



Occurrence of Musculoskeletal Health Complaints and Corresponding Risk Factors among Music Students and Non-music Students – Results from a Prospective Cohort Study

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ABSTRACT

Introduction: Musculoskeletal complaints (MHC) in professional musicians are common but a lack of prospective studies in the field of music medicine, identification of causal relations in the etiology of musculoskeletal disorders in instrumental musicians is challenging.

Objectives: A prospective cohort study was launched with 1) determining the prevalence of MHC among music students 2) to compare the physical and mental health of music students and non-music students at the start of the study 3) identify risk variables for MHC, and 4) develop an MHC prediction model in musicians.

Methods: The measurements consisted of a self-designed questionnaire addressing history of pain, localization of pain, habits, practicing and sports, validated questionnaires measuring health related Quol (SF12), stress symptoms (SCI), and performance anxiety (KMPAI) and physical examination including core stability, hypermobility, cervical range of motion, mechanosensitive. Occurrences (incidence and prevalence) of MHC were recorded monthly by online questionnaires.

Results: 278 are included for the cross-sectional comparison and 149 for the longitudinal analysis so far. The monthly and yearly prevalence of MHC was 27% and 56% respectively. Yearly incidence rate was 29%. The number of stress symptoms and mechanosensitive were considerably increased ($p < 0.05$) in music students compared to non-music students, but physical and mental health, physical activity, and general cervical CROM were dramatically decreased ($p < 0.05$). Longitudinal analysis, significant risk factors for the development of MHC within one year were being a music student, increased bodily pain, history of complaints, higher number of stress symptoms, reduced physical and mental health, and history of smoking ($p < 0.05$). Furthermore, a set of mainly pain and physical health related variables including smoking showed good ability in predicting MHC (AUC=0.74).

Conclusion: In further cohorts the results need to be replicated. Additionally, occurrences and risk factors of MHC will be analyzed body region and instrument specific

Keywords: music health; cohort study; risk factors; prediction