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Letter to the Editor

Musculoskeletal Disorders in Agricultural Workers must be Taken Seriously and Investigated using Appropriate Methods

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Letter to the Editor

We read with interest the article by Campana *et al*., which presents a cross-sectional study on the prevalence of musculoskeletal disorders (MSDs) and their association with selected sociodemographic and occupational factors among agricultural workers in rural communities in Loja, Ecuador, using the "Nordic Musculoskeletal Questionnaire" (NMQ) [1]. The study found that MSDs most frequently affected the lower back, knees, and neck; furthermore, an association was observed between being overweight and lower back pain, while only a borderline association was noted for neck pain [1]. The authors concluded that there is a high prevalence of MSDs among agricultural workers in rural Ecuador [1]. While the study is noteworthy, several aspects warrant further discussion.

A first point is that the NMQ has several limitations [2]: It lacks clinical-diagnostic precision, as it captures the presence and impact of pain, numbness, or discomfort but cannot provide a specific medical diagnosis. The NMQ is designed more for broad epidemiological screening than for clinical assessment, meaning that positive results require subsequent medical evaluation. The NMQ employs a simple binary scale (yes/no questions or questions regarding frequency/impact) and lacks more detailed scales, such as numerical rating scales, information on the exact duration of the complaints, or detailed qualitative characteristics. Since the NMQ asks about pain or discomfort experienced over the past 12 months, the data are susceptible to recall bias: Respondents might forget minor episodes or, conversely, disproportionately report particularly severe or significant episodes. Furthermore, there are no standardized modifications for the NMQ; researchers frequently adapt the instrument for specific target groups—for example, by adding body regions, altering timeframes, or adjusting the layout. This compromises comparability, as such non-standardized modifications hinder comparisons between different studies and make a reliable juxtaposition of data nearly impossible. Moreover, the NMQ employs a highly simplified "body map," which can obscure the precise localization of pain. Such simplified representations of the human body may also be less intuitive, or more difficult to interpret accurately, for certain population groups, such as individuals with obesity [3].

A second point is that the frequency and intensity of musculoskeletal complaints (MSCs) may also depend on the job satisfaction of individuals working in agriculture. Job satisfaction can be influenced by numerous factors. These include personality traits (internal disposition, low neuroticism - i.e., high emotional stability - high extraversion, conscientiousness, and agreeableness); social relationships (close ties to family, partners, or friends; a sense of belonging); the perception of one's work as meaningful (career path, performing significant tasks, pursuing personal goals); economic factors (such as whether an individual works on their own land or as an employee, whether crop yields provide a satisfactory standard of living, and secure housing conditions); as well as health and personal autonomy (self-determination) [4]. As long as these factors are not incorporated into the assessment, the findings and their interpretation remain questionable.

A third point is that the relationship between MSDs and exposure to pesticides and herbicides among those working in agriculture has not been investigated. Given that agricultural production, particularly industrial agriculture, involves the targeted use of chemicals that can poison or harm the people working with them, it would have been important to distinguish whether the individuals studied were employed in industrial agriculture and exposed to such toxic substances, or whether they worked on small-scale farms that did not use pesticides or herbicides.

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