Title: Social health profiles in primary consulters for common musculoskeletal conditions; operationalisation of the PROMIS short form tool in patients with musculoskeletal conditions

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**Background:**

Social health in people with musculoskeletal conditions has not been investigated as much as physical or mental health. Social health is a key target for people with musculoskeletal conditions; involvement in meaningful activities that fulfil aspects of an individual’s identity and roles in family and community life, are important for wellbeing and healthy ageing. Low social health predicts poorer quality of life and higher social health is associated with short and long term physical and mental health benefits. Better intelligence in people with musculoskeletal conditions is important for directing strategies to maintain social health. The aim of this study was to describe social health in people who consult primary care for common musculoskeletal conditions, overall and by socio-demographic status, and compare with the general population.

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| **Methods:** Case cohort study of adults aged 35 years and over registered with one of eleven general practices in North Staffordshire or Stoke-on-Trent CCGs. Analysis included responders to a baseline survey who (i) had consulted primary care in the previous 12 months for back (n=1220), neck (n=484), hip (n=530), hand (n=601), knee (n=1100) or shoulder (n=695) pain or osteoarthritis (n=1075) or (ii) belonged to a general population sample (n=3769). Social health was measured using the Patient-Reported Outcomes Measurement Information System (PROMIS) Short Form v2.0 – Ability to Participate in Social Roles and Activities 4a. Social health was compared between the each musculoskeletal cohort and the general population cohort. Social health was then described within each cohort by age, gender and deprivation (measured using the Index of multiple deprivation).  |

**Results:** In the general population, social health scores were characterised by excess ceiling scores (i.e. 45.1% had no limitation in social heath); scores were categorised to no limitation (score >=58.3) and based on the general population distribution to moderate (46.2-58.29)) and severe limitation (<46.2).

Social health was lower in each musculoskeletal cohort compared to the general population. Limitation in social health increased with age for those with osteoarthritis, knee, shoulder and back pain (p<0.05). Social health was lower in women only for knee pain (severe limitation 44.8% cf 38.5%). Social health decreased with increasing deprivation in all musculoskeletal cohorts, apart from hip pain.

Taking osteoarthritis for illustrative purposes, compared to the general population, those who consulted for osteoarthritis had lower levels of no limitation (11.2% cf 38.0%) and higher level of severe limitation (50.8% cf 20.8%) in social health. In those who consulted for osteoarthritis, severe limitation was similar in men and women (47.5% cf 52.8%; p=0.10) and increased with increasing deprivation (richest 20% cf poorest 20%; 45.3% cf 62.1%).

**Conclusion:** Limitation in social health is more common in people with musculoskeletal conditions. Higher levels with deprivation and in women indicate target groups for interventions and may be indicative that the pathways to limited social participation differ by socio-demographic strata.