180. MUSCULOSKELETAL PAIN, SLEEP QUALITY AND RESTRICTED SOCIAL ACTIVITY

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Background: Musculoskeletal pain is the most common symptom of rheumatological disorders and often co-occurs with poor sleep quality.

Pain and sleep problems increase the risk of restricted social activity (RSA), a measure of disability associated with increased morbidity (e.g. cardiovascular disease) and mortality. The aim of this study was to examine the relative contribution of pain, poor quality sleep, and concurrent pain and poor quality sleep to the risk of future RSA.

Methods: A population-based prospective cohort study of adults aged ≥18 years ($n = 1181$) who completed baseline and 12 month follow-up questionnaires. The questionnaires assessed age and sex; pain (blank body manikin); sleep quality (Jenkins Sleep Scale measuring delayed sleep onset, difficulty maintaining sleep, early wakening and non-restorative sleep); RSA (Has your health limited your social activities? with participants reporting limited social activities All/Most/A good bit/Some of the time classified as having RSA); anxiety and depression (Hospital Anxiety and Depression Scale); and physical disability. Logistic regression examined the associations between baseline pain, sleep problems and RSA at 12 months, adjusting cumulatively for age and gender, anxiety, depression and physical disability, and baseline RSA. Finally, interaction terms (pain x individual sleep item) were included. Results are presented as odds ratio (OR) with 95% CI.

Results: Mean age was 49.6 (S.D. ±15.2) years. 55.7% were female. At baseline, 880 (74.5%) reported pain, 122 (10.3%) delayed sleep onset, 298 (25.2%) difficulty maintaining sleep, 188 (15.9%) early wakening, and 215 (18.2%) reported non-restorative sleep. At follow-up 200 (16.9%) reported RSA. Baseline pain [OR = 2.3 (95% CI 1.5, 3.5)], delayed sleep onset [6.1 (4.1, 9.3)], difficulty maintaining sleep [3.2 (2.3, 4.4)], early wakening [4.1 (2.9, 5.9)] and non-restorative sleep [4.1 (2.9, 5.9)] were associated with RSA at 12 months. After adjustment for anxiety, depression, physical disability, and baseline RSA, there was no association between baseline pain, difficulty maintaining sleep, early wakening or non-restorative sleep and RSA at follow-up. Delayed sleep onset remained significantly associated with an almost nine fold increased odds of RSA at follow-up [8.6 (2.6, 28.3)]. The interaction between pain and delayed sleep onset was less than multiplicative [0.2 (0.7, 0.9)]. Depression, physical disability and baseline RSA were independent predictors of RSA at follow-up.

Conclusion: Having concurrent pain and delayed sleep onset was not associated with a greater risk of RSA than pain or sleep problems alone. In patients with pain interventions that improve sleep onset, mood and physical ability have the potential to reduce RSA and prevent subsequent morbidity.

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