Abstract
The main purpose of the present meta-analysis was to examine the scientific literature on the criterion-related validity of the toe-touch test for estimating hamstring extensibility. For this purpose relevant studies were searched from five electronic databases dated up through September 2012. Primary outcomes of criterion-related validity were Pearson’s zero-order correlation coefficients (r) between the toe-touch test and hamstring extensibility criterion measure. Then, from the included studies, the Hunter-Schmidt’s psychometric meta-analysis approach was conducted to estimate population criterion-related validity of the toe-touch test. Firstly, the corrected correlation mean (rp), unaffected by sampling error and measurement error, was calculated. Subsequently, the three potential moderator variables (sex of participants, age of participants, and level of hamstring extensibility) were examined by a partially hierarchical analysis. Of the six studies included in the present meta-analysis, 12 correlations values were retrieved. The overall results showed that the toe-touch test have a moderate mean criterion-related validity for estimating hamstring extensibility (rp = 0.66, 0.54-0.79). Generally, females, children and individuals with high levels of hamstring extensibility seem to have greater mean values of criterion-related validity for estimating hamstring extensibility. However, due to the low number of r values found, the fact that almost all the 95% CIs of mean correlation coefficients were overlapped, and that criterion-related validity of the toe-touch test within each category was still heterogeneous, we should be cautious with the results of the present meta-analysis. When the use of the angular tests is limited, the toe-touch test seems to be a useful alternative to estimate hamstring extensibility.

Keywords
Concurrent validity, range of motion, flexibility, stand and reach test, lineal test, field-based physical fitness test, research synthesis, systematic review.