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## Pain analysis in musicians using digital pain drawings

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According to the existing literature, musicians are at risk of experiencing a range of painful musculoskeletal conditions. Recently, a novel digital technology was developed to investigate pain location and pain extent. The aim of this study was to describe pain location and pain extent in musicians using a digital method for pain drawing (PD) analysis. Additionally, the association between PD variables and clinical features were explored in musicians with pain. 158 musicians (90 women and 68 men; age 22.4±3.6 years) were recruited from Swiss and UK conservatories. Participants were asked to complete a survey including both background musical information and clinical features, the QuickDASH (QD) questionnaire, and the digital PDs. Of the 158 participants, 126 musicians (79.7%) reported having pain, with higher prevalence in the areas of the neck and shoulders, the lower back, and the right arm. The mean percentage of pain extent was 3.1%±6.5%. The mean QD score was higher for musicians with pain than for those without pain. Additionally, the results indicated a positive correlation between QD score and pain extent, and there were significant correlations between age and pain intensity, as well as between pain extent and pain intensity. The high prevalence of pain among musicians has been confirmed using a digital technique for PD acquisition and analysis. In addition, positive correlations between pain extent and upper limb disability have been demonstrated. Our findings highlight the need for effective prevention and treatment strategies for musicians.

### Biography

Cinzia Cruder is a PhD candidate at the Queen Margaret University of Edinburgh and a Research Fellow at the Department of Research and Development, Conservatory of Southern Switzerland, Lugano and the Rehabilitation Research Laboratory (2rLab), Department of Business Economics, Health and Social Care, University of Applied Sciences and Arts of Southern Switzerland, Manno, Switzerland. Her research interests lie in the artistic research field especially analyzing typical injuries in musicians and promoting health and wellbeing in schools of music.

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