Knee and health-related quality of life of people with patellofemoral pain: a systematic review.

Sally Coburn, Dr Christian Barton, Dr Stephanie Filbay,
Dr Michael Rathleff, Professor Kay Crossley

La Trobe Sports and Exercise Medicine Research Centre
Patellofemoral Pain (PFP)

PFP is common among young and active populations and is not a self-limiting condition.
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PFP diagnosed in more than 50% of knee pain consultations

[Image: www.saanichtonphysio.com]
[Rathleff CR et al, 2013; Molgaard et al 2011]
Patellofemoral Pain (PFP)

PFP is common among young and active populations and is not a self-limiting condition.

PFP diagnosed in more than 50% of knee pain consultations

PFP may form a disease continuum with patellofemoral OA

[Image: www.saanichtonphysio.com]

[Rathleff CR et al, 2013; Molgaard et al 2011; Collins et al., 2016]
What does the literature tell us about PFP?

- Symptoms
- Impairments
Health-related quality of life (HRQOL)

- Refers to the influence of a person’s health status on their perceived well-being

- Patient-reported outcomes commonly used to assess HRQOL
  - SF-36 and KOOS-QoL

[Filbay SF et al 2013]
Health-related quality of life (HRQOL)

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No systematic review has investigated HRQOL in individuals with PFP to date
Aims

To investigate:

- HRQOL in individuals with PFP compared to population norms and healthy control groups
- If interventions to treat PFP impact on HRQOL
- Other factors that are related to HRQOL in people with PFP
Methods
Cochrane Review strategy

5 databases

1579 studies

99 full text

22

Included studies

- Mean age <50 years
- PFP
- HRQOL outcome
- Peer reviewed

[van der Heijden et al 2015; Filbay et al, 2013]
Methodological quality

- RCT intervention
- Cross-sectional
- Repeated measures
- Reliability & validity

Downs & Black Checklist for methodological quality of intervention studies (1998)
- Usually 27 items
- Modified to 15 items
- Percentage
Data Management

- Extracted data
  - Age
  - BMI
  - Sex
  - Mean and SD

- Outcomes normalised
- BMI calculated
- Means combined
Statistical Analysis

- Random effects meta-analysis
  - Aim 1: Baseline mean
  - Aim 2: Mean closest to end of treatment

- Meta-regression analysis variables:
  - Age
  - BMI
  - Methodological quality score
  - Sample size
  - Other scales of KOOS
Results
Participant Characteristics

1174 individuals with PFP
100 healthy controls
5/22 reported QOL as primary outcome

Mean
Age=27
BMI=23
% Female=64

Range
(14-47)
(20-25)
(34-100)
Methodological quality

- Range of scores 33-100%

Mean = 68%
HRQOL for individuals with PFP

KOOS-QOL

None

PFP-pooled mean = 55 (47,63)

Max

None

KOOS-QOL score mean

Optimum
HRQOL for individuals with PFP

KOOS-QOL

PFP-pooled mean = 55 (47,63)

Norm = 84 (81, 88)

[Paradowski et al, 2006]
HRQOL for individuals with PFP

KOOS-QOL

None

PFP-pooled mean = 55 (47,63)

Norm = 84 (81, 88)
[Paradowski et al, 2006]

H Control = 97 (94, 100)
[Rathleff, et al 2016]
HRQOL for individuals with PFP

SE-36-Physical domains

None

<table>
<thead>
<tr>
<th></th>
<th>H Control</th>
<th>Norm</th>
<th>Pooled PFP</th>
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<tbody>
<tr>
<td>Physical Function</td>
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<td></td>
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100 = Maximum

Max
HRQOL for individuals with PFP

SF-36-Physical domains

None

Physical Function

100 = Maximum

H Control
Norm
Pooled PFP

Bodily Pain

0 = Poor

Role Physical

General Health
HRQOL for individuals with PFP

SF-36-Mental domains

None

Vitality

100 = Maximum

ax
HRQOL for individuals with PFP

SF-36-Mental domains

None

Vitality

100 = Maximum

Role Emotional

0 = Poor

Social Function

Mental Health
Effect of interventions on HRQL
Repeated measures studies
Effect of interventions on HRQL
Repeated measures studies
Effect of interventions on HRQL
Randomised controlled trials
Effect of interventions on HRQL
Randomised controlled trials
Factors related to HRQOL

<table>
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<tr>
<th>KOOS QOL</th>
<th>SF-36 PF</th>
<th>SF-36 RP</th>
<th>SF-36 BP</th>
<th>SF-36 GH</th>
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Max

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<th>R² &gt; 0.7</th>
<th>R² 0.4-0.7</th>
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Summary

- HRQOL is reduced in people with PFP
- An intervention may improve HRQOL however there are too few studies to be certain
- Sport and ADL participation, age and BMI are related to HRQOL
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- An intervention may improve HRQOL however there are too few studies to be certain
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People with PFP have reduced HRQOL and should be a consideration in management.