



The evolution of manual therapy education: what are we waiting for?

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The evolution of manual therapy education: what are we waiting for?

A string of editorials suggest that the credibility of manual therapy (MT) is at stake [1], MT is not fashionable [2], MT has a questionable future [3] and overall MT is in an identity crisis [4]. Whereas much ink and social media has been devoted to the debate between evidence and value for MT interventions versus a hands-off biopsychosocial (BPS) approach [5], little attention has been given to how MT is being taught at entry level and beyond. As educators and members of the AAOMPT Academic and Clinical Faculty special interest group, we recognize this MT identity crisis has challenged the traditional paradigm of teaching MT interventions and has now extended into teaching (dare we say all) physical therapy interventions. This crisis of identity creates the opportune time for reflection on the needed evolution of MT education.

Physical therapist educators who teach orthopedic based content, including MT, are faced with the conundrum of reliance on teaching psychomotor skills based on biomechanical models, which have traditionally emphasized the passive and prescriptive nature of MT-based examination and intervention. Research in the MT arena has continued to produce conflicting results, small to moderate effect sizes and MT has maintained a rather modest presence in clinical practice guidelines [6–9]. However, as the pendulum swings toward the BPS model, pain science education, and other ‘hands off’ forms of interventions, the opportunity to emphasize the importance of a more meaningful, holistic, and shared patient-centered approach has arrived. To fully appreciate the leadership opportunity MT educators are provided, this article will first reflect on the roots of MT practice within the BPS model as a foundation to provide guidance on what teaching MT *should NOT be*, and then proposals for what updated MT teaching *should be*.

Patient-centered concepts emphasized within the hands-off BPS model have historically been present in sound MT practice; however, the popularity and renewal of these concepts as a more intentional framework is a welcomed development necessary to further advance the evolution of MT education. Engel’s BPS model stated ‘*The most essential skill of the physician involves the ability to elicit accurately and analyze correctly the patient’s verbal account of his illness experience.*’ [10] This essential skill of listening and correctly analyzing the patient’s account of their experience is a foundational skill within multiple paradigms of MT practice. Maitland consistently reinforced the foundations of patient interviewing for aggravating and easing factors to assess tissue irritability

and plan the physical examination [11]. McKenzie reinforced the foundational skill of interviewing to determine a patient’s symptomatic response to movements and positions [12]. Additional examples of this foundational patient-centric skillset exist within the osteopathic model’s method of modulating sympathetic and parasympathetic activity based upon assessment of tone and life stressors [13–15]. These essential skills encompass the understanding of the patient’s values and beliefs, allow for a shared therapeutic alliance through motivational interviewing, and help to understand one’s own implicit bias including when NOT to use hands-on techniques in the patient’s plan of care.

Louis Gifford proclaimed the value of the BPS model over tissue-based diagnosis; this concept has been revised and implemented into practice in many forms [16]. More recently, MT’s have incorporated the BPS model into the framework of regional interdependence [17] and have recognized the BPS model as a foundation for local mobility and stability components of movement control [18]. The BPS model has been integrated in recognition of common domains of pain management amongst all health professions, which should include alignment with professional core values [19,20]. Finally, an updated model proposed by Bialosky and colleagues attempts to describe all mechanisms involved in MT delivery, including context, as a roadmap for practice and research [21,22]. Although foundations of these models and theories have been described as ‘expert’ MT practice [23], why have these concepts not been fully integrated within MT education? If expert manual therapists have evolved in this BPS model, why have MT educators NOT yet evolved?

The opportunity to better communicate how the ‘bio’ of MT integrates within the ‘psychosocial’ of the intervention model has arrived. Now is the time to update outdated teaching models in MT education and provide leadership for integration of other interventions within the BPS model. First, teaching MT should *not be*: passive, prescriptive, performed one way based on one school of experts thought and rooted solely on the opinions of these ‘experts.’ Teaching MT is *not* teaching the psychomotor skill of passive techniques in isolation, stripped of patient context, although understanding and appreciating the value of passive motion and biomechanics in their intended context is important [24]. Patient encounters, including those of chronic pain for which MT is indicated, are rich with dialogue, interaction, active patient engagement and continual feedback both from

the musculoskeletal tissue at the physiological level and the patients' behavioral response at the psychosocial emotional level [22,25,26]. Moreover, teaching MT should *not* be rooted solely in outdated 'expert' MT algorithms and clinical prediction rules[27]. Finally, teaching MT should *not* be so homogeneous across educational institutions, reflecting a single perspective based on the lens and experiences of a single educator. Although early learners need more guided direction and rules to develop clinical decision-making, build confidence in psychomotor skills [28], and gain mastery, it is important to provide students with multiple MT perspectives and tools which, in the spirit of graded exposure principles, foster the creativity to treat each individual patient differently and, more importantly, based on *their unique* biopsychosocial context.

So what should we teach regarding MT and other interventions? An updated MT model, which attempts to describe all mechanisms, including patient context, has recently been presented[22]. This model could serve as a framework not only for MT but the application of other interventions and the connection of the psychosocial; herein is the opportunity for MT educators to lead. *Are we actively teaching and communicating all three components to develop proficient manual physical therapists?* Based on zone one of the model, let us begin with a framework of *biomechanics to serve as the foundation* for tissue loading, movement observation, test-treat, and re-testing. Key concepts for learners in zone one of the model is understanding how the patient-provider dynamics interact with the biomechanical tissue response. For zone two of the model, MT educators should instruct the *impact of neurophysiological theory on stability and motor control*. Learners must grasp the 'bottom-up' approach [25] and global stability aspects of movement control [29]. Finally, zone three requires an emphasis on how well we are able to develop a *therapeutic alliance* and fully weigh and respect its influence on patient outcomes. The need for the MT education evolution is now! Educators what are we waiting for?

References

- [1] Oostendorp RAB. Credibility of manual therapy is at stake "Where do we go from here?". *J Man Manip Ther.* 2018;26(4):189–192.
- [2] Reid D, Cook C, Sizer PS, et al. Is orthopaedic manipulative physical therapy not fashionable anymore? Lessons learned from 2016 IFOMPT meeting and future directions. *J Man Manip Ther.* 2017;25(1):1–2.
- [3] Collins CK, Masaracchio M, Brismée J-M. The future of orthopedic manual therapy: what are we missing? *J Man Manip Ther.* 2017;25(4):169–171.
- [4] Mintken PE, Rodeghero J, Cleland JA. Manual therapists - Have you lost that loving feeling?! *J Man Manip Ther.* 2018;26(2):53–54.
- [5] Kerry R. Hands-on, hands-off: is that even a thing? *Physiofirst.* [Published Summer cited 2019 Jul 1]. Available from: <https://www.physiofirst.org.uk/>
- [6] Martin RL, Chimenti R, Cuddeford T, et al. Achilles pain, stiffness, and muscle power deficits: midportion Achilles tendinopathy revision 2018: clinical practice guidelines linked to the international classification of functioning, disability and health from the orthopaedic section of the American physical therapy association. *J Orthop Sports Phys Ther.* 2018;48(5): A1–A38.
- [7] Blanpied PR, Gross AR, Elliott JM, et al. Neck pain: revision 2017: clinical practice guidelines linked to the international classification of functioning, disability and health from the orthopaedic section of the American physical therapy association. *J Orthop Sports Phys Ther.* 2017;47(7):A1–A83.
- [8] Enseki K, Harris-Hayes M, White DM, et al. Nonarthritic hip joint pain: clinical practice guidelines linked to the international classification of functioning, disability and health from the orthopaedic section of the American physical therapy association. *J Orthop Sports Phys Ther.* 2014;44(6):A1–A32.
- [9] Bialosky JE, Simon CB, Bishop MD, et al. Basis for spinal manipulative therapy: a physical therapist perspective. *J Electromyogr Kinesiol.* 2012;22(5):643–647.
- [10] Engel GL. The need for a new medical model: a challenge for biomedicine. *Science.* 1977;196(4286):129–136.
- [11] Maitland GD. *Vertebral manipulation.* London, England: Butterworth-Heinemann; 2013.
- [12] McKenzie R, May S. *The lumbar spine: mechanical diagnosis and therapy.* Vol. 1. Waikanae, New Zealand: Spinal Publications; 2003.
- [13] Fornari M, Carnevali L, Sgoifo A. Single osteopathic manipulative therapy session dampens acute autonomic and neuroendocrine responses to mental stress in healthy male participants. *J Am Osteopath Assoc.* 2017;117(9):559–567.
- [14] Henley CE, Ivins D, Mills M, et al. Osteopathic manipulative treatment and its relationship to autonomic nervous system activity as demonstrated by heart rate variability: a repeated measures study. *Osteopath Med Prim Care.* 2008;2(1):7.
- [15] Henderson AT, Fisher JF, Blair J, et al. Effects of rib raising on the autonomic nervous system: a pilot study using noninvasive biomarkers. *J Am Osteopath Assoc.* 2010;110(6):324–330.
- [16] Gifford L. Pain, the tissues and the nervous system: A conceptual model. *Physiotherapy.* 1998;84(1):27–36.
- [17] Sueki DG, Cleland JA, Wainner RS. A regional interdependence model of musculoskeletal dysfunction: research, mechanisms, and clinical implications. *J Man Manip Ther.* 2013;21(2):90–102.
- [18] Alrwaily M, Timko M, Schneider M, et al. Treatment-based classification system for low back pain: revision and update. *Phys Ther.* 2016;96(7):1057–1066.
- [19] Fishman SM, Young HM, Lucas Arwood E, et al. Core competencies for pain management: results of an interprofessional consensus summit. *Pain Med.* 2013;14(7):971–981.
- [20] Hoeger Bement MK, St Marie BJ, Nordstrom TM, et al. An interprofessional consensus of core competencies for prelicensure education in pain management: curriculum application for physical therapy. *Phys Ther.* 2014;94(4):451–465.

- [21] Bialosky JE, Bishop MD, Price DD, et al. The mechanisms of manual therapy in the treatment of musculoskeletal pain: a comprehensive model. *Man Ther.* 2009;14(5):531–538.
- [22] Bialosky JE, Beneciuk JM, Bishop MD, et al. Unraveling the mechanisms of manual therapy: modeling an approach. *J Orthop Sports Phys Ther.* 2018;48(1):8–18.
- [23] Resnik L, Hart DL. Using clinical outcomes to identify expert physical therapists. *Phys Ther.* 2003;83(11):990–1002.
- [24] Zusman M. There's something about passive movement. *Med Hypotheses.* 2010;75(1):106–110.
- [25] Puentedura EJ, Flynn T. Combining manual therapy with pain neuroscience education in the treatment of chronic low back pain: A narrative review of the literature. *Physiother Theory Pract.* 2016;32(5):408–414.
- [26] Coronado RA, Bialosky JE. Manual physical therapy for chronic pain: the complex whole is greater than the sum of its parts. *J Man Manip Ther.* 2017;25(3):115–117.
- [27] Haskins R, Cook C. Enthusiasm for prescriptive clinical prediction rules (eg, back pain and more): a quick word of caution. *Br J Sports Med.* 2016;50(16):960–961.
- [28] Wise CH, Schenk RJ, Lattanzi JB. A model for teaching and learning spinal thrust manipulation and its effect on participant confidence in technique performance. *J Man Manip Ther.* 2016;24(3):141–150.
- [29] Alrwaily M, Timko M, Schneider M, et al. Treatment-based classification system for patients with low back pain: the movement control approach. *Phys Ther.* 2017;97(12):1147–1157.

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