

The Development of Musculoskeletal Disorders in Healthcare Workers May Not Only Be Gender-Specific, but Multifactorial

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Keywords: musculoskeletal disorder, gender, physical stress, upper limbs, chronic overload.

LETTER TO THE EDITOR

We read with interest the article by Hernandez-Duarte on a cross-sectional study using an online questionnaire on the risk factors for the development of musculoskeletal disorders (MSDs) in the upper limbs, involving 93 healthcare workers, and on possible intervention methods [Hernández-Duarte, W. A. *et al.*, 2024]. The cohort consisted of 84% women, 33% nurses, 57% people living in a relationship, 55% people performing the same or similar elbow movements every few seconds, 51% people performing strong, sudden wrist movements associated with uncomfortable postures, and 42% people performing tasks involving handling objects and tools weighing more than 2 kg [Hernández-Duarte, W. A. *et al.*, 2024]. Half of the participants reported extreme temperature fluctuations during working hours, 81% reported working overtime due to a high workload and 40% reported regular physical activity [Hernández-Duarte, W. A. *et al.*, 2024]. A significant association was found between gender and task-related factors such as the presence of repetitive or sudden movements, supporting the postulates of the division of labor [Hernández-Duarte, W. A. *et al.*, 2024]. It was concluded that physical preparation and adaptation of the workplace under professional guidance, training and breaks prevent the development of MSD [Hernández-Duarte, W. A. *et al.*, 2024]. The study is convincing, but some points should be discussed.

The first point is that the occurrence of musculoskeletal disorders depends not only on gender, but also on many other risk factors. These include the type of physical strain at work, the type of physical strain during leisure time, habits, hobbies, the use of tobacco, alcohol and illegal drugs, the ability to relax and recover from physical activity, the extent of leisure activities, the psychological corset, comorbidities,

concomitant medication and genetic background. For example, if a healthcare worker has to perform repetitive movements such as supination and pronation of the forearm and also plays tennis as a hobby, they may develop tennis elbow more easily than a healthcare worker who does not play tennis. A healthcare worker who uses a computer mouse by hand and also sits in front of a computer in their free time is more likely to develop hand-mouse syndrome than a colleague who rarely uses a computer at home. Someone who performs strong wrist movements in uncomfortable positions and regularly does push-ups as a hobby or for physical exercise is more likely to develop carpal tunnel syndrome than someone who does not have this hobby. As the development of musculoskeletal disorders due to workload also depends on how relaxed healthcare workers are during working hours, it is important to recognize that this is not always the case.

The second point is that 84% of the participants were female [Hernández-Duarte, W. A. *et al.*, 2024], so it is questionable whether gender differences in the development of MSDs can really be extracted.

The third issue is the use of an online questionnaire [Hernández-Duarte, W. A. *et al.*, 2024]. Online questionnaires have several disadvantages. It cannot be ensured that the addressee is also the person who completes the questionnaire. It is not possible to ensure that the answers given are correct and not the product of the respondent's imagination. It cannot be ensured that the addressee was mentally capable of understanding the questions correctly and answering them appropriately.

Overall, this interesting study has limitations that put the results and their interpretation into perspective. Taking these limitations into account could strengthen the conclusions and reinforce the

message of the study. The development of musculoskeletal disorders in healthcare workers may not be gender-specific but depends on numerous other factors.

REFERENCES

1. Hernández-Duarte, W. A. "Musculoskeletal disorders, associated factors, and literature review for intervention according to gender." *Revista Brasileira de Medicina do Trabalho*, 22.2 (2024): e20231117.

Source of support: Nil;

Conflict of interest: Nil.

Cite this article as:

Scorza, C.A., Scorza, F.A. and Finsterer, J. "The Development of Musculoskeletal Disorders in Healthcare Workers May Not Only Be Gender-Specific, but Multifactorial." *Sarcouncil Journal of Medical Series* 4.3 (2025): pp 7-8.