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LETTER TO THE EDITOR

Comments on "Translation, cross-cultural adaptation, validation, and measurement properties of the Spanish version of the anterior cruciate ligament-return to sport after injury (ACL-RSI-Sp) Scale"

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I read the article with great interest by Barat et al. entitled "Translation, cross-cultural adaptation, validation, and measurement properties of the Spanish version of the anterior cruciate ligament-return to sport after injury (ACL-RSI-Sp) Scale" [5]. The purpose of the study was to evaluate the psychometric properties of the survey. While I believe the authors have made a considerable contribution to this work, there are some concerns that I would like to address. Besides, I would like to raise some questions about methodological issues.

First, the authors stated that 38 footballers re-tested the ACL-RSI-Sp again 3 weeks from the first test to analyze the reliability in terms of internal consistency. The method of test–retest reliability is not specified in the statistical analysis section; it is most likely intraclass correlation coefficient (ICC). If the time between the test and the retest is short, memory-related effects may occur, such as the individual remembering the answers to the questions. However, if this time is too long, you could sometimes be measuring the actual change of the case instead of reliability. Although the ICC score was measured as 0.9, considering the recovery period of anterior cruciate ligament (ACL) reconstruction and recommendation that interval time of two tests should have been between 1 and 2 weeks recommended in such studies, keeping the interval time short would be more efficient [6].

The authors stated that they used the translation procedures recommended by Beaton and colleagues for the Spanish translation and cultural adaptation of the scale. The authors emphasized that the survey was finalized after the back-translation phase. However, it was necessary to create the pre-final version with the review of the translation committee and then to review the cultural adaptation and understandability elements after the pre-test phase, and then to prepare the final version. Also, they conducted a pre-test on 12 patients to confirm the comprehensibility of the Spanish version. However, as can be seen from the reference, Beaton et al. suggest that this "pre-test" should be performed with at least 30–40 cases [2].

It is reported that KOOS does not have adequate measurement properties for its use in patients after ACL reconstruction. It is stated that some questions are confusing and a question can have answers in more than one variation [3, 4]. Likewise, using the SF-36 (Short Form-36) questionnaire with eight subscales, including role emotional and mental status, would be more effective.

It is known that ICC is a correlative analysis. Although the recommendation of 50 cases for comparative studies is known, test–retest reliability is observed with 38 (33.3% of all cases) cases [1]. At the very least, the power analysis for the sample size calculation should be stated in the methodology. Also, I want to ask the authors: which parameter (standard deviation etc.) did you use from these studies to determine the sample size?

Last but not least, it was stated that cultural adaptation was made, but the demographic information about the cultural level of the cases was not recorded or presented. Knowledge of the cultural level of cases is essential to describe this adaptation [2].

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References

1. Altman D (1991) Practical statistics for medical research. Chapman and Hall, London
2. Beaton DE, Bombardier C, Guillemin F, Ferraz MB (2000) Guidelines for the process of cross-cultural adaptation of self-report measures. Spine 25(24):3186–3191
3. Comins J, Brodersen J, Krogsgaard M, Beyer N (2008) Rasch analysis of the Knee injury and Osteoarthritis Outcome Score (KOOS): a statistical re-evaluation. Scand J Med Sci Sports 18(3):336–345
4. Faleide AGH, Inderhaug E, Vervaat W, Breivik K, Bogen BE, Mo IF, Trøan I, Strand T, Magnussen LH (2020) Anterior cruciate ligament—return to sport after injury scale: validation of the Norwegian language version. Knee Surg Sports Traumatol Arthrosc. https://doi.org/10.1007/s00167-020-05901-0
5. Sala-Barat E, Álvarez-Díaz P, Alentorn-Geli E, Webster KE, Cugat R, Tomás-Sabado J (2019) Translation, cross-cultural adaptation, validation, and measurement properties of the Spanish version of the anterior cruciate ligament-return to sport after injury (ACL-RSI-Sp) scale. Knee Surg Sports Traumatol Arthrosc 28(3):833–839
6. Terwee CB, Bot SDM, de Boer MR, van der Windt DAWM, Knol DL, Dekker J, Bouter LM, de Vet HCW (2007) Quality criteria were proposed for measurement properties of health status questionnaires. J Clin Epidemiol 60(1):34–42