

# Effect of supervised exercises on pain, disability and health related quality of life in textile workers

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**Relevance:** It is related to the congress themes: public health, prevention and social care. Therapeutic exercise programmes run by physiotherapists has shown to decrease musculoskeletal pain (MSP), to improve the functionality and the Health Related Quality of Life (HRQoL) in a women's group within the textile industry.

**Purpose:** Musculoskeletal diseases such as lower back pain and repetitive strain injuries have been reported to have a high prevalence among the clothing manufacturing workers. This may be attributed to repetitive work tasks, prolonged sedentary postures, heavy lifting, intensive-physical actions and long working hours.

The aim was to evaluate the effects of a supervised exercise therapy program on pain; lumbar and cervical disability and health related quality of life amongst clothing manufacturing employees.

**Methods/analysis:** The study was conducted at textile cooperative facility in Galicia (Spain). It was used quasi-experimental design, with measurements taken before and after 15 sessions. Thirteen female workers were included.

**Outcome measures:** visual analog scale (VAS), Roland-Morris (RM), Neck Disability Index (NDI) and SF-36. At the end of the program the perception of changes at musculoskeletal level and satisfaction were also obtained. Exercises were performed for 80 minutes, once weekly. They included breathing, stabilization, flexibility and neural mobilization, strengthening and relaxation exercise. Statistical analysis were carried out using Student's t-test for paired data and Wilcoxon's test. The study was approved by the Ethics Committee (CE 09/2014).

**Results:** In comparison with the baseline, a significant decrease was observed in VAS for upper back ( $P=0.043$ ), low back ( $P=0.049$ ) and hips ( $P=0.043$ ); in the NDI ( $P=0.005$ ) and in the RM ( $P=0.042$ ). All the SF-36 dimensions presented an improvement, but in Physical Functioning ( $P=0.013$ ), Physical Role ( $P=0.020$ ), General Health ( $P=0.003$ ), Vitality ( $P=0.005$ ), Social Functioning ( $P=0.017$ ) and Physical Component Summary ( $P=0.046$ ) this improvement was more significant. After the intervention, the majority (61.5%) referred as to have felt much better. With regard to the satisfaction with the program, 61.5% indicated to be very satisfied and 38.5% extremely satisfied.

**Discussion and conclusions:** The exercise therapy pro-program was beneficial to decrease intensity of pain and low back and cervical disability and to improve the perceived Health Related Quality of Life. The overall satisfaction with the intervention was very high. It is important to remark the limitation of the study such as a quite small sample and a not so experimental design. It would be recommended to confirm these results with randomized controlled trials.

**Impact and implications:** Textile workers should be taken more into account as they have a high prevalence of musculoskeletal pain and there are no preventing actions directed to them. These results show how physiotherapy can contribute to diminish the musculoskeletal pain and improve the workers life quality.

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