

Based on the results from the Foot Health Status Questionnaire, 17/43 (39.5%) (95% CI=26.3%, 54.4%) of the participants in the sham treatment group met the criteria for a within-group MID (ie, 13 points). In the group receiving real dry needling, 28/41 (68.3%) (95% CI=53.0%, 80.4%) of the participants met the criteria for a within-group MID. This finding equated to an absolute risk reduction of 28.8% (95% CI=0.07%, 46.7%).

For the results relating to the visual analog scale, 19/43 (44.2%) (95% CI=30.4%, 8.9%) of the participants in the sham treatment group met the criteria for a within-group MID of 19 mm. In the real dry needling group, 31/41 (75.6%) (95% CI=60.7%, 86.2%) of the participants met the criteria for a within-group MID. This finding equated to an absolute risk reduction of 31.4% (95% CI=10.5%, 48.8%).

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On "Quality of life and self-reported lower extremity function..." Galantino ML, Kietrys DM, Parrott JS, et al. *Phys Ther.* doi: 10.2522/ptj.20130337.

[Editor's note: Both the letter to the editor by Stratford and Riddle and the response by Parrott and colleagues are commenting on the author manuscript version of the article that was published ahead of print on May 22, 2014.]

We read with great interest the study by Galantino et al¹ that investigated the quality of life and self-reported lower extremity function of adults who are HIV+ and either with or without distal sensory polyneuropathy (DSP). The Medical Outcomes Study HIV Health Survey (MOS-HIV) measure was used to assess quality of life²; the Lower Extremity Functional Scale (LEFS)³ and Lower Limb Functional Index (LLFI)⁴ were applied to assess lower extremity functional status. One of the study's purposes was to "evaluate agreement (concordant validity) between the LEFS and LLFI in this population."¹ We were troubled by this attempted comparison for 2 reasons.

First, we believe it makes sense to compare measures only if they share the same conceptual framework. The LEFS and LLFI were developed to assess lower extremity functional status, which Bellamy⁵ and Dobson et al⁶ define as the ability to move around and perform daily activities. The focus is on ability, not on what is experienced when engaging in activity and moving around. In clinical practice, this distinction matters when planning interventions and determining whether change in the target outcome has occurred following implementation of an

intervention. If the goal is to assess lower extremity functional status as defined above, the applied measure must contain items that are unique to this characteristic. Gabel et al⁴ have reported that LLFI items loaded on a single factor; however, factor analysis does not define the factor for us. The LLFI consists of 25 items that include questions addressing a variety of constructs, including pain, appetite, irritability, and sleep.⁴ On face, these types of questions do not assess the ability to move around, and we suspect the factor being assessed is linked to overall well-being. Given that the LLFI is summarized and validated as a total score, this score captures something other than the ability to move around. Was a change in LLFI score measuring change in the ability to move around, or was it a result of a change in pain, appetite, or irritability, or some combination of these constructs? If one accepts the premise that the LLFI assesses a broader construct than lower extremity functional status, its comparison with the LEFS, an instrument that assesses lower extremity functional status, is problematic.

Our second concern relates to the presentation of data comparing the LLFI and LEFS. Although concerns with direct comparisons of LLFI and LEFS scores were addressed earlier in this letter, we believe there are errors in the data presented by Galantino et al. The authors reported the extent to which there was agreement between the LEFS and LLFI by applying the method of Bland and Altman.⁷ This analysis is appropriate when the metrics of the 2 measures are identical. For example, Bland and Altman investigated the agreement between the Wright peak flowme-

ter and the Mini Wright peak flow-meter.⁷ For both instruments, the outcome was liters per minute. In contrast, the metrics for the LEFS and LLFI are different. One LEFS point does not equal 1 LLFI point, and the metrics cannot be homogenized by simply converting raw scores to percentage values. Item response theory methods are required to truly equate scores between the 2 measures.

Our last point addresses an apparent contradiction in the results presented by Galantino et al. In Table 2, the mean scores for the LLFI were 76.2 for patients without DSP and 43.4 for patients with DSP. For the LEFS, the mean scores were 62.2 for patients without DSP and 40.9 for patients with DSP. Figure 1 provides a graph of the differences in LEFS and LLFI scores arrived at as follows: LEFS – LLFI (thus, positive scores indicate LEFS assesses the individual at a higher level of functioning). Figure 1 shows the mean difference to be positive (LEFS scores greater than LLFI scores), and the text reports this difference to be 6.2. If the mean scores in Table 2 are reported correctly, the mean difference in Figure 1 must be negative, given that difference scores were calculated as LEFS scores minus LLFI scores. It would be helpful to have this point clarified.

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Author Response

[Editor’s note: Both the letter to the editor by Stratford and Riddle and the response by Parrott and colleagues are commenting on the author manuscript version of the article that was published ahead of print on May 22, 2014.]

We thank Stratford and Riddle¹ for their comments on our article² and for providing us with this opportunity to clarify several points. They indicate that because the items of the Lower Limb Functional Index (LLFI) and Lower Extremity Functional Scale (LEFS) are different, the tools are likely measuring somewhat different theoretical constructs. Because the LLFI asks questions about how leg function affects several different aspects of the patient’s life (sleep, appetite, daily activities), it is possibly a hybrid measure of lower

limb dysfunction (ie, the LLFI may be a more comprehensive index of the negative effects of lower limb dysfunction). Because the 2 tools are measuring different things (LEFS: “moving about,” LLFI: more global sequelae of lower limb dysfunction), Stratford and Riddle suggest the comparison is problematic.

Differences in theoretical focus (or psychometric constructs) point precisely to the value of comparing the clinical usefulness of 2 tools designed to serve a similar purpose (in this case, the purpose is to describe lower limb function). Whether or not they are measuring exactly the same thing (and in this case, they likely are not), the question persists: Which of the tools would be more likely to identify self-reported limitations in function? The purpose of comparing LLFI and LEFS, therefore, is not theoretical, but practical. If, in fact, the LEFS focuses more tightly on lower extremity function (“moving about”), but in so doing may systematically indicate adequate function for a set of patients who could otherwise benefit from physical therapy, the LLFI may be preferred, as it captures a broader set of relevant constructs related to function in patients with HIV-related distal sensory polyneuropathy (DSP).

The key point of our comparison was to explore the practical utility in identifying patients with HIV-related DSP (who may benefit from physical therapy) because of the negative effects of lower limb problems. The comparison in our study is not psychometric—thus, the question of whether the 2 tools measure the same self-perception of the impact of HIV-related DSP on function is somewhat beside the point. As Stratford and Riddle point out, they likely do not, but this may be precisely the source of the practical utility of using one versus the other. Hence, a

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