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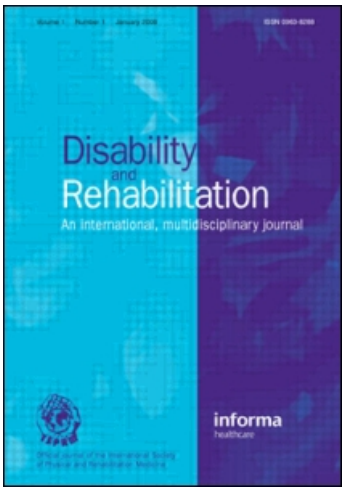

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Italian translation of the VISA-A score for tendinopathy of the main body of the Achilles tendon

NICOLA MAFFULLI[1], UMILE GIUSEPPE LONGO[2], VITTORINO TESTA[3], FRANCESCO OLIVA[4], GIOVANNI CAPASSO[5] & VINCENZO DENARO[2]

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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

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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 ± 18.2 at the first examination, and 51.1 ± 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

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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.

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Appendix

VISA-A Achilles tendon score Versione Italiana

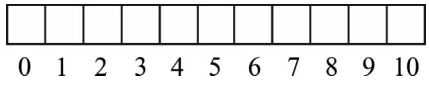
Lato affetto:

Etichetta

Data dell'esame:
Esaminato da: _____

Specifico per dolore nella regione del tendine d'Achille

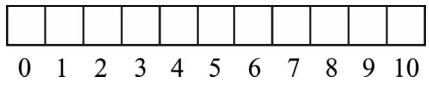
1. Per quanti minuti ha dolore nella regione del tendine di Achille al risveglio?



PUNTI

100 minuti 0 minuti

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)

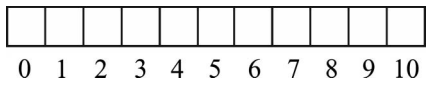


PUNTI

0 1 2 3 4 5 6 7 8 9 10

Dolore forte Nessun dolore

3. Dopo aver camminato per 30 minuti in pianura, ha dolore nelle due ore successive?(Se non le e' possible camminare per 30 minuti in pianura a causa del dolore al tendine di Achille, in questa domanda il punteggio sara' 0)

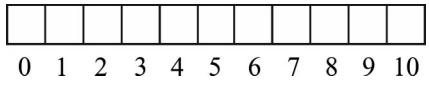


PUNTI

0 1 2 3 4 5 6 7 8 9 10

Dolore forte Nessun dolore

4. Ha dolore a scendere le scale ad un'andatura normale?

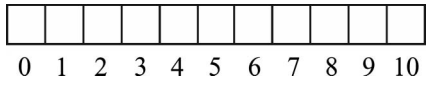


PUNTI

0 1 2 3 4 5 6 7 8 9 10

Dolore forte Nessun dolore

5. Ha dolore durante o immediatamente dopo essere andato sulla punta dei piedi per 10 volte da una superficie piana sulla gamba il cui tendine di Achille fa male?

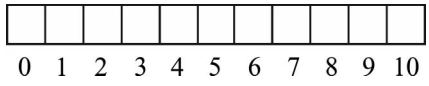


PUNTI

0 1 2 3 4 5 6 7 8 9 10

Dolore forte Nessun dolore

6. Quanti saltelli a una gamba puo' fare senza aver dolore?



PUNTI

0 1 2 3 4 5 6 7 8 9 10

Dolore forte Nessun dolore

7. Svolge regolarmente sport o attivita' fisica?

0	No, per niente	PUNTI
2	L'allenamento e la partecipazione alle gare sono stati modificati	
3.5	Allenamento completo, ma le gare non sono piu' allo stesso livello di prima dell'esordio dei sintomi	
5	Gare allo stesso livello o livello piu' alto rispetto a quando sono iniziati i sintomi	

8. Risponda alla domanda **A, B o C**.
   - Se non ha dolore praticando sport, completi **solo la domanda Q8A**.
   - Se ha dolore praticando sport, ma il dolore non e' tale da impedirle di portare a termine l'attivita' sportiva, completi **solo la domanda Q8B**.
   - Se ha dolore praticando sport tale da impedirle di portare a termine l'attivita' sportiva, completi **solo la domanda Q8C**.

   A. Se non ha dolore praticando sport, per quanto tempo lo puo' praticare?

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 praticando sport, ma il dolore non e' tale da impedirle di portare a termine l'attivita' sportiva, per quanto tempo lo puo' praticare?

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

   Oppure

   C. Se ha dolore praticando sport tale da impedirle di portare a termine l'attivita', per quanto tempo lo puo' praticare?

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

9. E' in grado di lavorare allo stato attuale?

0	No, per niente	PUNTI
2	Ho modificato la mia attivita' lavorativa (meno attivita' fisica)	

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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)	%

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