



## Reliability, validity and responsiveness of the Spanish Manchester-Oxford Foot Questionnaire (MOXFQ) in patients with foot or ankle surgery



Juan B. Gerstner Garcés<sup>a,\*</sup>, Ian Winson<sup>b</sup>, Sabine Goldhahn<sup>c</sup>, Michael D. Castro<sup>d</sup>, Michael P. Swords<sup>e</sup>, Leslie Grujic<sup>f</sup>, Stefan Rammelt<sup>g</sup>, Andrew K. Sands<sup>h</sup>

<sup>a</sup> Centro Médico Imbanaco Cali, Carrera 38A, No. 5A, 100 Con 233, Cali, Colombia

<sup>b</sup> Avon Orthopaedic Centre, Southmead Hospital, Southmead Road, Westbury on Trym, Bristol BS10 5NB, United Kingdom

<sup>c</sup> AO Foundation, AO Clinical Investigation and Documentation, Stettbachstrasse 6, 8600 Duebendorf, Switzerland

<sup>d</sup> Summit Orthopedics, 710 Commerce Dr, Woodbury, MN 55255, USA

<sup>e</sup> Michigan Orthopedic Center, 2815 S. Pennsylvania Ave., suite 204, Lansing, MI 48910, USA

<sup>f</sup> Level Two/The Gallery, 445 Victoria Avenue, Chatswood, NSW 2067, Australia

<sup>g</sup> University Hospital Carl Gustav Carus, Trauma and Reconstructive Surgery, Fetscherstrasse 74, 01307 Dresden, Germany

<sup>h</sup> New York-Presbyterian Hospital – Lower Manhattan Hospital, Department of Orthopaedics, 170 William Street, New York, NY 10038, USA

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### ABSTRACT

**Background:** The Manchester-Oxford Foot Questionnaire (MOXFQ) has been validated in Spanish for use in patients undergoing foot and ankle surgery.

**Methods:** 120 patients completed the MOXFQ and the SF-36 before surgery and 6 and 12 months postoperative. Surgeons completed the American Orthopaedic Foot and Ankle Society (AOFAS) Clinical Rating System. Psychometric properties were assessed for all three MOXFQ dimensions, and for the MOXFQ Index.

**Results:** The Spanish MOXFQ demonstrated consistency with Cronbach's alpha values between 0.65 and 0.90, and reliability ([ICCs] >0.95). It shows a moderate to strong correlation between the Walking/standing dimension and the related domains of the SF-36 ( $|r| > 0.6$ ), the AOFAS Ankle-Hindfoot Scale ( $|r| > 0.47$ ) and Hallux-MTP-IP Scale ( $|r| > 0.64$ ). Responsiveness was excellent, (effect sizes >2.1). The respective minimal detectable change (MDC90) was 14.18 for the MOXFQ Index.

**Conclusions:** The Spanish version of the MOXFQ showed good psychometric properties in patients with foot and ankle disorders.

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## 1. Introduction

Orthopaedic foot and ankle conditions affect a high number of people in the general population and, because of the foot's weight-bearing function, have a considerable impact on gait and posture and, by this, on different aspects of health-related quality of life [1–3]. In order to evaluate outcomes of foot and ankle surgeries from the patients' perspective, it is therefore essential to incorporate

patient-reported outcome measures (PROMs). To compare PROMs at an international level and in clinical studies, cross-culturally adapted and validated outcome measures in various languages are needed [4–7]. The reason for this are the different cultural traditions, values and behaviours that are reflected in activities of daily living and social interactions and can thereby have an impact on the results of a PROM when used in another language. Therefore, a clearly defined process of cross-cultural adaptation and validation is required to ensure content validity across languages and populations. For foot conditions, only a small number of such validated measures exist in languages other than English.

In Latin America, foot and ankle surgery has progressed considerably within the last decade: better availability of devices and instruments, and improved surgical training have contributed to a growing number of internationally recognized foot and ankle

\* Corresponding author at: Centro Medico Imbanaco of Cali Carrera 38 A, No. 5 A 100 Con 233, Cali, Colombia, Tel.: +57 2 557 4288.

E-mail addresses: [jbgerstner@me.com](mailto:jbgerstner@me.com) (J.B.G. Garcés), [ianwinson@doctors.org.uk](mailto:ianwinson@doctors.org.uk) (I. Winson), [sabine.goldhahn@aofoundation.org](mailto:sabine.goldhahn@aofoundation.org) (S. Goldhahn), [Michael.Castro@me.com](mailto:Michael.Castro@me.com) (M.D. Castro), [foot.trauma@gmail.com](mailto:foot.trauma@gmail.com) (M.P. Swords), [lesg@tlchome.com.au](mailto:lesg@tlchome.com.au) (L. Grujic), [Stefan.Rammelt@uniklinikum-dresden.de](mailto:Stefan.Rammelt@uniklinikum-dresden.de) (S. Rammelt), [aksands@gmail.com](mailto:aksands@gmail.com) (A.K. Sands).