



## CORR Insights

**CORR Insights®: Crosscultural Adaptation and Validation of the Korean Version of the New Knee Society Knee Scoring System**

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**Where Are We Now?**

In the current study, Kim and colleagues provide evidence supporting the validity of a Korean adaptation of the patient-reported portion of the 2011 Knee Society Score® (2011 KS Score®). The 2011 KS Score is commonly used in the study of

*This CORR Insights® is a commentary on the article "Crosscultural Adaptation and Validation of the Korean Version of the New Knee Society Knee Scoring System" by Kim and colleagues available at: DOI: 10.1007/s11999-017-5307-8.*

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This *CORR Insights®* comment refers to the article available at DOI: 10.1007/s11999-017-5307-8.

outcomes following TKA, particularly in the United States. The investigators applied a crosscultural adaptation method that included an explicit intent to maintain the content (meaning) and structure (scoring and subscales) of the English language instrument [1, 4]. The adapted version was then administered to a cohort of patients who underwent TKA, in order to estimate the Korean-language version's reliability and validity.

Several instruments commonly used in study of TKA, including the Oxford Knee Score (OKS) and KOOS, are currently available in more than a dozen languages, including Korean, and the WOMAC index is available in more than 80 languages [3]. Although Kim and Colleagues found the Korean version of the 2011 KS Score to be a reliable, valid, and responsive tool to assess functional outcomes and expectations of Korean patients who undergo TKA, it may be some time

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before the instrument is available in additional languages. As demonstrated in the study, the adaptation process requires effort beyond that required for a literal, linguistic translation.

Still, expanding the 2011 KS Score to Korean-speaking patients adds another large patient population to the list of those that may be evaluated using this instrument, further facilitating multinational comparative research. It also allows comparisons of new research conducted among Korean-speaking patients to previously published reports from countries and populations in which the 2011 KS Score was collected in other languages.

**Where Do We Need To Go?**

Healthcare professionals commonly provide care to patients who do not speak or read the primary language of the nation where the care is being given or the provider offering the care. Within a single facility, patient education and care instructions may be provided in several languages, and

nearly all major medical centers have access to full-time translation services. Despite this environment, patient-reported outcomes measures (PROMs) may not be available in appropriate, culturally adapted forms, potentially excluding patients from participation in clinical research—leading to underrepresentation of certain populations in the medical literature.

Standardized PROMs with similar precision and interpretation scores across patient populations are needed for multisite and multinational clinical trials and comparative effectiveness research. A standardized measurement would more accurately compare different implants or surgical procedures, regional practice variations, socioeconomic and cultural factors, and hospital and surgeon factors, as well as better determine how those factors affect treatment responses and PROMs [4]. Additionally, systematic reviews and analysis of individual-level patient data aggregated across multiple studies [5] are greatly facilitated by the use of common measures [2].

### How Do We Get There?

The translation and review for content validity across cultures can be initiated by identifying the appropriately qualified translators and back-translators to begin the process. Once a consensus translation is obtained, a committee of experts including researchers, clinicians, and patients can compare the original and translated versions for equivalence of meaning and comprehension. Following revisions at this stage, the adapted instrument can be evaluated among a small group of bilingual lay persons to ascertain comprehension and correspondence between language versions from the patient perspective. The final crossculturally adapted version is then administered to patients in a study that is designed to evaluate reliability and validity. The sample should be representative of the population (and language) of interest. Several waves of data collection may be required to evaluate responsiveness. This process can be

performed in parallel within multiple countries or regions to produce many different language versions in only a few years.

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