Patient Specific Functional Scale

Summary

**Description:** The Patient Specific Functional Scale (PSFS) is a patient-specific outcome measure which investigates functional status (Stratford et al 1995). Patients are asked to nominate up to five activities with which they have difficulty due to their condition and then rate the functional limitation associated with these activities. The PSFS is intended to complement the findings of generic or condition-specific measures.

**Instructions to client and scoring:** At initial assessment, clients are asked ‘Today, are there any activities that you are unable to do or having difficulty with because of your [nominated] problem?’ Clients then rate their functional limitation with each nominated activity on a 0 to 10 scale, where 0 = unable to perform activity and 10 = able to perform activity at same level as before injury or problem. At follow-up assessments clients are asked again to rate each of their previously nominated activities on the same scale. There is no total score calculated and the PSFS is not designed to compare clients, rather individual items are followed over time. The PSFS takes only 5–10 minutes to complete and score, requires no special training to administer, and is available from the original paper (Stratford et al 1995) and at www.tac.vic.gov.au.

**Reliability, validity and sensitivity to change:** The PSFS has been shown to be valid and responsive to change in musculoskeletal conditions such as neck pain, cervical radiculopathy, knee pain, and low back pain (Chatman et al 1997, Cleland 2006, Pengel 2004, Westaway 1998). When compared to other instruments, the PSFS has been shown to be more responsive than the Neck Disability Index (Cleland 2006), the Pain Rating Index, and the Roland Morris questionnaire (Pengel 2004).

Michele Sterling
The University of Queensland

Commentary

Improving function in activities that are meaningful to our patients is an important role for physiotherapists. The Patient Specific Functional Score (PSFS) is an outcome measure which assists in identifying activities impaired by illness or injury and provides a measure of clinical outcome that has been shown to be valid and sensitive for many musculoskeletal conditions.

The PSFS is generally included as part of the subjective examination and it is quick to apply in both the initial and, more importantly for busy clinicians, the subsequent assessment. In pain-focused patients the PSFS is useful to redirect questioning towards function and ability rather than pain and disability. Clinically the PSFS is simple to administer and does not require the subtle nuances to rank, unlike disabilities questionnaires. This is especially important to patients where English is a second language.

It is advantageous to assist the patient to select activities they are likely to perform prior to the subsequent assessment so that a comparison may be drawn. If treatment is being directed towards a work-related injury it is important that occupational activities are included to align with the broader goal of return to work. It is also of benefit to nominate a period of time when including static activities, such as 30 minutes of sitting, and record this for a specific chair so that accurate comparison may be performed in the future.

Clinicians should be aware that while the PSFS is able to be applied to many areas of the body is has not yet been shown to be valid for all musculoskeletal conditions. The minimal detectable change (90% CI) for an average score is 2 points, and 3 points for a single activity score (Stratford 1995).

David Brentnall
Axis Rehabilitation, Brisbane

References

Passive intervertebral motion tests for diagnosis of lumbar segmental instability

Description
Clinical assessment of spinal segmental motion involves two major constructs: quantity of motion (displacement), and stiffness (or the force-displacement relationship) (Maher 1998b).

Reliability: Reliability of segmental motion tests has been controversial, due in large part to serious flaws in the design of many of the studies in the literature (Abbott 2005). There is some evidence of adequate reliability (Lundberg and Gerdle 1999, Strender 1997), but other studies conflict (Johansson 2006).

Validity: Two recent studies indicate moderate validity of manual assessment of intervertebral displacement (Abbott 2005, Fritz 2005a). Both indicate that passive accessory intervertebral motion (PAIVM) testing has adequate specificity (81–89%) but low sensitivity (29–46%) for detecting excessive sagittal translation displacement. Passive physiological intervertebral motion (PPIVM) testing was found to be highly specific (99% for flexion, 98% for extension) but with low sensitivity (5% and 16% respectively) (Abbott 2005). In vivo study of force-displacement is technically challenging, to say the least, with studies using parallel or proxy measures of stiffness indicating a moderate degree of validity (Maher 1998a).

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<th>Sensitivity (95% CI)</th>
<th>Specificity (95% CI)</th>
<th>LR+ (95% CI)</th>
<th>LR– (95% CI)</th>
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<tr>
<td><strong>Accuracy of PAIVMs for diagnosis of excessive sagittal translation.</strong></td>
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<td>Abbott (2005)</td>
<td>0.29 (0.14 to 0.50)</td>
<td>0.89 (0.83 to 0.93)</td>
<td>2.5 (1.15 to 5.5)</td>
<td>0.61 (0.61 to 1.06)</td>
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<td>Fritz (2005)</td>
<td>0.46 (0.30 to 0.64)</td>
<td>0.81 (0.60 to 0.92)</td>
<td>2.4 (0.93 to 6.4)</td>
<td>0.66 (0.44 to 0.99)</td>
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<tr>
<td><strong>Accuracy of PPIVMs for diagnosis of excessive sagittal translation.</strong></td>
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<td>Abbott (2005)</td>
<td>0.05 (0.01 to 0.22)</td>
<td>0.995 (0.97 to 1.00)</td>
<td>8.73 (0.57 to 134)</td>
<td>0.88 (0.88 to 1.05)</td>
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<td>Flexion PPIVMs</td>
<td>(0.06 to 0.38)</td>
<td>(0.94 to 0.99)</td>
<td>(1.7 to 29)</td>
<td>(0.71 to 1.05)</td>
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<td>Extension PPIVMs</td>
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PAIVMs = passive accessory intervertebral motion tests, PPIVMs = passive physiological intervertebral motion tests, LR+ = likelihood ratio for a positive test, LR– = likelihood ratio for a negative test.

Commentary
Despite the widespread use of manual physical assessment of lumbar spinal segmental mobility, the validity of these methods for assessing magnitude of motion has not, until recently, been tested. The study by Fritz (2005a) provides rigorous independent validation of the results of Abbott (2005) as, despite differing methodology and populations, their results were highly consistent. The studies are complementary: one study was an inception cohort conducted in a primary care setting, with low prevalence of segmental instability (Abbott 2005); the other was a smaller cohort assembled in tertiary care, and which had been through several filters – a primary care filter referring to specialist care, and then the specialist referral to radiology with suspicion of instability – and therefore much higher prevalence (Fritz 2005a). The concuring results indicate that the validity of these tests is stable across a wide spectrum of the condition.

It is important to note that these results are delimited to quantity of displacement – not stiffness – and therefore represent only a proportion of the construct of segmental instability. Information on the validity of stiffness assessment helps complete this picture. When taken in the context of growing evidence supporting the predictive validity of these assessments (Childs 2004, Flynn 2002, Fritz 2005b, Hicks 2005), these studies indicate that manual physical assessments of lumbar segmental motion are valid components of an evidence-based clinical examination.

J. Haxby Abbott
University of Otago, New Zealand

References