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Description of the Simple Ankle Value

A Simplified Patient-Reported Outcome Measure for the Assessment of Ankle and Hindfoot Function

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Disclosure Information

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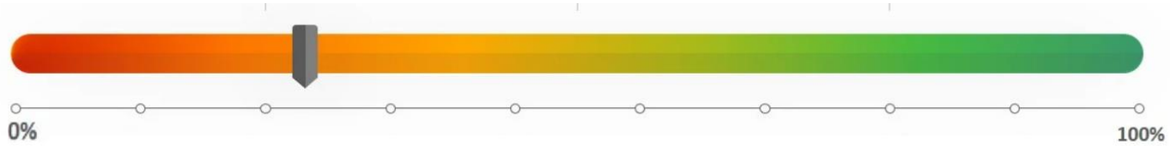
Introduction

- Functional scores are essential for ankle pathology evaluation.
- However, existing PROMs are complex and time-consuming.
- A simplified, patient-friendly tool is needed.



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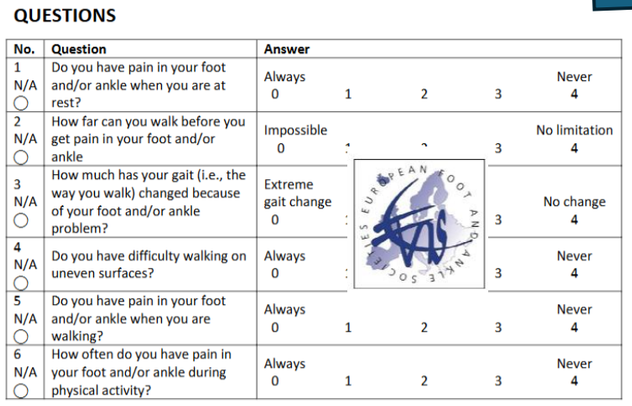
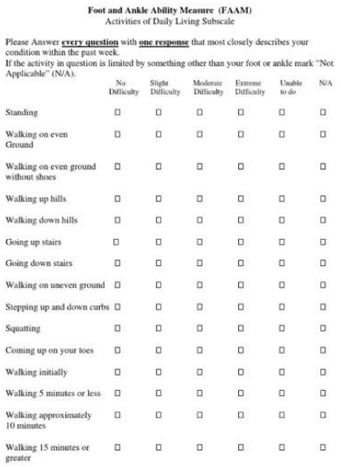


QUESTIONS

No.	Question	Answer				
1 N/A ◯	Do you have pain in your foot and/or ankle when you are at rest?	Always 0	1	2	3	Never 4
2 N/A ◯	How far can you walk before you get pain in your foot and/or ankle	Impossible 0	[illegible]	[illegible]	3	No limitation 4
3 N/A ◯	How much has your gait (i.e., the way you walk) changed because of your foot and/or ankle problem?	Extreme gait change 0	[illegible]	[illegible]	3	No change 4
4 N/A ◯	Do you have difficulty walking on uneven surfaces?	Always 0	[illegible]	[illegible]	3	Never 4
5 N/A ◯	Do you have pain in your foot and/or ankle when you are walking?	Always 0	1	2	3	Never 4
6 N/A ◯	How often do you have pain in your foot and/or ankle during physical activity?	Always 0	1	2	3	Never 4



Foot and Ankle Ability Measure (FAAM)
Activities of Daily Living Subscale

Please Answer **every question** with **one response** that most closely describes your condition within the past week.
If the activity in question is limited by something other than your foot or ankle mark "Not Applicable" (N/A).

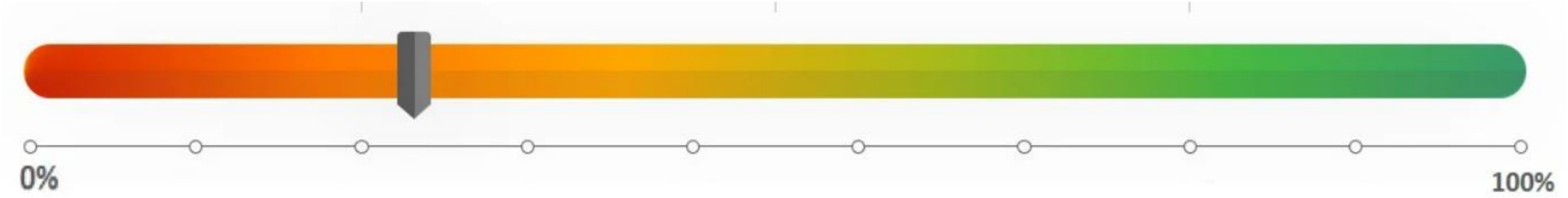
	No Difficulty	Slight Difficulty	Moderate Difficulty	Extreme Difficulty	Unable to do	N/A
Standing	☐	☐	☐	☐	☐	☐
Walking on even Ground	☐	☐	☐	☐	☐	☐
Walking on even ground without shoes	☐	☐	☐	☐	☐	☐
Walking up hills	☐	☐	☐	☐	☐	☐
Walking down hills	☐	☐	☐	☐	☐	☐
Going up stairs	☐	☐	☐	☐	☐	☐
Going down stairs	☐	☐	☐	☐	☐	☐
Walking on uneven ground	☐	☐	☐	☐	☐	☐
Stepping up and down curbs	☐	☐	☐	☐	☐	☐
Squatting	☐	☐	☐	☐	☐	☐
Coming up on your toes	☐	☐	☐	☐	☐	☐
Walking initially	☐	☐	☐	☐	☐	☐
Walking 5 minutes or less	☐	☐	☐	☐	☐	☐
Walking approximately 10 minutes	☐	☐	☐	☐	☐	☐
Walking 15 minutes or greater	☐	☐	☐	☐	☐	☐

Study Aim

- To validate the Simple Ankle Value (SAV), a single-question PROM.
- To assess its correlation with established scores: FAAM and EFAS.
- To evaluate its reliability, sensitivity, and discriminatory ability.

The SAV Tool

- **"How normal do you consider your ankle function today, as a percentage?„**



- Answer from 0% (worst) to 100% (fully normal).
- Inspired by the Single Assessment Numeric Evaluation (SANE).

Methods

- Prospective, multicenter cohort (Saint Herblain & Paris).
- 3 groups: operative (n=79), nonoperative (n=103), control (n=27)
- All completed SAV, FAAM, and EFAS.

TABLE 1
Patient Characteristics of Different Groups[a]

	Nonoperative Group (n = 103)	Operative Group (n = 79)	Control Group (n = 27)
Men/women, n	63/40	43/36	15/12
Age, y, mean ± SD	42.03 ± 15.85	41.91 ± 16.57	41.44 ± 15.73
Diagnosis, %	• Hindfoot osteoarthritis: 20.3 • Chronic painful instability: 17.4 • Ankle instability: 15.5 • Ankle impingement: 12.6 • Tendinopathy (Achilles or peroneal): 9.7 • Chronic ankle pain with no organic cause: 9.7 • Osteochondral talar dome lesion: 8.7 • Syndesmosis injury: 2.9	• Ligament reconstruction ± associated procedure: 43 • Arthrodesis (subtalar ankle/twist): 25.3 • Osteochondral graft: 5.8 • Debridement ankle impingement: 5 • Tear or speed bridge Achilles tendon: 5 • Regularization peroneal tendon: 5 • Treatment pseudarthrosis (external malleolus or other): 3.8 • Ablation of osteosynthesis equipment in the ankle: 2.5 • Calcaneonavicular coalition: 1.2 • Calcaneal osteotomy: 1.2	—
Postoperative follow-up, %	2.9	—	—

[a]Dashes indicate areas not applicable.

Reliability

- Excellent test-retest reliability: ICC = 0.92 (95% CI: 0.88–0.94).
- No floor or ceiling effects.

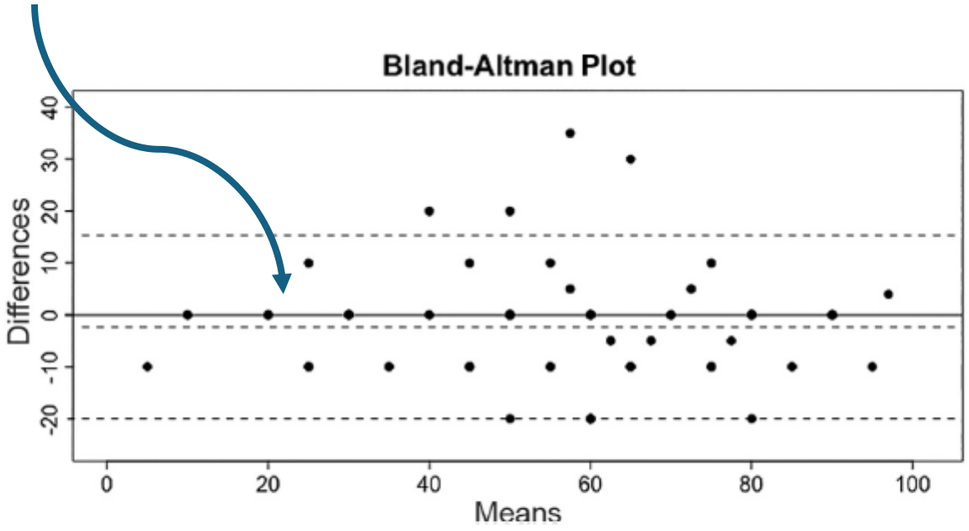


Figure 1. Intraclass correlation between test and retest. Top line, +1.96 SD; middle line, mean; bottom line, –1.96 SD.

Validity

- Strong correlation between SAV and FAAM/EFAS (r = 0.48–0.66, p < .001).
- SAV correlates with daily and sports subscales.

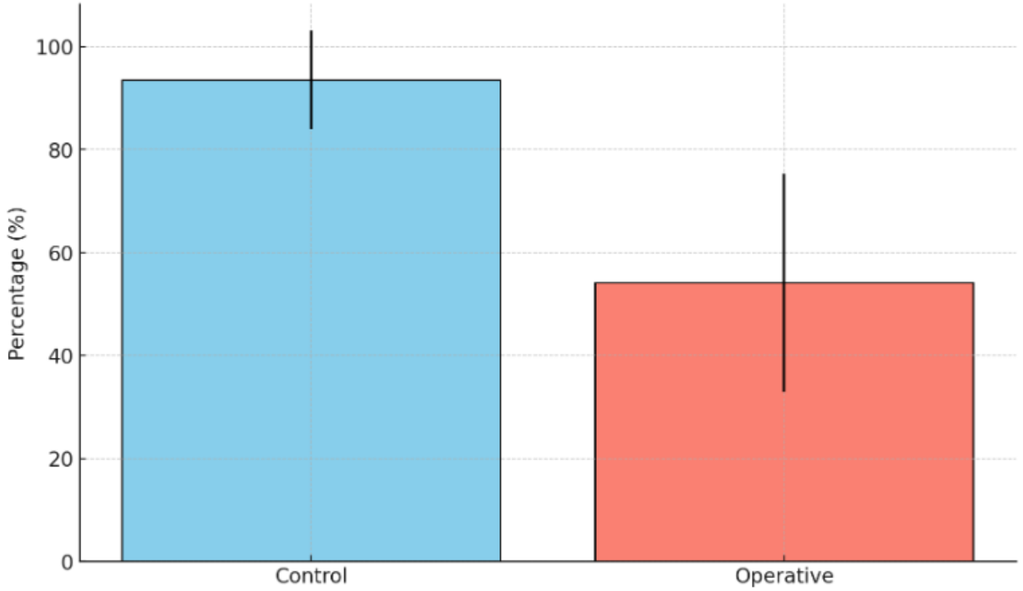
TABLE 2
Outcome Scores and Correlations Between the SAV and Other Scores in the Operative Group[a]

		FAAM, %		EFAS, %	
	SAV, %	Daily Activities	Sports	Daily Activities	Sports
Score, mean ± SD					
Preoperative	54.18 ± 21.22	62.76 ± 20.35	38.39 ± 25.92	35.58 ± 22.5	25.66 ± 27.65
Postoperative	62.53 ± 20.83	69.49 ± 20.91	37.57 ± 31.76	50.53 ± 23.2	24.28 ± 29.68
r_S (95% CI)					
Preoperative		0.60 (0.41-0.75)	0.56 (0.37-0.71)	0.48 (0.26-0.67)	0.50 (0.29-0.65)
		$P < .001$	$P < .001$	$P < .001$	$P < .001$
Postoperative		0.66 (0.48-0.79)	0.62 (0.43-0.76)	0.56 (0.36-0.72)	0.61 (0.43-0.76)
		$P < .001$	$P < .001$	$P < .001$	$P < .001$

[a]EFAS, European Foot & Ankle Society; FAAM, Foot and Ankle Ability Measure; SAV, Simple Ankle Value.

Discriminative Ability

- SAV discriminates between healthy controls and patients:
  - Control group: 93.5 ± 9.6%
  - Operative group: 54.2 ± 21.2%
- $p < .0001$



Sensitivity to Change

- No significant improvement at 3 months postop (p = .44):
  - Pre-op: 54.2 ± 21.2%
  - 3-months post-op: 62.5 ± 20.8%

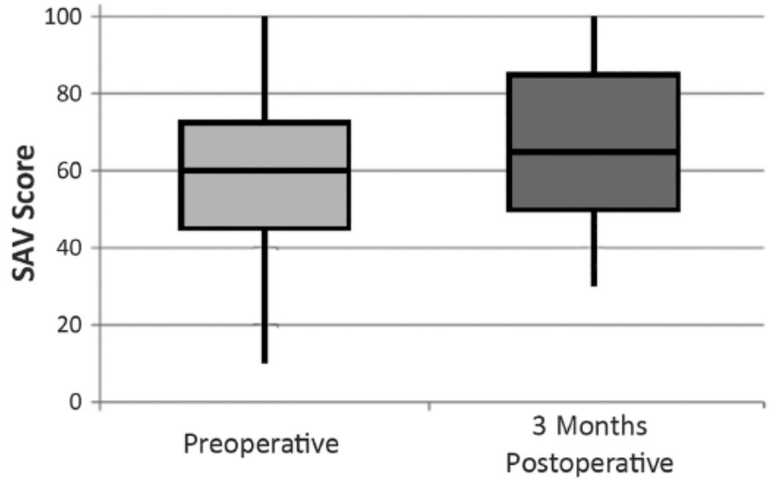


Figure 2. Distribution of the Simple Ankle Value (SAV) for preoperative and 3 months postoperative in the operated group. In operative group: Low mustache, minimum SAV score of the series; high mustache, maximum SAV score of the series; low box, 1st quartile value; high box, 3rd quartile value; horizontal line, median value.

Discussion

- ✓ Valid
- ✓ Reliable
- ✓ Discriminant
- ✓ Simple

- SAV is valid and reliable.
- Easy to use, understood by patients, no assistant required.
- Ideal as a complementary PROM in ankle/hindfoot disorders

Conclusion & Perspectives

- SAV correlates well with established ankle PROMs
- Suitable for clinical and research use
- Further studies needed on responsiveness 🔍

Simplicity is the ultimate sophistication.
-Leonardo da Vinci

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