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Musculoskeletal disorders of the upper limbs: A scourge among nursing staff



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Aims To assess the prevalence of musculoskeletal disorders of the upper limb (MSD-UL) among healthcare staff, to identify socio-occupational factors risk. And their impact on the work capacity.
Methods Cross-sectional study, conducted with a representative sample stratified according to age, gender and service ensuring the nursing function in one of two university hospitals in central Tunisia. Data of the survey concerned socio-professional characteristics, the index of work capacity (WAI) and integrates Nordic questionnaire MSD. The survey was completed by twelve manoeuvres of SALTSA, the protocol of early clinical MSD-UL screening.

Results The sample included 300, but only 239 forms were useable. The average age was 42.64 years \pm 11.65 years, with a slight predominance of older workers over 45 years (53.9%) and the sex ratio was 1.06. Obesity involved more than 1/5 of the nurses (BMI > 30) and more than half (51.9%) did not practice any regular physical activity. Work capacity was considered "good" or "excellent" for 3/4 of caregivers. During the previous 12 months of investigation MSD of the shoulders were the most reported with a prevalence of 62.12% versus 43.34% MSD of the neck, 21.84% of the elbow and 43.68% of the hands. MSD of the neck and shoulder were statistically correlated to the female gender, age >45 years. The protocol SALTSA objectified painful movements of the shoulders in 62 nurses, epicondylitis and tendinitis of the wrist in 67.92% and carpal tunnel syndrome in 25 nurses. The average distance thumb-C7 as equal to 16.42 \pm 5.91 cm and its increase was correlated with professional seniority. Moreover, the presence of some MSD significantly alter the working capacity, particularly MSD neck ($P < 10^{-3}$), the right shoulder ($P = 0.03$), the left elbow ($P = 0, 03$) and the right wrist ($P = 0.01$).

Conclusion MSD-UL are pathologies, which can be associated with heavy individual handicap and serious consequences for society, imposing multidisciplinary preventive strategy and management.

Keywords Musculoskeletal disorders; Work ability; Risk factors; Nursing staff

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Evaluation of i-Préventive: Active prevention digital tool for musculoskeletal disorders among computer workers



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Objective To evaluate the effects of a software program that stimulates extra breaks with a personalized self-program exercises form, on pain and/or function, among computer workers who have upper-limb musculoskeletal disorders with visual discomfort [1].

Methods A cluster randomized controlled trial was performed. Each group was composed of symptomatic and asymptomatic employees. We conducted a prospective feasibility study developed in two different sites of Michelin firm. Cluster randomization was used for office locations. The study lasted 5 months. The main outcome was the overall recovery from complaints after one-month intervention, using "the Nordic style questionnaire" and eyestrain questionnaire [2].

Results 96 workers included in the intervention group, 79 in the control group. The most painful areas (VAS ≥ 2) are: neck (40%), upper back (18.8%), shoulders (15.7%). Concerning, the most painful anatomical area, the Nordic score significantly decreases after one month utilization in the intervention group ($P = 0,038$) versus control group ($P = 0.59$). After one-month utilization, in the intervention group, the painful area and visual discomfort symptoms number decrease ($P = 0.02$). After one month, the adhesion of the system is satisfactory (almost 60% of employees).

Discussion In the short-term, the active breaks use in the musculoskeletal disorders and eyestrain treatment is effective using the software program. It is a numerical simple tool to use, which allows each worker to interact on areas of their choice by offering personalized exercises easily achievable on workplace.

Keywords Musculoskeletal diseases; Eyestrain; Computer work; Muscle stretching exercises; Rest; Application software program

Disclosure of interest The authors have not supplied their declaration of conflict of interest.

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Effectiveness of an intervention program for management of shoulder disorders in industrial workers: A workplace study



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Introduction Shoulder work-related musculoskeletal disorders represent a major occupational health problem. The most common shoulder disorder described in the literature is the subacromial impingement syndrome. This pathomechanism is generally