

Appraisal

Clinimetrics: The Victorian Institute of Sport Questionnaire - gluteal tendinopathy (VISA-G)

Description

The Victorian Institute of Sport Questionnaire – gluteal tendinopathy (VISA-G) is a freely available, eight-item, self-reported scale designed to evaluate the severity of disability associated with gluteal tendinopathy on a 0 to 100 scale, where 100 indicates no hip-related disability.¹ The questionnaire includes one item related to usual pain (item 1), four items related to pain on tendon loading (items 2, 3, 4 and 6), one item related to difficulty in moving after sitting (item 5) and two items related to activity participation (items 7 and 8).¹ Items 1 to 7 are each scored out of 10 points. For item 8, patients are directed to complete one of three sections, contributing a total of 30 points. These sections evaluate the ability to perform weight-bearing activities such as walking, shopping or running. A recent systematic review of six studies appraised the VISA-G

using the Consensus-based Standards for the Selection of Health Measurement Instruments² and found that the questionnaire had moderate-quality evidence of: sufficient responsiveness (pre–post intervention); low-quality evidence of sufficient reliability, measurement error and comprehensibility; and very low-quality evidence of sufficient comprehensiveness; relevance and responsiveness in comparison with other outcome measures.³ Structural validity and internal consistency were rated as indeterminate.³ The minimum clinically important change of the VISA-G was 29 out of 100 in patients 12 months following hip abductor repair when using a global rating of change of ‘moderately better’ as an anchor (or 22 out of 100 using ‘somewhat better’ as an anchor).⁴

Commentary

The VISA questionnaires have been the key patient-reported outcome measures (PROMs) used to evaluate the pain and disability associated with lower limb tendinopathy for the last two decades, with site-specific measures developed for the Achilles, patellar, proximal hamstring and gluteal tendons. The VISA-G, developed in 2015, is currently the only measurement tool developed and validated specifically for patients with gluteal tendinopathy.¹ The measure has since been translated into several languages (eg, Portuguese, French, Danish, Norwegian, Turkish, Slovenian and Italian) and is commonly used to evaluate gluteal tendinopathy-related disability in clinical trials.^{5,6}

Studies on gluteal tendinopathy have traditionally used PROMs that were developed to evaluate intra-articular hip pathology such as osteoarthritis. An issue with this is that items included in these PROMs may not be relevant for gluteal tendinopathy. One example is items relating to limitations caused by hip joint stiffness (eg, putting on shoes and socks). Another example is the Oxford Hip Score and Modified Harris Hip Scale (developed for hip osteoarthritis), which may overestimate hip-related function in patients following gluteal tendon surgery, with many patients experiencing ceiling effects, compared with the VISA-G.⁴

The VISA-G involved patients in the item generation phase of its development to ensure that items were relevant, comprehensive and easy to understand.⁷ Despite this, the comprehensibility of item 8 has been cited as an issue, with responders often failing to understand that they are only required to answer one of the three sub-questions relating to activity participation.⁸ Furthermore, this item along with item 7 may result in low maximum scores for sedentary patients, for example: if a patient does not wish to engage in regular exercise (item 7) or perform more than 30 minutes of weight-bearing activities (item 8) they can only achieve a maximum score of 66 out of 100 points, even if they are pain-free with no perceived disability. Due to the significant weighting of item 8, care should be taken to clearly

explain this item to patients, to ensure that it is understood, and their activity level is considered when interpreting the total score.

A key concern with the VISA questionnaires, like the VISA-G, is that they generate a total score intended to measure a single construct,³ yet individual questions likely capture more than one construct (eg, pain on loading, activity level and disability).⁹ A possible solution to increase the value of these tools would be to divide it into subscales and re-analyse the measurement properties of each subscale.

As a tendinopathy-specific measure, the VISA-G is superior to other orthopaedic measures but does require further validation and refinement. To capture the broad impact of tendinopathy on patients, clinicians should evaluate other health domains, such as psychology, physical function and quality of life.

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References

1. Fearon AM, et al. *Man Ther.* 2015;20:805–813.
2. Prinsen CAC, et al. *Qual Life Res.* 2018;27:1147–1157.
3. Nasser AM, et al. *Br J Sports Med.* 2022;56:877–887.
4. Ebert JR, et al. *Mus Sci Prac.* 2019;43:1–5.
5. Ganderton C, et al. *J Womens Health.* 2018;27:815–829.
6. Mellor R, et al. *Br J Sports Med.* 2018;52:1464–1472.
7. Korakakis V, et al. *Knee Surg Sports Traumatol Arthrosc.* 2021;29:2749–2764.
8. Jorgensen JE, et al. *Peer J.* 2020;4:e8724.
9. Korakakis V, et al. *Knee Surg Sports Traumatol Arthrosc.* 2021;29:2745–2748.