months,  $p=0.029$  and 7 days,  $p=0.018$ ; less activity limitation,  $p=0.034$  and pain,  $p=0.017$ ). After the intervention, the pain pressure threshold showed positive and significant results ( $p<0.05$ ) for almost all muscles evaluated in both worker groups. Regarding quality of life, the both groups showed good levels in all dimensions with slight improvements, in blue-collars (M0: 64.0-87.2; M1: 63.9-90.4) in white-collars workers (M0: 54.2-88.5; M1: 59.1-90.4) only in the "emotional dimension" in white-collar workers showed to be significant ( $p=0.030$ ).

## Conclusion

After 13 months of the WG program, musculoskeletal symptoms decreased, pressure pain threshold increased, and perceived quality of life improved among both blue- and white-collar workers.

**Keywords:** Exercise, Nordic, Musculoskeletal, Questionnaire, algometry