Emotional-based practice

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In 1999, David Isaacs and Dominic Fitzgerald offered up seven alternatives to evidence-based practice when faced with a situation where no evidence exists on the topic at hand.¹ Their jocular suggestions of (1) eminence-based medicine; (2) vehemence-based medicine; (3) eloquence-based medicine; (4) providence-based medicine; (5) diffidence-based medicine; (6) nervousness-based medicine; and (7) confidence-based medicine reflect the arrogance, nihilism, or lack of confidence displayed during decision making by physicians, nurses, and surgeons. Although meant to be funny, the editorial is decisively accurate and despite being over 10 years old it is not dated in context. Truly, these are the unsightly alternatives to evidence-based practice.

I do think one alternative to evidence-based practice is conspicuously absent from this list. This alternative, which I call emotional-based practice, differs from Isaacs and Fitzgerald's¹ suggestions because emotional-based practice is utilized when evidence exists to refute the use of a specific test or intervention (not during a lack of evidence). In other words, the clinician has elected to use the test or intervention despite evidence to the contrary. They elect to do so because they are personally and emotionally attached to the test or intervention.

But before we condemn emotional-based practice, let's discuss how research is disseminated in clinical practice; because quite frankly, this is no easy task. Rogers'² adoption/innovation curve (Fig. 1), which was first proposed in the late 1950s, has frequently been used as a model for dissemination of innovation or research. The innovation curve suggests that approximately 16% of those (a group called 'laggards' by Rogers) involved in the dedicated field (for example, manual therapy) will either be significantly delayed in their adoption of information or will never adopt the information. I think that the number is probably higher. Around 34% falls in the 'late majority' group, a group that has been described as a 'skeptical' population by others.³ A certain degree of skepticism in healthcare is constructive, as it delays the implementation of a poorly vetted clinical treatment. However, when evidence exists to refute the use of a specific test or intervention, skepticism loses its value.

In defense of our colleagues who continue to use specific tests or interventions when evidence exists to refute the use, it is worth mentioning that up to 30 000 papers on biomedical literature are published yearly.⁴ Furthermore, folklore, myth, and information handed down over the generations have duped a number of healthcare professions and the lay public as a whole. For example, myths such as (1) people should drink eight glasses of water in a day to maintain good health; (2) we only use 10% of our brains during normal activities; (3) hair and fingernails continue to grow after death; and (4) reading in dim light ruins your eyesight are accepted as truisms, even though there is no evidence to support these claims.⁵ People still call chronic Achilles pain, lateral epicondylitis, and rotator cuff injuries 'tendonitis', despite that we have known for years that there is generally no inflammatory aspect to the processes.⁶ It is easy to see why there is the mistake in advocating certain tests or treatment, if we have misinformation.

However, when one knows that evidence exists to refute the use of a specific test or intervention, yet he/she elects to use these procedures anyway; that is, emotional-based practice. I would argue that this is the most significant problem that delays our pursuit of evidence in support of manual therapy.

I have encountered emotional-based practice a number of times over my 20 years of a clinician but have noticed the feverishness of this more so in the last 3–5 years as evidence has grown and has become more prominent in clinical practice. Specifically, I have witnessed an emotional attachment to particular orthopedic manual therapy procedures ('fix all' procedures), orthopedic special tests, screening tests, and diagnoses. Let's consider the following clinical examples: (1) the use of the straight leg raise (SLR) as confirmatory diagnostic test for a disc herniation; (2) allowing a clinical prediction rule (CPR) to trump clinical reasoning that refutes proper use; and (3) the continued insistence that palpation tests of the sacroiliac joint are diagnostic for sacroiliac joint syndrome.

The SLR Is a Good Confirmatory Diagnostic Test

Clinicians and researchers are quite fond of the SLR and for good reason. The test is quite useful in ruling

Figure 1 Innovation curve for dissemination of research.

out a lumbar disc herniation.⁷ However, the test has limited value in diagnosing a condition associated with disc herniation^{8,9} and there are a number of reasons why.

The argument that clinicians often make is that the SLR is nearly always positive in patients who have a blatantly herniated disc, which is true (the test has high sensitivity).^{8,9} One may see a positive SLR during testing for any source of sciatica, including those outside a disc herniation. Most studies have found that the test lacks specificity.^{8,9} Consequently, because it is highly sensitive and not specific, a negative finding is more useful than a positive one; more useful in ruling out a herniated disc.⁹

A CPR Should Trump Clinical Reasoning, or CPRs Should Never Be Used

I would argue that clinicians who use CPRs as a trump card during the clinical reasoning process have not heard or have misunderstood the true value of the rule. A CPR is a combination of clinical findings that have statistically demonstrated meaningful predictability in determining a selected condition or prognosis of a patient who has been provided with a specific treatment.^{10,11}

No CPR is infallible. In fact, recent evidence¹² has found different results in a commonly used CPR,¹³ most likely, because of the variations in study design, including differences in environment, population spectrum, and intervention used. Nonetheless, it does lend a fact that a CPR is not a rule that works in every given situation, which can override other information that is found during the examination; most notably, something that may cause potential patient harm. For example, if one examines a patient who meets the clinical prediction rule for lumbar manipulation,¹³ but after a careful screen of potential visceral conditions found a situation in which kidney dysfunction or bladder cancer was as likely as a

competing diagnosis, the correct use of the CPR is not to manipulate the patient!

In contrast, some clinicians will never use a CPR because they feel that it undermines their clinical decision making capacity. This is untrue and does not reflect the nature of a CPR, nor does it reflect the principles in which a CPR is designed. CPRs are clusters of items that normally are considered in good decision making. A well-designed rule can be very useful for clinicians and the rules should be considered during clinical practice.

Palpation Tests of the Sacroiliac Joint Are Diagnostic for Sacroiliac Joint Syndrome

I left this example last because it is the one that I have seen that has the most venom associated with its use. We now know that a wealth of evidence exists that suggests that palpation-based tests are not reliable or valid, during the diagnostic process for sacroiliac joint syndrome.^{14–17} If one looks at this without emotion, it makes good sense; the movements are minute,¹⁸ the joints are covered with excessive amounts of soft tissue and fat, and other diagnoses (that are typically more prevalent) such as low back pain will yield positive findings on palpation tests (findings are not unique to the sacroiliac joint).¹⁹ Nonetheless, clinicians still advocate their use as diagnostic measures because they see changes in patients when they perform an intervention that is targeted to the sacroiliac joint. I would argue that this has little to do with diagnosis and more to do with treatment.

We know that tests targeted at the sacroiliac joint also address the lumbar spine¹⁹ and potentially, the hip. Interventions are likely to also address multiple regions including structures such as soft tissue, nerves, fat, and fascia, because nearly all of the interventions are not localized. Clinicians often use palpatory tests to determine a 'mal-alignment' and

then perform the intervention to correct the alignment. Usually a thought process such as this is more reflective of treatment decision making than diagnosis. To implicate the sacroiliac joint as a diagnosis because that is what someone learned from a textbook or from someone else and then argue to support this, simply lacks evidence and is steeped in emotion.

There are likely countless other examples of emotional-based practice used daily and I invite you to look for and recognize these situations.

In summary, I recently witnessed an educator who asked graduating physical therapy students to think of their favorite intervention for a particular disorder based on their clinical affiliations. She then asked whether the students would give up their favorite intervention tomorrow, if they were given valid evidence today that the intervention offered no more value than chance alone. The majority of the students indicated that they would still consider using that intervention. It is intriguing to see that emotional-based practice has found its way into the physical therapy curriculum. Now, let's figure out how to get rid of it.

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