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VALIDITY AND RELIABILITY OF THE FRENCH TRANSLATION OF THE VISA-A QUESTIONNAIRE FOR ACHILLES TENDINOPATHY

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ABSTRACT

Purpose: The Victorian Institute of Sport Assessment – Achilles tendinopathy questionnaire (VISAA) evaluates the clinical severity of Achilles tendinopathy. The aim of this study was to translate the VISA-A into French and to study the reliability and validity of this French version, the VISA-AF.

Method: The VISA-A was translated into French to produce the VISA-AF using a validated methodology in six steps. Thereafter, several psychometric properties of this French version such as test–retest reliability, internal consistency, construct validity and floor and ceiling effects were evaluated. Therefore, we recruited 116 subjects, distributed into 3 groups: pathological patients (*n* = 31), at-risk athletes (*n* = 63) and healthy people (*n* = 22).

Results: The final version of the VISA-AF was approved by an expert committee. On a scale ranging from 0 to 100, the average scores of the VISA-AF obtained were 59 (± 18) for the pathological group, 99 (± 1) for the healthy group and 94 (± 7) for the at-risk group. The VISA-AF shows excellent reliability, low correlations with the discriminant subscales of the SF-36 and moderate correlations with the convergent subscales of the SF-36.

Conclusions: The French version of the VISA-A is equivalent to its original version and is a reliable and valid questionnaire for French-speaking patients with Achilles tendinopathy.

IMPLICATION FOR REHABILITATION

– The VISA-AF questionnaire is a reliable translation of the original VISA-A, from English into French, which is one of the most widespread languages in the world.
– The VISA-AF questionnaire is now a valid instrument that can be used by clinicians and researchers to assess the severity of pain and disability of French-speaking subjects with Achilles tendinopathy.
– The VISA-AF is a questionnaire to assess the severity of Achilles tendinopathy symptoms but is not a diagnostic tool.

KEYWORDS. Achilles tendinopathy; crosscultural adaptation; French; VISA-A

Introduction

Running is a highly popular sport and leisure activity. It is also an essential part of training for the majority of sporting disciplines. The overall annual injury rate resulting from regular running varies from 24% to 65%. Among these injuries, around 50–75% are pathologies linked to tendon overuse caused by constant repetition of the same movement.[1] Achilles tendinopathy is the most common pathology of overuse in runners, with a prevalence of 10%.[2] It also occurs in sports involving jumping. Annually, it affects between 7% and 9% of athletes who run or play basketball, volleyball, or squash.[2]

The Victorian Institute of Sport Assessment-Achilles tendinopathy questionnaire (VISA-A) is a self-administered questionnaire, originally developed in 2001 for English-speaking population, on the basis

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of the VISA-P (Victorian Institute of Sport Assessment-Patellar tendinopathy questionnaire).[3] VISA-A assesses the symptoms of Achilles tendinopathies and their impact upon physical activity.[3] As with the VISA-P, it consists of eight questions divided into three areas: the first three focusing on pain, the next three on functional consequences and the last two on the consequences for sporting activity.

It was subsequently translated into other languages (Swedish, Italian, German, Turkish and Dutch) [4–8] but no French translation has been carried out to date, justifying the approach taken in this study. This French version of the VISA-A (VISA-AF) could be used by nearly 275 million French speakers around the world across all five continents. The aim of this study was both to translate and adapt the VISA-A into a reliable French version, the VISA-AF, and to validate it by evaluating its psychometric properties.

Materials and methods

TRANSLATION

The final translated questionnaire was completed in six steps, according to the international recommendations for cross-cultural adaptation of questionnaires measuring health status, in order to reach linguistic and cultural equivalence between the original questionnaire and the translated version.[9]

STEP 1: INITIAL TRANSLATION

The first step was to translate the questionnaire from the original language (English) into the target language (French). Two bilingual translators, both native French speakers (one in the medical field and one outside the medical field) provided two independent translations (T1 and T2) of the original questionnaire. Each translator provided a written report of difficulties encountered in the translation of certain words or phrases and the reasons for their choices.

STEP 2: MERGING TRANSLATIONS

The second step consisted in merging the two initial translations. Therefore, the translators met and, from the two initial translations (T1 and T2), they provided a merged translation (T1–2).

STEP 3: BACK TRANSLATION INTO THE ORIGINAL LANGUAGE

From the merged version, and without having read the original questionnaire, another bilingual translator, this time native English speaker, translated the questionnaire back into its original language, English, to obtain a new English version (BT1). This step was used to check that the translation corresponded to the original questionnaire and had the same concepts.

STEP 4: EXPERT COMMITTEE

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The constitution of an expert committee, composed of one health professional, one expert in languages and all the translators (*n* = 3), was essential for this fourth step. They met to produce, from the different translations (T1, T2, T1–2 and BT1), a pre-final version of the questionnaire with semantic, idiomatic, experiential and conceptual equivalence.

STEP 5: PRE-FINAL VERSION TESTING

This was the last step in the process of adapting the questionnaire. The pre-final version was tested on a group of 10 people: 5 pathological subjects and 5 healthy subjects. After having responded to the questionnaire, subjects were questioned about their understanding of the different items and about the answers they provided. This step ensured that the adapted questionnaire keeps the same equivalence even when applied on the field.

STEP 6: EXPERT COMMITTEE APPROVAL

Following the information gathered from the previous step (i.e., no difficulties to answer the questionnaire and no misunderstanding or confusion about any item), the final version of the questionnaire was approved.

After the translation process, the last step was to demonstrate that the new version contains all the necessary measurement properties required by the original purpose of the questionnaire.

PARTICIPANTS

The protocol was approved by the Ethic Committee of the University of Liège (Belgium; number B707201318804). All participants (*n* = 116) were informed of the study goals and gave their informed consent. Subjects asked to test the French version of the VISA-A (VISA-AF) were divided into three groups.

A group of patients who were suffering from Achilles tendinopathy (*n* = 31) recruited from the Physical Medicine and Sports Traumatology Department of the University Hospital of Liège (Belgium). Subjects came to the Department to consult for Achilles pain. The diagnosis of Achilles tendinopathy was confirmed by clinical examination and imagery (ultrasound and/or MRI). One criterion was that they had to practise sport (whatever the frequency and length of sessions). They were directed by the physicians from the Physical Medicine and Sports Traumatology Department to the same investigator of our team.

A group of asymptomatic athletes who were practising a discipline where the risk of developing Achilles tendinopathy was recognized in the literature as high (*n* = 63): runners, trailers and athletes. They were recruited from different athletics clubs across the Province of Liège (Belgium).[1] These participants were recruited by our team and had never complained of Achilles pain.

A group of healthy individuals who were not involved in a sport at risk of Achilles tendinopathy (*n* = 22), recruited among students registered in sports sciences and physiotherapy of the University of

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Liège (Belgium). They had to practise sport (whatever the frequency and length of sessions) which is not reputed to be harmful for the Achilles tendon: fitness, cycling, gymnastic, rowing, collective sports, etc. These participants were recruited by our team and had never complained of Achilles pain.

The subjects had to be at least 18 years old and aware of the purpose of the study. Those with a history of complete rupture of the Achilles tendon or of recent ankle injury, and pregnant or breastfeeding women, were excluded.

ASSESSMENT OF THE CONSTRUCT VALIDITY

All participants in the study answered not only the VISAAF but also a questionnaire on quality of life, the Medical Outcomes Survey Short Form 36 (MOS SF-36), validated in French,[10] in order to establish correlations with other items measuring various aspects of the individuals' health status. MOS SF-36 evaluates eight concepts of physical and mental health (MH): physical functioning, role limitations due to physical health, bodily pain, general health perceptions, vitality, social functioning, role limitations due to emotional problems and MH. The score of each domain of the questionnaire ranges from 0 to 100, with 0 corresponding to extremely serious health problems and 100 reflecting no health problems.[10] All the questionnaires where self-administrated under the supervision of the same investigator.

The theoretical conception of the phenomenon enables to establish a number of hypotheses, which have to be tested experimentally later. Comparison of the scores in the three groups assesses whether the questionnaire scores reflect their logic (discriminant validity) and thus, tests the hypothesis that the average of the scores obtained in each of these three groups have to be significantly different.

If the experimental results are consistent with those expected, we will be able to trust the construct validity of the scale. Thereafter, to obtain acceptable validity, convergent and discriminant validity will have to be assessed. Therefore, the following assumptions need to be verified.

– The scale scores are considered moderately or highly correlated with the subscales of SF-36 measuring similar concepts to those measured by the adapted questionnaires (convergent validity);

– The scale scores should be weakly correlated with the subscales MH, emotional role functioning (ER), social role functioning (SF) and vitality (VT) of SF-36 because they assess different concepts (discriminant validity).

ASSESSMENT OF TEST–RETEST RELIABILITY

This assessment tests the stability over time of the results using intra-class correlation coefficients (ICC). A single investigator/evaluator assesses each patient twice at 30-min intervals while the subject's status remains unchanged.[11] Reliability increases as ICC approaches 1. It is also important to consider the 95% confidence interval of each ICC to have a clear idea of the possible variation range of the reliability value in the (various) groups.[11]

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ASSESSMENT OF INTERNAL CONSISTENCY

Cronbach's alpha coefficient assesses internal consistency of a set of items, scale or subscale, corresponding to a single clinical dimension. The aim is to estimate the strength of the inter-correlations between items. The more items are interconnected, the more the alpha value increases. Usually internal consistency and test–retest reliability are studied together because Cronbach's alpha coefficient can be regarded as a special case of ICC.[12] The alpha value ranges from 0 to 1, and internal consistency increases as alpha approaches 1.[11]

ASSESSMENT OF FLOOR AND CEILING EFFECTS

Minimum or maximum effects are considered present when more than 15% of participants obtain the lowest possible score (minimum effect) or the highest possible score (maximum effect). When a minimum or maximum effect is present, persons with a minimum score or a maximum score cannot be distinguished from each other, reducing the discriminating power of the questionnaire. To assess the presence or absence of these effects, a sample size of 50 individuals is required.[12]

DATA PROCESSING

All statistical analyses were performed using Statistica 10 software (Chicago, IL). Results were expressed as means and standard deviations (SDs) for continuous variables and as numbers and frequencies (%) for qualitative variables. All quantitative variables were submitted to a Shapiro–Wilk normality test to determine whether the variables were normally distributed or not. Depending on this, the relationship between quantitative variables was measured by either the Pearson or the Spearman correlation coefficient: low correlations were less than 0.3, moderate correlations were between 0.3 and 0.6 and strong correlations were greater than 0.6. The group means were compared using ANOVA (analysis of variance) with the Tukey HSD *post hoc* test. Results were considered significant at the level of uncertainty of 5% ($p < 0.05$). Test–retest reliability was tested using ICC, internal consistency using Cronbach's alpha coefficient, and construct validity using Spearman correlation.

Results

TRANSLATION

A few differences between the translation T1 and T2 were observed: ''heel raises'' in Item 5 and ''single leg hops'' in Item 6. These were resolved during analysis of the two translations. Because the translations were quite similar, the version T1–2 was essentially based on the T1 version in order to obtain a questionnaire which offered the greatest possible clarity and precision. The back translation was conducted without any significant problems, and the version obtained was very similar to the original. During tests of the pre-final version, none of the subjects expressed any difficulties

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understanding the questionnaire/the various items. The various members of the Expert Committee gave their approval after expressing their satisfaction with the final version (Table 1).

Table 1. French version of the VISA-A (VISA-AF).

1. Lorsque vous vous levez le matin, durant combien de minutes présentez-vous une raideur au niveau du tendon d'Achille?
   100 min — 0 min
   0 1 2 3 4 5 6 7 8 9 10

2. Après échauffement matinal, ressentez-vous des douleurs lorsque vous effectuez l'étirement complet du tendon d'Achille (en étant sur le bord d'une marche avec le genou en extension)?
   Douleur extrême — Pas de douleur
   0 1 2 3 4 5 6 7 8 9 10

3. Après avoir marché sur sol plat pendant 30 minutes, ressentez-vous des douleurs au cours des 2 heures suivantes? (Si vous en êtes incapable à cause de la douleur, indiquez un score de 0 pour cette question).
   Douleur extrême — Pas de douleur
   0 1 2 3 4 5 6 7 8 9 10

4. Ressentez-vous des douleurs quand vous descendez les escaliers (avec un cycle de marche normal)?
   Douleur extrême — Pas de douleur
   0 1 2 3 4 5 6 7 8 9 10

5. Ressentez-vous des douleurs pendant ou immédiatement après vous être mis 10 fois sur la pointe d'un pied (sur une surface plate)?
   Douleur extrême — Pas de douleur
   0 1 2 3 4 5 6 7 8 9 10

6. Combien de sauts unipodaux (sur une jambe) pouvez-vous accomplir sans ressentir de douleur?
   0 — 10
   0 1 2 3 4 5 6 7 8 9 10

7. Pratiquez-vous actuellement un sport ou une autre activité physique?
   0 Pas du tout
   4 Entraînement/compétition modifié
   7 Entraînement/compétition complet mais à un niveau différent (inférieur) de celui qui a vu les symptômes apparaître
   10 Entraînement/compétition à un niveau identique ou supérieur à celui qui a vu les symptômes apparaître

8. Complétez uniquement A, B ou C pour cette question:

- Si vous ne ressentez aucune douleur pendant la pratique sportive, veuillez compléter uniquement la Q8A.
- Si vous ressentez une douleur pendant la pratique sportive mais qu'elle ne vous empêche pas de poursuivre celle-ci, veuillez compléter uniquement la Q8B.
- Si vous ressentez une douleur qui vous empêche de poursuivre l'activité sportive, veuillez compléter uniquement la Q8C.

(Q8A) Si vous ne ressentez aucune douleur pendant la pratique sportive, combien de temps pouvez-vous vous entraîner/jouer?

0 min	1–10 min	11–20 min	21–30 min	>30 min
0	7	14	21	30

(Q8B) Si vous ressentez une douleur pendant la pratique sportive mais qu'elle ne vous empêche pas de poursuivre celle-ci, combien de temps pouvez-vous vous entraîner/jouer?

0 min	1–10 min	11–20 min	21–30 min	>30 min
0	4	10	14	20

(Q8C) Si vous ressentez une douleur qui vous empêche de poursuivre l'activité sportive, combien de temps pouvez-vous vous entraîner/jouer?

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

Score total: /100

POPULATION

The total sample size of the study consisted of 116 subjects. Out of these, 31 were patients suffering from unilateral or bilateral Achilles tendinopathies, 22 were people who were not affected by this pathology and 63 were athletes practising a sporting activity associated with the development of Achilles tendinopathy within the province of Lie`ge. The total sample consisted of 32 women and 84 men aged between 18 and 69 and with an average age of 34.1 years (Table 2). Running was the most common sporting activity practised by the patients (31) suffering from Achilles tendinopathy. It was also practised by all the subjects (63) from the at-risk group.

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Table 2. Characteristics of subjects who participated in the validation of the VISA-AF.

	Pathological subjects	"At-risk" subjects	Healthy subjects
Number of subjects	31	22	63
Age	45.2 ± 15.2	29.1 ± 11	30.1 ± 10.7
Gender (% of women)	7 (22.6%)	7 (31.8%)	18 (28.6%)
Right tendinopathy	5 (16.1%)	/	/
Left tendinopathy	12 (38.7%)	/	/
Bilateral tendinopathy	9 (29%)	/	/

Table 3 shows the VISA-A scores obtained in the three groups of subjects for the various adaptations in other languages made to date. The scores obtained in those studies were more or less similar to those of the VISA-AF.

Table 3. Results (mean ± SD) of various adaptations of the VISA-A in different languages compared with the original English version.

	Score of the pathological group (number of subjects)	Score of the at-risk group (number of subjects)	Score of the healthy group (number of subjects)
French version	59 ± 18 (n = 31)	94 ± 7 (n = 63)	99 ± 1 (n = 22)
Original version (English)	64 ± 17 (n = 45)	/	96 ± 7 (n = 63)
Swedish version	50 ± 23 (n = 51)	/	96 ± 4 (n = 15)
Italian version	52 ± 18 (n = 50)	/	/
German version	36 ± 14 (n = 93)	/	/
Dutch version	45 ± 14 (n = 15)	99 ± 2 (n = 31)	98 ± 7 (n = 48)
Turkish version	53 ± 14 (n = 55)	/	97 ± 2 (n = 55)

Table 4 shows the scores (mean ± standard deviation) obtained for the different questions in the VISA-AF. ANOVA demonstrates a significant difference between the three groups which responded to the VISA-AF. The *post hoc* test revealed that the average scores of the pathological group were significantly different from that of the healthy group as well as that of the at-risk population ($p < 0.001$).

Table 4. Results (mean ± SD) for the different items of the VISA-AF.

	Pathological subjects	"At-risk" subjects	Healthy subjects
Item 1	8.0 ± 2.2	9.7 ± 1.2	9.7 ± 1.2
Item 2	6.1 ± 2.5	9.3 ± 1.3	9.3 ± 1.3
Item 3	6.1 ± 2.8	9.6 ± 0.9	9.6 ± 0.9
Item 4	6.2 ± 2.3	9.7 ± 0.8	9.7 ± 0.8
Item 5	6.4 ± 3.1	9.4 ± 1.1	9.4 ± 0.2
Item 6	6.0 ± 3.8	9.5 ± 1.2	9.5 ± 1.2
Item 7	4.2 ± 3.3	8.9 ± 2.1	8.9 ± 2.1
Item 8	15.8 ± 7.6	28.0 ± 3.8	28.0 ± 3.8

TEST–RETEST RELIABILITY

The test–retest reliability results for the VISA-AF questionnaire are presented in Table 5. These results show that the reliability of the VISA-AF is excellent, with a total ICC of 0.99.

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Table 5. Test–retest reliability with 95% confidence interval (VISA-AF).

	Non-parametric Wilcoxon signed-rank test	ICC	95% CI
Item 1	1.00	0.98	0.979–0.990
Item 2	1.00	0.99	0.991–0.996
Item 3	0.75	0.98	0.978–0.989
Item 4	1.00	0.99	0.999–0.999
Item 5	0.99	0.97	0.961–0.981
Item 6	0.50	0.98	0.977–0.989
Item 7	0.50	0.99	0.989–0.994
Item 8	1.00	0.98	0.979–0.990
Total score	0.27	0.99	0.996–0.998

INTERNAL CONSISTENCY

The internal consistency of the VISA-AF was assessed using Cronbach's alpha coefficient which was 0.9, demonstrating a very good internal consistency (Table 6).

Table 6. Internal consistency of the VISA-AF.

	Correlation with the total score	Cronbach's alpha
Item 1	0.54	0.92
Item 2	0.70	0.91
Item 3	0.78	0.90
Item 4	0.75	0.91
Item 5	0.80	0.90
Item 6	0.70	0.91
Item 7	0.76	0.90
Item 8	0.80	0.90

CONSTRUCT VALIDITY

This was assessed by comparing the results of VISA-AF with those of SF-36. In order to reach convergent validity, the VISA-AF was compared with the total score of the SF-36 as well as with the physical health (PH), physical role functioning (PR), bodily pain (BP) and general health (GH) subscales. Discriminant validity was estimated by comparing the VISA-AF with the MH, emotional role functioning (ER), social role functioning (SF), and vitality (VT) subscales of SF-36. The SF-36 questionnaire was completed by 99 subjects (18 subjects in the pathological group, 22 healthy subjects and 59 atrisk subjects) (Table 7).

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Table 7. Construct validity of VISA-AF.

VISA-AF	r_S
SF-36 PH	0.51***
SF-36 PR	0.41*
SF-36 BP	0.57***
SF-36 GH	0.46***
SF-36 Total	0.56***
SF-36 MH	0.19*
SF-36 ER	0.09*
SF-36 SF	0.32*
SF-36 VT	0.39*

*$p < 0.05$.
***$p < 0.001$.
PH: physical health; PR: physical role functioning; BP: body pain; GH: general health perceptions; MH: mental health; ER: emotional role functioning; SF: social role functioning; VT: vitality; rS: discriminant validity coefficients.

The VISA-AF scores obtained were moderately correlated with the scores on the PH, PR, BP and GH subscales of SF-36 (respectively: $r_s = 0.51$, $p < 0.001$; $r_S = 0.41$, $p < 0.05$; $r_S = 0.57$, $p < 0.001$; $r_S = 0.46$, $p < 0.001$). The correlations obtained between the VISA-AF and the MH, ER, SF and VT subscales were moderately to weakly correlated (respectively: $r_S = 0.19$, $p > 0.05$; $r_S = 0.09$, $p > 0.05$; $r_S = 0.32$, $p < 0.05$; $r_S = 0.39$, $p < 0.05$).

FLOOR AND CEILING EFFECTS

None of the subjects obtained a minimum score of 0 or a maximum score of 100. No floor or ceiling effects could thus be observed.

Discussion

The VISA-A is a self-administered questionnaire for the assessment of symptoms of Achilles tendinopathies.[3] It was originally developed in English and translated into other languages [4–8] but not in French, which is one of the most spoken languages all over the world. Therefore, the objective of this study was both to translate and adapt the VISA-A into a reliable French version, the VISA-AF, and to approve this version after having assessed its psychometric properties.

No major difficulties were encountered during the translation of the VISA-A into French. Differences were resolved without difficulty and the back translation demonstrated the high level of linguistic equivalence between the French and the original versions. During the test of the pre-final version of the questionnaire, subjects did not encounter any comprehension difficulty. Therefore, the Expert Committee approved the final French version of the questionnaire.

All other adaptations of the VISA-A followed a quite similar translation process leading to linguistic equivalence which was judged satisfactory by the various Expert Committees of these studies.

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The average scores of the three groups were significantly different. The average score of the pathological group is significantly lower than that of the other two groups. When compared with the other adaptations made in other countries, the results were relatively similar, with the exception of the Dutch version which showed a lower average score in the pathological group and of the German version where the average score of the at-risk population group was slightly higher than that of the healthy group.

Test–retest reliability of the VISA-AF was measured using an interval of 30 min. The ICC calculated for this time interval was 0.99 for the total score of the questionnaire and varied from 0.97 to 0.99 for the different items. This shows excellent test–retest reliability because they are higher than 0.91. The VISA-AF test– retest reliability is slightly higher than that of other translated versions as well as that of the original version of the VISA-A, which were estimated as moderate to very good with ICCs varying from 0.58 to 0.97.

Internal consistency was assessed using Cronbach's alpha coefficient, and the calculated value was 0.92. This value represents strong internal consistency and is thus satisfactory because it is both higher than 0.7 and not too close to 1, showing the absence of redundancy between items in the questionnaire. Moreover, the scores of the different items are strongly correlated to the total VISA-AF score. The alpha coefficient measured in this study (0.90–0.92) is a little higher than those of other adaptations which varied from 0.74 to 0.88.

The Spearman correlation coefficients of the subscales of the physical components of the SF-36 (PH: r_S = 0.51, PR: r_S = 0.41, BP: r_S = 0.57 and GH: r_S = 0.46) are higher than those of the psychological components (VT: r_S = 0.39, SF: r_S = 0.32, ER: r_S = 0.09 and MH: r_S = 0.19). The PH, PR, BP and GH subscales as well for the SF-36 (r_S = 0.56) are very significant and are moderately correlated with the VISA-AF, which confirms a convergent validity demonstrating a theoretical construct which is close but not entirely identical. The MH and ER subscales are weakly correlated, which appears to demonstrate discriminant validity. The SF and VT subscales show significantly moderate correlations with VISA-AF but these are lower than that of the physical components. Discriminant validity can thus be considered to be confirmed.

The only other study which used the SF-36 as a validation tool for the adaptation of the VISA-A was for the Dutch version.[8] Their results were fairly similar to those described here. The only differences observed are the strong correlation for PH, the weak correlation for GH and a moderate correlation for RE. The other adaptations used the Curwin and Stanish scale [13] as well as the Percy and Conochie scale.[14] The results show very similar correlations.

We acknowledge some potential limitations in this study. First, the number of subjects in the pathological group was lower than the recommended size. Nevertheless, floor and ceiling effects were assessed. None of the pathological subjects obtained a maximum score of 100 or the minimum score of 0. There were, therefore, no observable floor and ceiling effects. Second, for the test–retest reliability, the interval time chosen could have been longer in order to avoid the memory effect during the second answer to the questionnaire. Most of the other adaptations chose an interval time of one

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week. For this study, the choice of 30 min was made for practical reasons and on the basis of the methodology of the Italian adaptations of VISA-P and VISA-A.[5,15]

Conclusion

The VISA-A is a valid and effective questionnaire for assessing the symptoms of Achilles tendinopathies. Originally developed in English, the French version (VISA-AF) of this questionnaire was approved by an Expert Committee which judged it comprehensible, reliable and appropriate for French-speaking patients suffering from Achilles tendinopathy. The results showed satisfactory levels of construct validity, excellent test–retest reliability, good internal consistency, absence of floor and ceiling effects and, finally, very good discriminatory validity.

Disclosure statement

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

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