THE KNEE INJURY AND OSTEOARTHRITIS OUTCOME SCORE (KOOS)

Pain

P1. How often is your knee painful? Never, monthly, weekly, daily, always
What degree of pain have you experienced the last week when…?

P2. Twisting/pivoting on your knee None, mild, moderate, severe, extreme

P3. Straightening knee fully None, mild, moderate, severe, extreme

P4. Bending knee fully None, mild, moderate, severe, extreme

P5. Walking on flat surface None, mild, moderate, severe, extreme

P6. Going up or down stairs None, mild, moderate, severe, extreme

P7. At night while in bed None, mild, moderate, severe, extreme

P8. Sitting or lying None, mild, moderate, severe, extreme

P9. Standing upright None, mild, moderate, severe, extreme

Symptoms

Sy1. How severe is your knee stiffness after first waking up in the morning? None, mild, moderate, severe, extreme
Sy2. How severe is your knee stiffness after sitting, lying, or resting later in the day? None, mild, moderate, severe, extreme
Sy3. Do you have swelling in your knee? Never, rarely, sometimes, often, always
Sy4. Do you feel grinding, hear clicking or any other type of noise when your knee moves? Never, rarely, sometimes, often, always

Sy5. Does your knee catch or hang up when moving? Never, rarely, sometimes, often, always
Sy6. Can you straighten your knee fully? Always, often sometimes, rarely, never
Sy7. Can you bend your knee fully? Always, often sometimes, rarely, never

Activities of daily living

What difficulty have you experienced the last week…?

A1. Descending stairs None, mild, moderate, severe, extreme
A2. Ascending stairs None, mild, moderate, severe, extreme
A3. Rising from sitting None, mild, moderate, severe, extreme
A4. Standing None, mild, moderate, severe, extreme
A5. Bending to floor/pick up an object None, mild, moderate, severe, extreme
A6. Walking on flat surface None, mild, moderate, severe, extreme
A7. Getting in/out of car None, mild, moderate, severe, extreme
A8. Going shopping None, mild, moderate, severe, extreme
A9. Putting on socks/stockings None, mild, moderate, severe, extreme
A10. Rising from bed  None, mild, moderate, severe, extreme
A11. Taking off socks/stockings  None, mild, moderate, severe, extreme
A12. Lying in bed (turning over, maintaining knee position) None, mild, moderate, severe, extreme
A13. Getting in/out of bath None, mild, moderate, severe, extreme
A14. Sitting None, mild, moderate, severe, extreme
A15. Getting on/off toilet None, mild, moderate, severe, extreme
A16. Heavy domestic duties (shoveling, scrubbing floors, etc.) None, mild, moderate, severe, extreme
A17. Light domestic duties (cooking, dusting, etc.) None, mild, moderate, severe, extreme

Sport and recreation function
What difficulty have you experienced the last week…?
Sp1. Squatting None, mild, moderate, severe, extreme
Sp2. Running None, mild, moderate, severe, extreme
Sp3. Jumping None, mild, moderate, severe, extreme
Sp4. Turning/twisting on your injured knee None, mild, moderate, severe, extreme
Sp5. Kneeling None, mild, moderate, severe, extreme

Knee-related quality of life
Q1. How often are you aware of your knee problems? Never, monthly, weekly, daily, always
Q2. Have you modified your lifestyle to avoid potentially damaging activities to your knee? Not at all, mildly, moderately, severely, totally
Q3. How troubled are you with lack of confidence in your knee? Not at all, mildly, moderately, severely, extremely
Q4. In general, how much difficulty do you have with your knee? None, mild, moderate, severe, extreme

Scoring: Each item is scored 0 to 4 and the raw score for each section is the sum of item scores. Scores are then transformed to a 0 to 100 scale. A higher score indicates fewer problems.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Raw score</th>
<th>Transformed score</th>
<th>MDC90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>/36</td>
<td></td>
<td>12 points</td>
</tr>
<tr>
<td>Symptoms</td>
<td>/28</td>
<td></td>
<td>8 points</td>
</tr>
<tr>
<td>ADL</td>
<td>/68</td>
<td></td>
<td>10 points</td>
</tr>
<tr>
<td>Sport/Rec</td>
<td>/20</td>
<td></td>
<td>19 points</td>
</tr>
<tr>
<td>QOL</td>
<td>/16</td>
<td></td>
<td>13 points</td>
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</tbody>
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Example: a pain raw score of 16 would be transformed as follows:

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100 - \frac{(16 \times 100)}{36} = 56
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