

Final report

Project title: **Creaky knees and exercise beliefs and participation. A mixed-methods study**

Award: **2021-2022 Project Grant \$15,000**

Funded by: Australian Rheumatology Association Research Trust

Grant Investigators: **Jeanette Thom (CI)**, Justine Naylor, James McAuley, Sarah Dennis, Kathryn Gibson, John Booth, Matthew Jones, Kathryn Mills, Adrian Ram, Alexandre Kovats

Research students on project: Alexandre Kovats, Elise Drum

Intended Department: School of Health Sciences, UNSW Sydney

Scientific report:

MAIN SCIENTIFIC OBJECTIVES OF THE PROJECT:

The overarching aim of this project was to determine if the experience of having 'noisy knees' influences peoples' beliefs and exercise behaviours prior to being diagnosed with osteoarthritis.

The contribution of this study to scientific knowledge is that it provides insight for researchers and medical professionals on the concerns and beliefs of people with knee crepitus, allowing for more evidence-based approaches to patient priorities and education.

MAIN SCIENTIFIC RESULTS OF THE PROJECT:

Outcomes to date:

The initial focus group study of this project has been completed, with 24 people affected by crepitus recruited for the online interviews / focus groups. The preliminary results from this study have been presented in a variety of settings (see below) and a manuscript is being finalised. These results are currently being used to inform a wider online survey study (Part B).

Key findings include:

- Five main themes emerged from the 24 participants:
 - 1) Individual variation of knee crepitus
 - 2) Occurrence of knee crepitus
 - 3) Meaning of knee crepitus
 - 4) Attitudes and exercise behaviours regarding crepitus
 - 5) Knowledge deficits and needs concerning crepitus
- Most participants had not ceased exercise but may have modified movement due to crepitus and associated symptoms, some had increased intentional strength training to try alleviating it.
- For those already with osteoarthritis or other symptoms, crepitus was of less concern than symptoms such as pain.

- Participants agreed that more understanding about the processes causing crepitus and what exercise was safe for knee health would be beneficial.

MAIN SCIENTIFIC ACHIEVEMENTS OF THE PROJECT:

UNSW Medicine Honours Thesis and presentation:

Patient perspectives on their creaky knees and the role of exercise in knee health: a qualitative study

Elise Drum, UNSW Medicine ILP Research Project, September 2022

CEPA: Clinical Exercise Physiology Association 2023 Virtual Conference presentation and published abstract:

Thom J., Kovats A., Drum E., Jones M., Dennis S., Mills K., & Naylor J. Patient perspectives on their creaky knees and the role of exercise in knee health. *Journal of Clinical Exercise Physiology* (2023) 12 (s1): 12. <https://doi.org/10.31189/2165-7629-12-s1.12>

<https://meridian.allenpress.com/jcep/article-abstract/12/s1/12/490244/PATIENT-PERSPECTIVES-ON-THEIR-CREAKY-KNEES-AND-THE/>

There have also been presentations to community groups for potential recruitment, education and dissemination of the results. These include groups such as Arthritis NSW - Support Group, Windsor Bowls Team, clinical/research groups such as the Sydney NeuroMusculoskeletal Research Collaborative, Sydney Musculoskeletal Health -arthritis research theme, Riverina Orthopaedics (Wagga Wagga clinic) and within a podcast.

PLANS FOR FURTHER DISSEMINATION AND RESEARCH:

A manuscript of the focus group results is planned to be submitted for publication in 2023. Once this has been accepted for publication, further details will be provided and further dissemination via social media, community groups and researchers will take place.

Currently these results are informing Part B of the project, with the participants' findings being used to develop the survey questions. The survey, following ethical approval, will be advertised for participants during 2023 and results disseminated later in early 2024.