



## The health-related quality of life of patients with musculoskeletal disorders after the COVID-19 pandemic

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Dear Editor,

We read the article with great interest by Hidetomi Terai et al. “The health-related quality of life of patients with musculoskeletal disorders after the COVID-19 pandemic” [1]. Based on the results of the research, the authors found that up to 35% of patients with musculoskeletal disorders reported deterioration of HRQOL after the COVID-19 pandemic, and pain and mobility rather than anxiety were the two leading factors of the HRQOL decrease. We really appreciate the interesting observation for their conclusion. However, after reading this article, we would like to highlight some important questions that it raises.

Initially, we have some doubts about the evaluation scale selected by the authors for health-related quality of life (HRQOL). As we know, there are some widely used scales could assess the HRQOL for patients with musculoskeletal disorders, such as the 3-level EQ-5D (EQ-5D-3L), the 5-level EQ-5D (EQ-5D-5L), and the SF-6D [2, 3]. The authors chose the EuroQoL-5 dimensions 5-level (EQ-5D) as the only evaluation means for all the patients with musculoskeletal disorders. However, there are some articles that showed that higher-severity individuals usually have significantly higher mean utilities from SF-6D, whereas lower-severity individuals from EQ-5D [4, 5]. Nikolaos Kontodimopoulos et al. found that in more severe patients, SF-6D

generated significantly higher utilities than EQ-5D-3L and EQ-5D-5L. Dr. Terai said in the article that all participants were patients who visited the orthopedic clinic, so we just wondering, among those participants, are there some have severe conditions? For them, maybe the use of SF-6D could be more accurate? Moreover, in some specific musculoskeletal condition, it is generally accepted that generic tools should be supplemented with disease-specific instruments [6]. Because generic tools may not always be able to detect subtle effects of a specific condition on HRQOL, a specific tool is highly valuable to assess the impact of musculoskeletal conditions on HRQOL [5]. Because the authors showed the participants have some different complaints contains spine, shoulder/hand, hip/knee joint or other, we speculated that among those participants, are there some specific musculoskeletal disorders? For them, plus with disease-specific scales, is that could be considered? In summary, those aspects motioned all above may affect the final statistical results of this study, especially the percentage of patients with musculoskeletal disorders reported deterioration of HRQOL after the COVID-19 pandemic. Therefore, in my opinion, these factors should be concerned.

Additionally, the authors assessed the two different time points (pre-outbreak and post-second wave of COVID-19) and found that the two major negative changes in patients with decreased HRQOL were in the mobility and pain subdomains, rather than in the anxiety subdomain, just opposite of what they expected. The authors explained that the participant characteristics differ from those of the general healthy population. We thought that maybe another possibility exists, because there was no survey of the post-first wave of COVID-19, and the percentage of anxiety of the reason of the HRQOL decrease may differ from the result. There was an international collaborative study that showed that insomnia, anxiety, and depression were very prevalent during the first wave of the COVID-19 pandemic, and this will apparently effect the quality of life [7]. So can we infer that because of the lack of the survey of the post-first wave

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of COVID-19, the effect of anxiety on the decrease on the HRQOL was attenuated?

Lastly, we addressed a couple of controversial aspects and hope that the readers may benefit from it. And we hope that this discussion can assist future researchers who may be interested in the reason on the decrease of the health-related quality of life of patients with musculoskeletal disorders after the COVID-19 pandemic.

**Author contribution** All authors contributed to the study's conception and design. Material preparation and background research were performed by Di Zhu. The first draft of the manuscript was written by Genying Zhu and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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## Declarations

**Ethics approval** Not applicable.

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**Consent for publication** The authors declare that they agree to publish.

**Competing interests** The authors declare no competing interests.

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