A Need for a Shared Paradigm in the Physical Therapy Classification and Treatment of Mechanical Low Back Pain: Part II: **practice guideline versus classification systems**

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Abstract: Due to conflicting and a lack of high quality evidence supporting physical therapy intervention for mechanical low back pain (MLBP), clinical practice guidelines have been developed based on the best available evidences. This paper will review a few of the challenges and limitations that exist with the present practice guidelines and will suggest a need for the establishment of a universally accepted classification system for MLBP. The evolution of classification systems will be discussed and evaluated. To date a consensus for a common classification system has not been reached in the physical therapy profession. A clinically applicable, valid and reliable classification system may be essential for future high quality research studies to be able to demonstrate the efficacy of physical therapy management of MLBP.

Key Words: *low back pain, classification and diagnosis*

Although there have been many attempts to find a solution for the diagnosis and management of mechanical low back pain (MLBP) (Sahrmann 2002, Malmivaara et al 1995, Delitto et al 1995, Dettori et al 1995, van Tulder et al 1997a, Faas et al 1995, Koes et al 1995, Nachemson 2000, Pengel et al 2002, Gulich et al 2003, McKenzie & May 2003), unfortunately no worldwide consensus has been noticed thus far. What is certain to date is that for the majority of low back pain (LBP) cases, a specific etiology cannot be determined (Spitzer et al 1987, Lutz et al 2003, Waddell 1998, Nachemson 2000).

Evidence-based practice (EBP), systematic reviews and meta-analyses of randomized controlled trials are three tools commonly used to appraise the quality of evidence in diagnosis and treatment of LBP. These tools have been the center of attention in recent years as an alternate pathway in medicine and health care to move the practice toward a new paradigm. EBP is a method of extracting the most valid and reliable information needed for clinical decision-making and treatment. Systematic reviews attempt to present the most updated body of knowledge using a specific scientific approach. Meta-analyses apply a statistical analysis to combine or integrate the results of several independent clinical trials (Egger 1997). Using the combination of systematic reviews and meta-analyses help in the development of clinical practice guidelines. Practice guidelines have been designed to improve the process of health care and health outcomes, decrease practice variation, and optimize resource utilization (Pearson et al 1995). Many panels of experts, such as the Quebec Task Force, (Spitzer et al 1987), the Agency for Health Care Policy (Bigos et al 1994), and the Clinical Standards Advisory Group (Waddell 1996 & 1999) have been attempting to develop a clinical guideline for MLBP based on a quantitative review of

existing literature. The comparison of various clinical guidelines for the management of MLBP has shown that diagnostic and therapeutic recommendations are generally similar (Koes et al 2001). The present practice guidelines generally recommend minimal intervention and conscious waiting with some advice in the first 4-6 weeks after onset of MLBP (Bigos et al 1994, Abenhaim et al 2000, Koes et al 2001) (Table 1).

Although the ongoing development and revision of practice guidelines should provide optimism in the management of MLBP, there are still many challenges that must be faced. Four of these challenges with the practice guideline recommendations will be reviewed in this paper.

Practice guidelines have recommended:

1. Aspirin/NSAIDs
2. A trial of manipulation
3. Provision of assurance and education about back problems
4. Encouragement of low stress aerobic exercise
5. Recommendation to avoid irritating activities
6. Conditioning exercises after a few weeks

Practice guidelines have recommended against:

1. TENS
2. Lumbar corsets and support belts
3. Traction
4. Biofeedback, and
5. Bed rest (>4 days)

Table 1 (Adopted from: Nachemson 2002)

Challenge#1: Overlooking the long-term recurrence rate & disability following an acute episode of MLBP.

The recommendations of the practice guidelines seem to be inaccurately based on a notion initially proposed by Waddell (1987). It has been stated that most acute MLBP episodes are short lived and that "80-90% of attacks of low back pain recover in about six weeks, irrespective of the administration or type of treatment". However, long-term studies show most patients with acute MLBP actually continue to have long-term pain and disability (Croft et al 1998). Although 90% of patients with LBP seen by medical practitioners ceased to consult about their symptoms within three months, most still had substantial pain and related disability and only 25% of the patients had fully recovered 12 months later (Croft et al 1998). In addition, the functionally disabling recurrence rate is substantial and varies between 8%-14% at 3 to 6 months, and 20% -35% at 6 to 22 months (Carey et al 1999). In view of the considerable long-term functional disability rate and the recurrence rate, the practice guideline recommendations may need to look beyond a simple resolution of acute episodes of pain and disability.

In fact, there is evidence showing that specific exercises, with two to three years follow-up, have significantly reduced the recurrence rate (35% in the treatment group to 75% in the

control group) (Hides et al 2001). Another 5-year follow-up study showed that patients who received specific treatments (McKenzie principle), had significantly less recurrences of pain and fewer sick leave days compared with the subjects who received only education in mini back school (Stankovic et al 1995). Therefore, it seems that long-term studies support that early specific exercise therapy may be more effective in reducing LBP recurrences than medical management and normal activity alone, which may help reduce the social, economic, and medical impact of MLBP (Croft et al 1998).

Challenge #2: Irrational conclusions on exercise recommendation in acute MLBP.

Clinical practice guidelines have suggested that the key to success in the treatment of MLBP is physical activity itself rather than any specific activity or exercise (Abenhaim et al 2000). Even though therapeutic exercise is the most commonly reported treatment procedure for patients sent for physical therapy (Mielenz et al 1997, Gracey et al 2002) and one of the most researched treatment in the physical therapy field, practice guidelines advise minimal intervention and no specific exercises in the first 4 to 6 weeks after onset of injury (Bigos et al 1994, Abenhaim et al 2000, Koes et al 2001). A recent systematic review of the literature found strong evidence (39 RCTs) to support that all forms of back exercises were not more effective than alternatives, in the treatments of acute LBP. There was also conflicting evidence that exercise, regardless of type, is effective in chronic LBP (van Tulder et al 2000). Before simply accepting the conclusions supported by the systematic reviews, the quality and the design of the research studies need to be more closely considered. Although in the past decade a considerable number of randomized clinical trials have been carried out to evaluate the efficacy of interventions in MLBP, disappointingly most of these studies have been of low methodological quality (Koes et al 1995&1991, Nachemson 2000, Pengel et al 2002). Van Tulder et al (1997b) showed that only 35% of research studies in acute LBP and 20% of studies in chronic LBP have a quality score of more than 50 (out of 100). It should be of interest that methodological quality tends to be associated with the outcome of studies (Koes e al 1995). It seems that the higher quality studies on MLBP, generally have less favorable outcomes and on the other hand, the lower quality studies generally have more conclusive and favorable outcomes. This may be due to the fact that the low quality studies often carry out some biases that may affect their results and inevitably reduce their power. Small sample sizes, no description of randomization, no description of drop out, no placebo control group and lack of blinded outcome assessment are some of the most common methodological shortcomings (Koes et al 1995, Nachemson

2000). The efficacy of other physical therapy treatments like electro-therapy and manual therapy has also been questioned and unfortunately it seems that the current clinical practice guidelines on manual and electro-therapy are based primarily on low quality research studies (Nachemson 2000).

Challange#3: Low quality research & poor methodology misleading.

Practice guideline recommendations are based on the meta-analysis of a group of studies that are of low qualities and/or have small sample sizes, with the purpose of increasing their power. Although meta-analysis is a valuable technique in summarizing information, it seems that sources of bias cannot always be controlled by this method. Basically, a good meta-analysis of poorly designed studies will still result in poor statistics. Specific examples of this kind of weakness and contradiction in research can be seen in the medical literature by comparing the results of meta-analyses with real mega-trials (e.g. mega-trial effect of magnesium on myocardial infarction vs. its meta-analysis) (Yusuf & Flather 1995).

The inconsistency in meta-analyses of small trials does not necessarily invalidate this technique. However, meta-analyses based on a relatively small amount of data, incompatible quality, and despite even extreme P value (0.001) may be misleading. In fact, the results of meta-analyses are subject to a number of biases that are not readily quantifiable. A similar challenge exists with systematic reviews of the literature. With a quick search on Medline, and other search engines, a number of systematic reviews will appear with the same purpose and almost the same resources, yet with different conclusions. This inconsistency can be noted when studying relatively recent systematic reviews on the effect of manipulation on MLBP. Assendelft et al (2003) published a systematic review and concluded that there is no evidence that spinal manipulative therapy is superior to other standard treatments for patients with acute or chronic low-back pain. On the other hand, Bronfort et al (2004) completed a systematic review and concluded with some confidence regarding the use of manipulation as a viable option for the treatment of low back pain. In another systematic review, van Tulder et al (2000), found moderate evidence that manipulation was more effective than usual care by the general practitioner, bed rest, analgesics and massage for short-term pain relief in (only) chronic LBP. In conclusion, it is recommended that systematic reviews need to reach high methodological

standards and be conducted as carefully as the trials (van Tulder et al 2003), to achieve more consistent and conclusive results.

Challenge #4: Studies based on heterogeneous population of MLBP.

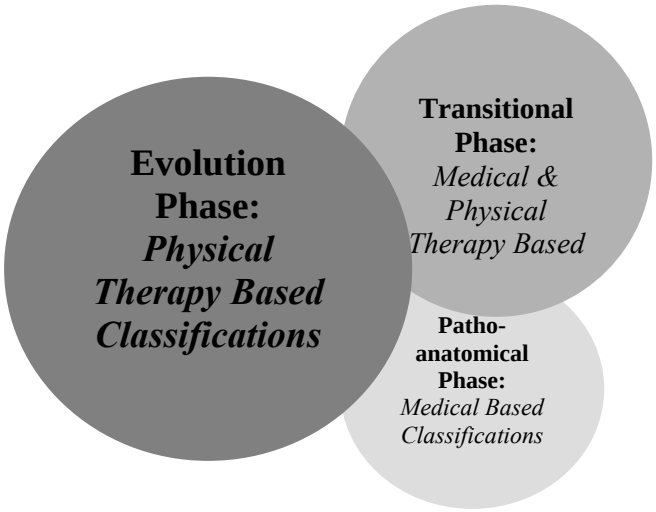
The recommendations of practice guidelines are based on studies that use a heterogeneous population of patients with MLBP. Many authors have attributed the inconsistent effectiveness of various interventions to the fact that randomized studies have been done on populations with widely diverse forms of MLBP (Spitzer et al 1987, Deyo et al 1991, Bouter et al 1998, Bowling et al 1997, Leboeuf-Yde et al 1997, McKenzie & May 2003). Since there is no single treatment method that will ever be effective for all individuals with MLBP, placing a sample of heterogeneous patients in a melting pot would reduce the potential value of any specific treatment. Unfortunately, the majority of the studies that influence the practice guidelines fail to identify subgroups of patients that may most likely respond to a particular treatment approach. Thus, to improve the current research methods and outcomes in the management of MLBP, several authors have suggested a need for an accepted physical therapy classification system (Van Dillen et al 1998, Fritz et al 2003, McKenzie & May 2003, Sahrmann 2002, Waddell 1998).

Potential benefits of classification

Many authors believe that a classification system could provide a solution to the debate posed by practice guidelines on the efficacy of physical therapy in the management of MLBP (Delitto et al 1995, Riddle 1998, Fritz et al 2003). The need to classify patients into homogenous subgroups is reflected by the number of classification systems proposed within the past two-decades (Sikorski 1985, Bernard & Kirkaldy-Willis 1987, Coste et al 1992, Moffroid et al 1994, Delitto et al 1995, Marras et al 1995, Roach et al 1997, Wilson et al 1999, Sahrmann 2002, McKenzie & May 2003). It has been suggested that patients treated based on a classification may be managed more effectively than patients treated without this regard (Riddle 1998, McKenzie & May 2003, Fritz et al 2003). To date, only a few studies have demonstrated that patients treated based on a specific classification system show a better outcome (Sinaki et al 1989, Erhard et al 1994, Stankovic & Johnell 1995, Delitto et al 1995, O'Sullivan et al 1997, Fritz et al 2003). Although a universally accepted classification system for MLBP does not exist, a comprehensive survey of physical therapists did show some encouraging sign of possible agreement on categories associated with MLBP, despite differences in practice patterns (Binkley et al 1993).

An overview of LBP Classification Systems

A review of the literature on MLBP in the last three decades, demonstrates a gradual shift in physical therapy classification and management. It is evolving away from the patho-anatomical model and towards analyzing the movement dysfunction and its relation to pain behavior. Based on our literature review, we may arrange all classification systems into three basic evolving phases, firstly the **patho-anatomical phase**, secondly the **transitional phase** and thirdly the **evolution phase** with focus progressively away from patho-anatomy, but towards movement dysfunction.



Patho-anatomical phase

The first stage of classification is purely dependent on structural diagnosis and relies primarily on differential diagnostic injection blocks and radiological signs (Kirkaldy-Willis 1979, Mooney 1989, Marras et al 1995, Bogduk 2004). A typical example of this classification model categorizes based on anatomical defects such as spondylolisthesis, stenosis, disc herniations and nerve root compressions. Classically, physicians, surgeons, radiologists and anatomists rely on this classification method for their assessment and/or treatment. Although many studies exist in medical literature that have proposed various forms of the patho-anatomical classification systems, fortunately in the past decade, only a few such studies could be found in the physical therapy field (Binkley 1993, Young et al 2003, Petersen et al 2004). For instance, Petersen et al (2004) have demonstrated acceptable reliability in classifying based on anatomical pathology by means of history and physical examination. Unfortunately this diagnostic system is incompatible with any specific physical therapy treatment system. It is also important to note that many authors agree that non-specific MLBP can rarely be accurately diagnosed based on a single structural pathology (Delitto et al 1995, Abenhaim et al 1995, Waddell et al 1996, Nachemson 2000, Sahrmann 2002, McKenzie & May 2003). Thus, as concluded in part one of this paper, any physical therapy intervention based primarily on structural diagnosis does not seem rational.

Transitional Phase

Many researchers with various theories and backgrounds have made an effort to transform and improve the traditional classification systems of MLBP (Sikorski 1985, Spitzer et al 1987, Coste e al 1992, Moffroid et al 1994). We consider these attempts to be part of the transitional phase towards a more established paradigm in the physical therapy of LBP. The transitional phase is the second stage in the evolving classification history towards physical therapy evaluation and treatment based on the movement dysfunction / impairment model. McKenzie's work in 1981 may be credited for being the first spark of paradigm shift in physical therapy of MLBP. His work will be discussed later in the evolution stage. Classification systems of Sikorski et al (1985), QTF/ Spitzer et al (1987), Coste et al (1992) and Moffroid et al (1994) are other examples that have attempted to find an alternative to the traditional concept.

Sikorski et al (1985) classified patients with LBP based on their similarity in pain duration (acute versus chronic) and pain behavior (based on movements and postures) and linked them to various pathologies. Although their method of classification was a good start, with some value in guiding physical therapy treatment, it was vague to some extent in describing the clinical history of the different patient groups. Furthermore, no clinical trials exist to support the characteristics described in each of the classified groups.

Another classification example in the transitional phase is the Quebec Task Force (QTF). The QTF system attempts to classify patients with work-related LBP based on their symptom distribution and pathology as confirmed by radiological findings (Spitzer et al 1987). The QTF system was designed to establish prognosis and offer general recommendations regarding the management for each of its categories, however, it was not intended to provide any specific guidelines for physical therapy treatment of non-specific MLBP.

Coste et al (1992), as a part of the transitional phase, clearly demonstrated that patients with MLBP could be classified into homogenous sub-groups based on their acute or chronic status, range of motion, pain behavior and possible psychological involvement. Once again, this classification system was not designed to provide any specific guidelines for physical therapy treatment of MLBP.

Moffroid et al (1994), similarly, did not focus on the patho-anatomical model and identified homogeneous sub-group of patients with LBP. Their classification was based on impairment characteristics including soft-tissue flexibility and spinal range of motion. This

system did not consider pain behavior and its relevance to the specific soft-tissue or movement impairment. Since factors such as pain behavior with movement and activity have a direct influence in guiding treatment, the usefulness of this classification system for physical therapists is clinically limited (Riddle 1998).

In conclusion, the many attempts of classification in the transitional phase have gradually increased the confusion among physical therapists. This may be due to:

a. The failure of most of the systems in guiding physical therapy treatment
b. The lack of evidence to support and validate most of the proposed systems
c. Various background of the researchers who propose different classification systems (e.g. Orthopedic surgeons, bioengineers, physical therapists, rheumatologists)
d. The limited scope of the categories for many of the proposed systems which has frustrated many clinicians in their clinical classification of MLBP

Evolution Phase

The evolution phase includes more comprehensive and research-based classification systems, which have been more suitable in guiding specific physical therapy treatment (McKenzie 1981 & 2003, Delitto et al 1995, O'Sullivan et al 2000, Sahrmann 2002).

In this phase, the classification systems have evolved to focus on symptomatic response to movement and postural dysfunctions. The best example of this phase is the McKenzie approach, even though the concepts were initially proposed more than two decades ago. The McKenzie method and the centralization phenomenon have been one of the most widely accepted physical therapy approaches in the diagnosis and management of LBP. This may be credited to the fact that the McKenzie method of assessment and treatment is relatively easy to learn, straightforward to apply and potentially effective in many cases of MLBP. The McKenzie concept has been one of the most investigated and scrutinized methods of evaluation and treatment. In the past decade several studies have supported the McKenzie approach and some have failed to demonstrate reliability and validity of the approach. The centralization phenomenon is the essence of McKenzie’s method of evaluation. The most recent systematic review on the centralization phenomenon showed that; it is a clinical phenomenon that can be reliably detected, is associated with good prognosis and appears to identify a substantial sub-group of spinal patients (Aina et al 2004). However, the validity and reliability of pain response to repeated end range spinal

test movements in the McKenzie approach remains controversial, given that one study reported poor reliability (Riddle & Rothstein 1993) and more recent studies have reported good and satisfactory reliability as long as the examiners have been trained in the McKenzie method (Razmjou et al 2000, Kilpikoski et al 2002). The assessment of the lateral shift has been shown to have poor to moderate reliability for both its presence and direction of shift (Donahue et al 1996, Clare et al 2003). McKenzie has also recently revised his classification system and has excluded the previous notion of the lateral shift as a criterion for specific classification, although it is still noted during assessment and appropriately addressed in the treatment (McKenzie & May 2003).

The greatest challenge with the McKenzie method of classification may be the fact that when the symptoms of patients with MLBP cannot be consistently centralized or altered with direction specific repeated movements, they are labeled as unclassifiable and not appropriate for physical therapy intervention. This is a major weakness of the McKenzie system since many of patients with motor control dysfunctions (segmental and global coordination), myofascial impairment (e.g. trigger points and restrictions) or neuro-dynamic impairment (peripheral or central) may not respond predictably to repeated movement techniques. These “unclassifiable” patients may potentially respond to other conservative management techniques other than repeated movements or postural correction.

Wilson et al (1999) (in conjunction with Dr. Hamilton Hall) argued that although the McKenzie system of classification was potentially clinically beneficial, it consisted of too many categories. Therefore, they proposed a relatively more simple classification method to help provide a practical guide for rehabilitation. Based on the location and pain behavior with lumbar movement, they demonstrated that both experienced and novice physical therapists could reliably categorize all patients with MLBP into one of five patterns (Wilson et al 1999). Even though this system of classification appears to be reliable and clinically applicable, the categories of classification are still vague and provide only a general guideline for treatment. Similar to the McKenzie system, the categorization of patients in this classification will not necessarily direct physical therapy treatment to focus on motor control retraining, mobilization, manipulation, myofascial release, or neural mobilizations.

Sahrmann (2002) also developed a classification model based on the concept that different movement patterns and postures reproduce or alleviate symptoms of MLBP, regardless of pathology. An underlying assumption of this approach is that daily repetition of similar movements and postures may lead to the deviation of the lumbar spine in a specific direction. This may eventually contribute to the development, persistence, or recurrence of MLBP (Maluf et al 2000). For example, a tennis player may be prone to develop a symptom related to the motion of the lumbar spine into a direction of extension and rotation, whereas a cyclist may be more likely to develop symptoms associated with lumbar flexion. The above examples of syndromes may be clinically classified and treated through the correction of faulty alignments and motions of the lumbar spine. Although, this classification model seems very appropriate for physical therapists and is somewhat supported by research (Van Dillen et al 1998 & 2003), a number of issues still need to be addressed. Firstly, it seems that the Sahrmann method of assessment is rather extensive, detailed and time consuming for typical outpatient physical therapists. Secondly, the application of this method of assessment requires considerable training, and even with training, the examiners involved in their reliability studies were still not likely to agree on the judgment of alignment and movement as much as they anticipated (Van Dillen et al 1998). Thirdly, it seems that the judgment of alignment (e.g. pelvic and lumbar sway, asymmetry of lumbar movement, asymmetry of pelvic and lumbar rotation movements, relative flexibility, etc.) expressed in their assessment method, seems too subjective to convince and satisfy skeptical clinicians. Fourthly, there is still a lack of evidence supporting the validity and the relation of the various suggested movement impairments as the cause of MLBP.

O'Sullivan (1997 & 2000) also proposed a sub-group of patients with MLBP identified as lumbar segmental instability (LSI). Unfortunately, the terminology and the theory of LSI are still very controversial and the notion of increased spinal motion and its correlation with pain remains unproven in orthopaedic medicine (Nachemson 2000, Bogduk 1997). However, several studies have demonstrated the link between various aspects of motor control deficiency and specific spinal pain conditions, including proprioception (O'Sullivan 2003), fine tune control and timing (O'Sullivan et al 1998, Hodges & Richardson 1996) and tonic control (Hodges 1999). Specific segmental muscular retraining based on the LSI theory has also been demonstrated to be effective for patients with MLBP (Hides et al 2001). Although the identification of individuals with LSI has become more clinically

common, the reliability of categorizing this sub-group of patients has not been shown to date and needs to be studied. A criticism for the clinical identification LSI is based on the lack of reliability of segmental mobility testing; however segmental mobility testing is relatively a small part of LSI diagnosis (Hicks et al 2003).

Delitto et al (1995) also designed a classification system based on the movement dysfunction. The proposed classification seems to be one of the more comprehensive attempts that has combined and modified different schools of thought into a more practical and evidence-based system. This categorization method relies on historical information, behavior of symptoms, and clinical signs to allocate patients into one of the four sub-groups: Immobilization (stabilization), Mobilization (lumbar or sacroiliac), Specific exercises (flexion, extension, lateral shift) and Traction. Thus far they have studied the reliability and effectiveness of three aspects of their classification. This includes evidence for the reliability of the centralization phenomenon (Fritz et al 2000a), the reliability of accurately identifying patients as a sub-group who are most likely to respond to manipulation (Flynn et al 2002, Fritz et al 2000b, Erhard et al 1994) and the inter-rater reliability of detecting lumbar segmental instability (Hicks et al 2003). The positive features of this system of classification are that it is relatively easy to understand, clinically applicable and it provides a straightforward method of guiding treatment based on the categorization. This classification method appears to be most inclusive as it combines and includes stabilization exercises, mobilization / manipulation techniques and the McKenzie method of assessment and treatment. In a recent randomized controlled trial, the superiority of this classification system was demonstrated with respect to improved disability, return to work status, and the cost-effectiveness, when compared to the general recommendations of the practice guidelines (Fritz et al 2003).

As with the other classification systems reviewed thus far, there are still certain limitations to this method. Firstly, the method of assessment for assigning patients in different categories still needs improvement since it sometimes relies on less reliable observation and palpation findings such as segmental hypo or hyper-mobility, pelvic asymmetry, standing and seated flexion tests. Secondly, the term “immobilization” is rather misleading or vague as it is primarily supposed to represent individuals who may benefit from stabilization exercises. Thirdly, selecting a patient for the “Traction” category is based on the process of elimination rather than clear objective criteria. Even though traction seems to be clinically effective in selected individuals with MLBP, the inclusion criteria to predict responses to

traction is still inconclusive. Fourthly, the current classification method does not seem to provide a prioritization for those individuals who may fit in more than one category. For example, a patient who may fit into the mobilization group due to hypo-mobility in a certain segment of the lumbar spine may also benefit from stabilization for the adjacent hyper-mobile segments. Finally, the four categories of this classification method do not cover all aspects of movement dysfunction such as myofascial pain, neural tissue mechano-sensitivity, and the inter-relation of the thoracic spine, upper and lower extremities as a contributing factor to MLBP. Although the Delitto and colleague system has certain inevitable limitations, based on this literature review it seems that it is the most inclusive and evidence based classification system for MLBP to date.

Conclusion:

Critical appraisal of studies in the past three decades has put major doubts on the effectiveness of various treatments provided by physical therapists in the management of MLBP. This has inevitably lead to the emergence and establishment of practice guidelines. Although practice guideline recommendations have been publicized as the most evidenced based and cost effective approach in the management of MLBP, there is still no evidence to show their advantage over other treatment approaches (van Tulder 2004, Fritz et al 2003).

Many authors and researchers believe the current disarray and inconclusive results of studies on various treatment approaches may be resolved by a comprehensive classification system. We believe that three primary issues contribute to the lack of general consensus to classify MLBP. The first issue is the continued over reliance on the medical model of patho-anatomy, which is of limited value to physical therapy. The second issue is related to the various unintended biases within many research studies in the field of MLBP that lead to controversial results. The third issue is simply the insufficient number of studies in the field of classification of MLBP.

Although there are many classification systems proposed for the diagnosis and treatment of MLBP, only some of them have clinical value for physical therapists and only a few of them are being investigated for their reliability and validity. Despite different perspectives, it is interesting to note that the most clinically accepted classification systems by physical therapists utilize pain associated movements as the primary basis for their categorization. For example McKenzie, Delitto and Sahrmann classify a patient whose symptoms are increased by flexion movements and decreased by extension movements into posterior derangement, extension syndrome and flexion syndrome respectively. These “different”

classification systems have certain strengths and weaknesses and all have the potential to improve and eventually amalgamate.

Based on the Buchbinder's (1994) work, it is suggested that the preferred classification system needs to be relatively easy to understand and applicable with minimal training. It has to be reliable, valid and must embrace most of the currently existing concepts of classification in the physical therapy field. Ideally, a valid and accepted MLBP classification system would challenge the current ignorance of the practice guidelines towards specific physical therapy interventions. This may eventually improve the cost-effectiveness of treatment by reducing the recurrence and prevalence of MLBP.

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