

Letter to the Editor: Translation and Validation of the German New Knee Society Scoring System

Fatih Özden MSc

To the Editor,

I read the study by Kayaalp and colleagues [1] with great interest. While I believe the authors have made a considerable contribution with this work, there are some concerns that I would like to address.

The authors analyzed the construct validity of the new Knee Society Score (KSS) using the German

WOMAC and the German SF-36. The *Licensed User Manual of the Knee Society Knee Scoring System* [5] stated that the new KSS was generally consistent with other “knee-specific” scores. In this study, the German WOMAC does not meet all parameters evaluated by the new KSS, which now includes patient expectation and satisfaction parameters. The low correlation values between the patient expectations subdomain and the German WOMAC subdomain support this criticism.

Additionally, applying such long questionnaires burdens the patient [3]. Shortening the questionnaires for patients may reduce the burden, but a validity study with a single knee-specific questionnaire may not provide all the information that patients wish to share or that providers need to make good surgical decisions.

Another concern is that although the *Licensed User Manual of the Knee Society Scoring System* [5] states that there is no total score of the survey, the authors calculated the total score and performed a statistical analysis. This situation should be corrected immediately, as this may lead to misleading results and the development of chain errors.

The authors performed the study with 100 patients, and they also included 39 patients for test-re-test reliability. That number of patients is

low for the validity and reliability of this questionnaire, considering the recommendation that the sample size should be 10 times the number of items [4].

Since only the patient expectations subdomain of the questionnaire is different between pre-operative and post-operative versions of the new KSS, performing the analysis of the other subdomains with all patients could make the statistical analysis more valuable like in the Turkish version of the new KSS. [2].

Finally, I would like to mention a minor error. In Table 3, the correlation coefficient (symptoms subdomain of the new KSS and mental health subdomain of the German SF-36), which we normally expect to be negative, was positive, whereas the correlation coefficient (between symptoms subdomain of the new KSS and vitality subdomain of German SF-36), which we expected to be positive, was negative. This may adversely affect the validity of the study.

References

1. Kayaalp ME, Keller T, Fitz W, Scuderi GR, Becker R. Translation and Validation of the German New Knee Society Scoring System. *Clin Orthop Relat Res.* 2019;477:383-393.
2. Özden F, Tuğay N, Umut Tuğay B, Yalın Kılınc C. Psychometrical properties of the Turkish translation of the new knee society scoring system. *Acta*

(RE: Kayaalp ME, Keller T, Fitz W, Scuderi GR, Becker R. Translation and Validation of the German New Knee Society Scoring System. *Clin Orthop Relat Res.* 2019;477:383-393).

The author certifies that neither he, nor any members of his immediate family, have any commercial associations (such as consultancies, stock ownership, equity interest, patent/licensing arrangements, etc.) that might pose a conflict of interest in connection with the submitted article.

The opinions expressed are those of the writers, and do not reflect the opinion or policy of CORR® or The Association of Bone and Joint Surgeons®.

F. Özden, Lecturer, Department of Elderly Care, Muğla Sıtkı Koçman University Muğla, Turkey

Fatih Özden MSc (✉), Muğla Sıtkı Koçman University, Department of Elderly Care, Muğla, 48000 Turkey, Email: fatihozden@mu.edu.tr

All ICMJE Conflict of Interest Forms for authors and *Clinical Orthopaedics and Related Research*® editors and board members are on file with the publication and can be viewed on request.

Letter to the Editor

- Orthop Traumatol Turc.* 2019;53:184-188.
3. Scuderi GR, Sikorskii A, Bourne RB, Lonner JH, Benjamin JB, Noble PC. The Knee Society short form reduces respondent burden in the assessment of patient-reported outcomes. *Clin Orthop Relat Res.* 2016;474:134-142.
 4. Tabachnick BG, Fidell LS, Ullman JB. *Using multivariate statistics.* Boston, MA: Pearson; 2007.
 5. The 2011 Knee Society Knee Scoring System. Licensed user manual. Available at: http://kneesociety.org/wp-content/uploads/2017/08/2011-KSS-User-Manual_FINAL_12-2012.pdf. Accessed August 13, 2019.