

**Title:****The Development, Initial Reliability and Construct Validity of the Motor Control Abilities Questionnaire**

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**Abstract:** (Your abstract must use **Normal style** and must fit in this box. Your abstract should be no longer than 300 words. The box will 'expand' over 2 pages as you add text/diagrams into it.)

**Introduction**

Specific motor control exercises (SME) are commonly used to rehabilitate musculoskeletal dysfunction. SME require the client to have a variety of learning based skills. A small number of clients do not appear to be able to learn these exercises. The purpose of this study were: to development a tool that could screen patients to predict if they could learn SME; to assess the internal consistency and the test – retest reliability of the instrument; to assess the construct validity.

**Methods**

The item generation consisted of 3 phases. Phase 1: A semi-structured interview was conducted with 31 clients who had not progressed with a SME program to identify problems or barriers for the failure of the program. Phase 2: A chart review was performed on 27 clients who had not progressed with a program as above. Phase 3: 114 patients who fit the above criteria filled out 16 related questionnaires. 50 items were generated based on the responses from the questionnaires and the semi-structured interview, and a 5 point Likert scale was used. The subgroups consisted of questions relating to cognitive and sensory motor function. Test-retest reliability: The questionnaire was administered to 265 subjects with chronic low back pain, twice, one week. Construct validity: The questionnaire was given to 394 subjects with the clinician blind, and their ability to perform the exercises was rated. SPSS version 15 was used for the statistical analysis. Internal consistency reliability was assessed with Cronbach's  $\alpha$  and test retest reliability was assessed with Pearson's  $r$ . A standard 2 x 2 was used to calculate sensitivity and specificity.

**Results**

Test retest reliability ranged from 0.75-0.88. Internal consistency reliability ranged from 0.77 to 0.94 (standardized). Using a cut off value of 80 the sensitivity 0.88 and specificity 0.98 were, respectively.

**Discussion**

The instrument appears to be stable over a one week period with acceptable test – retest reliability. The internal consistency is also acceptable, however an exploratory factor analysis with higher a number of subjects is required. The initial sensitivity and specificity values provide preliminary construct validity for the questionnaire. Further assessment is warranted for this instrument.

