LETTER TO THE EDITOR

Pain location and widespread pain in youth with orthopaedic conditions: Methodological and statistical issues on reliability analysis

Dear Editor

We were interested to read the recent paper by Foxen-Craft E and colleagues published online in Jul 2018 in the Eur J Pain (Foxen et al., 2018). The authors aimed to explore the reliability and validity of a pain body map among youth with orthopaedic conditions before surgery. Youth ages 10–17 years completed the body map and other self-reported outcomes at their preoperative clinic visit and at their day of surgery. Percent agreement and Kappa statistics were used to examine the discrepancy of children’s pain location reports between baseline and second assessments. Kappa value between baseline and follow-up body map reports by different sites ranged from 0.26 to 0.82 (poor to very good). The authors supported the use of body map tools in further research examining widespread pain among youth by demonstrating adequate reliability, descriptive validity and associative validity (Foxen et al., 2018). However, these results are not the most appropriate estimates to evaluate reliability (agreement). Kappa has two crucial disadvantages that must be considered by researchers; first, it depends on the prevalence in each category and the second weaknesses are the fact that it depends on the number of categories (Sabour, 2015; Szkel & Nieto, 2014). Failure to take into account these two weaknesses of kappa value can easily cause misleading messages. Therefore, applying appropriate tests with correct interpretation of their results are crucial to correctly judge about agreement (Sabour, 2015; Sabour et al., 2007). To assess reliability (agreement) depending on the type of the variables, appropriate tests are intra-class correlation coefficient (ICCC) or Bland–Altman plot for quantitative variables and weighted kappa for qualitative variable with more than two categories (Sabour, 2015; Sabour, 2016).

CONFLICTS OF INTEREST

None declared.

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