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Assessment of physical function: considerations in chronic pain populations

Letter To Editor:

We read with interest the study by Karayannis et al.⁴ inspired in a common clinical practice: to assume a strong relationship between pain interference and physical function. Using an elegant design, they observed that the moderate concurrent correlation between pain interference and physical function did not seem to extend to longitudinal changes. Therefore, they concluded that pain interference is not an appropriate surrogate or proxy of physical function in a large sample ($n = 389$) composed of a mixture of noncancer chronic pain populations.

We agree with Karayannis et al.⁴ about the psychometrical appropriateness of the physical function item bank of the National Institute of Health–Patient-Reported Outcome Measurement Information System in comparison with other patient-reported outcome measures. Different chronic pain conditions might impose a distinct burden on patients' physical function. However, the Patient-Reported Outcome Measurement Information System assesses generic aspects of physical function. In accordance with the Initiative on Methods, Measurements, and Pain Assessments in Clinical Trials and the Outcome Measures in Rheumatology initiative, physical function is better assessed by a combination of generic and disease-specific measures.⁵ Given that Karayannis et al.⁴ recruited a mixture sample of chronic pain populations, further research testing the prospective association of pain interference and physical function in specific chronic pain subpopulations using specific-condition physical function questionnaires is welcome. By doing so, a corroboration of pain interference as an inappropriate surrogate of self-reported physical function related to specific chronic pain conditions might be provided.

It must be also noted that physical function is measurable by either patient-reported outcomes,⁵ as Karayannis et al.⁴ did, or performance-based measures (eg, the 6 minutes walk test). Advantages and disadvantages of both approaches have been described elsewhere.⁵ In people with noncancer chronic pain, there is discordance between patient-reported and performance-based status.^{2,3,7} People who experience chronic pain tend to report more impaired physical function than they are indeed able to perform.^{1–3} A potential reason behind this finding is that patients' beliefs have an influence on perceived physical function.^{2,6} It seems that self-reports and performances of physical function provide unique yet related information on chronic pain populations. Therefore, the interesting findings obtained by Karayannis et al.⁴ suggesting a lack of prospective association between pain interference and self-reported physical function should not be extended to performed physical function without empirical corroboration.

In summary, Karayannis et al.⁴ designed an interesting longitudinal study including a large sample size of people with chronic pain conditions to test whether pain interference might be used as a surrogate measure of physical function. Their findings suggest that researchers and clinicians should assess both domains specifically because the prospective association between them is not significant. Based on the limitations of their study, Karayannis et al.⁴ indicated that replication of their findings is required. To do so, we believe that it is of interest to include a battery of physical function assessments including generic and specific-population patient-reported outcomes as well as performance-based measures in specific subpopulations of chronic pain (eg, chronic low back pain, fibromyalgia, rheumatoid arthritis). Nevertheless, we do recognize the inspiring and well-conducted study by Karayannis et al.,⁴ which may have implications for clinical practice and health care policies.

Conflict of interest statement

The author has no conflict of interest to declare.

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