Patient Satisfaction in Spine Surgery: A Systematic Review of the Literature

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Disclosures

• None of the authors have disclosures
• Financial considerations
• Improved patient outcomes
• Defining a successful treatment
Systematic Review
## Systematic Review: Results

<table>
<thead>
<tr>
<th>Dominant Characteristic</th>
<th>Percentage of Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>84.1%</td>
</tr>
<tr>
<td>Outcome</td>
<td>94.9%</td>
</tr>
<tr>
<td>Generic</td>
<td>78.3%</td>
</tr>
<tr>
<td>Direct</td>
<td>77.7%</td>
</tr>
<tr>
<td>Affective</td>
<td>79.0%</td>
</tr>
<tr>
<td>Closed-ended</td>
<td>94.3%</td>
</tr>
<tr>
<td>Questionnaire</td>
<td>81.5%</td>
</tr>
<tr>
<td>Likert Scale</td>
<td>79.0%</td>
</tr>
</tbody>
</table>
Systematic Review: Results

<table>
<thead>
<tr>
<th>Less Frequent Characteristics</th>
<th>Tools Utilized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Dimensional</td>
<td>NASS, SF-36, SRS-24, SRS-30,</td>
</tr>
<tr>
<td></td>
<td>Zurich</td>
</tr>
<tr>
<td>Disease Specific</td>
<td>NASS, SRS-30, Zurich</td>
</tr>
</tbody>
</table>
Ideal Instrument

**Content**
- Multidimensional with global questions
- Outcome and Care
- Disease Specific
- Direct

**Method**
- Affective
- Closed-ended questions
- Self-administered questionnaire
- Likert
### Dimensions Affecting Patient Satisfaction

<table>
<thead>
<tr>
<th>Pain</th>
<th>Function</th>
<th>Efficacy of Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caregiver Interpersonal Manner</td>
<td>Postoperative Care</td>
<td>Specific Patient Health Characteristics</td>
</tr>
<tr>
<td>Patient Expectations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Pain

• 41% of papers correlated satisfaction with perception of pain
• This includes overall pain level as well as perceived relief or exacerbation of pain
• Persistent back pain, rather than leg pain, seems to drive patients towards dissatisfaction
Function

• 40% of papers correlated satisfaction with post-operative functional capacity
• The effect of functional capacity on satisfaction was found to be subordinate to pain control in multiple studies
• Increases in ambulation and mobility were most strongly associated with increased satisfaction
• Pre-operative functional status was found to be inversely related to satisfaction
Efficacy

• 16% of papers correlated satisfaction with treatment efficacy
• No consistent correlation between achievement of desired radiographic outcome and satisfaction
• Peri-operative complications related to decreased satisfaction
• One study found imperfect correlation between patients’ perception of surgical success and satisfaction: 20% of “very dissatisfied” patients reported the surgery was successful and helped “some” or “a lot” and 10% of satisfied patients reported that the surgery “did not help” or “made me worse”

Caregiver Manner

• 11% of papers correlated satisfaction with care from the primary physician
• Improved perception of pre-operative counseling—especially with regards to expected post-operative pain—was related to higher rates of satisfaction
Post-op Care/Therapy

• 5% of papers correlated satisfaction with post-operative therapy
• Universally found that patients who participated in physical therapy post-op were more satisfied
Patient Specific Characteristics

• 33% of papers correlated satisfaction with patient specific characteristics
• Increasing co-morbidities related to decreased satisfaction
• No difference in satisfaction among different age groups
• Multiple studies found increasing income levels were associated with increased satisfaction
Patient Expectations

• 16% of papers correlated satisfaction with patient expectations
• Increased expectations about post-operative function was consistently associated with a higher degree of satisfaction while high expectations about post-operative pain relief was associated with a lower degree of satisfaction
## Future Directions

**Birmingham Spine Patient Satisfaction Index**

1. I am satisfied with pain control following the surgery.
   - Very Dissatisfied
   - Very Satisfied

2. I am satisfied with the improvement in my leg pain following the surgery.
   - Very Dissatisfied
   - Very Satisfied

3. I am satisfied with my ability to stand and walk following the surgery.
   - Very Dissatisfied
   - Very Satisfied

4. I am satisfied with my ability to care for myself following the surgery.
   - Very Dissatisfied
   - Very Satisfied

5. My expectations regarding pain control were met by the surgery.
   - True
   - False

6. My expectations regarding improvement in strength or functional capacity were met by the surgery.
   - True
   - False

7. I am satisfied with the surgical procedure.
   - Very Dissatisfied
   - Very Satisfied

8. I would undergo the procedure again in the same circumstances.
   - Very Unlikely
   - Very Likely

9. I am satisfied with the availability and ability of my surgeon for pre-operative counseling.
   - Very Dissatisfied
   - Very Satisfied

10. I am satisfied with the post-operative care I received from my surgeon and doctor office.
    - Very Dissatisfied
    - Very Satisfied