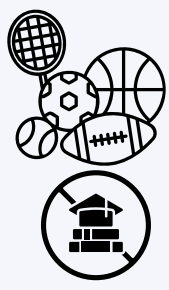
Preventing Osteoarthritis After a Sport-Related Injury: Results from the Stop OsteoARthritis (SOAR 2.0) Program

Did You Know?

In Canada, **1-in-3 people living with OA** are diagnosed before age 45

Why We Did This Research

The **treatment of knee injuries** tends to **focus on returning to playing sports**, and **little to no effort is spent on OA prevention and education** following an injury



What We Did

In **partnership with patients and clinicians**, we developed a virtual **physiotherapist-guided knee health program,** Stop OsteoARthritis (SOAR), **to improve knee extensor strength** in people **at risk of post-traumatic knee osteoarthritis (PTOA).** We tested SOAR via a **randomized delayed-controlled trial.**

The SOAR Program Components:

2-Hour Knee Camp

1-hour interactive group-based **education** session

1:1 **knee exam, exercise-therapy**, & **PT counselling**

Personalized Exercise Therapy & Tracking

Weekly independent **exercise-therapy**

Fitbit **activity/exercise tracking** & **logging of perceived effort and pain**

Weekly 1:1 PT counselling

15-minute **weekly virtual PT meeting**

Modifications to program made as needed with PT's input

Who Was Involved in the Trial:

49 people participated

26 **Immediate** Group (65% women; m_{age} = 26.3)

27 **Delayed** Group (63% women; m_{age} = 27.4)

Participants had experienced **a knee injury on average 2.4 years previously**

What We Measured & With What Tools:

Knee extensor strength

Biodex System 4TM

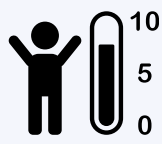
Moderate-to-vigorous physical activity

ActigraphTM GT3XP & Godin Leisure Time Questionnaire

Knee-related self-efficacy

Knee Self-Efficacy Scale

Knee-related quality of life



Knee injury and OA Outcome Score QOL Subscale

Self-management

Partner in Health Scale

Self-reported kinesiophobia

Tampa Scale of Kinesiophobia

Pain & function in sport and recreation

Additional KOOS subscales

6-meter timed hop & peak knee flexor torque

The Impact of Social Support:

We also looked at how social support affects people's participation in exercise therapy by conducting Zoom interviews with 15 participants

Trial Feasibility:

The feasibility of the SOAR program was assessed via implementation outcomes (enrolment rate, participant attrition, protocol & participant adherence, & PT intervention fidelity), alongside practicality outcomes (reported adverse events & completion rates of exercise-therapy & physical activity goals)

What We Found

There were improvements in:

Self-management

Kinesiophobia

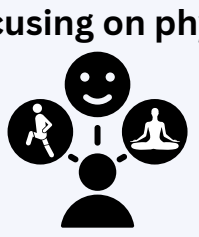
Trial feasibility:

- **79%** of participants completed study components
- **87%** of PTs completed required items during counselling sessions
- **92%** of exercise therapy goals were completed
- **84%** of physical activity goals were completed

Interviews on social support revealed:

Three key themes related to the role of social support for fostering exercise participation:

treating participants holistically, not just focusing on physical needs



need for on-going support

the value of a collaborative partnership between clinician (PT) & participant

Takeaways & Next Steps

The SOAR Program may benefit knee health self-management and reduce the fear of knee injury/pain due to movement. These findings will help design a study to see if the SOAR Program can prevent PTOA after knee injuries.

For Full Article:

SCAN ME

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