



INVESTIGATING MULTI-JOINT PAIN AND PHYSICAL ACTIVITY IN RUNNERS AND NORDIC WALKERS

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Background

High training load, poor technique and insufficient recovery are associated with musculoskeletal injuries and joint pain in recreational runners and Nordic Walkers.

Here, we investigate recreational running and Nordic Walking training loads (distance and pace) and consider Non-Steroidal Anti-Inflammatory Drug (NSAID) use in people self-reporting current and chronic multi-joint pain.

Aim

To investigate self-reported lower limb multi-joint pain and physical activity in runners and Nordic Walkers.

Methods

- Baseline data from 'Running Through', a prospective cohort study of community runners, joggers and Nordic walkers aged over 18, were collected via an electronic survey between February 2021–February 2022.
- Weekly messages were sent to participants to capture pain and injury incidence, whilst data collected through running smartwatches and mobile phone apps monitored total weekly running distance (kilometres per week) and running pace (minutes per kilometre).
- Respondents' data were analysed by the number of different joints they self-reported experiencing persistent pain in (zero, one, or more than one).
- Descriptive statistics were reported as mean, standard deviation (SD) and percentage. Odds ratios and 95% confidence intervals (CI) were calculated.

Results

Participants were followed for a median of 9 (1, 24) weeks.

Baseline characteristics

- 2726 participants
- 57% female
- Mean age 49.78 years (SD 12.69)
- Mean BMI 24.4 (SD 4.2)
- 40% reported a lower extremity injury during follow up



Results continued

Current lower joint pain was reported by **31.9%**



(19.7%)



(11.8%)



(6.9%)

Persistent lower joint pain for **most days of the past month** was reported by **26.64%**

(9.4%)

(13.6%)

(9.1%)

Persistent lower joint pain for **most days of the past month** was reported by **27%**



22%



5%



Runners with **one** painful joint are **2.5** times more likely to report regular **NSAID** use (95% CI 1.9 to 3.4) compared to runners with no painful joints



Runners with **two or more** painful joints are **3.2** times more likely to report regular **NSAID** use (95% CI 1.9 to 5.3) compared to runners with no painful joints



22.5km per week (95% CI: 9.3 to 35.7)



21.4 km per week (95% CI: 9.6 to 33.3)



25.0 km per week (95% CI: 9.2 to 40.9)

6.3min/km (SD 1.8)

6.3min/km (SD 1.7)

6.5min/km (SD 2.1)

Conclusions

- Almost one-third of runners reported at least one currently painful lower limb joint, with a quarter reporting experiencing chronic joint pain for at least a month.
- Recreational runners with one or multiple painful lower joints report similar weekly running distances and speed when compared to recreational runners who do not report persistent lower extremity pain.
- Runners maintain running pace and distance despite increasing pain, which may be explained by the increasing use of NSAIDs to improve pain management.
- Future research should further investigate why and how exercise habits are maintained by runners despite experiencing musculoskeletal pain.

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