The role of specialist physiotherapy in a pain management clinic – traditional and novel approaches

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Abstract

There is no doubt that coronavirus disease (COVID-19) has had a drastically negative impact on the NHS, as well as many other public services, individuals and families. The role of physiotherapy in managing chronic pain is challenging; even more so with the added burden of COVID-19. As COVID-19 cases increased many non-urgent outpatient services were suspended: This district general hospital continued to offer some appointments, albeit limited, but were they beneficial? This article not only considers the multidisciplinary approach to manage chronic pain; focusing on the bio-psycho-social model, which incorporates a variety of specialities within a pain clinic but also the impact of COVID-19. It considers both the clinicians' and patients' experiences respectively of offering, and receiving, key physiotherapy treatments such as patient education, patient empowerment, exercise and function; how these were modified, sometimes with digital support. It gives some insight into the differing patient responses and attitudes such as patients who fear exercise; those who expected physiotherapy to be a 'hands-on treatment' and the challenges of 'remote' patient supervision. Alternatives to educational groups are described and the patients' responses to them. Other treatments such as phased activities, goal setting, cognitive functional therapy, desensitization, mirror therapy, virtual reality, yoga, tai chi, and acceptance and commitment therapy are briefly outlined.

Keywords Chronic pain; digital technology; education; exercise and function; patient empowerment; physiotherapy

Royal College of Anaesthetists CPD Skills Framework: Pain

Learning objectives

After reading this article, you should be able to:

- understand the importance of physiotherapy in managing chronic pain
- understand the importance of using a bio-psycho-social model involving various health disciplines.
- understand the approach to key physiotherapy treatments: patient education, empowerment and exercise or function
- understand that the intensity and nature of pain often does not equal the extent of pathology
- understand the importance of patient engagement and application to treatment
- understand the benefits of integrating different types of learning and digital technologies into an educational and clinical setting

On January 22nd, 2020, Public Health England revised the risk of coronavirus disease (COVID-19) moving to the UK from 'very low' to 'low'. Sadly, by March 2020, the numbers were rising, having a significant impact on the NHS, with the Government recommending a variety of measures, including supporting outpatient staff to offer digital appointments to patients.

Some hospitals, due to the demands of inpatient care, suspended their non-urgent outpatient services completely but as a smaller District Hospital we were able to continue, albeit at a more restricted level. How did this Affect an already stretched Pain Clinic, particularly in providing specialist physiotherapy input when physiotherapy is commonly seen as a 'hands-on' treatment? How did patients respond? Did patients presenting with a complex picture of chronic pain have their fears exacerbated due to COVID-19 or did it hamper their treatment?

Chronic pain is defined as pain that persists beyond the normal healing time and is regarded as chronic when it lasts or recurs for more than 3–6 months.[4] Pain is part of everyday life – from falling off a bike, sustaining a simple graze to learning to live with chronic pain which can occur in anyone for a variety of reasons; some more predictable than others. Clinicians are challenged in dealing with pain: the postoperative management of acute pain following routine surgery to the more demanding task of pain following complex spinal surgery. Pain is not only governed by the outcome of the actual cause but by the individual's response to it – their age, attitudes, character and beliefs are just a few influential factors. Following routine surgery, patients are usually offered pain management via the conventional medical model whereas patients experiencing chronic pain are treated using the bio-psycho-social model, requiring a multidisciplinary approach. This model consists of three strands:

- Bio – what pathology is there and to what extent? Are other investigations or procedures indicated?
- Psycho – how is the patient affected mentally by their pain? Are they ruminating over their symptoms or presenting with significant negative emotions?
- Social – how are everyday factors affecting them? Are there social issues such as poor housing, family tensions or financial concerns?

Physiotherapy

Physiotherapy is commonly a key aspect in managing chronic pain, being part of this multidisciplinary, bio-psycho-social approach. Evidence has shown that physiotherapists use a variety of skills to guide and support people with chronic pain towards a better quality of life.[1] Despite progress in chronic pain management, some patients and some clinicians still expect a 'cure'. It is often assumed that 'hands-on' physiotherapy will be

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offered, (which is commonly not indicated or appropriate). Certain patients fear physiotherapy, exercise and activity, as past experience has worsened their pain or not helped at all.

Patient education

Patient education is therefore a key treatment as there are many misunderstandings about chronic pain. Some may be associated with an individual's upbringing; beliefs or being misinformed. *'Have you met other people with pain like mine? The doctor says it's degenerative changes: That must be really bad'.*

Patients with chronic back pain may have more specific thoughts: *'My brother had sciatica and was told his disc had 'popped out'. He ended up having surgery. I've had the same symptoms as his for a week now. Surely I need an MRI otherwise I'll end up in a wheelchair.'*

Before the COVID-19 pandemic, advice and education was routinely given to patients explaining these misconceptions, reassuring them to have confidence to progress. The science of pain was outlined, giving patients an understanding of chronic pain or why it does not 'go away'. It was explained that the extent of pain does not necessarily equate to the level of pathology, (which could be minimal) and in a chronic situation — 'pain does not mean harm'.[2] Information may be given on certain pathologies such as the spine, i.e. that discs do not 'pop in and out' and that a 'degenerative spine' implies age-related osteoarthritis or 'wear and tear'. In other instances, patients may be advised on conditions such as fibromyalgia and complex regional pain syndrome (CRPS). With advice, reassurance, explanation of results, such as an MRI, patients are usually more confident to embark on treatment.

Pain management programmes (PMP), using a multidisciplinary approach, can also be effective despite the more recent National Institute for Health and Care Excellence (NICE) guidelines finding insufficient clinical evidence to recommend them.[4] As a pain clinic, however, providing various education groups (offering less hours than recommended for a PMP), we have enabled patients to progress, achieving a better quality of life and improved function.

Advice on exercise management and activity

Exercise is a key part of physiotherapy,[1,3,4] offered on an individual basis or within a group. Patients seeing a physiotherapist within a pain clinic often have misconceptions of what to expect, frequently believing that exercise is harmful; that physiotherapy will increase their pain. Patients are encouraged to consider exercise as part of daily life — carrying out activities to assist daily function, using specific exercises to enhance this — see Table 1. For example:

Patients are encouraged to exercise within manageable levels of pain, gradually increasing activities or carrying out 'phased activities' and/or pacing. With pacing, patients learn to briefly stop **before** their pain or other symptoms, such as paraesthesia, increase, minimizing further 'wind up' of the body's nervous system. Anticipating pain can be unhelpfully powerful. By changing how they approach activities, frequently breaking them up as well as using psychological strategies, patients usually manage their pain better. Over time they find they can achieve more without increased pain, improving their confidence and self-esteem, reducing negative thoughts, and creating more positive feedback within their nervous system. Similarly, patients are encouraged to set goals, to consider their values and hobbies, to have a purpose in life. Goals may link with improving their function, such as getting in and out of the bath or walking a particular distance daily. In addition, they might consider past or new hobbies which can promote activity and exercises.

More specific exercises or treatments may be offered based on the patient's symptoms or particular diagnosis. Desensitization and mirror therapy[2,5] can modify symptoms in conditions such as CRPS, phantom limb pain and allodynia. These responses are due to abnormal processing within the brain. Desensitization and mirror therapy 'remind' the brain of the normal, expected response, to establish normal processing. Alternatively, the brain is 'tricked' into believing something is happening, i.e creating an illusion through use of a mirror. Virtual reality (VR) can also be effective in chronic pain, assisting in exercise participation by creating a form of distraction: VR draws attention away from the patient's mental processing and can decrease the level of pain consciously experienced.[6]

Cognitive functional therapy[3] (CFT) embraces many of the approaches already considered but is even more patient specific. The patient is helped to address their psychological and physical fears, recognizing how fear can promote inappropriate coping strategies and avoiding fearful movements can amplify pain. Patients are gradually exposed to movements they fear or avoid and can combine this with psychological activities (such as mindfulness or specific breathing techniques), to promote relaxation and reduce pain.

Exercise and function

Functional task	Movement/exercise required
Moving from sitting to standing	Forward flexion of the lumbar spine
Increased standing and walking tolerance	Contracting the quadriceps and gluteal muscle groups
Getting out of bed	Pelvic tilts to mobilize the lumbar spine
Walking to the toilet	Exercising the hamstring and quadriceps muscle groups/balance exercises

Table 1

What changed during COVID-19?

During the first wave of COVID-19, whilst some patients were still seen 'face to face', digital physiotherapy appointments by telephone or video were offered with interesting outcomes:

1. Some patients had less expectations of being 'cured' as they were seen remotely and away from a 'medical' setting.
2. Patients were more accepting of the absence of a 'hands-on' approach to treatment, often more willing to embrace the value of exercise and ultimately benefitted from it.
3. Less anxiety issues (which are commonly seen in patients living with chronic pain), as triggers were removed. These included:

- fear of physiotherapy due to a previous bad experience of physiotherapy and/or hospitals
- the logistics of attending a hospital, such as transport, difficulties with hospital parking, work, family commitments or financial issues.

4. Better 'attendance' was seen in patents with mental health issues, as some could more easily cope with a telephone or video call. Hence treatment continuity improved.
5. There was a change in attitude with certain patients. COVID-19 enabled them to be more philosophical about their symptoms and activity limitations, seeing the problem as less, compared with COVID-19, and to 'just get on with their life'. One patient even reported that with the imposed lockdown, she felt better mentally: due to her chronic pain and fatigue she was used to staying at home and now felt on a par with other people who had to stay at home.
6. Patients with comorbidities had less pressure to attend appointments, reducing demands on their time and others, achieving a better 'hospital—life' balance and removing guilt for the times they thought they imposed on others to assist them.
7. Some patients had more time to reflect on advice given and to carry out more structured exercise regimes. Other patients, who worked before COVID-19 discovered that 'home working' gave a better work—life balance; it prompted them to re-consider their priorities, recognizing that their previous approach to work amplified their pain.

By offering digital appointments, patients were able to control their lives better, more easily arrange appointments around other commitments and remove the fear of seeing a physiotherapist 'in person', gaining confidence in them 'virtually' in order to engage with treatment and progress. These factors complemented some of the established approaches to chronic pain management such as acceptance and commitment therapy (ACT), cognitive—behavioural therapy (CBT) and mindfulness.[2,3] These treatments are usually offered by clinical psychologists but physiotherapists working in chronic pain may refer to them. Such psychological strategies could be enhanced by a 'virtual' appointment, where a physiotherapist cannot 'hold the patient's hand' so to speak but merely guide them. Patients need to be empowered to believe in themselves to have confidence to increase their activity regardless of pain: Self-motivation and engagement is essential to ensure progress.[3] Chronic pain can be likened to a journey and a variety of analogies are used. Digitalized appointments have, where appropriate, enabled clinicians to observe a patient's 'pain journey' from a distance, not being drawn into some of the 'detours' or psychological factors that might hamper treatment and progress. Shockley, who has lived with chronic thoracic spine pain since 2007, describes pain management succinctly: *'Healing severe or chronic pain, I believe, includes transforming our relationship to the pain, and, ultimately it is about transforming our relationship to who we are and to life.'*

Group education

Due to COVID-19 with limitations on services offered, one of the bigger challenges was finding an alternative to the various education groups. The clinical psychologists gradually established an online ACT group; the occupational therapists created a 'Living well with fibromyalgia' workbook and the physiotherapists a book 'Advice on managing your lower back pain'. Whilst other educational material is available the clinicians were keen to offer something which reflected the content of their usual groups and advice given. These alternative options — such as group participation from the patient's own home and educational books which patients could read at their own pace rather than be committed to the time constraints of a physical group — have enhanced future treatment options especially as all were well received: *'The back group book is great; it's easy to read and makes sense. I wish I'd been given this years ago'. 'This book has taught me a lot without me having to worry about missing time from work' …. . 'I like the book — I can go back to it when I need extra guidance.'*

Yoga and tai chi exercises are normally modified for people living with chronic pain and shown to be beneficial. These exercises were also embraced in a virtual setting. One physiotherapist offered an online yoga class, enabling patients to participate virtually on a weekly basis as well as creating a yoga video. Another physiotherapist demonstrated seated tai chi then referred patients onto appropriate YouTube links to continue independently.

Conclusion

COVID-19 has prompted a rapid increase in the implementation and use of digital technology within the NHS, with less hoops to 'jump through' before proposals were agreed. Technology will continue to be beneficial, regardless of the pandemic but is not suitable for everyone and anecdotally caused some frustration (IT challenges; issues booking telephone or video appointments or patients linking with them). Virtual education groups have not been fully established within our pain clinic, either due to insufficient time or understanding to create them. Technology can be daunting for some patients; some disliked video appointments due to insufficient privacy in their home or only having a small screen, whilst others preferred to be seen face to face. Certain assessments and treatments benefitted from a physical presence. Patients cannot always demonstrate physical limitations by telephone or video, whilst others engaged better in a face-to-face setting. Furthermore, if patients' symptoms were very complex, a physical assessment was preferred, if not essential. Finally, we must not forget the immense negative impact and devastation that COVID-19 has caused. Additionally, many symptoms of long COVID are similar to those of chronic pain.

Let us also not forget the value of digital technology, using it wisely with appropriate patient selection. ◆

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