Body-mind interactions in low back pain

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Invited contributors, Mary and Kieran have a keen interest in challenging common low back pain beliefs. In this feature, they tackle one of the most common beliefs – that low back pain is either physical or psychological, but cannot be both. Drawing on parallels from other health conditions, they illustrate why back pain management remains too focussed on the physical anatomy of the back.

Low back pain (LBP) is exceptionally common. In fact, to not experience LBP at some point of your life would be abnormal. Many healthcare professionals have been trained to view the high incidence of LBP as either a terrible sign of the way we live in modern society (e.g. prolonged sitting) and/or the inherent fragility of our spine. Instead, LBP is like becoming tired or sad, which is perfectly natural to experience at some point in our lives. Usually, it only lasts a short period and people recover and go on to live a full and healthy life. Unfortunately, a small proportion of people experience LBP that either never goes away or returns so frequently that it has a big impact on their quality of life. In these cases, like among people with clinical depression or chronic fatigue, there is a need to step back and consider why this person has not recovered, as opposed to why most of us develop LBP at some point in our lives. Therefore, we are not convinced that we should be trying to "prevent" LBP in terms of aiming to get to a point where almost nobody in society gets LBP. Almost all of us will experience LBP at some point in our lives – as Nortin Hadler has said,[2] LBP is one of the common "predicaments" of life which most of us will face. The more important question is how to ensure when someone gets LBP that it only lasts a very short period and doesn't affect a person's life on an ongoing basis. Key to this is the body-mind relationship in people with LBP, which LBP management has usually not addressed.

How is low back pain typically treated?

Healthcare – and society in general – has spent decades thinking that once we find an accurate diagnosis of a local tissue that is causing LBP, treatment of that specific local tissue will eliminate the pain. Unfortunately, what this has led to is more scans, more rehabilitation, more medications and more surgery.[1] There is no denying the fact that the approaches we have taken to managing LBP in recent decades have had little benefit.[1] This is not because LBP has become more prevalent – rather we have more unhelpful methods of frightening people in recent years e.g. through using high-tech imaging such as MRI scans inappropriately. In fact, it is likely that it is the interpretation of such tests which is the biggest problem. For example, it is very rare for an MRI of someone's back not to show something such as disc degeneration.[6] We used to think these things were always important, but it now looks like **the things we see on MRI scans are a lot like finding some grey hair on your head or some wrinkles on your face**. In other words, they may not be cosmetically appealing, but they are themselves not dangerous and just signify a combination of genetics

and ageing. The pain is still there – and the pain is "real" – which makes the situation frustrating for patients. However, it is critical that we dispel inaccurate notions of serious back degeneration in most people with LBP.

Society has overwhelmingly accepted the idea that LBP and injury are very closely connected. Furthermore, there's an assumption that if a person's stress levels or mood are involved then that person's pain is psychological or "all in their head". However, even if LBP commonly starts with injury,[5] its persistence is not related to the degree of injury or damage.[4] Consequently, treating LBP solely as an injury is misguided, and has not lead to impressive clinical outcomes.[4] If we compare LBP management to other healthcare areas, it has not given the taxpayer the same value for money. For example, the risk of being disabled by cardiovascular disease or breast cancer had decreased, but the risk of being disabled by LBP has increased.[1]

We are not saying that typical treatments have nothing to offer, but we are concerned they tend to look at "fixing" one aspect of a person with LBP (e.g. their facet joint, or a tender point in their muscle, or a disc, or their posture) and not considering the entire person. Even psychologically-informed treatments such as CBT are not immune to such criticisms – tending to be almost exclusively psychological, such that their effectiveness is similar to physical treatments.[3, 7] With patients, we obviously need to examine their back, but we also need to look at the whole person – their sleep, their stress, their fears, and what they think is wrong with their back.

How is low back pain similar to other health conditions?

It is well accepted that high blood pressure can be linked to physical factors (e.g. cholesterol or diabetes) as well as psychological factors like stress. There is no suggestion that patients with high blood pressure should be divided into "real" and "imaginary" cases depending on whether stress is involved. I think sensible management would address acute symptoms and then focus on each person's own contributing factors – be that obesity, stress or whatever. Cold sores provide another useful comparison. They have a "real" biological trigger (a virus). However, the virus typically only becomes symptomatic when a person is "run down" (e.g. stressed, sleep deprived, poor diet, lack of exercise). Once overall health improves, the cold sore resolves, despite the virus remaining. We see the virus being a lot like a sensitive tissue in the back (e.g. muscle, disc, and ligament). **When overall health is good, the back is much less symptomatic**. Cold sores are typically managed through (i) short-term local treatment and (ii) enhancing the person's overall health in the medium-term. Unfortunately, LBP is not as visible as a cold sore – patients can feel reluctant to accept something like stress is part of their pain, and fear being judged by others. Consequently, treatment then focusses almost exclusively on the back, and not the big picture of their overall health. This possibly increases risk of recurrent pain as an accurate understanding is critical to long-term self-management.

We have personally both had cold sores in the past. We have similarly both had LBP, headaches and other various aches and pains at points in our lives. We see managing such infrequent episodes of pain as being very similar to the management of intermittent cold sores – get some symptomatic relief if needed in the short-term, and work on boosting our overall health in the medium-term.

About the authors

Mary O'Keeffe is a PhD student at the University of Limerick. Her PhD research is examining whether tailoring multidimensional rehabilitation to the individual chronic LBP patient enhances effectiveness, and is worth the additional time (and costs!) involved. Her supervisors are Dr. Kieran O'Sullivan and Dr. Norelee Kennedy from UL and Prof. Peter O'Sullivan from Curtin University, Perth.

Dr Kieran O'Sullivan is a lecturer at the University of Limerick and has been awarded 'specialist' status by the Irish Society of Chartered Physiotherapists. He is also a researcher with over fifty peer-reviewed publications, whose work has attracted €1 million in funding, including a multi-centre randomised controlled trial of LBP treatment.

Further resources

www.pain-ed.com – **public health information on chronic pain**
www.ulresearchimpact.com/category/health – **'Building Resilience' initiative**

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