**Additional file 5:** Intra-rater reliability of methods of capturing foot morphology presented as ICCs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameters** | **Foot length** | **Forefoot width** | **Rear foot width** | **Medial arch height** | **Rearfoot/****forefoot angle** |
| Carroll, et al 2011 (27) | 3D scanning (NWB)  | R1 | 0.99 | 0.99 | 0.99 | 0.97 | 0.82 |
| R2 | 0.99 | 0.99 | 0.99 | 0.96 | 0.81 |
| Plaster cast (NWB)  | R1 | 0.99 | 0.94 | 0.91 | 0.87 | 0.49 |
| R2 | 0.99 | 0.92 | 0.96 | 0.65 | 0.36 |
| Laughton, et al 2002 (28) | 3D scanning (PWB) | - | 0.96 | 0.93 | 0.70 | 0.79 |
| 3D scanning (NWB) | - | 0.75 | 0.78 | 0.43 | 0.65 |
| Plaster cast (NWB) | - | 0.92 | 0.91 | 0.67 | 0.83 |
| Foam impression (PWB) | - | 0.95 | 0.93 | 0.70 | 0.79 |
| Telfer, et al 2012 (29) | 3D scanning (relaxed standing 50% WB)  | R1 | 0.94 | 0.87 | 0.96 | 0.64 | 0.96 |
| R2 | 0.92 | 0.87 | 0.95 | 0.50 | 0.93 |
| 3D scanning (corrected standing 50%WB)  | R1 | 0.90 | 0.89 | 0.93 | 0.47 | 0.75 |
| R2 | 0.94 | 0.94 | 0.95 | 0.50 | 0.85 |
| 3D scanning (corrected sitting PWB) | R1 | 0.90 | 0.87 | 0.95 | 0.43 | 0.86 |
| R2 | 0.95 | 0.94 | 0.95 | 0.25 | 0.75 |
| Plaster cast (NWB) (R1, R2) | R1 | 0.87 | 0.87 | 0.91 | 0.73 | - |
| R2 | 0.86 | 0.91 | 0.87 | 0.70 | - |
| Foam impression (sitting PWB)  | R1 | 0.90 | 0.90 | 0.90,  | 0.30 | - |
| R2 | 0.87 | 0.90 | 0.92 | 0.25 | - |
| Foam impression (walking FWB)  | R1 | 0.92 | 0.88 | 0.87 | 0.65 | - |
| R2 | 0.78 | 0.88 | 0.87 | 0.26 | - |
| Lee, et al 2014 (30) | 3D scanning (50%WB) | 0.98 | 0.95 | 0.96 | - | - |
| Digital calliper (50%WB) | 0.98 | 0.89 | 0.87 | - | - |
| Digital footprint (50%WB) | 0.97 | 0.98 | 0.94 | - | - |
| Ink footprint (50%WB) | 0.91 | 0.59 | 0.78 | - | - |
| Abbreviations: NWB: non-weight bearing, PWB: partial-weight bearing, FWB: Full-weight bearing, 50%WB: 50% weight bearing,R1 = rater 1 (experienced user), R2 = rater 2 (less experienced user) |