Chapter 16

Translation and validation of the German Foot and Ankle Outcome Score

Christiaan J.A. van Bergen
Inger N. Sierevelt
Paul Hoogervorst
Hazibullah Waizy
C. Niek van Dijk
Christoph Becher

Submitted.
Chapter 16

Abstract

Purpose

Outcome assessment is critical in evaluating the efficacy of orthopaedic procedures. The Foot and Ankle Outcome Score (FAOS) is a 42-item questionnaire divided into five subscales, which has been validated in several languages. Germany has no validated outcome score for general foot and ankle pathology. The aim of this study was to develop a German version of the FAOS and to investigate its psychometric properties.

Methods

Forward and backward translation was executed according to official guidelines. The final version of the FAOS was investigated in 150 patients with various foot and ankle disorders. All patients completed the FAOS, Short Form-36, numeric rating scales for pain and disability, and the Hannover questionnaire. The FAOS was re-administered after one week. Test-retest reliability, internal consistency, minimal detectable change, construct validity, and floor and ceiling effects were analyzed.

Results

Test-retest reliability and internal consistency of each subscale were excellent (intraclass correlation coefficient, 0.88 to 0.95; Cronbach's alpha, 0.94 to 0.98). The minimal detectable changes of each subscale were 17.1 to 20.8 at the individual level and 2.0 to 2.4 at group level. There were moderate to strong correlations between FAOS subscales and physical outcomes and low to moderate correlations between FAOS subscales and mental outcomes. Floor and ceiling effects were not present.

Conclusion

The German version of the FAOS is a reliable and valid instrument for use in foot and ankle patients.

Introduction

Outcome assessment is critical in evaluating the efficacy of orthopaedic procedures. The assessment of outcome from the patient's perspective becomes more recognized. Questionnaires are used to assess the patient's perspective on the degree of impairment, pain, disabilities, and quality of life. Translation and validation of the original questionnaire into the target language are essential for the conduction of multinational studies and for the comparison of outcomes from different countries. There are few validated outcome measures for disability of the foot and ankle. The Foot and Ankle Outcome Score (FAOS) is a valid and reliable instrument. The score is available in English, Swedish, Portuguese, Persian, Turkish, and Dutch. Germany has the largest population of Europe but, to our knowledge, has no validated outcome score for general foot and ankle pathology. Therefore, the aim of
this study was to translate and validate the FAOS into German, enabling its use in the German-speaking population.

Methods

Translation procedure

Forward and backward translation was executed according to official guidelines. Two bilingual translators with different profiles (one physician) whose native language was German produced two independent forward translations. A synthesis of these translations was conducted. Two other translators without medical background, with English as the native language and blinded to the original version, then translated the questionnaire back into the original language. A committee composed of the translators and a German orthopaedic surgeon consolidated all the versions of the questionnaire and developed the final version for field testing (Supplement). The last step of the translation procedure was the pretesting on several random patients. The patients were asked whether they understood all the items and whether they had suggestions for improvement. No difficulties were encountered, and changes to the final version were not indicated (Supplement).

Validation procedure

A random sample of 150 outpatients with chronic foot and ankle related disorders were included in the study at a single institution. Exclusion criteria were inability to understand or complete the questionnaires, or refusal to sign informed consent. There were 65 male and 85 female patients with a mean age of 48 ± 16 years (range, 18 – 79 years). The diagnoses of the ankle included osteochondral defects, osteoarthritis, anterior or posterior impingement, instability, loose bodies, and tendonitis; diagnoses of the foot included plantar fasciitis, metatarsalgia, and pes planus. About 80% were preoperative or nonoperative patients, and 20% were postoperative during routine controls (not in the early postoperative period). The study protocol was approved by the local Medical Ethics Committee (Nr. 720/2010). All patients signed informed consent.

Each patient completed a package of questionnaires containing the FAOS, Short Form-36 (SF-36), numeric rating scale (NRS) for pain and disability, and Hannover questionnaire. The FAOS was re-administered under similar conditions with a 1-week interval. The patients had to indicate whether any change in the (extent of) symptoms had occurred during the interval.

Instruments

The FAOS is a 42-item questionnaire intended to evaluate symptoms and functional limitations related to the foot and ankle. It consists of five subscales: pain; other symptoms; activities of daily living (ADL); sport and recreational activities; and foot- and ankle-related quality of life (QoL). Patients score each question on a Likert scale (no, mild, moderate, severe, extreme) resulting in a score ranging from 0 to 4. The scores of the subscales are calculated by the sum of the items included. The total scores are then transformed to a scale from 0 to 100. Higher total values indicate lesser problems and/or functional limitations.

The SF-36 is a widely used, patient-administered, generic health related quality of life instrument, which has been translated and validated into German. It comprises 36 items across eight subscales, which are each calculated on a 0 to 100 scale (100 indicating no symptoms and 0 indicating extreme symptoms).

Numeric rating scales (NRS) were used to determine the severity of pain and disability.
Chapter 16

200

of the ankle and foot. A score of 0 accounts for no pain or disability; a score of 10 represents the most severe pain or disability imaginable.

The Hannover questionnaire rates patients’ complaints and functional status based on a severity-symptom scale and functional status. It contains 20 subjective questions for the patient with five possible answers to each. A test-retest reliability of $r = 0.91$ has been reported but the score has not been validated.387

**Statistical analysis**

The FAOS subscale scores were calculated with use of formulas provided by the developers.3 Missing data and double marks were treated as outlined by the developers.387

Psychometrics is the process that allows researchers to apply scientific methodology to the measurement of subjective outcomes. The psychometric properties of a questionnaire define how well a questionnaire measures what it is supposed to measure. Reliability and validity of the German version of the FAOS were tested with use of SPSS software (version 19.0; Chicago, Illinois, USA).

The test-retest reliability was assessed by calculation of intraclass correlation coefficients (ICC, two-way random effects model).355,383 The test-retest reliability was considered good if the ICC is $0.40 - 0.75$ and excellent if the ICC $> 0.75$.134 Systematic differences between the first and second test were assessed with use of paired t-tests.

Internal consistency determines whether the questions cover the same construct. Cronbach’s alpha was calculated to assess the internal consistency of each subscale of the FAOS.89 This coefficient addresses the homogeneity of the questions included in a questionnaire. Cronbach’s alphas of 0.7, 0.8, and 0.9 are considered to represent a fair, good, and excellent degree of internal consistency, respectively.53

There is a 95% confidence rate that the health status of a patient improves or deteriorates when the change in scores exceeds the minimal detectable change. The minimal detectable change (MDC) at the individual level was calculated as $1.96 \times \sqrt{2 \times \text{standard error of measurement}}$ (i.e., the square root of the within-subject variance).383 The MDC at group level was calculated by dividing the MDC at the individual level by $\sqrt{n}$.

Validity relates to the ability of a questionnaire to measure the outcome parameter of interest. Construct validity refers to the association with other measures in a manner that is consistent with theoretically derived hypotheses, in the absence of a “gold standard”.383 The FAOS subscales were compared with the SF-36, NRS pain and disability, and Hannover questionnaire. Pearson correlation coefficients were calculated to determine construct validity of the FAOS. Correlation coefficients of $<0.30$, $0.30 - 0.60$, and $>0.60$, are considered low, moderate, and strong, respectively.207 Convergent and discriminate validity were evaluated (i.e., are correlations high where they are expected to be high, and low where they are expected to be low). We hypothesized that correlations of FAOS subscales with the physical outcomes (SF-36 subscales Physical functioning, Role physical, and Bodily pain; NRS Pain and Disability; and Hannover questionnaire) would be higher than correlations with the mental outcomes (other SF-36 subscales).

Floor and ceiling effects were registered for each scale. These effects are considered to be present if the amount of minimal or maximal scores exceeds 15%.383

**Results**

In the complete study population, the mean FAOS subscale Pain was 59.5 $\pm$ 22.4 (range,
Validation of the German FAOS

13.9 – 100); Symptoms was 62.3 ± 20.9 (range, 17.9 – 100); ADL was 70.3 ± 21.9 (range, 7.4 – 100); Sport was 46.2 ± 28.7 (range, 0 – 100); and QoL was 36.9 ± 21.3 (range, 0 – 100). A total of 158 individual items were missing, which corresponds to 2.5% of missing data (158 items in 150 patients × 42 items). Each subscale score of all patients could be calculated.

One-hundred and eighteen patients (79%) completed the second FAOS after a week. Of these, 42 indicated that the (extent of) symptoms had changed since the first questionnaire. Therefore, data of 76 patients (51%) were used to calculate the reliability.

Test-retest reliability of each subscale and internal consistency were excellent (Table 1). The MDCs at the individual level were between 17.1 and 20.8; those at group level were between 2.0 and 2.4 (see Table 1).

There were moderate to strong correlations between FAOS subscales and SF-36 Physical functioning, Role physical, and Bodily pain; NRS Pain and Disability; and Hannover questionnaire (Table 2). There were low to moderate

Table 1. FAOS subscale scores (n = 76), test-retest reliability (n = 76), internal consistency (n = 150), and minimal detectable change (n = 76)

<table>
<thead>
<tr>
<th>FAOS subscale</th>
<th>Test (mean ± SD)</th>
<th>Retest (mean ± SD)</th>
<th>ICC (95% CI)</th>
<th>Cronbach’s alpha</th>
<th>Systematic difference</th>
<th>MDCindividual</th>
<th>MDCgroup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>57.6 ± 23.0</td>
<td>58.7 ± 22.6</td>
<td>0.92 (0.88 - 0.95)</td>
<td>0.96</td>
<td>1.1 (p = 0.25)</td>
<td>18.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Symptoms</td>
<td>60.2 ± 21.1</td>
<td>63.0 ± 22.5</td>
<td>0.88 (0.82 - 0.93)</td>
<td>0.94</td>
<td>2.8 (p = 0.06)</td>
<td>20.0</td>
<td>2.3</td>
</tr>
<tr>
<td>ADL</td>
<td>69.4 ± 22.6</td>
<td>68.7 ± 23.9</td>
<td>0.89 (0.83 - 0.93)</td>
<td>0.94</td>
<td>0.7 (p = 0.61)</td>
<td>20.8</td>
<td>2.4</td>
</tr>
<tr>
<td>Sport</td>
<td>47.1 ± 29.0</td>
<td>48.7 ± 29.9</td>
<td>0.95 (0.93 - 0.97)</td>
<td>0.98</td>
<td>1.6 (p = 0.21)</td>
<td>17.2</td>
<td>2.0</td>
</tr>
<tr>
<td>QoL</td>
<td>38.5 ± 23.8</td>
<td>39.3 ± 22.2</td>
<td>0.93 (0.90 - 0.96)</td>
<td>0.97</td>
<td>0.8 (p = 0.40)</td>
<td>17.1</td>
<td>2.0</td>
</tr>
</tbody>
</table>

ADL = activities of daily living, CI = confidence interval, ICC = intraclass correlation coefficient, MDCgroup = minimal detectable change at group level, MDCindividual = minimal detectable change at individual level, QoL = foot- and ankle-related quality of life, and SD = standard deviation.

Table 2. Construct validity. Correlation (Pearson correlation coefficient) between FAOS subscales and other outcome measures (n = 150)

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Pain</th>
<th>Symptoms</th>
<th>ADL</th>
<th>Sport</th>
<th>QoL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF-36</td>
<td>0.66</td>
<td>0.58</td>
<td>0.79</td>
<td>0.75</td>
<td>0.63</td>
</tr>
<tr>
<td>Physical functioning</td>
<td>0.33</td>
<td>0.34</td>
<td>0.54</td>
<td>0.53</td>
<td>0.43</td>
</tr>
<tr>
<td>Role physical</td>
<td>0.80</td>
<td>0.59</td>
<td>0.68</td>
<td>0.62</td>
<td>0.66</td>
</tr>
<tr>
<td>Bodily pain</td>
<td>0.36</td>
<td>0.36</td>
<td>0.38</td>
<td>0.44</td>
<td>0.38</td>
</tr>
<tr>
<td>Social functioning</td>
<td>0.23</td>
<td>0.25</td>
<td>0.25</td>
<td>0.21</td>
<td>0.17</td>
</tr>
<tr>
<td>Mental health</td>
<td>0.19</td>
<td>0.27</td>
<td>0.30</td>
<td>0.34</td>
<td>0.27</td>
</tr>
<tr>
<td>Role emotional</td>
<td>0.21</td>
<td>0.22</td>
<td>0.26</td>
<td>0.21</td>
<td>0.26</td>
</tr>
<tr>
<td>Vitality</td>
<td>0.25</td>
<td>0.40</td>
<td>0.42</td>
<td>0.32</td>
<td>0.41</td>
</tr>
<tr>
<td>General health perceptions</td>
<td>0.71</td>
<td>0.74</td>
<td>0.75</td>
<td>0.78</td>
<td>0.64</td>
</tr>
<tr>
<td>NRS</td>
<td>-0.74</td>
<td>-0.47</td>
<td>-0.54</td>
<td>-0.52</td>
<td>-0.59</td>
</tr>
<tr>
<td>Pain</td>
<td>-0.55</td>
<td>-0.51</td>
<td>-0.63</td>
<td>-0.58</td>
<td>-0.61</td>
</tr>
<tr>
<td>Disability</td>
<td>0.71</td>
<td>0.74</td>
<td>0.75</td>
<td>0.78</td>
<td>0.64</td>
</tr>
</tbody>
</table>

All correlations were statistically significant (p <0.05).

ADL = activities of daily living, NRS = numeric rating scale, SF-36 = Short Form-36, and QoL = foot- and ankle-related quality of life.
correlations between FAOS subscales and SF-36 Social functioning, Mental health, Role emotional, Vitality, and General health perceptions.

There were no floor or ceiling effects. The lowest score was obtained by 0%, 0%, 0%, 5%, and 1% of the patients on the subscales Pain, Symptoms, ADL, Sport, and QoL, respectively. The highest score was obtained by 7%, 5%, 10%, 5%, and 5% of the patients on the subscales Pain, Symptoms, ADL, Sport, and QoL, respectively.

Discussion

A German version of the FAOS was developed in the first part of the present study. The translation process was executed according to official guidelines. The translated version was tested in the second part of the study. According to the psychometric analyses, the translated version was shown a reliable and valid instrument for use in German-speaking patients with foot and ankle pathology.

Test-retest reliability and internal consistency of each subscale were excellent (see Table 1). There were moderate to strong correlations between FAOS subscales and physical outcomes, and there were low to moderate correlations between FAOS subscales and mental outcomes (see Table 2). In addition, no floor or ceiling effects were observed. According to the MDC, the FAOS may be more suitable for the evaluation at group level than at individual level. The relatively high MDC may be attributed to the diverse study population.

Although only 76 of 150 patients were available for statistical analysis of test-retest reliability (due to a relatively low response rate of the second questionnaire or a changed situation), this number was well above the required number of 50. Cross-cultural adaption of the questionnaire was deemed unnecessary, because the German population can be considered similar to the Swedish population of the original version. Likewise, the patient burden imposed by administering the FAOS was not tested because it is considered to be identical to that of the original version (less than 10 min).

Roos et al. invented the original English version (adapted from the Knee injury and Osteoarthritis Outcome Score). They tested the Swedish version in 213 patients. The psychometric properties were generally similar to the German version. Test-retest reliability varied from an ICC of 0.70 for ADL to 0.92 for QoL, and Cronbach's alpha varied from 0.88 for Symptoms to 0.97 for ADL. For construct validity, the FAOS subscales were compared with the Karls- son score. Spearman correlation coefficients of 0.58 to 0.67 were found. However, ceiling effects occurred in each subscale. The differences in ceiling effects between the original version and the developed translation may be contributed to the different study population. Roos et al. studied patients with previous ankle ligament reconstructions after a mean follow-up of 12 years, while our study population consisted of patients with a variety of foot and ankle disorders.

The original version has also been translated and validated into Turkish and Persian. Karatepe et al. studied 55 Turkish patients with various foot and ankle disorders. They found a test-retest reliability (ICC) of 0.70 to 0.96 and a Cronbach's alpha of 0.79 to 0.97 for each subscale. Correlations between FAOS and SF-36 subscales were comparable to those in our study. Floor or ceiling effects were not reported. Negahban from Iran validated the Persian version in 93 patients with foot and ankle disorders, mostly ankle sprain. ICCs were excellent but two subscales had low internal consistency (Cronbach's alpha of 0.39 for Symptoms and 0.62 for QoL). The correlations between FAOS and several SF-36 subscales were generally somewhat lower than in our study. Floor and
Validation of the German FAOS

celling effects were not present. Although the psychometric properties of the other languages are slightly inferior to the German version, all versions meet the quality criteria. The previous studies and our study indicate that the FAOS can be regarded a reliable and valid international outcome measure.

Other outcome measures developed for the German foot and ankle patient are the Visual Analog Scale Foot and Ankle (VAS FA) and the Foot and Ankle Ability Measure (FAAM). The VAS FA, however, is not available in other languages. Furthermore, only the construct validity was reported in healthy individuals. The FAAM is a reliable and valid international instrument with psychometric properties similar to the FAOS. The score has two subscales (ADL and Sport). The English and Persian versions have been validated in a range of foot and ankle disorders. However, the German version has been validated only in chronic ankle instability. In contrast, the FAOS has been validated in patients with various pathologic conditions. Possible advantages of the FAOS over the FAAM are a larger number of subscales and a broader target population.

The principal limitation of the present study is the fact that the sensitivity to change (i.e., responsiveness and minimal clinically important change) of the FAOS after an intervention was not investigated. Further studies are required to assess the sensitivity to change.

In conclusion, the developed German version of the FAOS is a valid and reliable instrument for foot and ankle patients. Future use of the score will allow comparison with the international literature and the execution of international multicenter studies. Translation and validation into other languages will expand its applicability.
„FAOS“ Fragebogen Fuß & Sprunggelenk

Datum: _____/_____/______ Geburtsdatum: _____/_____/______
Name: __________________________________________


Symptome
Diese Fragen beziehen sich auf Ihre Fuß/Sprunggelenksbeschwerden während der vergangenen Woche.

S1. Hatten Sie Schwellungen an Ihrem Fuß/Sprunggelenk?
   niemals selten manchmal oft immer
   [ ] [ ] [ ] [ ] [ ]

S2. Fühlten Sie ein Mahlen, hörten Sie ein Klicken oder irgendein Geräusch, wenn Sie Ihren Fuß/Ihr Sprunggelenk bewegten?
   niemals selten manchmal oft immer
   [ ] [ ] [ ] [ ] [ ]

S3. Blieb Ihr Fuß/Sprunggelenk hängen, oder blockierte er/es bei Bewegung?
   niemals selten manchmal oft immer
   [ ] [ ] [ ] [ ] [ ]

S4. Konnten Sie Ihren Fuß/Ihr Sprunggelenk ganz ausstrecken?
   immer oft manchmal selten niemals
   [ ] [ ] [ ] [ ] [ ]
Validation of the German FAOS

S5. Konnten Sie Ihren Fuß/Ihr Sprunggelenk ganz beugen?

immer          oft             manchmal          selten          niemals
[ ]             [ ]             [ ]             [ ]             [ ]

Steifigkeit
Die nachfolgenden Fragen betreffen die Steifigkeit in Ihrem Fuß/Sprunggelenk während der letzten Woche. Unter Steifigkeit versteht man ein Gefühl der Einschränkung oder Verlangsamung der Fähigkeit Ihre Gelenke zu bewegen.

S6. Wie stark war Ihre Fuß/Sprunggelenkssteifigkeit morgens direkt nach dem Aufstehen?

keine            schwach               mäβig                stark          sehr stark
[ ]             [ ]             [ ]             [ ]             [ ]

S7. Wie stark war Ihre Fuß/Sprunggelenksteifigkeit nach dem Sie saßen, lagen, oder sich im Verlauf des Tages ausruhten?

keine            schwach               mäβig                stark          sehr stark
[ ]             [ ]             [ ]             [ ]             [ ]

Schmerzen
P1. Wie oft haben Sie Schmerzen im Fuß/Sprunggelenk?

nie          monatlich         wöchentlich             täglich              immer
[ ]             [ ]             [ ]             [ ]             [ ]

Wie ausgeprägt waren Ihre Schmerzen in der vergangenen Woche als Sie z.B.?

P2. Sich im Fuß/Sprunggelenk drehten

keine            schwach               mäβig                stark          sehr stark
[ ]             [ ]             [ ]             [ ]             [ ]

P3. Ihren Fuß/Ihr Sprunggelenk ganz ausstreckten

keine            schwach               mäβig                stark          sehr stark
[ ]             [ ]             [ ]             [ ]             [ ]

P4. Ihren Fuß/Ihr Sprunggelenk ganz beugten

keine            schwach               mäβig                stark          sehr stark
[ ]             [ ]             [ ]             [ ]             [ ]

P5. Auf ebenem Boden gingen

keine            schwach               mäβig                stark          sehr stark
[ ]             [ ]             [ ]             [ ]             [ ]
Aktivitäten des täglichen Lebens
Die nachfolgenden Fragen beziehen sich auf Ihre körperliche Leistungsfähigkeit.
Hierunter verstehen wir Ihre Fähigkeit, sich selbständig zu bewegen bzw. sich selbst zu versorgen.
Für jede der nachfolgenden Aktivitäten geben Sie bitte das Ausmaß der Schwierigkeiten an, welche Sie aufgrund Ihres Fuß/Sprunggelenks innerhalb der letzten Woche erfahren haben.

Welche Schwierigkeiten hatten Sie in der letzten Woche als Sie z.B.:

A1. Treppen herunterstiegen
   keine    wenig    einige    große    sehr große
   □     □        □         □        □

A2. Treppen heraufstiegen
   keine    wenig    einige    große    sehr große
   □     □        □         □        □

A3. Vom Sitzen aufstanden
   keine    wenig    einige    große    sehr große
   □     □        □         □        □

Welche Schwierigkeiten hatten Sie in der letzten Woche als Sie z.B.:

A4. Aufrecht standen
   keine    wenig    einige    große    sehr große
   □     □        □         □        □
A5. Sich bückten um z.B. etwas vom Boden aufzuheben
keine                        wenig                einige                    große                 sehr große
☐                                ☐                                ☐                                ☐                                ☐

A6. Auf ebenem Boden gingen
keine                        wenig                einige                    große                 sehr große
☐                                ☐                                ☐                                ☐                                ☐

A7. Ins Auto ein- oder ausstiegen
keine                        wenig                einige                    große                 sehr große
☐                                ☐                                ☐                                ☐                                ☐

A8. Einkaufen gingen
keine                        wenig                einige                    große                 sehr große
☐                                ☐                                ☐                                ☐                                ☐

A9. Socken/Strümpfe anzogen
keine                        wenig                einige                    große                 sehr große
☐                                ☐                                ☐                                ☐                                ☐

A10. Vom Bett aufstanden
keine                        wenig                einige                    große                 sehr große
☐                                ☐                                ☐                                ☐                                ☐

A11. Socken/Strümpfe auszogen?
keine                        wenig                einige                    große                 sehr große
☐                                ☐                                ☐                                ☐                                ☐

A12. Im Bett lagen und sich drehten, ohne den Fuß/Sprunggelenk dabei zu beugen
keine                        wenig                einige                    große                 sehr große
☐                                ☐                                ☐                                ☐                                ☐

A13. In oder aus der Badewanne stiegen
keine                        wenig                einige                    große                 sehr große
☐                                ☐                                ☐                                ☐                                ☐

A14. Saßen
keine                        wenig                einige                    große                 sehr große
☐                                ☐                                ☐                                ☐                                ☐

A15. Sich auf die Toilette setzten oder aufstanden
keine                        wenig                einige                    große                 sehr große
☐                                ☐                                ☐                                ☐                                ☐
Chapter 16

A16. Schwere Hausarbeit verrichtet (schwere Kisten umstellen, Boden schrubben, etc)
keine wenig einige große sehr große
☐ ☐ ☐ ☐ ☐

A17. Leichte Hausarbeit verrichtet (kochen, Staub wischen, etc.)
keine wenig einige große sehr große
☐ ☐ ☐ ☐ ☐

Aktivitäten bei Sport und Freizeit
Die nachfolgenden Fragen beziehen sich auf Ihre körperliche Belastbarkeit im Rahmen von Sport- und Freizeitaktivitäten. Für jede der nachfolgenden Aktivitäten geben Sie bitte das Ausmaß der Schwierigkeiten an, welche Sie aufgrund Ihres Fuß/Sprunggelenks innerhalb der letzten Woche erfahren haben.

SP1. In die Hocke gingen
keine wenig einige große sehr große
☐ ☐ ☐ ☐ ☐

SP2. Rannten
keine wenig einige große sehr große
☐ ☐ ☐ ☐ ☐

SP3. Hüpften
keine wenig einige große sehr große
☐ ☐ ☐ ☐ ☐

SP4. Sich auf Ihrem kranken Fuß umdrehen
keine wenig einige große sehr große
☐ ☐ ☐ ☐ ☐

SP5. Sich hinknieten
keine wenig einige große sehr große
☐ ☐ ☐ ☐ ☐

Lebensqualität

Q1. Wie oft sind Sie sich Ihres Fuß/Sprunggelenksproblems bewusst?
nie monatlich wöchentlich täglich immer
☐ ☐ ☐ ☐ ☐
Q2. Haben Sie Ihre Lebensweise verändert, um eventuell Ihrem Fuß/Sprunggelenk schädigende Tätigkeiten zu vermeiden?

- gar nicht
- wenig
- etwas
- stark
- vollständig

Q3. Wie sehr leiden Sie unter einem Mangel an Vertrauen und Zuversicht hinsichtlich Ihres Fuß/Sprunggelenks?

- gar nicht
- wenig
- etwas
- stark
- sehr stark

Q4. Wie würden Sie insgesamt die Schwierigkeiten bewerten, die Sie durch Ihren Fuß/Ihr Sprunggelenk haben?

- keine
- wenig
- einige
- große
- sehr große

Vielen Dank für die Beantwortung aller Fragen.
Fragebogen und Anleitung sind auf der folgenden Internetadresse zu finden: www.koos.nu