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Knowledge driving health

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Explain Pain 21st Anniversary Tributes

Explain Pain (2003, 2013) David S. Butler and G. Lorimer Moseley, Noigroup Publications, Adelaide Australia

1. Kevin E Vowles – Queen's University Belfast
2. Jo Nijs – Vrije Universiteit Brussel
3. Mark P. Jensen – University of Washington
4. Joletta Belton – Writer, pain advocate, research partner
5. Joshua W. Pate – University of Technology Sydney
6. Darren Burgess – High Performance Manager, Adelaide Football Club

Further tributes are welcome to be submitted and shared with the authors via: ariane@noigroup.com

1. Kevin E Vowles

On charisma, epistemologies, and evidence.

I am both grateful and humbled by the opportunity to provide a commentary on Explain Pain on its 21st anniversary. I will identify my conflicts of interest from the outset. In 2015, I was invited to take part in what I now fondly refer to as "that Australian physio circus", a three-day Explain Pain training event in Melbourne where I taught alongside the two authors of this book, David Butler and Lorimer Moseley, as well as the talented Robert Coghill, a formidable neuroscientist and all-round big brain nice guy. In Melbourne, I had a ringside seat for the combination of wit, intelligence, wisdom, and personality that forms part of the engine driving Explain Pain. It was easy to get caught up in the fun and enthusiasm surrounding Dave and Lorimer's method of chronic pain treatment. I must also admit that I am quite fond of the both of them, their families, their co-workers, Dave's frequent use of inappropriate language in polite company, and Lorimer's fondness for mischief. I smile when I think of the time spent in their company.

Underlying all scientific approaches are philosophical assumptions about *how things work*. These assumptions represent best guesses at the fundamentals regarding the operation of complex systems, including the highly complex ones like human sensation, perception, and action. There is an entire branch of science devoted to the study of its *philosophy – how do we know what we know?* For example, Pepper (1942) identified what are arguably *the* four overarching worldviews (*formism, mechanism, contextualism, and organicism*), Kuhn (1977) posited five key criteria that make scientific theories useful (*accurate, consistent, broad in scope, simple, and fruitful*), and Popper (1962) distinguished science from pseudoscience, by identifying a line of demarcation between the two (*falsifiability*). Each of these works (and many more that I don't mention here – they didn't give me limitless space in this commentary to literally *wax philosophical*!) concerns that core question of science – *how do we know what we know?* These are epistemologies, literally theories of knowledge.

There are three key epistemologies I want to highlight here. Specifically - and back on topic - does Explain Pain "work"? How do we know?

The first epistemology is one of authority – we know what we know because someone in authority, or influence, tells us what we know. This epistemology is one that can be useful as long as the source of authority is truthful and accurate. It can get us into trouble, as human judgement regarding truth and accuracy can be clouded when speaking with charismatic, interesting, and energetic individuals – hello, Dave and Lorimer. We cannot conclude Explain Pain "works" just on the epistemology of authority – those two are just too fun to hang out with for us to trust that the intervention works. The former (fun to hang out with) is in no way related to the latter ("works"). Darn it.

The second is an epistemology of tradition – we know what we know because we've done it this

way for a long time. This epistemology can be useful as long as we've been doing it in a way that works, but one must be mindful of at least two facts: first, what used to work may stop working as circumstances change and, second, "we've always done it this way" doesn't mean it *works*. Thus, we must be mindful of saying things like Explain Pain works because it's 20 years old or, even worse, it works because its underlying approach suffuses many contemporary approaches to chronic pain treatment – it has essentially become part of the traditional model of care. It would be too easy for us to rely on history as an explanation of what we are doing now, but it doesn't tell us if the approach works. Strike two.

The third is an empirical epistemology – we know what we know because the *data tell us* what we know. This epistemology is a fundamentally scientific one in nature – we listen to the data because the data don't lie (granted there are ways to lie with the data; see Huff, 1954). The data care about neither authority nor tradition.

Here is what the data say in relation to Explain Pain. Some of the information below may not be pure Explain Pain, as "Pain Neuroscience Education" is a broad church, but again, here is my understanding of what the relevant data have to say. When used alone, Explain Pain improves pain biology knowledge accuracy and can improve subsequent pain rehabilitation u (Moseley & Butler, 2015), perhaps because it reduces pain-related fear and catastrophizing (Watson et al., 2019). This latter causal inference is only an assumption that has not been tested to my knowledge, but it is theoretically plausible. Used alone, Explain Pain may reduce pain and disability, but that reduction may be modest (Watson et al., 2019). When used in combination with other rehabilitative interventions, such as physiotherapy, it is associated with improvements in pain and disability at least in the short term (Moseley & Butler, 2015; Wood & Hendrick, 2019). Don't take my word for it, go look at the data.

What we have in Explain Pain is an approach that is accessible and disseminable with an established evidence base demonstrating reasonable benefits that are of clinical importance. It has no known evidence of harm. It can help – perhaps in aiding people move on towards rehabilitative treatments or when combined with these approaches directly. It probably also involves some key aspects of treatment uptake from a patient perspective – building rapport because of its inherent encapsulation of its founders energy and charisma. It puts us healthcare providers in a position of listening first, interacting second, and educating third. It has a history of examining the data. Finally, inherent in its 20-year history is an epistemology of listening to the data – it just happens to be all the more interesting when we get to sit in a room with Dave and Lorimer and hear them tell us about it.

Thanks gents.

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2. Jo Nijs

Tribute to Explain Pain's 21st birthday

Twenty years ago, I was completing my PhD on pain in patients with chronic fatigue syndrome and fibromyalgia, and got passionate about the role of central nervous and immune systems in chronic pain. Especially the early work by Staud and Price[1,2] triggered me, also because it fitted perfectly into the ground-breaking pioneering psychoneuroimmunology work by Watkins and Maier[3] about immune-to-brain communication and the so-called 'sickness behaviour'. I had started integrating this knowledge into our teaching (BSc and MSc students as well as postgraduate courses) and postdoctoral research plan[4,5] when I came across a paper by Lorimer Moseley on explaining pain to patients with chronic pain[6]. A couple of weeks later, during the editorial board meeting of the Dutch 'Yearbook Physiotherapy', I shared my enthusiasm and Lorimer's paper with Paul van Wilgen (the Netherlands). It appeared that he was working on a very similar idea, and had just submitted a paper entitled 'The sensitization model: a method to explain chronic pain to a patient' to the Dutch Journal of Medicine[7]. Back then, I couldn't imagine what massive, global impact Explain Pain would have… Not much later, I attended the Australian Physiotherapy Congress in Adelaide (2004), and got even more inspired about Lorimer's appearance and lecturing skills, including his early work showing that understanding pain allows patients with chronic low back pain to move better[8]. Back then, I was already a fan of David Butler's previous book on 'Mobilisation of the Nervous System'[9] – I even had a copy of it in my luggage when traveling to Australia for the first time.

I recall being nervous the first time I tried explaining pain in the clinic, but the patient was so grateful and excited to finally understand her medical problem. By that time, she had received multiple explanations for her chronic pain, but this was the first to capture everything, including her full range of symptoms and comorbidities. Finally, all pieces of the puzzle fell into place. As a clinician, the possible pain-relieving effects of explaining pain in itself were not that much of importance to me. Of more significance was that explaining pain allowed removing the barriers for a more active approach (i.e., behavioural graded activity, exposure in vivo, cognition-targeted exercise therapy, stress management, etc.). Explaining pain became the fundament of a multimodal approach to managing chronic pain, and it turned out to be a very successful one.

All this inspired us to undertake a series of studies that we developed and completed about the isolated effects of pain neuroscience education[10-16], as well as the combined effects of pain neuroscience education with other conservative interventions[17-19] in various pain populations such as low back pain, neck pain, post-surgical pain, osteoarthritis pain, post-cancer pain, paediatric pain, fibromyalgia, whiplash associated disorders, etc. Explain Pain surely impacted massively on my work as a clinician, researcher, and teacher, and it helped so many patients in dealing with and recovering from persistent pain. I guess the Nobel Prize committee should start reflecting on the Pain Revolution and the pioneering work by David Butler, Louis Gifford, and Lorimer Moseley?

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3. Mark P. Jensen

Explain Pain: My very own desert island pain book

If I was stranded on a desert island and I had to choose a single book about pain, I would choose *Explain Pain*. If I could go back to when my study of pain began in the early 1980s and give myself career advice, my advice would be to travel 20 years into the future and find a copy of *Explain Pain*. When asked by students to list books that provide the best introduction to the pain field, my first three choices are always *Explain Pain, Explain Pain,* and *Explain Pain*.

With great clarity, this book teaches principles essential to clinicians and to individuals with chronic pain, vital knowledge needed to understand the role of pain, how it can maintain. or even worsen long after this pain is useful. And it does so in a tremendously fun and entertaining way, reflecting the good-spirited humor and whimsey of the authors.

For these reasons and more, it is worth celebrating the first 21 years of *Explain Pain*. Whether you are someone with chronic pain or care deeply for someone with chronic pain, whether you are a pain clinician, a pain researcher, or some combination of these, you would do well to consider *Explain Pain* as your very own desert island book. It will inspire you and change you; it is a book that just keeps on giving.

4. Joletta Belton

When I first learned of *Explain Pain* I was years into my pain experience. Ongoing, worsening pain that didn't make sense, that didn't respond to treatment like expected, that didn't get better when it *should* have. Pain that led to my medical retirement from the firefighting career that had defined me. My life and world was upended. My sense of self incoherent, my future lost. I felt abandoned. No one could seem to explain why I still had pain, nor what I could do about it.

Out of necessity, I set out on a path of discovery. I went to graduate school to study human movement and pain, and discovered the work of a pain scientist named Lorimer Moseley. He was gracious enough to speak to me for an assignment where we had to interview someone in our 'field'. (Having no professional 'field' at that time, I figured being lost in the unnavigable terrain of unexplained pain counted!). We talked about pain, about life, about being human. It was a conversation that would change the trajectory of my life. A conversation that helped me contextualize what I was reading in *Explain Pain* and begin to apply it to myself. I finally saw that my pain was real, just real in ways I had never considered before. For so long I had thought that 'real' had to equal damage, and everything else was… I don't know what. And that was the problem!

Through that conversation with Lorimer, and on the pages of *Explain Pain,* I realized I was not some failed and unworthy human. That my distress was understandable - who wouldn't be distressed when their lives are so utterly changed by pain? But the best part of beginning to understand my pain differently - and myself with pain differently - was that for the first time in a long time I had hope. I began to see a path forward, a future ahead of me. I didn't have to wait for pain to be gone to get on with living. To get back to being me. To reengage with the world and reconnect with the people, places, and experiences that mattered to me. I was worthy, pain and all. I could love and be loved.

This was a profound realization for me after so many years of living with shame, guilt, fear, worry, anger, resentment, hurt. All things that so often come with pain that can't be seen on a scan or verified with a test. So often, those of us with ongoing pain are disbelieved, doubted, dismissed. We are told, explicitly or implicitly, that our pain isn't real. *Explain Pain* made my pain real, and showed me a way forward.

5. Joshua W. Pate

I can clearly remember the first time I opened up the ring-bound cover of Explain Pain. I was a student physiotherapist on a hospital placement seeing patient after patient challenged by chronic pain. Up until that placement, 'providing education' to me was just a tick-of-the-box component of my care and I had never put much thought into it or read any research around the potential benefits of pain science education.

Fast forward to 2023, and now Explain Pain is two decades old, and I have never been more enthusiastic about the potential of people learning about the amazing science of pain. I should mention that I have had the exciting privilege of working with both Dave and Loz during my PhD and beyond, AND I have worked with the world-class Noigroup team for Zoe and Zak's Pain Hacks. I mention these interactions because I want to highlight that I have seen first-hand just how talented these people are. It's an excellent resource made by an excellent bunch of humans.

Congratulations all, and I hope that future generations benefit from the passing down of the learnings contained within Explain Pain.

6. Darren Burgess

Thank you, David and Lorimer, for opening our collective eyes to the many inputs, and their individual and collective influence over pain. We like to think of life Before Explain Pain (BEP)and After Explain Pain (AEP). BEP we read journals, listened to podcasts and attended conferences, attempting to join the dots on this (pre-BEP) incredibly complex phenomenon. AEP we not only understood, but, crucially, we were able to apply this to our daily lives, both professionally and personally, in a vast majority of fields.

There are few resources in our world that are equally applicable to both Sports and Conventional medicine, and none that do so in such a dynamic format. We thank you for the book, and continued work helping us all understand pain a little more and therefore suffer pain a little less.