What do Scottish patients expect from their knee arthroplasties?

M. A. Smith, M. Sedhom, A.H. Deakin, M. Sarungi

Department of Orthopaedics, Golden Jubilee National Hospital, Clydebank, Scotland
Golden Jubilee National Hospital

- Large elective lower limb arthroplasty unit near Glasgow
- Over 2,500 primary and revision operations annually
- Patients admitted from all over Scotland
- Reflective of Scottish population
Background

- PROMs important measure of success → NJR (2014)

- PROMs influenced by patient expectations

- Unrealistic pre-op expectations → poor PROMs (Scott et al 2012)

National Joint Registry. NJR PROMs (Patient Reported Outcome Measures) (2014)

Aim & objective

• Better understanding of expectations required to allow improved multi-disciplinary management and education of patients pre-operatively

• To quantify pre-operative expectations of Scottish patients undergoing total hip or knee replacements
Methods

• Ethics committee approved Prospective study

• Validated questionnaire from HSS (Mancuso et al 2001)

• 200 unilateral primary TKR

• Standard pre-operative information
  – Booklet
  – DVD
  – Consultation
  • Cohesive MDT team

Methods

• Expectations rated pre-operatively
  – Very important (3)
  – Somewhat important (2)
  – A little important (1)
  – Do not have expectation or Do not expect this (0)

• Sum to give expectations score

• Univariate regression analysis to investigate relationship between demographics and expectation score
### Demographics

<table>
<thead>
<tr>
<th></th>
<th>200 patients</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean Age</strong></td>
<td>68 (45-84)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>59% female</td>
</tr>
<tr>
<td><strong>Mean BMI</strong></td>
<td>32 (21-50)</td>
</tr>
<tr>
<td><strong>Mean Pre-op OKS</strong></td>
<td>17 (1-44)</td>
</tr>
</tbody>
</table>
HSS Knee replacement expectations

- Pain relief
- Improved ability to walk
- Remove the need for walking aid
- Make knee or leg straight
- Ability to go upstairs
- Ability to go downstairs
- Kneel
- Squat
- Driving/public transportation
- Employment
- Recreational activities
- ADL
- Sport
- Change position
- Interaction
- Sexual activity
- Psychological well being
Number of expectations
Expectations I: pain & mobility

- **Very important**
- **Somewhat important**
- **A little important**
- **No Expectation**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>99%</td>
</tr>
<tr>
<td>Walk</td>
<td>97%</td>
</tr>
<tr>
<td>Up Stair</td>
<td>94%</td>
</tr>
<tr>
<td>Cane</td>
<td>70%</td>
</tr>
</tbody>
</table>
Expectations II: activities

- Very important
- Somewhat important
- A little important
- No Expectation

Percentage of Patients

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADL</td>
<td>95%</td>
</tr>
<tr>
<td>REC</td>
<td>93%</td>
</tr>
<tr>
<td>SPORT</td>
<td>84%</td>
</tr>
</tbody>
</table>
Expectations III: socio-psych & sex

- Very important
- Somewhat important
- A little important
- No Expectation

<table>
<thead>
<tr>
<th></th>
<th>PSYCH 89%</th>
<th>EMPLOY 26%</th>
<th>SEX 60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Percentage of Patients
Expectations IV: high demand

- Very important
- Somewhat important
- A little important
- No Expectation

- Percentage of Patients

- KNEEL: 86%
- SQUAT: 81%
Reiterated expectations

- Change positions
- Daily activities
- Employment
- Exercise and sport
- Family interaction/care
- Mobility
- Pain
- Psychological well being
- Recreational
- Stairs
- Straighten leg

The graph illustrates the reiterated expectations across different aspects of daily life and health.
Other expectations

- Comfort
- Feeling like a burden
- Health/weight loss
- Independence/Freedom
- Medication
- Mood
- Normal
- Quality of life
- Sleep
- Taking part

The graph shows varying levels of satisfaction for each category:

- Comfort: High satisfaction
- Feeling like a burden: Low satisfaction
- Health/weight loss: Moderate satisfaction
- Independence/Freedom: High satisfaction
- Medication: Moderate satisfaction
- Mood: Low satisfaction
- Normal: High satisfaction
- Quality of life: High satisfaction
- Sleep: Moderate satisfaction
- Taking part: Low satisfaction
Association with expectations

Gender
- Male \( \uparrow \) expectations \( p=0.08 \)

BMI
- \( \times \)

Pre-op Oxford score
- \( \times \)

Age
- \( \uparrow \) expectations \( \downarrow \) \( p=0.08 \)
Discussion

• Patients expect far more than pain relief and improved mobility only

• We did not find any demographic factors which had a statistically significant impact on expectations

• Trend could be seen in both gender and age, younger patients and males tended towards higher expectations
Discussion
Discussion
Discussion

![Histogram of Expectations Score by Gender](image)

- **Frequency** and **Expectations Score** are shown for both **Female** and **Male** categories.

- The graph illustrates the distribution of expectations scores, with a notable peak around the 40-50 range for females, indicating a higher concentration of responses in this area.

- Males show a more spread-out distribution with a peak around the 10-20 range, suggesting a broader range of expectations scores among males.

- The chart highlights differences in expectations based on gender, with females tending to have higher expectations scores compared to males.
Discussion
Discussion

• Some patients’ expectations are unrealistic, hence likely to remain unfulfilled ➞ impact on PROMS

• Better understanding and management of preoperative patients’ expectations are essential

• Improved management of expectations will likely result not only in improved PROMS but also in potential cost saving (less post op follow-ups and/or investigations)
The last word

- “I would like the pain, which makes me very crabbit, to leave me as I was never like this”

- "being able to be 'normal' again. Not being a spectator - being able to take part“

- “just became a granddad for the first time 6 months ago and I look forward to playing and walks with my granddaughter“

- “A better lifestyle. I love to dance and sing at my local nursing home so I need to be fit”
Thank you