

Spinal function classification framework for non-specific low back pain: a delphi survey of academic experts and clinicians

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Introduction: Low back pain (LBP) and sciatica guidelines encourage people to remain physically active to better self-manage their condition¹. This may prove challenging for LBP patients who operate with demonstrable physical aberrations, including reduced range of motion, poor muscle function, reduced sense of balance, are generally physically deconditioned with low exercise tolerance levels. Clinical assessment of spinal function is a routine part of (LBP) assessment, yet there is no clear consensus on what constitutes a 'spinal dysfunction' and how this informs treatment.

Purpose: To develop LBP physical function assessment and exercise performance framework by gaining expert academic and clinical consensus for: (i) spinal physical function assessment tests, (ii) spinal physical function LBP subsets and their characteristics, (iii) exercises recommended for each LBP subset.

Methods: Web-based 2-round Delphi survey method was used to build an academic expert and clinical consensus. 92 individuals were surveyed. In round 1 world-leading academic experts participating in round 1 (n=5) rated their agreement and elaborated on items generated from literature on spinal assessment tests, LBP subsets, their characteristics and exercises recommended for each LBP subset. In round 2, 87 clinical physiotherapy specialists (extended scope practitioners) were asked to rate their agreement with round 1 generated items on the assessment tests, LBP subsets & their characteristics and exercise items and its performance in each LBP subset. A five-point Likert scale was used to obtain level of agreement (LOA). A priori consensus was set at 80% LOA.

Results: Forty participants responded (44%) (U.K., Norway, Belgium, Ireland, Italy, Brazil, Japan) with 4 academic experts (round 1) and 36 clinical physiotherapy experts (round 2). From 174 in round 1, 85 items gained >80% agreement. Five (out of 14) spinal physical function assessment tests were considered 'very important, important' reaching $\geq 80\%$ agreement. Out of ten proposed LBP physical function subsets, 7 were recognised by clinicians reaching required level of agreement ($\geq 80\%$ LOA). Out of 128 described characteristics within the 7 physical function LBP subsets, 12 reached consensus ($\geq 80\%$ LOA). Seven out of 12 exercises were considered 'very important / important' with highest agreement on exercises re-training sitting, standing, forward bend and sit-to-stand. LBP subset specific exercise performance was mapped with 26 items (out of 34) on compensations and 28 items (out of 52) on exercise feedback gaining consensus ($\geq 80\%$ LOA).

Conclusion: First to date study gaining academic and clinical expert consensus on spinal function assessment and exercise performance for LBP. The consensus within the studied domains was comparable across academic and clinical experts. Mapping spinal physical function and exercise performance across clinically recognised subsets of LBP could be used to develop technologies to better equip and guide LBP patients through the exercise component of their self-management.

References:

¹NICE guideline NG59 (2016) Low back pain & sciatica www.nice.org.uk/guidance/ng59