

Association between dietetic input and clinical outcomes in patients with hip and knee Osteoarthritis

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Background

- Osteoarthritis (OA) is a leading cause of pain, morbidity and healthcare utilisation, with prevalence predicted to impact 3.11 million Australians by 2040¹
- The Musculoskeletal Wellness (MSK-W) program is a multi-disciplinary program providing conservative management to patients with OA
- Despite integration of dietetic services within the program since 2022, the contribution of dietetic input on Patient Reported Outcomes remains unclear
- The aim of this analysis is to describe whether dietetic input effects the association between patient reported outcomes over time

Methods

- A retrospective observational audit using routinely collected data from participants enrolled in the MSK-W program
- Demographic characteristics were extracted from medical records and linked to Patient Reported Outcome Measures (PROMs) from REDCap surveys completed at baseline, 6 weeks, 12 weeks
- PROMS included pain, function and quality of life (QOL), using the hip and knee osteoarthritis outcome score (H/KOOS short form)
- Analysis was limited to those who completed surveys at baseline and 12 weeks
- Linear mixed effects models were used to describe whether dietetics exposure modified the association between PROMs and time (baseline to 12 weeks), after adjusting for confounders (age, sex, joint)

Results

- Of the n=574 participants enrolled, n=281 were eligible for analysis (had completed PROMS)
- There were no differences in Age, sex or Body Mass Index (BMI) for completers vs non-completers
- At baseline, those offered dietetic input were significantly younger (-2.9 [-4.3, -0.9] years), more obese (5.1 [2.9, 7.3] kg/m²) and had worse pain (-5.4 [-9.2, -1.6]), function (-5.2 [-9.9, -0.5]) and QOL (-5.2 [-9.9, -0.6])
- Of the n=281 participants, pain, function and QOL significantly improved over 12 weeks (pain: 3.2 [1.7, 4.7]; function: 3.9 [2.1, 5.7]; QOL: 3.3 [1.5, 5.0]), after adjusting for age, sex, dietitian exposure, and joint, however, dietetic exposure did not modify this effect (time by dietitian interaction: p>0.05 for pain, function and QOL), see figure 1

- Pain, function and quality of life improved over 12 weeks irrespective of dietetic exposure.

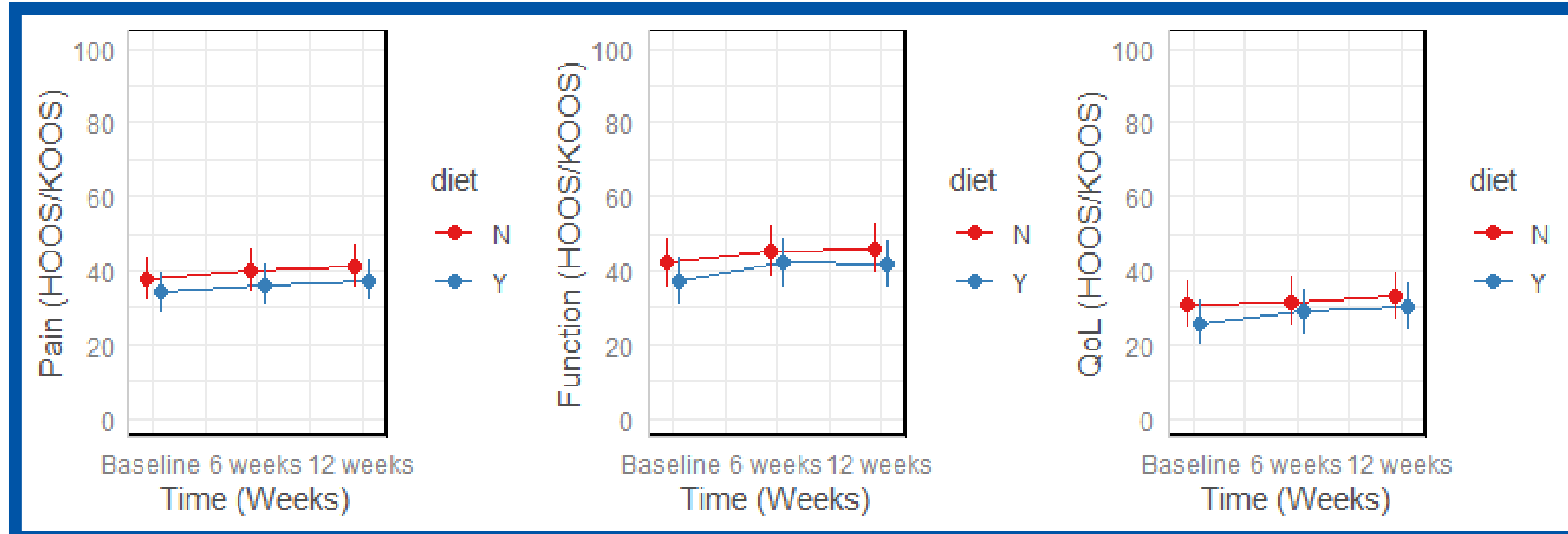


Figure 1: Comparison between HOOS/KOOS outcomes and dietetic service provision

Discussion

- Participants who received dietetic input were younger but had higher BMI and worse baseline pain, function and quality-of-life scores, suggesting that services targeted those with greater weight- or symptom-related needs. These baseline differences raise the possibility of confounding by indication.
- Pain, function and quality of life improved over 12 weeks in both groups, with no evidence that dietetic exposure altered these trajectories. However, as this was an observational study without random allocation, the findings do not establish that dietetic input is ineffective.
- Further research should assess whether the extent of weight change, dietary factors or other modifiable risk factors influence improvement

Conclusion

- Pain, function and quality of life improved over 12 weeks in both groups, with no difference in outcome trajectories for those receiving dietetics care
- Larger prospective studies adjusting for baseline PROMs and measuring dietetic care intensity are needed to determine its contribution to patient-reported outcomes



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1. Hincapié, Cesar A. The Lancet Rheumatology, 2024