

# En pointe: dancers report their pain less variably than do controls

## Abstract

The subjective nature of pain and the lack of a gold standard for objective measurement hinders effective assessment, diagnosis, and treatment. Some individuals, such as professional dancers, are better in assessing and reporting bodily sensations. This observational study aimed to assess whether dancers report their pain less variably, than other people do. After consenting, subjects completed the Focused Analgesia Selection Task (FAST), which assesses subjects' variability of pain reports. FAST outcomes, ICC and R2 reflect the magnitude of variability of pain reports observed. In addition, subjects underwent a taste task, which similarly assesses variability of tastes (salty and sweet) intensity reports and completed the Multidimensional Assessment of Interoceptive Awareness (MAIA) questionnaire. Thirty-three professional dancers and thirty-three healthy aged-matched controls were recruited. The dancers exhibited less variability of pain reports than controls ( $P=0.013$ ), but not in case of tastes-reports. Years of practice was positively correlated with pain reporting variability ( $r=0.447$ ,  $P=0.009$ , and  $r=0.380$ ,  $P=0.029$ ; for FAST ICC and R2, respectively). MAIA sub-scores correlated with pain reporting variability: R2 and ICC with emotional awareness ( $r=0.260$ ,  $P=0.040$ , and  $r=0.274$ ,  $P=0.030$ , respectively), and R2 with trusting [ $r=0.254$ ,  $P=0.044$ ]. Perspective The difference between dancers and controls in the magnitude of variability of pain reports is probably due to the dancers' extensive training, which focuses on attention to body signals. Our results suggest that training can improve subjective pain reports, which are essential for quality clinical care.

**Keywords:** Pain intensity; athletes; interoception; pain assessment; pain variability.