conditions, results in significant losses in productivity at work and incurs billions of dollars in medical expenditure annually. LBP and other musculoskeletal disorders have therefore been prioritized as a global health concern during the Bone and Joint decade (2000-2010, WHO). Despite the GBD 2010 and WHO reports, LBP and other musculoskeletal conditions remain prioritized in low- to middle-income countries (LMICs), due to more pressing health issues like HIV/AIDS.

**Purpose:** A better understanding of the current burden of LBP in African LMICs was therefore required. An updated search of the current literature into the prevalence of LBP among African nations was therefore conducted. Specific challenges faced in retrieving epidemiological information in Africa, the methodological quality of reported African studies and on conducting meta-analyses of LBP data were also highlighted.

**Methods:** (Protocol reg.#:CRD42014010447) A comprehensive search of all accessible bibliographic databases via the Stellenbosch University’s Medical and Health Sciences Library website was conducted (April 2014-October 2014); updated March 2015. Population-based studies into the prevalence of LBP among children/adolescents and adults living in Africa were included. Methodological quality of included studies was appraised using an adapted tool. Meta-analysis were conducted using methods described by Neyeloff et al (2012). Subgroup analyses, sensitivity analyses, publication bias and meta-regression analyses were also conducted.

**Results:** Fifty-four studies were included in this review. The majority of the studies were conducted in Nigeria (n = 22; 41%) and South Africa (n = 15; 28%). Thirty-six included studies (66.7%) were found to be of higher quality. The lifetime, one-year and point prevalence of LBP in Africa was 55.8% (95% CI 19.8;91.8); 57.5% (95% CI 51.6;63.5) and 41.9% (95% CI 29.2;54.6), respectively. There was little difference in LBP prevalence between African males (48.6%; 95% CI 36.1;61.1) and African females (49.5%; 95% CI 38.6;60.5). The prevalence of LBP was estimated to be higher among African adults (54.3%; 95% CI 44.9;63.7) compared to African children and adolescents (32.1%; 95% CI 18.9;45.3).

**Conclusion:** This review found that the lifetime, one-year and point prevalence of LBP among African nations was considerably higher than or comparable to global LBP prevalence estimates reported.

**Implications:** Despite the high burden of LBP in Africa, African healthcare budgets and systems may generally be ill-prepared to deal with the management of LBP. Successful development and implementation of strategies and policies to address the burden of LBP on poorer countries or countries with emerging economies, like those in Africa, is therefore warranted.

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**Ethics Approval:** This study was exempt from ethical approval since it was a systematic review.

**Disclosure of Interest:** None Declared

**Keywords:** Africa, Epidemiology, Low back pain

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**Health promotion/Public health**

**PO3-LB-046**

**SPINAL PAIN IN FIELD HOCKEY PLAYERS: A CROSS SECTIONAL STUDY**

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**Background:** Hockey is a popular sport. In Belgium the participation in field hockey increased from 20.000 members in 2007 to 35.000 members in 2014. Epidemiological studies have consistently shown that injuries in field hockey are numerous. In addition to injuries to the extremities and the head, spinal pain is frequently mentioned in the scientific literature. However, studies examining spinal pain in field hockey players are lacking.

**Purpose:** The main aim of the present study was to examine the prevalence of spinal pain in amateur field hockey players and its relationship with pain catastrophizing.

**Methods:** Belgian male field hockey players from first to third division were recruited in nine clubs. Hockey players were included if they had a minimum age of eighteen years, had an hockey experience for at least three years in the first to third division, were fluent in French or Dutch speaking and were willing to sign the informed consent. The participants were asked to fill in a battery of questionnaires. The Nordic Musculoskeletal Pain Questionnaire was used to examine the prevalence of low back pain (LBP) and neck pain and activity limitations due to back or neck pain. The Dutch and French translations of the Pain Catastrophizing Scale (PCS) were used to assess pain catastrophizing.

**Results:** Eighty-eight male players volunteered for the study (mean age = 28.8 +/- 7.6 years). They played on average 5h hockey per week and played since 17.8 +/- 9 years. The lifetime and 12-month prevalence of LBP were 46% and 36%, respectively. Half of the players which suffered from LBP the

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**Disclosure of Interest:** None Declared

**Keywords:** Longitudinal design, Prevention, Risk factors
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previous year indicated that the LBP interfered with their hockey play. The lifetime and 12-month prevalence of neck pain were 40% and 20%, respectively. Only six players reported that their neck pain influenced their hockey play. No significant differences were observed in total PCS-scores between players with and without LBP or neck pain during the last 12 months (p > 0.05).

Conclusion: Low back pain is common in field hockey players and interferes with the game in 18% of the field hockey players. However, it appears unrelated to pain catastrophizing. Neck pain is less common, and does not seem to influence hockey playing.

Implications: Low back pain should be further examined in both amateur and elite field hockey players as it might influence hockey playing in a fifth of the amateur players. Further research should examine contributing factors.

Funding Acknowledgements: The work was unfunded

Ethics Approval: The study was approved by the Ethics Committee of the Cliniques Universitaires Saint-Luc

Disclosure of Interest: None Declared

Keywords: Hockey, Low back pain, Neck pain

Health promotion/Public health
PO4-AP-007
DEVELOPMENT OF AN INJURY RISK ASSESSMENT WORKPLACE WELLNESS SCREENING TOOL

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Background: Heath promotion is in the forefront of healthcare reform in the USA and prevention of health disparities remains a global initiative. With emerging workplace wellness programs (WWP) there is a need for a screening tool to identify employees at risk for injury. Purpose: Review the evidence on the most common injuries among individuals participating in WWP. Identify evidence-based cardiovascular and musculoskeletal assessments specific to these common injuries. Create a comprehensive screening tool to identify at risk individuals who would benefit from a medical or physical therapy referral.

Methods: A review of the literature identified common medical and physical injuries associated with WWP in middle age adults. Eleven peer reviewed articles were identified. Physical injuries most commonly described are knee and back pain, ankle sprains, shin splints, and shoulder tendinitis. A second literature review identified specific evidence based medical and physical screening tools used to identify risk factors for common injuries and cardiovascular disease. Articles were searched from 2005-present using the following databases: EBSCOhost Sports Discus, PubMed, and CINAHL.

Results: More than 100 articles utilizing examination or assessment tools specific to these common injuries were identified. From the identified articles, 47 were used to compile the screening tool, based on the strongest evidence, demographics and feasibility for our specific workplace population. The tests chosen for inclusion in the screening tool were shown to be individually reliable and valid at identifying associated risk factors.

Conclusion: The Wellness Program Screening Tool (WPST) is a comprehensive cardiovascular and musculoskeletal screening tool developed to be administered by a physical therapist or trained medical professionals. This tool compiles evidence informed risk assessments for medical, cardiovascular events and upper extremity, lower extremity and spine injuries. The WPST includes a detailed history, vitals, biometric measurements, Heart Rate Recovery Bike Test, Flexibility test, Scapular stability test, Single Leg Squat, Navicular Drop, Star Excursion Balance test and a Side Bridge test. Detailed instruction and interpretation documents accompany the data sheet. Future directions include establishing reliability and validity for the screening tool.

Implications: The WPST will provide an important individualized risk assessment, which can be used to modify exercise programs and/or to identify the need for a referral to the appropriate medical personnel to address these potential health concerns. With the emphasis for preventive medicine, the WPST will help promote health and safety, while still encouraging workers to participate in physical activity and exercise. Physical therapists or trained medical professionals have the education and skills to administer, interpret the results and recommend modifications or referrals.

Funding Acknowledgements: Unfunded

Ethics Approval: Ethical approval not required

Disclosure of Interest: None Declared

Keywords: Health promotion, Screening tool, Workplace wellness

Health promotion/Public health
PO4-CS-017
PLAYING-RELATED MUSCULOSKELETAL DISORDERS AMONG PROFESSIONAL ORCHESTRA MUSICIANS IN SCOTLAND – A PREVALENCE STUDY USING A VALIDATED INSTRUMENT: THE MUSCULOSKELETAL PAIN INTENSITY AND INTERFERENCE QUESTIONNAIRE FOR MUSICIANS (MPIIQM)

P. Berque.

Background: Many epidemiological surveys on playing-related musculoskeletal disorders (PRMDs) have been carried out among professional musicians, but none have evaluated or confirmed the psychometric properties of the self-report instruments that were used.

Purpose: The aim of this study was to evaluate the prevalence of PRMDs among professional orchestra musicians in Scotland, and to gather information on pain intensity and pain interference (impact of pain on function and psychosocial variables) using a self-report instrument developed specifically for a population of professional orchestra musicians, and psychometrically validated by the present authors in a previous study.

Methods: Out of 183 professional orchestra players, 101 took part in the study (55% response rate), and completed the Musculoskeletal Pain Intensity and Interference Questionnaire for Musicians (MPIIQM). Statistical tests were performed using a 5% level of significance (α = 0.05).

Results: Lifetime prevalence of PRMDs was 77.2%, one-year prevalence was 45.5%, and point prevalence was 36.6% (n = 37). Although no statistically significant relationship was found between gender and the number of reported pain sites (χ² = 2.571, p = 0.463), 68.8% of males in the PRMD group (n = 11) reported two or less pain sites whilst 52.4% of the females (n = 11) reported three or more pain sites. The most commonly reported locations of PRMDs were the right upper limb, the neck, and the left forearm and elbow. However, predominant sites of PRMDs varied between instrument groups. The mean pain intensity score for the PRMD group was 12.4 ± 7.63 (out of 40). The mean pain interference score was 15.2 ± 12.39 (out of 50), increasing significantly in relation to an increase in the number of reported pain locations (F = 3.009, p = 0.044). There were no statistically significant differences between males and females for the pain intensity (t = 0.145, p = 0.882) and pain interference (t = 0.434; p = 0.664) scores.

Conclusion: This study confirms that musculoskeletal complaints are common in elite professional musicians. Future studies are required to investigate the interactions of the constructs “pain intensity” and “pain interference” with other demographic variables and potential risk factors of PRMDs, and to compare the population of professional musicians to other professions involving repetitive movements and prolonged static and dynamic loading of neuromusculoskeletal structures.

Implications: The use of an operational definition of PRMDs and a self-report instrument specifically developed and validated for professional orchestra musicians contribute to the determination of more accurate and meaningful estimates of pain prevalence in this population.

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Ethics Approval: The study was approved by the Research Ethics Committee of the School of Health and Life Sciences at Glasgow Caledonian University, Glasgow, Scotland, UK.

Disclosure of Interest: None Declared

Keywords: Musculoskeletal pain, Musicians, Prevalence