A CLINICAL DECISION-MAKING ALGORITHM FOR
PHYSICAL THERAPIST IN PATIENTS WITH LOW BACK PAIN

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ABSTRACT

This study developed a clinical decision-making algorithm for novice physical therapist (PT) to determine specific structural fault in patients with low back pain (LBP) and examined the interexaminer agreement among experienced and novice PT for assessing the dysfunction and impairment of patients with LBP. The algorithm was developed from reviewed available algorithms, textbooks, and a convergence of opinions from expert PTs. The researcher collected and revised characteristics of each condition and tested the usability of the developed algorithm with many LBP patients before agreement testing between the expert PTs and a novice PT in the study. This algorithm consists of 3 parts (specific conditions, underlying conditions, and impairment of anatomical structures). Fifty subjects with LBP, aged between 16 and 75 years were recruited. Seven subjects had acute symptoms and 43 subjects had chronic symptoms. All subjects were having ongoing treatment by at least 1 of the 4 expert PTs. They were assessed by an expert PT who using his or her owns experience and a novice PT using the developed algorithm.

The results demonstrated good agreement between novice and expert PTs in all 3 parts of the algorithm. Possible fracture, coccygeal dysfunction, adverse neural tension (impaired neural mobility), possible spondylolisthesis, nerve root irritation or compression, sacroiliac joint syndrome, lumbar spinal stenosis or spondylosis, facet joint syndrome, scoliosis, and spinal instability/ possible spondylolysis were frequently agreed diagnoses.

The present algorithm has been validated by the expert PTs. Agreement among expert and novice PTs has been determined to be ‘good’. The algorithm could be used for both educational and clinical proposes. There is, however, a need for further study in more subjects to cover all conditions. Distribution of the algorithm, to be used widely among PTs, should be accomplished in order to gain more comment for further development.

KEY WORDS: LOW BACK PAIN/ CLINICAL DECISION-MAKING/ ALGORITHM/ PHYSICAL THERAPY