

# Functional pain syndromes – the story holds the key



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**Traditionally, complaints that are attributed as functional pain syndrome have always been considered as isolated conditions. However, research now suggests that treatment should be considered with regard to the whole person as these conditions often evolve from the patient's vulnerabilities and circumstances. This article aims to enthuse the reader to work with the many patients who experience persisting pain and other symptoms, understanding how and why these can emerge at any given moment, and thereby create an effective working partnership with their patient.**

## Learning outcomes

- 1 Understand the need to address the whole person in pain.
- 2 Understand the common biology underpinning functional pain syndromes.
- 3 Understand the concept of being vulnerable to developing chronic pain.
- 4 Develop thinking about how to approach chronic pain.

## Introduction

Functional pain syndromes (FPS), also known as functional somatic syndromes, include fibromyalgia (FM), irritable bowel syndrome (IBS), chronic fatigue syndrome (CFS), chronic low back pain (CLBP), chronic pelvic pain (CPP), interstitial cystitis (IC), tension-type headaches (TTH), migraine, vulvodynia and temporomandibular joint disorder (TMJD). Physiotherapists will meet patients who present with one or, more commonly, multiple complaints from the aforementioned list, which have traditionally been considered to be isolated conditions. In recent years there has been a re-think in line with research findings and the consideration of the whole person rather than a narrow focus on an end organ or a single body system. There are no better examples of how pain and other symptoms emerge from the whole person than in functional pain syndromes, demanding an approach that encompasses all dimensions of existence and how these interact: the physical, the emotional and the cognitive.

This article will review the common biology that feasibly explains FPS and creates opportunity to tackle these problems more effectively. From a practical perspective, features of FPS and how they evolve from certain vulnerabilities and circumstances mean

that the patient's narrative must take a centre stage in order to make sense of the condition(s) and create a meaning for both the patient and the clinician, from where they can proceed together in a trusting relationship. I will also discuss the importance and relevance of the narrative that provides the necessary clues to reach this end, as well as guiding the best course of action.

The suggested approach to identifying and working with the person suffering functional pain is based upon the latest thinking in neuroscience and the more recent blending of neuroscience with philosophical thought.

Often, chronic conditions and pain are feared or loathed by practitioners. However, in developing an understanding, the clinician can feel equipped to work with, and glean satisfaction from, the outcomes. It is an empowered position to find oneself in when a new patient is referred for one complaint, typically musculoskeletal, yet the narrative contains reference to a range of seemingly different problems, and you can join the dots to the delight of both yourself and the patient who now has an insight into what has happened to them and their life.

## Case study

Here, you are encouraged to consider this case study subjectively, albeit recognising the limitations of a penned picture rather than fully engaging with a person. Think about a patient you may have seen with a functional pain syndrome, while reading the sections below, in order to apply the new information practically.

A 49-year-old female is referred for chronic low back pain of five years. In her narrative it emerges that there have been increasing episodes of back pain over the past 10 years, each lasting a little longer and impacting more and more upon her life. She has also suffered neck pain and tension for many years.

In response to the enquiry regarding previous health issues, the patient mentions her irritable bowel syndrome, migraines and period pain (often this is not volunteered but requires elucidation). As commonly happens, the patient states that these problems have nothing to do with her back, and that she has a specialist for each (gastroenterologist, neurologist and gynaecologist). At this point you, as the clinician, are either excited at the prospect of “joining the dots” for this lady and explaining the biological commonality, or wondering how you are going to deal with this complex case.

Five years ago, the patient divorced and continued to live in the family home with two teenage girls. The girls are now both at university but return home frequently. One suffers with anxiety and panic attacks; both have been diagnosed with IBS.

Towards the end of the assessment, the patient remembers to tell you that she was diagnosed with depression 15 years ago and has been on anti-depressant medication ever since – how often does a patient recall something later on? Being open to the evolving relationship and flow of details is vital in building the overall picture of that person.

## What are functional pain syndromes?

When a physiological or organic cause for the pain cannot be found, often after extensive testing and multiple referrals, functional pain syndrome (FPS) is diagnosed. In such cases, the lack of understanding within the healthcare profession can lead to a patient being marginalised, labelled inappropriately as a malingerer, or even it being suggested that it is “all in their head”. The effects of this journey can be as distressing as the pain itself, and may contribute to the pain experience by gradually chipping away at any expectation of recovery.

We fully recognise the effect of expectation upon both pain and pain relief (Bingel 2011). Each time a treatment fails, hope is eroded a little more and the patient may seek an alternative explanation and intervention. The problem lies with treatments that merely focus on one aspect of the pain, commonly targeting the end organ, and not the complexity that resides upstream. This complexity is the reality, yet despite the challenge, it creates many opportunities to change the pain by taking a whole person approach that will be described later.

To understand FPS is to understand the personal and contextual nature of pain itself. These conditions are the ultimate examples of how our biological systems can adapt to the point of perceiving both dangerous and normal stimuli and situations as being threatening, and hence protection emerges in the person as the experience of pain. Pain is personal and unique to the self at that particular moment in that particular circumstance. By the very nature of existing within ever-changing environments, the pain experience is sculpted by the perceived need within that context. There is a great deal of learning that goes on; simple conditioning and association that can easily result in a pain experience. A place, an object, a person, a sound all have the ability to be detected as salient according to a past experience, and henceforth deem an urgent need to protect.

Pain is binary, in that we have it, or we do not. It hurts, or it does not hurt. The quality and intensity will of course vary, but it either exists in that moment, or it does not exist in our conscious field. For this reason, drawing upon phenomenological and experiential philosophy is a vital step forward to allow us to ask the patient the right questions and to give meaning to their narrative. The patient will, as a consequence, feel immediately validated and heard, and thereby embark on a trusting relationship. We must become trusted advisors.

The list of FPS conditions previously mentioned, each labelled a particular end-organ. While historically this may have been helpful and would identify a particular feature of FPS, the end-organ approach does not offer an explanation for co-morbidity that exists, or highlight the temporal nature of a condition. We are continuous and changing, with a past that is littered with incidents that are part of existence. The impact of these life events, however, is determined by a blend of our genes and environmental factors that trigger clinical conditions. Early life adverse circumstances have been indicated to play a role in future vulnerability. There is the potential that childhood adversity sets the scene for heightened and maladaptive responses to physical and emotional traumas later in life (Bourke *et al* 2015; Larauche *et al* 2012; Mayer & Bushnell 2009).

Understanding the continuous nature of the individual creates the opportunity to explain why a clinical syndrome emerges, as well as how a multi-faceted approach is required to tackle the problem.

There is gathering scientific evidence for a common biology for FPS, underpinning the range of seemingly different problems. Most patients are surprised to learn that there is a link, and are often relieved to understand that there is no pathology, or significant injury but, in fact, their pain is a manifestation of protection; usually too much protection generated by their body, with suffering the result.

It is becoming clearer that central sensitisation is playing a role in FPS (Bourke *et al* 2015), explaining why pain in particular persists. Woolf (2011) describes central sensitisation as “*an amplification of neural signalling within the central nervous system that elicits pain hypersensitivity*”. In essence, this means an increase in the gain resulting in more pain when a stimulus should be painful (hyperalgesia), and pain when a stimulus is normally not painful (allodynia). While this laboratory-based concept is increasingly being identified clinically (Nijs *et al* 2014), the fact that the explanation focuses upon the nervous system means that it does not incorporate the other systems engaged to protect: the immune system, the endocrine system, the motor system, and the autonomic nervous system at the very least. Wider thinking is required to take into consideration the individual’s traits, past experiences, beliefs, gender and thoughts/emotions to name but a few. All of these things play a part in defining a person’s continuum; their thoughts and emotions are considered together as, increasingly, these are viewed collectively (Kiverstein & Miller 2015).

In our distant past, our species was likely to have been adaptive to be vigilant to danger as a feature of survival. However, this

phenotype in the modern day poses problems. The types of danger that existed then no longer pose a threat now, yet our biology continues to respond as hypervigilance and an attentional bias for detecting potential harm (Mayer & Bushnell 2009). This forms the vulnerability that has an integrated multi-system set of responses to situations that register as salient and motivating action. Seeking to maintain a homeostatic balance, conscious experiences indicate to us the need to do something; thirst motivates the imbibing of water, hunger motivates the ingestion of food, pain motivates or even demands that we face up to or avoid the threat. While an actual threat in the form of injury, infection or emotional trauma needs action, even when no physical threat exists, such a demand by the body for action is no less felt through the intensity or nature of the pain. In fact, without a cause that is obvious and can be "seen" or determined through investigation, and despite the relief in a lack of sinister pathology, further questions arise including those that lead to a sense of injustice; "why me?" The individual's character traits, ability to control emotions and cognitions, and the meaning that they give to the problem determines the actions taken and subsequent thinking. Again, it is only by considering the whole person that we near their reality and offer a tangible route forward based upon their understanding of their problem.

The complex nature of FPS means that there is an urgent need to go upstream to consider their existence in an individual as a phenotype constructed by gender, genes, experiences and environment. Central sensitisation is a credible biological adaptation, understood as a nervous system phenomenon. However, we need a deeper understanding of how other systems play a role in shaping sensitivity that manifests as persisting pain, abdominal bloating, hypervigilance, over-reporting symptoms, disrupted sleep, poor concentration, emotional turmoil and altered movement patterns related to a change in body sense and a sense of self. All, during careful questioning, are commonly described by patients and illustrate the multi-dimensional nature of FPS; physical, cognitive and emotional. These dimensions are not separate as they are all underpinned by activity in different body systems, reduced to chemical activity and receptor profiles emerging from gene activity. This sequence is hugely over-simplified but does demonstrate the complexity that exists. If we, as clinicians, can note the wider presentation where a discussion around the past history is as inclusive as the current set of symptoms, clues will appear with regard to the significant influences on the pain and suffering, as well as the vulnerabilities, that begin the process of bringing a meaning and often a "realness" to the problem that has not existed to date.

## Vulnerability to chronic pain

It is becoming increasingly accepted that people who develop chronic pain do so as a result of a "vulnerability". We could argue that this vulnerability is in a tendency to protect, as pain is a protective device. A move to consider why certain individuals convert acute pain into a persisting state is vital in understanding how we can better intervene and create effective treatment programmes that impact earlier, reduce the risk of chronic symptoms developing, and / or deliver more desirable outcomes.

Indeed, it is as important to determine the likely influences on the patient during assessment as it is to do so academically, as this information will provide an explanation and a meaning for the patient; a key starting point for the therapeutic process.

Denk *et al* (2014) discuss in detail the neurobiological risk factors for chronic pain conditions. To identify the vulnerabilities is also to offer ways that resilience may be sought in the face of chronic pain. The main areas of study that Denk *et al* highlight are genetics, epigenetics, priming and brain networks. It is beyond the scope of this article to detail their findings, but readers are encouraged to consume their work. In brief, the authors are confident that there are vulnerable people who experience an injurious event or are influenced by a stressful environment, thereby priming them at a molecular level. This priming means that if the person receives an insult such as an injury, infection or an emotional event, the response is vigorous and prolonged, both biologically and behaviourally; the two being inextricably linked with togetherness that is the whole person. In terms of FPS, the responses beginning at the gene level are not unique to any one body system and hence the florid manifestation that evolves from one "starter" system. This is the biological red herring.

## The approach

As the title of this article suggests, we must consider the whole story in order to understand the full nature of FPS. Of course, it is a whole person who seeks help, who wants to know the meaning behind their suffering that pervades into every corner of their very self. As Oliver Sacks (1985) pointed out, it is the person we must consider as much as the condition. As the primary symptom, and usually the vehicle that brings the person to the consulting room, it is pain that is emergent in that whole person (Thacker in personal communication) and hence cannot be thought of as a separate experience from self, despite the frequent attempts to do so (Edwards *et al* 2014). This is neither in the way the person thinks about their pain, nor in the clinician's thinking as the latter seeks to give meaning to the meaning given by the patient. This can only happen when the continuous nature of FPS is accounted for by understanding the vulnerabilities professed within the narrative.

There is a great skill in guiding the patient to revealing their lengthy story. Often their history will have been taken on many occasions, sometimes with disbelief and hence affecting future therapeutic relationships. It must be navigated with care. Like detective work, the pieces of information need to be gathered and pulled together with a thread that can be tangibly explained to the patient in a way that makes sense to them. With the biomedical model of healthcare maintaining supremacy, most patients focus on the body and physical structures as causative, for this is what they have been told despite the lack, in many cases, of any significant evidence. To vigorously remove this layer of understanding is to pose a threat. It therefore needs to be recalled that pain is a response to a perceived threat and so a gentle introduction with credible evidence is required. Threat comes in many forms including one's internal monologue (thoughts) that forms the content for rumination. We must, therefore, be careful of the messages that we deliver, especially to those who are vulnerable.

Once it has been told, it is important to emphasise the importance of their story to the patient, and its role in guiding the best course of action; the explanation begins. The patient's narrative holds the clues and the physical examination confirms important functional features; the purpose here being not to instruct how to examine, but rather to guide the thinking behind the assessment of the whole person.

Notably, astute individuals will consider the assessment as a bi-directional experience of mutual examination (Broyard 1992); who is examining whom? The results of the assessment will impact on both parties, with their beliefs, expectations and prior experiences, and set the ground for the next steps. Certainly, the clinician must work hard to avoid judgement of the person or think about the treatment programme by rote.

Taking a whole person approach really means that we are seeking to close the gap between the first and third person; the former being concerned with understanding the lived experience of the individual, brilliantly described in the article by Edwards *et al* (2014). We desire the patient to wholly engage in a treatment process and benefit optimally in doing so. This can only happen when the patient feels heard, understood and that their interests are aligned with that of the clinician. The whole person is a thinking, feeling, acting individual who resides on an ever-moving continuum of change. This, in itself, creates an optimistic view of our potential for overcoming pain.

Pain is consistent only in appearing in our consciousness, which is a changeable state in that the objects of our attention are dynamic. We are not in one mode all of the time. We need the flux and flexibility, yet pain can persist in grabbing a sizeable chunk of our attention unless we work hard to change habits of thought and action.

## Conclusion

A good proportion of a musculoskeletal physiotherapist's caseload is formed by FPS. Understanding that there is a common biology, that evolves as part of the individual's life continuum made of their vulnerabilities, experiences, genetics, gender and environmental influences, permits meaning. The meaning is key for both the patient and the clinician, as together they form a route forward based on a shared belief. Once the patient feels that their condition has been validated, and they are heard, the trusting relationship begins. The story told holds the key and it is up to the clinician to use their skills of communication to foster a coaching partnership, filled with the right thinking and definite action. The whole person approach considered the individual and the condition as inseparable. In the light of an ever-expanding pain science knowledge base blending with philosophical thought, we can offer hope and optimism as never before.

## About the author

Richmond is a physiotherapist with a background in nursing, rehabilitation and pain neuroscience. He specialises in coaching and treating individuals to overcome their persisting and chronic

pain. His over-arching aim is to change the way society thinks about pain in order to tackle what is the global, number one health burden.

Inspired by the likes of Louis Gifford, Mick Thacker and Lorimer Moseley, Richmond believes that patients can be guided to overcome their pain, even chronic pain, with the blend of pain sciences and philosophical thought. Both Mick and Louis have been great influences in his work and thinking, the culmination of which is in his approach to working with individuals suffering chronic pain in an approach he calls "Pain Coach", as his work is closely aligned with a coaching model, in that he believes that with the right thinking, vision and action, physiotherapists can and do change for the better. Pain Coach is also a training programme for clinicians who wish to deepen their understanding of pain and how they can use this knowledge to take the best action.

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