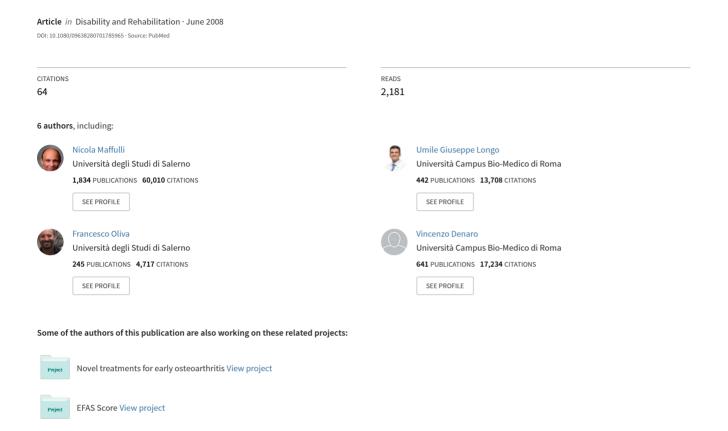
# Italian translation of the VISA-A score for tendinopathy of the main body of the Achilles tendon



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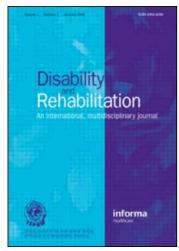
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## Italian translation of the VISA-A score for tendinopathy of the main body of the Achilles tendon

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#### Abstract

Purpose. To translate and adapt the English VISA-A questionnaire to Italian, to perform reliability and validity evaluations of the Italian VISA-A version in patients with tendinopathy of the main body of the Achilles tendon.

Methods. The VISA-A English version was translated into Italian by a bilingual orthopaedic surgeon. The back translation of the Italian version into English was performed by another bilingual orthopaedic surgeon. The original version was compared with the back translation. The VISA-A-I questionnaire was then administered to 50 male athletes (average age 26.4, range 18–49 years) with a diagnosis of tendinopathy of the main body of the AT. For test-retest evaluation, the 50 patients were asked to complete the questionnaire at first examination, and 30 minutes following the end of this examination. Results. The kappa statistics for 50 patients was 0.80 (range 0.7–0.86). There were no significant differences between the scores immediately after the consultation and 30 minutes later.

Conclusions. Italian and the English versions of the VISA-A questionnaire evaluate the same aspects of clinical severity in patients with tendinopathy of the main body of the Achilles tendon.

**Keywords:** Achilles tendon, tendinopathy, VISA-A, Italian, translation

#### Introduction

Overuse injuries of the Achilles tendon (AT) are well documented and fairly common [1,2]. Repetitive overload of the AT to a level beyond its physiological threshold can lead to inflammation of its sheath, failed healing response of its body, or a combination of both [3].

While many of the epidemiological and imaging difficulties have been addressed and solved, few studies to quantify the clinical outcome of patients suffering with Achilles tendinopathy have been performed, and clinical outcome has been often described quite subjectively. This lack of uniformity among outcome evaluation makes it difficult to compare and combine data. It is necessary for

the outcome measures made in the different studies to follow an accepted questionnaire. If outcome measures are uniform across the different studies then comparing and combining data will be possible.

The Victorian Institute of Sports Assessment – Achilles questionnaire (VISA-A) is an easily self-administered questionnaire which evaluates symptoms and their effect on physical activity [4]. The VISA-A questionnaire is able to determine the clinical severity and provide information about the effect of the management of Achilles tendinopathy [4]. It is desirable that VISA-A questionnaire is translated, adapted and evaluated for non-English speaking people. The VISA-A score has already been used to evaluate the outcome of management

and has been formally cross-culturally adapt to Swedish [5].

The goal of the study was to translate and adapt the English VISA-A questionnaire to Italian, to perform reliability and validity evaluations of the Italian VISA-A (VISA-A-I) version in patients with tendinopathy of the main body of the Achilles tendon.

#### Patients and methods

Our institutional review board approved the study, and all patients gave written informed consent to participate in this study.

#### Eligibility criteria

Patients were included in the study if they had received a diagnosis of tendinopathy of the main body of the AT of at least 12 weeks pain duration. The diagnosis of tendinopathy of the main body of the AT was made if patients had pain at the AT at rest or at exercise in the main body of the AT, 2-6 cm proximal to the insertion, associated with tenderness and swelling.

Patients were excluded from the study if they had insertional tendinopathy, paratendinopathy, partial rupture, total rupture, autoimmune or inflammatory condition, previous surgery on the AT or in the affected ankle, Haglund's exostosis or bursitis, or had metabolic disorders.

#### VISA-A-I

To establish good face validity and content validity, the translation and cultural adaptation of the VISA-A questionnaire into Italian was performed in several steps. The English version was translated into Italian by a bilingual orthopaedic surgeon. The back translation of the Italian version into English was performed by another bilingual orthopaedic surgeon. The authors of this article compared the original version with the back translation.

The VISA-A-I questionnaire was then used for this study, administering it to patients with a diagnosis of tendinopathy of the main body of the AT. Fifty consecutive male athletes (average age 26.4, range 18–49 years) (Table I), with unilateral tendinopathy of the main body of the AT, were included in the study. Construct validity of the VISA-A-I was tested according to the original article on the VISA-A English version [4].

For test-retest evaluation, the patients to whom the VISA-A-I were administered were asked to complete the questionnaire at first examination, and 30 minutes following the end of this examination.

Table I. Type of sport followed by participants.

Sports participation	
Soccer	15
Volleyball	6
Basketball	5
Track and field athletics	13
Rugby	4
Martial arts	4
Ballet	3

#### Statistical analysis

Data were analysed by SPSS 11.5 for Windows. Descriptive data are reported as mean, standard deviation and 95% confidence interval. Test-retest data were analysed by Pearson's r, as in the VISA-A English version. Internal consistency was assessed by calculation of Cohen's Kappa statistics. The level of significance was set at p < 0.05.

#### Results

The VISA-A-I score was  $51.8 \pm 18.2$  at the first examination, and  $51.1 \pm 19$  30 minutes following the end of this examination. There were no significant differences between the scores immediately after the consultation and 30 minutes later. The kappa statistics for the test-retest was 0.80 (range 0.7-0.86), showing good test-retest reliability.

#### Discussion

The Victorian Institute of Sports Assessment – Achilles questionnaire (VISA-A) evaluates symptoms and their effect on physical activity [4]. The VISA-A score has already been adapted to Swedish [5], and used to evaluate the outcome of management [6].

We have used a German version of the VISA-A score in a recent randomized controlled trial on extracorporeal shock wave therapy in patients with tendinopathy of the main body of the AT [7], but it has not been formally validated in that language.

In the present investigation, we translated and adapted the English VISA-A questionnaire to Italian, to perform reliability and validity evaluations of the Italian version in patients with tendinopathy of the main body of the AT. The VISA-A-I showed good test-retest reliability in the 50 male athletes in whom it was tested. The Italian and the English versions of the VISA-A questionnaire evaluate the same aspects of clinical severity in patients with tendinopathy of the main body of the AT. We can, therefore, expect that similar scores in the two versions indicate the same index of severity in patients with tendinopathy of the main body of the AT. The mean VISA-A-I score for patients in the present study was not significantly different from the mean VISA-A score

for the non-surgical group in the original article by Robinson et al. [4].

We are aware that even more stringent validation could have been performed. For example, two or more translators and back translators could have been used, and the resultant translations could have been collated and amalgamated. Each question could have been analysed statistically on its own. However, as the results of other studies [5,6] showed that there is good cross-cultural adaptation of the original VISA-A score, we felt that this would have unnecessarily overloaded of the research team.

We did not validate the VISA-A-I for insertional tendinopathy of the AT, and this is a further area of study. Informal feedback from the patients involved in this study showed that the Italian translation of the VISA-A is valid, easily comprehensible, and readily understandable. A more extensive testing procedure could have been warranted, and this may be the subject of future endeavours. Also, we could have tested it in non-athletic patients, and in females. However, the work performed by ourselves using the English version of the VISA-A confirms that this scoring system is equally valid in non-athletic patients, and in females.

We did not administer the VISA-A-I to patients scheduled for surgery. Unfortunately, the present conservative management regime used in our setting has drastically reduced the number of subjects required such intervention [8,9]. Again, this could be the subject of further, more refined studies.

The fact that the test-retest experimentation was performed on the same day and only within 30 minutes of each other can be regarded as a limitation of the study. However, this was dictated by practicalities, as it would have been difficult if not impossible to bring patients back at a later date for a further testing session. Also, we felt that it would

not have been feasible to ask the patients to complete the VISA-A questionnaire on their own, outside of our clinical setting, and then bring it back or post it to the department.

In conclusion, research on conservative and surgical management of Achilles tendinopathy is performed in many countries. It is therefore desirable that, to compare and contrast the results of such management modalities, validated questionnaires are used. We believe that translations and adaptations of the VISA-A will allow this.

#### References

- Maffulli N, Wong J, Almekinders LC. Types and epidemiology of tendinopathy. Clin Sports Med 2003;22:675-692.
- Maffulli N, Sharma P, Luscombe KL. Achilles tendinopathy: Aetiology and management. J R Soc Med 2004;97:472-476.
- Maffulli N, Kader D. Tendinopathy of tendo achillis. J Bone Joint Surg Br 2002;84:1–8.
- Robinson JM, Cook JL, Purdam C, Visentini PJ, Ross J, Maffulli N, Taunton JE, Khan KM. The VISA-A questionnaire: A valid and reliable index of the clinical severity of Achilles tendinopathy. Br J Sports Med 2001;35:335-341.
- Silbernagel KG, Thomee R, Karlsson J. Cross-cultural adaptation of the VISA-A questionnaire, an index of clinical severity for patients with Achilles tendinopathy, with reliability, validity and structure evaluations. BMC Musculoskelet Disord 2005; 6:12.
- Silbernagel KG, Thomee R, Eriksson BI, Karlsson J. Continued sports activity, using a pain-monitoring model, during rehabilitation in patients with Achilles tendinopathy: A randomized controlled study. Am J Sports Med 2007;35:897–906.
- Rompe JD, Nafe B, Furia JP, Maffulli N. Eccentric loading, shock-wave treatment, or a wait-and-see policy for tendinopathy of the main body of tendo Achillis: A randomized controlled trial. Am J Sports Med 2007;35:374 – 383.
- Kader D, Saxena A, Movin T, Maffulli N. Achilles tendinopathy: Some aspects of basic science and clinical management. Br J Sports Med 2002;36:239 – 249.
- Tallon C, Coleman BD, Khan KM, Maffulli N. Outcome of surgery for chronic Achilles tendinopathy. A critical review. Am J Sports Med 2001;29:315 – 320.

#### **Appendix**

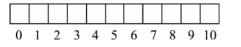
#### VISA-A Achilles tendon score Versione Italiana

Lato	affetto:

Lato affetto.	
	Etichetta
Data dell'esame: Esaminato da:	

#### Specifico per dolore nella regione del tendine d'Achille

1. Per quanti minuti ha dolore nella regione del tendine di Achille al risveglio?



**PUNTI** 

0

2

No, per niente

Ho modificato la mia attivita' lavorativa (meno attivita' fisica)

<i>3</i> 0	N. Majjuit et a	и.					
2. Una volta riscaldato, ha dolore allungando al massimo il tendine con l'avampiede sul bordo di un							
gradino? (Tenendo il ginocchio esteso e rigido)							
gruumo. (Tononuo il ginocomo esceso e rigiuo)							
						PUNTI	
		0 1 2	3 4 5 6 7	7 8 9 10			
Dolor	re forte			Nessun do	lore		
						?(Se non le e' possible	
	_	0 minuti in p	pianura a causa	del dolore al tendir	ne di Achille, in questa	domanda il punteggio	
S	ara' 0)						
						DINT	
		0 1 2	3 4 5 6 7	7 8 9 10		PUNTI	
Dolor	re forte	0 1 2	5 4 5 0 1	Nessun do	lore		
	Ha dolore a scen	idere le sca	ıle ad un'anda		1010		
						PUNTI	
		0 1 2	3 4 5 6 7	7 8 9 10			
	re forte			Nessun do			
				_		i per 10 volte da una	
SI	uperficie piana	sulla gamba	a il cui tendine	e di Achille fa male	e?		
						PUNTI	
		0 1 2	3 4 5 6 7	7 8 9 10		TONTI	
Dolor	re forte			Nessun do	lore		
6. Ç	Quanti saltelli a	una gamba	puo' fare senz	za aver dolore?			
	-	$\Box$	<del>-</del>				
						PUNTI	
		0 1 2	3 4 5 6 7				
	re forte			Nessun do	lore		
	volge regolarme		o attivita' fisica	1.		PUNTI	
0 2			nartecinazione	alle gare sono sta	ti modificati	PUNII	
				_		orima dell'esordio dei	
,	sintomi	into compi	icto, ma ic gai	e non sono più u	ino stesso inveno di p	orinia den esoraro der	
5	Gare allo	o stesso live	ello o livello pi	u' alto rispetto a c	juando sono iniziati i	i sintomi	
8. R	Risponda alla do	manda <b>A</b> ,	B o C.				
•				mpleti <b>solo la dor</b>			
•					la impedirle di porta	re a termine l'attivita'	
	•	-	la domanda (				
•	_	-	sport tale da im	ipedirle di portare a	termine l'attività' spo	ortiva, completi solo la	
	domanda Q8 A. Se non h		raticando enor	rt ner guanto temi	oo lo puo' praticare?		
		_	11 – 20 minut			PUNTI	
	0	3.5	7	10.5	15	101111	
	Oppure	3.3	•	10.3			
<b>B.</b> Se ha dolore praticando sport, ma il dolore non e' tale da impedirle di portare a termine							
l'attivita' sportiva, per quanto tempo lo puo' praticare?							
		10 minuti	11-20 minut	i 21-30 minuti	>30 minuti	PUNTI	
	0	2	5	7	10		
Oppure							
<b>C.</b> Se ha dolore praticando sport tale da impedirle di portare a termine l'attivita', per quanto tempo lo puo' praticare?							
			11 – 20 minut	i 21 – 30 minuti	>30 minuti	PUNTI	
	0 mmuu 1 – 0	1	2.5	3.5	> 50 mmun 5	101411	
9. E	E' in grado di la	-		5.5	<i>3</i>		

PUNTI

- 3.5 Ho ripreso la mia attivita' lavorativa, ma non allo stesso livello di prima della insorgenza dei sintomi
- 5 Non ho modificato la mia attivita' lavorativa da quando sono incominciati i sintomi
- 10. Risponda solamente alla domanda A, B o C
  - Se non ha dolore durante la sua attivita' lavorativa, risponda solo alla domanda 10A
  - Se ha dolore durante la usa attivita' lavorativa, ma il dolore non e' tale impedirle di portarla avanti, risponda solo alla domanda 10B
  - Se ha dolore durante la usa attivita' lavorativa tale da impedirle di portarlo avanti, risponda alla domanda 10C
    - A. Se non ha dolore durante la usa attivita' lavorativa, per quanto tempo puo' lavorare? 0 minuti 1-10 minuti 11-20 minuti 21-30 minuti >30 minuti PUNTI 0 3.5 7 10.5 15

#### **Oppure**

**B**. Se ha dolore durante la sua attivita' lavorativa, ma il dolore non e' tale da impedirle di portarla avanti, per quanto tempo puo' lavorare?

0 minuti 1-10 minuti 11-20 minuti 21-30 minuti >30 minuti PUNTI 0 2 5 7 10

#### **Oppure**

**C**. Se ha dolore durante la sua attivita' lavorativa tale da impedirle di portarlo avanti, per quanto tempo puo' lavorare?

0 minuti 1-10 minuti 11-20 minuti 21-30 minuti >30 minuti PUNTI 0 1 2.5 3.5 5

La preghiamo di voler scrivere, a parole sue, suggerimenti alle domande di cui sopra che possano aiutarci a misurare la severita' del suo dolore nella regione del tendine di Achille. Come puo' determinare se il suo tendine di Achille ha problemi o meno?

Punti Totali (/100)