

ORIGINAL RESEARCH

CROSS-CULTURAL ADAPTATION AND VALIDATION OF THE KOREAN VERSION OF THE CUMBERLAND ANKLE INSTABILITY TOOL

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ABSTRACT

Background: The Cumberland Ankle Instability Tool (CAIT) is a valid and reliable patient reported outcome used to assess the presence and severity of chronic ankle instability (CAI). The CAIT has been cross-culturally adapted into other languages for use in non-English speaking populations. However, there are no valid questionnaires to assess CAI in individuals who speak Korean.

Purpose: The purpose of this study was to translate, cross-culturally adapt, and validate the CAIT, for use in a Korean-speaking population with CAI.

Study Design: Cross-cultural reliability study.

Methods: The CAIT was cross-culturally adapted into Korean according to accepted guidelines and renamed the Cumberland Ankle Instability Tool-Korean (CAIT-K). Twenty-three participants (12 males, 11 females) who were bilingual in English and Korean were recruited and completed the original and adapted versions to assess agreement between versions. An additional 168 national level Korean athletes (106 male, 62 females; age = 20.3 ± 1.1 yrs), who participated in ≥ 90 minutes of physical activity per week, completed the final version of the CAIT-K twice within 14 days. Their completed questionnaires were assessed for internal consistency, test-retest reliability, criterion validity, and construct validity.

Results: For bilingual participants, intra-class correlation coefficients ($ICC_{2,1}$) between the CAIT and the CAIT-K for test-retest reliability were 0.95 (SEM = 1.83) and 0.96 (SEM = 1.50) in right and left limbs, respectively. The Cronbach's alpha coefficients were 0.92 and 0.90 for the CAIT-K in right and left limbs, respectively. For native Korean speakers, the CAIT-K had high internal consistency (Cronbach's $\alpha = 0.89$) and intra-class correlation coefficient ($ICC_{2,1} = 0.94$, SEM = 1.72), correlation with the physical component score ($\rho = 0.70$, $p = 0.001$) of the Short-Form Health Survey (SF-36), and the Kaiser-Meyer-Olkin score was 0.87.

Conclusions: The original CAIT was translated, cross-culturally adapted, and validated from English to Korean. The CAIT-K appears to be valid and reliable and could be useful in assessing the Korean speaking population with CAI.

Keywords: Ankle sprain, Patient Reported Outcome, Ankle Injury

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