Reviewer's report

Title: Normative values for the Foot Posture Index

Version: 1 Date: 16 June 2008

Reviewer: Paul J Bennett

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Discretionary Revisions

• Provide a statement on what the Rasch model is (don't assume the reader knows what this term means).

• Some issues over terminology i.e. i.e. table 1, supposed “normals” are identified, but how are these actually defined in each study 9ie asymptomatic??). By what criteria, the reader cannot determine.

• Pg 6 then starts to discuss this point i.e. criteria of normal, 1 SD, potentially abnormal 2 SD, pathological = > 2 SD. The authors are reminded this is an “arbitrary construct”. To what group is construct validity provided? Sample characteristics ….1007 were “normal’s” from the control arms.

• I’m (personally) always a little concerned at attempts to “classify” feet as normal/abnormal etc, based on a morphological criteria (be i.e. Root, Kirby, Dannenberg, or FPI). At best, morphology may be a “risk factor” (not, or rarely a sufficient causal factor). Strength of a risk factor (it usefulness) is proven to be so from relative risk & odds ratio type of studies. Put another way round: "A cause of a disease event is an event, condition, or characteristic that preceded the disease event and without -which the disease event either would not have occurred at all or would not have occurred until some later time." (Rothman & Greenland 1998)

• So the analogy I often use is that arch height (surrogate for posture) is like human height, of little interpretative value on its own. It is only when in context that it makes sense. A 6 foot 8 person is well suited to basketball, and a 5 foot 2 individual is well suited to being a jockey. Neither could be considered “abnormal”, based on theye posture alone. (I note this is alluded to on page 9 of the manuscript…. good).

• Difference between “pathological groups” (pg 8) would mean this current paper, could only be generalised to those groups identified (in limited detailed, i.e. probably very heterogeneous sub groups i.e. “those with miscellaneous local musculoskeletal symptoms”.

• The discussion around neutral vs. pronated (pg 8 – 9) is perhaps more meaningful, and could be explored in more detail? Second paragraph on page nine is a good discussion of this point.
Overall, an excellent paper that does, on balance, provide some good, stimulating thought from a well conducted piece of research.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.