

## VISA-P score for patellar tendinopathy in males: Adaptation to Italian

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### Abstract

**Purpose.** To translate and adapt the English VISA-P questionnaire to Italian and to perform reliability and validity evaluations of the Italian VISA-P version in patients with patellar tendinopathy.

**Methods.** The VISA-P 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-P-I questionnaire was then administered to 25 male athletes (average age 27.9, range 18–32 years) with a diagnosis of patellar tendinopathy. For test-retest evaluation, the 25 patients were asked to complete the questionnaire at first examination, and 30 minutes following the end of this examination.

**Results.** The kappa statistics for 25 patients was 0.78. 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-P questionnaire evaluate the same aspects of clinical severity in patients with patellar tendinopathy.

**Keywords:** Patellar tendon, tendinopathy, VISA-P, Italian, translation

### Introduction

Patellar tendinopathy is a common knee disorder in jumping and running athletes [1,2]. It is often diagnosed clinically [3–5], and only recently scores quantifying patients' outcome have been formulated. Several scores are commonly used, and this lack of uniformity makes it difficult to compare and combine data among different investigations.

The Victorian Institute of Sports Assessment – Patellar questionnaire (VISA-P) is an easily self-administered questionnaire used to evaluate symptoms of patellar tendinopathy and their effects on physical activity [6]. The VISA-P has already been used to evaluate the outcome of management, and has been cross-culturally adapted to Swedish [7]. It has also been used in Norway in a recent randomized controlled trial to evaluate the effects

early surgery versus eccentric training in the management of the condition [8]. The VISA-P questionnaire is able to determine the clinical severity and provide information about the effects of management of patellar tendinopathy [6].

As the VISA-P questionnaire is now widely used across several countries, it would be desirable to translate, adapt, and evaluate it for non-English speaking subjects. We therefore translated and adapted the original English VISA-P questionnaire to Italian, and performed reliability and validity studies of the Italian version.

### 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 classical patellar tendinopathy. We excluded from the study patients with a clinical diagnosis of partial rupture, total rupture, Osgood Schlatter, quadriceps tendinopathy, or tendinopathy of the main body of the patellar tendon [2,9], autoimmune or inflammatory conditions, previous surgery on the patellar tendon or in the affected knee, and patients with known metabolic disorders.

### VISA-P

To establish good face and content validity, the English version of the VISA-P 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-P-I questionnaire was then used for this study, administering it to patients with a diagnosis of patellar tendinopathy. For test-retest evaluation, all 25 patients to whom the VISA-P-I was administered, were asked to complete the questionnaire at first examination, and 30 minutes following the end of this examination. Construct validity of the VISA-P-I was tested according to the original article on the VISA-P English version.

Twenty five male athletes (age 27.9, range 18–32 years old) (Table I), with unilateral tendinopathy of the main body of the Achilles tendon, were included in the main study. Construct validity of the VISA-P-I was tested according to the original article on the VISA-P English version [6].

### Statistical analysis

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

Table I. Sports participation.

Sports participation	
Soccer	8
Volleyball	2
Basketball	4
Track and field athletics	7
Rugby	1
Martial arts	3

### Results

The first mean VISA-P-I score was 44.3 (range: 33–61). At the second assessment, it was 45.2 (range: 31–61). There were no significant differences between the scores immediately after the consultation and 30 minutes later.

The kappa statistics for 25 patients was 0.78 (range 0.7–0.86) The VISA-P-I therefore showed good test-retest reliability in the 25 patients in whom it was tested.

### Discussion

The VISA-P questionnaire evaluates patellar tendinopathy symptoms and their effects on physical activity [6]. The VISA-P score has already been adapted to Swedish [7]. We performed our investigation on 25 patients, while the VISA-P-S has been validated on 17 patients [7]. A Norwegian group used the VISA-P score in a recent randomized controlled trial evaluating the results of early surgery versus eccentric training in the management of patellar tendinopathy [8]. We assume that they used a local translation of the questionnaire.

We did not validate the VISA-P-I for tendinopathy of the main body of the patellar tendon, and this is a further area of study. However, tendinopathy of the main body of the patellar tendon is markedly less common than classical patellar tendinopathy and such a study would require much longer time to be performed. We are aware of the fact 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 translation could have been collated and amalgamated. Each question could have been analysed statistically on its own. However, as the results of the study of Fhron et al. showed that there is good cross-cultural adaptation of the original VISA-P score [7], we felt that this would have unnecessarily overloaded the research team. Informal feedback from the patients involved in this study showed that the Italian translation of the VISA-P is valid, easily comprehensible, and readily understandable.

We are aware that a limitation of our investigation is the inclusion in the study of only male patients. However, in our practice, we do not encounter many female athletes with patellar tendinopathy [10]. Further studies could be performed in females, but probably would need to be multi-centric to enrol enough female athletes with the condition in a reasonable time. A more extensive testing procedure could have been warranted, and this may be the subject of future endeavours. We did not administer the VISA-P-I to patients scheduled for surgery: the present conservative management regime used in our setting has drastically reduced the number of subjects

requiring such intervention [2,11]. 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 one hour 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, and it would not have been feasible to ask the patients to complete the VISA-P questionnaire on their own, and then bring it back or post it to the department.

Our results show that the Italian and the English versions of the VISA-P questionnaire evaluate the same aspects of clinical severity in patients with tendinopathy of the patellar tendon. We can, therefore, expect that similar scores in the two versions indicate the same index of severity in patients with patellar tendinopathy.

In conclusion, research on conservative and surgical management of patellar 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 the translation and adaptation of the VISA-P will allow this.

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**Appendix**

**VISA-A patellar tendon score Versione Italiana**

Lato affetto:

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Etichetta

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Data dell’esame:

Esaminato da: \_\_\_\_\_

**Specifico per dolore nella regione del tendine rotuleo (NB: alcune persone conoscono questo tendine come tendine patellare), nella parte anteriore del ginocchio**

1. Per quanti minuti puo’ stare seduto senza dolore?

0	1	2	3	4	5	6	7	8	9	10

100 minuti

0 minuti

PUNTI

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2. Ha dolore scendendo le scale ad un' andatura normale?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4	5	6	7	8	9	10

PUNTI

Dolore forte

Nessun dolore

3. Ha dolore nell'estendere al massimo il ginocchio senza resistenza?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4	5	6	7	8	9	10

PUNTI

Dolore forte

Nessun dolore

4. Ha dolore nel fare un affondo?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4	5	6	7	8	9	10

PUNTI

Dolore forte

Nessun dolore

5. Ha problemi ad accovacciarsi?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4	5	6	7	8	9	10

PUNTI

Dolore forte

Nessun dolore

6. Ha dolore durante o immediatamente dopo aver fatto 10 saltelli con una sola gamba?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4	5	6	7	8	9	10

PUNTI

Dolore forte

Nessun dolore

7. Svolge regolarmente sport o attivita' fisica?

0 No, per niente

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

PUNTI

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

0 3.5 7 10.5 15

PUNTI

**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

0 2 5 7 10

PUNTI

**Oppure**

**C.** Se ha dolore praticando sport 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

0 1 2.5 3.5 5

PUNTI

**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 rotuleo. Come puo' determinare se il suo tendine rotuleo ha problemi o meno?**

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**Punti Totali (/100)** %

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