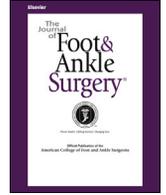




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# The Journal of Foot & Ankle Surgery

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Letter to the Editor

## Validity and Reliability of Turkish Version of Olerud-Molander Ankle Score in Patients With Malleolar Fracture by Bükler et al



We read the recently reported study by Bükler et al (1) with great interest, because we had already reported “Translation, cross-cultural adaptation, reliability and validity of the Turkish version of the Olerud-Molander Ankle Score (OMAS)” just 6 months previously (2). First, if the Turkish version is already available and reported, it is not necessary to translate and culturally adapted the same outcome score again. In such a situation, if the authors had already started the study but were too late to report it before our study, they could have used our Turkish version for a different patient population to determine whether it was reliable and valid. Second, the authors were aware of our study and criticized it with incorrect information. In addition, their discussion included very exact and strong argument regarding what is wrong and right in our study.

The authors stated that the Turkish version of the OMAS should have been validated against the Foot and Ankle Outcome Score (FAOS) and not the Foot and Ankle Ability Measure (FAAM) and the Health Outcomes Survey Short-Form 12-item questionnaire (SF-12), which were used in our study. Validity is represented by the extent to which a score retains its intended meaning and interpretation. Validity has 3 aspects: construct, convergent/divergent, and content validity (3). In our study, evidence for construct validity of the Turkish version of the OMAS was provided by determining its relationship with the activity of daily living and sport of the FAAM and the physical component score domain of the SF-12. Evidence for divergent validity was provided by determining the relationships with the mental component score domain of the SF-12 (3). Bükler et al used the Turkish version of the FAOS for construct validity but did not investigate divergent validity in their study. No data were presented that the convergent validity of the OMAS should only be provided with the FAOS. In addition, almost 90% of the reliability and validity studies used the mental components of the SF-36 or SF-12 for divergent validity. However, again, the authors stated that using the SF-12 is not correct. The OMAS was developed for patients with ankle fractures but not ankle fractures treated surgically, as the authors stated. Therefore, we used both patient

groups, those treated conservatively and those treated surgically. The important point is that the patient's condition was the same for the test-retest assessments.

Test-retest reliability is mostly assessed using intraclass correlation coefficients with a 2-way mixed-model analysis of variance (4). However, the study by Bükler et al (1) included 2 data points for test-retest reliability, and the statistics they used are not clear. Although, they reported that the test-retest reliability was strong (intraclass correlation coefficient 0.92) they used another term, “test-retest correlation.” We believe that it is not the right term to describe the reliability between 2 assessments.

Bükler et al (1) used both Pearson's and Spearman's validity in their study. The decision regarding which should be used is dependent on the data. If data are normally distributed and can be analyzed using the Shapiro Wilk test, Pearson's correlation should be used. Finally, the authors gave no explanation in their analysis.

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