

ORIGINAL RESEARCH

THE RELIABILITY OF FABER TEST HIP RANGE OF MOTION MEASUREMENTS

Jennifer J Bagwell, PT, PhD, DPT¹Lauren Bauer, BS¹Marissa Gradoz, BA¹Terry L Grindstaff, PT, PhD, ATC, SCS¹

ABSTRACT

Background: The Flexion ABduction External Rotation (FABER) test is typically used as a provocation special test, but has also been used as a measurement of combined hip range of motion (ROM). It is thought that limited ROM with this measurement may be indicative of hip pathology. To date, normative data, reliability, and minimal detectable change (MDC) of such measurements have not been established.

Purpose: To determine normative FABER height, assess inter- and intra-rater reliability and MDC for FABER, and compare traditional FABER measurements to methods which account for differences in thigh length.

Study Design: Descriptive laboratory reliability study

Methods: Nineteen healthy participants without low back, hip, or knee pain in the preceding three months were recruited. Measurements were performed during two sessions (three to seven days between sessions) by three clinicians. FABER height and thigh length measurements were performed. Thigh length normalized FABER range of motion (ROM) and side-to-side FABER ROM symmetry were calculated. One tester also measured FABER with a digital inclinometer. Inter- and intra-rater reliability were calculated using interclass correlation coefficients (ICC) and mean MDC values were calculated.

Results: Mean values for FABER height and normalized FABER ROM were 12.4 ± 2.8 cm and 0.30 ± 0.07 , respectively. Inter-rater reliability for FABER and normalized FABER were good (ICC 0.67-0.68) and between session intra-rater reliability were good to excellent (ICC 0.76-0.86). Mean FABER and normalized FABER ROM MDC were 3.7 cm and 0.04, respectively. Mean FABER ROM symmetry was 2.0 ± 0.9 cm with poor inter-rater reliability (ICC 0.20), poor to good intra-rater reliability (ICC 0.38-0.66), and mean MDC of 4.0 cm. FABER measured with a ruler, normalized FABER ROM, and inclinometry all resulted in excellent intra-rater reliability, with the highest ICC being demonstrated for inclinometry (ICC 0.86, 0.86, and 0.91).

Conclusions: Overall, FABER measurements were reliable, whether normalized to thigh length or not. Furthermore, use of inclinometry may increase reliability. Reliability was poor to good when assessing symmetry between limbs.

Level of evidence: Level 3

Key words: FABER, femoroacetabular impingement, hip, range of motion, reliability

CORRESPONDING AUTHOR

Jennifer J Bagwell

Department of Physical Therapy, Creighton University

2500 California Plaza

Omaha, NE 68114, USA

402-280-5188

E-mail: jennybagwell@creighton.edu

¹ Department of Physical Therapy, Creighton University, Omaha, NE, USA