

The Multidisciplinary Approach to the Treatment of Chronic Pain: A Qualitative Study

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Abstract

Background: Chronic pain affects some 1.5 billion people worldwide, and single-disciplinary approaches to its treatment have so far proved inadequate. Given the biopsychosocial complexity of chronic pain, the multidisciplinary approach to treating it is increasingly seen by many experts as the potential solution, even if its research and implementation is not proportionately widespread.

Aims and Method: To explore the challenges and prospects associated with the multidisciplinary approach, qualitative research was undertaken to investigate the perspectives of world-leading experts in the field of chronic pain management. In-depth interviews with eight experts in chronic pain – researchers, practitioners and administrators – were designed to retrieve candid opinions that might otherwise be constrained in conventional academic discourse.

Findings: Through thematic analysis of the data, the main findings of the research include - 1) Chronic pain is a multi-dimensional phenomenon; its treatment ought to reflect this multidimensionality. 2) Reviews of multidisciplinary pain clinics show them to be largely effective in reducing pain, improving functionality and thereby reducing healthcare costs. 3) Operational challenges at pain clinics such as coordination, communication, assessment and standardisation can undermine their effectiveness. 4) The 'pain sector' is driven by profitability and ROI – multidisciplinary pain clinics are costly, resource-intensive, and are yet to prove their cost-efficiency/profitability to payers. 5) A greater understanding of chronic pain – by researchers, practitioners and patients – can improve the effectiveness of its treatment.

Conclusion: The multidisciplinary approach is the most effective known method for combatting the global chronic pain epidemic, and ought therefore to receive the necessary support from all stakeholders.

Keywords: chronic pain, multidisciplinary, biopsychosocial, pain clinics, pain neuroscience, integrative pain medicine, holistic pain therapy

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Introduction

A Global Health Crisis

Given the sheer scale of the global chronic pain crisis (as summarized in Figure 1), the investigation and delivery of effective treatments for chronic pain has become one of the most pressing medical challenges of our times. Yet the evidence suggests that both the prevalence and societal burden of chronic pain are under-estimated, and that treatment is not always instituted and/or adequate.^[1] Outside pain medicine, chronic pain has a low priority within healthcare systems, partly because it does not have a code in the World Health Organisation (WHO) International Classification of Diseases, and also because the mechanisms underlying the transition from acute to chronic pain are still poorly understood.^[1] Moreover, despite the sheer amount of basic and translational research on chronic pain, progress made to treat it is far from being proportionate.

The micro-specialisation associated with the majority of the research on specific mechanisms and biochemical processes reinforces a culture of a one-dimensional treatment, usually pharmacological. The investment in such research by the pharmaceutical industry is substantial. Yet the relative failure of such conventional, one-dimensional treatments for chronic pain warrants an alternative, multi-dimensional approach; one that synchronises and synthesises different approaches to the problem in a way that is unique to the particular pain syndrome, and preferably to the individual's own socio-psychological context too.

Introducing the Multidisciplinary Approach

The multidisciplinary approach investigates all possible options for optimal pain management, including pharmacotherapy, interventional procedures, physical rehabilitation, psychological support, education about the patient's condition, and sometimes traditional/alternative methods. It involves the implementation of the treatment plan concurrently – that is, disciplines

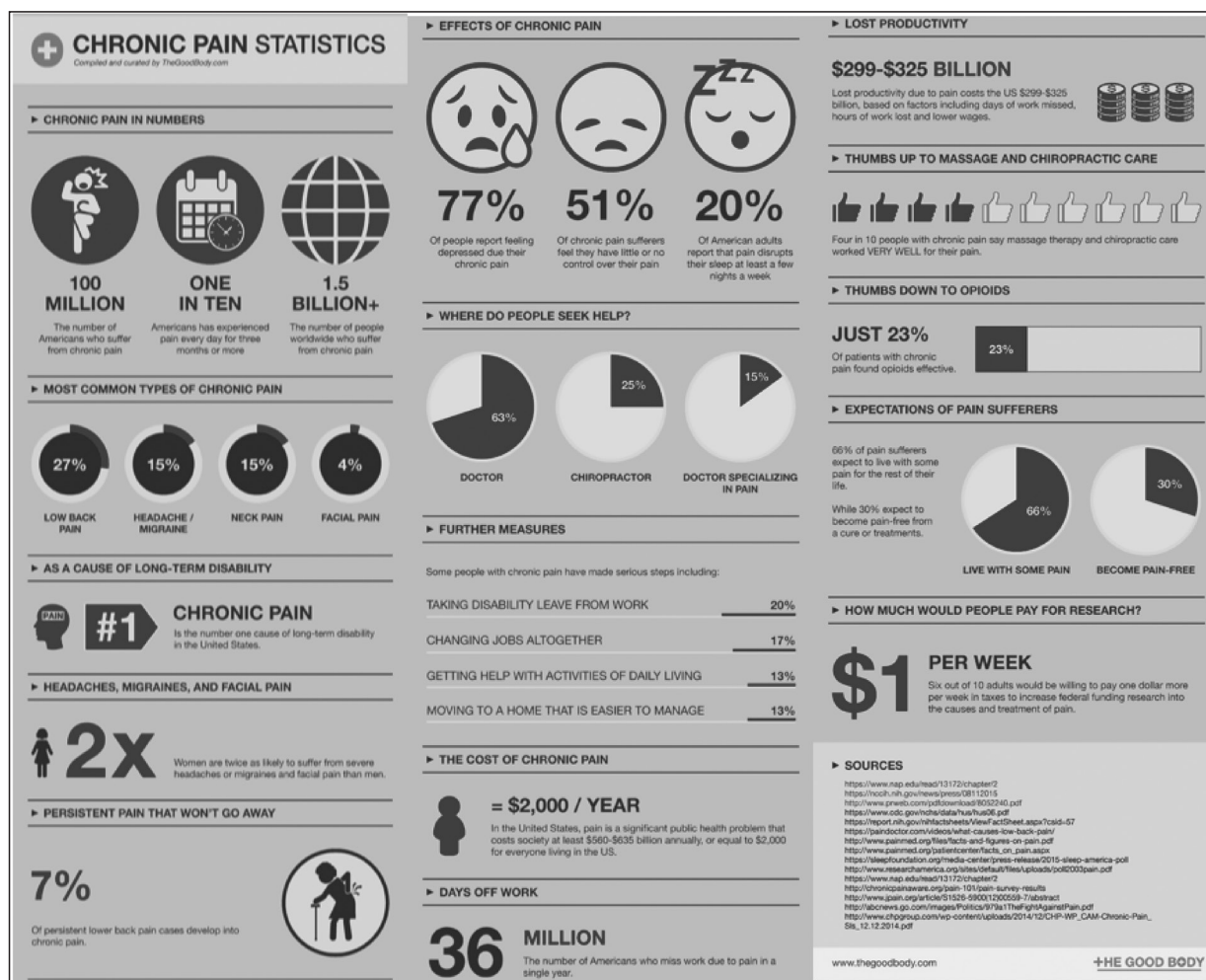


Figure 1: Some statistics on the scale and implications of the chronic pain epidemic (Global Industry Analysts 2015).

involved in healthcare will be engaged in parallel and in collaboration instead of sequentially whenever possible. Each team member must be familiar with the overall treatment plan, the methods and modalities being used, and the goals of each discipline working with the patient that contribute to the overall goals (reduction of pain, improved pain tolerance, and improvements in physical and emotional functioning, patient satisfaction). All goals should be clear, focused, realistic, and measurable.

This approach to the treatment of pain manifests clinically in the form of multidisciplinary centers, clinics and practices. Patients with excessive and prolonged pain symptoms are usually referred to them by their GP or secondary care provider. These entities recognize that as the phenomenon of pain is multifaceted, it is best treated by a multidisciplinary team, enabling patients to benefit from the coordination and integration of various medical disciplines and treatment modalities as part of a single treatment programme. This allows for the three core components of pain to be addressed simultaneously: sensory, affective and cognitive (Refer Figure 2).

Dedicated pain clinics were first developed in the United States in the 1940s, initially by anesthetists for cancer pain. As the methods for such treatments were not transferrable to non-cancer pain, the clinics became multidisciplinary. With the emergence of organizations like the International Association for the Study of Pain (IASP) and then the American and British pain societies, there was increasing support for the idea of

multidisciplinary treatment for chronic pain. Today, despite there being a growing acceptance of this biopsychosocial model of pain among most researchers, practitioners and associations,^[2,3] it has yet to translate into a widespread change in national and international attitudes towards the treatment of pain. To what extent this is down to the effectiveness of the multidisciplinary approach, vis-a-vis other wider issues is a question this paper aims to address.

The hypothesis of this paper is a bold one: that the multidisciplinary approach to the treatment of (non-cancer) chronic pain – whilst under-funded, under-researched and under-available – is the most effective known method of managing (if not combating) the global chronic pain pandemic and ought therefore to be supported by all stakeholders urgently. Whilst this paper is not titled ‘a case for the multidisciplinary clinics’ and is instead an investigation of the effectiveness of the multidisciplinary approach, a conclusion that indicates a robust case of multidisciplinary clinics will be drawn.

Methodology

To explore the challenges and prospects associated with the multidisciplinary approach, qualitative research was undertaken to investigate the perspectives of world-leading experts in the field of chronic pain management. This research was in the form of in-depth interviews with eight of the world’s leading experts on chronic pain, which includes leading practitioners, scientists and regulators. They included specialists in multidisciplinary scholarship and practice, as well as practitioners of integrative or alternative treatment. Leading institutions such as the Royal College of Anesthetists, the Wellcome Trust, the International Association for the Study of Pain, the British Pain Society and the American Pain Society were represented.

The interviews were designed to enrich existing evidence of the effectiveness of the multidisciplinary approach. The unique, cutting-edge insights and perspectives from the interviews sought further clarity or to fill gaps in the existing research. Key themes from the interviews will be drawn out using thematic analysis, and each core theme will be discussed using key quotes from the interviews where relevant to build up a narrative that addresses the question of ‘effectiveness’.

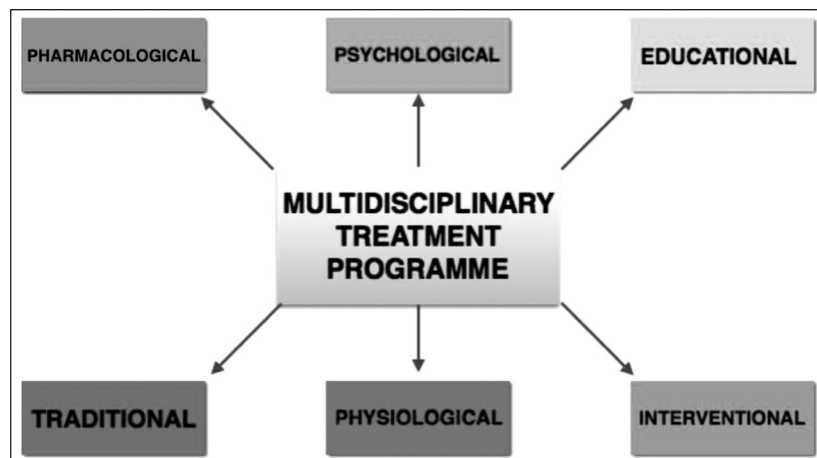


Figure 2. A multidisciplinary treatment programme is based around addressing chronic pain as a multifaceted, biopsychosocial phenomenon that requires a holistic approach to treatment. vary with regards to length of time, number of patients, disciplines/therapies integrated and the structure of the programme, factors which are extremely important in relation to the subjectivity of the pain experience and the individuality of the patient concerned (Waqās Ahmed, 2019).

This paper will not be restricted to a particular pain condition (fibromyalgia, migraine, lower back pain, for example) and will seek to address the effectiveness of the approach on the conceptual level for non-cancer chronic pain conditions in general.

To analyse and discuss the data and its relation to the main subject of this paper, a form of interpretive analysis will be used. The discussion of the results will be based around five main themes with their respective sub-themes. These themes are discussed in an order that builds a coherent narrative and best reflects the aims of this investigation.

Results and Discussion

1. Complexity of Chronic Pain

1.1. Multi-layered Mechanisms

It was clear from all participants that there were “multiple facets to pain”, many “layers and levels” including peripheral nociception, dorsal horn central sensitisation, the limbic system and the somatosensory cortex involvement. As the (pain) nociceptive signal enters the brain it affects “areas responsible for cognitive, behavioral, emotional and autonomous functions”. So, to treat chronic pain, “you can interfere with these at multiple rotations”.

Our increasing understanding of these mechanisms has made it “very much more complicated than it used to be”. As a result, many scientists are looking to Complexity Theory for answers. “We’re shifting to the appreciation of this almost overwhelming complexity, and with chronic pain there is talk of it being the emergent property of a complex biological system”. However, this is still not the conventional approach to understanding pain, which remains mechanistic. “The approach generally remains embedded in mechanistic/materialistic paradigm that by definition can’t address the above (complex, unpredictable) scientific realities”.

1.2. Biopsychosocial Model

There appeared to be little doubt in any participants’ mind (as is increasingly accepted in the literature) about the need to understand pain as a biopsychosocial phenomenon. The extent of the biological, psychological or social influence on the pain experience will vary from patient to patient and also according to the type of pain condition. The biological dimension to pain is best explained through the mechanisms. These were not elaborated in the interviews except as specified above.

Little coherent biological explanation of psychosocial influences on pain have been developed in the literature in the context of multidisciplinary treatments,

but one can discern or infer these from a reasonable body of literature on the neural mechanisms of psychological influences. For example, an important aspect of the neural mechanisms underlying chronic pain and the potential to overcome it through psychological intervention is neuroplasticity. “We have learned about the impressive ability of the brain to structure and re-structure itself; we have learned also that psychological inputs change gray matter and the structure of the brain”, one participant said.

Another reinforced this in the context of pain treatment: “Nerve tissue is not properly wired; it’s quite malleable and adaptable, as are synaptic connections/neurotransmitters/neurotransmitter density and activity. In short, there is a lot of flexibility”. As Cognitive Behavioural Therapy (CBT) and mindfulness are often used to treat depression, anxiety and other mental health conditions with the rationale that they affect plasticity, they have likewise been proposed and used to treat chronic pain. Social and cultural influences on the pain experience, as well its mechanisms are now increasingly seen to be significant. “It [pain] is affected not only by what is called the ‘skin and the skull’ of the individual but also by environment – relationships within society, cultural norms and so on. So the individual’s experience of pain is influenced not only by what happens within them but also by the broader societal sense”, one participant said.

Overall, it is acknowledged in a general sense that: “Pain is mixture usually of some organic pathophysiological process taking place coupled with a lot of expectation by the patient that may be learnt; it may be have genetic component as well - there are lots of different components to it.” This accords with findings from the literature review on the biopsychosocial model.^[3]

1.3. Multidimensional Therapy for a Multidimensional Illness

The general consensus among all participants was that “chronic pain is a multidimensional, multi-system problem, and so it calls for a multidisciplinary solution”. Moreover, “when we acknowledge that pain (also already acute pain in some kind) is a multidimensional phenomenon, then it is quite logical that unidimensional treatments must fail, at least in the long run”.

As a result, it seems that “the rationale is possibly more common sense rather than scientific”. Others derive their rationale from clinical observations and experience rather than a knowledge of the literature: “There’s no doubt that if you go and spend any time in

a pain clinic, many of the patients really will strike you as having a lot more to them than, say, arthritis. That's one of the reasons why it [chronic pain] is so difficult to treat; it's not a simple, singlehanded issue."

1.4. Alternative Approaches

For those practitioners that employ 'alternative' methods such as chiropractic and yoga, the concept of restoring and maintaining 'balance' was key. For the biologist, 'balance' is likely to mean one thing primarily: homeostasis. But for these integrative practitioners, it meant perceiving both pain and the patient more holistically and considering what yoga describes as the treatment of the 'whole person'. "We have to have a way of restoring the dimensionality of the individual – it's important that they have the social support and the spiritual support (meaning, etc.)".

Such methods are often referred to as 'traditional' or 'alternative', sometimes with patronizing tone, possibly because they originate either from pre-modern science and/or from countries other than the West. They include elements of pharmacological, psychological and physiological treatment – sometimes a synthesis of all. Conventional scientific researchers on pain are respectfully cautious of such interventions. "At the academic level, I think we're lacking the evidence", one participant said. Another provided a more balanced perspective but on the whole scepticism was prominent.

Notwithstanding such scepticism, studies that demonstrate the effectiveness of many such therapies do exist.^[4,5,6] The fact that many modern pain drugs are derivatives of ancient natural remedies demonstrates that the latter can be very effective even in original form. Indeed, they are still used in different societies worldwide to treat many acute and chronic pain conditions.

2. Effectiveness of Multidisciplinary Clinics

The majority of research around the effectiveness of treatments for chronic pain is focused on testing the outcomes of certain pharmacological or interventional therapies. There is also some work done on testing other therapies such as physical, psychological and even alternative therapies. The general view, however, is that for chronic pain, single interventions alone, hardly ever provides the complete solution. "Monotherapies can be investigated very usefully, and you can find the places where they fit", said one researcher, "but they certainly don't answer all the questions".

Many of the statements made about the effectiveness of multidisciplinary approaches were unequivocal. "We know what works, we know what helps peo-

ple... there's an enormous amount of evidence now". Another declares: "we are convinced that an interdisciplinary approach is superior to others, at least in the field of treating chronic pain." In terms of the effectiveness of multidisciplinary clinics, one specialist said: "the ones that I'm aware of often work quite well." Another practitioner whose clinic treats patients with almost all kinds of chronic pain in a standardized group program says her results have shown that "the patients' benefit was indeed the same across the conditions."

In discussing effectiveness, it was often stressed that there is currently no 'cure' for chronic pain, so the effectiveness must be seen in light providing patients with the tools to manage their pain experience so as to reduce both the occurrence and perception of it, as well as to restore some functionality and improve overall quality of life. As one researcher reminded: "let's not forget that many chronic pain states are not curable at the moment, and so having a strategy to get people to cope with the pain is a much more productive one than trying to cure them." A leading practitioner reiterated: "absence of pain is not a primary outcome for me, but finding a way back to a meaningful and satisfying life is."

In preoccupying themselves with the illusory aim of eradicating pain, many researchers and practitioners often lose sight of the need to set realistic, attainable targets. As pain is a subjective experience it can be best managed by gaining a fuller understanding of each patient's unique state: "a valued life does not depend on being pain free", insisted one researcher, "I think this is one of the main misconceptions which keep us (as therapists or other health care providers) much apart from understanding our patients". If one recognizes the importance of management over cure, multidisciplinary approaches become "key for all pain conditions."

3. Funding Issues

3.1. Research

Despite the consensus on the effectiveness of the multidisciplinary approach,^[7] multidisciplinary pain clinics continue to exist in relatively small numbers and are not attracting the necessary funding from public or private bodies in order to expand their numbers, further enhance their effectiveness and increase accessibility/availability to the millions of patients that could benefit from them. "I'm going to have one answer for pretty much every question you'll have: "money", said one participant at the very beginning of the interview. With regards to multidisciplinary treatment, he put

it straightforwardly: “we know it works but nobody wants to pay for it”.

Another mentioned the same challenge. “Pain management is not considered a high enough priority and as a consequence there is not enough money.” This is at least partly because for third party payers it is considered resource-intensive and questionable in terms of universal effectiveness. As a result, “at least in the States, it is expensive and not well, if at all reimbursed by 3rd party payers”.

On the issue of poor translatability of basic research data, one participant suggests that the reason for this is a particular commercial agenda. “There are tons of papers, but it’s money that drives all those works... not altruism or people wanting to do the right thing.” As a result, he implies, most of the research is focused on investigating pharmacological solutions that can be significantly monetized rather than solutions that might be sustainably effective. “The vast majority of its [funding body’s] money goes into research to find something that can be solved that will make that company billions of dollars.”

Moreover, bias against qualitative methods has been noted, perceived as soft or pseudo-science and in favour of – that quantitative or ‘hard science’. This is particularly important as it is established that chronic pain has psychological and sociological causes and consequences – both of which (unlike neurobiological studies) are not regarded in a favourable light among pain research funding bodies in general. Similarly, some medical conditions and demographics are favored disproportionately. As one participant said allegorically: “a chronic pain patient is not a ‘sexy’ one in the way that a young child with cancer is.”

To enhance the chance of attracting more funding, a fresh round of systematic research is warranted. The IASP has recently developed new definitions, guidelines and standards for multidisciplinary pain therapy, which provides an improved framework for this.

3.3. Monetisation and the ‘Pain Business’

The pharmaceutical industry has been blamed for over-commercialising the ‘pain sector’. This has an impact on the nature of the research as well as the treatments prevailing in the healthcare system. Most pain papers are biomedical and pharmacological related as this is where most funding is being directed because whoever finally ‘discovers’ the chronic pain drug will enjoy a significant return on their investment – likely billions of dollars. So, most papers are essentially a failed attempt at finding the ‘magic pathway’. Research priorities are therefore largely commercially-driven

rather than people-driven – that is, pharmaceutical companies (which commission most of the research on pain) profit more from relief drugs than from sustainable management or eradication programmes. “Unless you’re working for one of the Big Pharma companies, who are really what are driving this sector, it’s difficult”, one participant said.

The multidisciplinary approach proposes a reduction in the reliance on pharmacological solutions and by its very nature exposes the fact that pharmacological interventions alone – whilst effective in providing relief for acute pain – are ineffective in alone treating or managing chronic pain. It is not surprising therefore that multidisciplinary pain clinics are not supported by Big Pharma. As another participant said: “one has to be honest - what is the pharmaceutical industry? They are big businesses - they are there to make profits for their shareholders. So, it’s not going to be particularly in their interest to really engage with it.”

A significant budget from the sector is instead spent on lobbying government bodies to ensure the integration of its products into the healthcare sector.¹⁸¹ One participant goes as far as suggesting that there exists a ‘private-private complex’ which ensures this status quo: “Big Pharma, which controls and has legislators that control policy which is about maximising the healthcare industry’s profitability. And their profitability is not driven by resolution of pain and symptoms but by procedures and consumption of services”.

Unfortunately, a workable business model for multidisciplinary clinics is yet to be established. The drive for profit, which raises an ethical debate, does not seem to be restricted to private companies. “Even the government organisations and foundations have an enormous amount of interest in the ROI.” As a result, a capitalistic culture is developing in clinics, often at the expense of patients’ health, and participants generally seemed very disillusioned by the trajectory.

3.2. Cost-efficiency and Return on Investment

In order for multidisciplinary treatments to be adequately funded, it needs to be considered cost-efficient. As it stands, it is seen as “too expensive... at least from a short-term perspective”. One participant described that at an operational level there is no incentive for a multidisciplinary approach not considered to be cost effective.

Many participants on the other hand expressed the view that multidisciplinary pain clinics can actually be cost-efficient at the macroeconomic level. “I think it potentially is [cost effective]. Some clinics in London are demonstrating reduced time in hospital, reduced GP

visits, reduced drug load, people getting back to work paying tax rather than taking money from the state." Pain clinics mentioned that have apparently demonstrated both clinical and economic value include at UCLH and St Thomas in the UK plus a case study in Germany has been mentioned.

Both public and private bodies still need to be convinced though. There is still a stigma around multidisciplinary pain clinics, that they are capital and labour intensive, and during times of austerity and budget cuts, such treatments are considered a 'luxury'. There was frequent mention from various participants about the need for a pilot project in order to demonstrate the prospective economic value of such programmes.

4. Operational Challenges

4.1. Programme Development and Standardisation

Given the complexity of chronic pain itself, as well as the subjectivity of the patient's experience, it is difficult to standardize a programme for any particular condition or demographic especially as lack of research in this area was mentioned.

As a result of the lack of standard guidelines or algorithms to work with, practitioners are often relying on their own knowledge, experience and intuition: "From my experience several things [therapies] required [together] for back pain... neuropathic responds also to multiple things [therapies]..." Whilst there is some skepticism surrounding relying on algorithms to prescribe multidisciplinary treatment programmes, there is an acknowledgement that they can play an important role in supporting of assisting the process. "They [guidelines/standards/algorithms] can be a good starting point. In a broad sense they are helpful to make sure you don't do something silly." Indeed, this was a sentiment shared by many participants. Standardisation is difficult, however, as different socioeconomic and cultural factors can have a major role in the type of clinic and its delivery.

4.2. Team Communication and Integration

One of the most important operational challenges raised by almost every participant was team coordination and cohesion at multidisciplinary clinics due to the variety of specialists' own way of doing things. In theory regular meetings to discuss particular patients and programmes ought to happen.

As protocols have not been universally standardized, despite IASP attempts to do so, this seldom happens to the levels it should. "The experience of most clinics is that they work together very poorly, one highly experienced practitioner said. "I have been a

part of three integrative clinics including the biggest one in NYC – they said we're going to get together to talk once a week – it didn't happen." In order for the patients not feeling like a dysfunctional product on an assembly belt, rather than complete human beings with many integrated facets, effective team-work and a shared philosophy are essential.

Regular and effective communication is particularly important and different suggestions have been made at times arguing in favour of standardized protocols or of allowing more creativity in communication.

4.3. Patient Assessment

What makes effective performance measurement difficult is the fact that its assessment is never straightforward. It was stressed that "pain is a highly individual experience", essentially subjective and "one that we don't measure objectively" due to its complex and multidimensional nature. "I am not sure that there are meaningful markers, though there are surrogates", one assessment specialist confirmed. Pain assessment has forever been a 'hard problem' for those involved the research and treatment of chronic pain especially for the lack of a linear association between chronic pain and physical pathology. Assessments such as Quantitative Sensory Testing (QST) proposed by the German Research Network on neuropathic pain,^[9] is an attempt to address this.

5. Education Across all Streams

5.1. Interdisciplinary Research

The vast majority of research on chronic pain takes place from the micro-specialist perspective. Most is exploring neurobiological mechanisms. Some approach pain from the psychological and emotional perspectives. There is even a small amount of studies on pain done by philosophers and physicists. No doubt, these facets are each important components of the pain phenomenon. Yet one of the reasons why it is difficult to get a full understanding is that these disciplines most often work in isolation from one another. Both researchers and practitioners are content with owning and refining their part of the puzzle rather than seeking to solve the puzzle as a whole. "Studies need to be multi-centre. All specialties need to work together and learn from each other", one participant insisted.

A frequent example given was that of how philosophers can assist both in understanding pain itself as well as how best to approach the management of it. "Philosophers might help us to develop an elaborate concept of healthy living extending the common medical understanding (WHO). They also might help us to distinguish/identify medical/therapeutic limitations

and challenges in treating people, or even further help us to discuss what a respecting and supporting attitude for treating people might be.”

5.2. Professional education

There seems to be a serious frustration with how little practitioners in many medical fields know about pain science. In the United States and in the UK, very little of the curriculum is dedicated to understanding the mechanisms of pain. This is extremely worrying as pain is a medical phenomenon that permeates through most, if not all, medical conditions. It is particularly troublesome given the widespread human suffering and economic disaster it is causing. “We have a whole generation of new physicians coming through who know nothing, literally zero”, says one practitioner who regularly gets sent a cohort of medical students. “So, we should start with our doctors knowing the basics at least”.

When a yoga specialist was asked about whether their lack of conventional medical training was a disadvantage when trying to understand and treat pain in part of a multidisciplinary clinic, the response was quite the contrary. “There was no real pain science education in a typical medical training anyway”. There was a feeling too that as part of the formal medical training, he was not ‘corrupted’ by the overly pharmacological approach that conventionally trained doctors are taught to rely on as solutions to most medical problems. And this seems not to be an American phenomenon – a UK pain researcher says that this is the case in the US, Canada, Europe, the UK and in many other parts of the world. He referred to a recent magazine article, which he felt was telling: “your vet gets more pain training than your doctor!” Another participant insisted on the urgent need for “pain training for all healthcare groups”.

5.3. Patient Orientation and Engagement

Pain education should extend to the patients themselves, primarily because it serves as a form of therapy. As one participant confirms, “understanding what is happening to their bodies is key to management.” Moreover, patient edu-

cation is a key part of keeping the patient engaged and motivated. This is important because one key criticism of multidisciplinary programmes in general is that patients are not motivated to stick to them. As one participant says: “patients will not do it (often will not follow through on it, even if recommended)”. Another concurs: “patients living with pain can’t always appreciate the benefits of a Quality of Life’ (QoL) approach rather than pain reduction”. Proper engagement and education both about pain and the process is paramount.

Given the individuality, complexity and subjectivity of chronic pain, a close two-way interaction with the patient is key to the effectiveness of the overall treatment. “Serving the patient should be paramount”, one participant said. “The patient would have to be involved throughout”. It is important to “take the time to sit down with the person to appreciate and understand the complexity of their situation”. This is especially necessary as “patients and healthcare providers have different languages, different experiences and different frames of reference”. So, what is perhaps most important is “having an assessment that addresses the multiple aspects of the human experience around pain, but also having adequate time to develop a relationship with that individual so that they feel heard.”

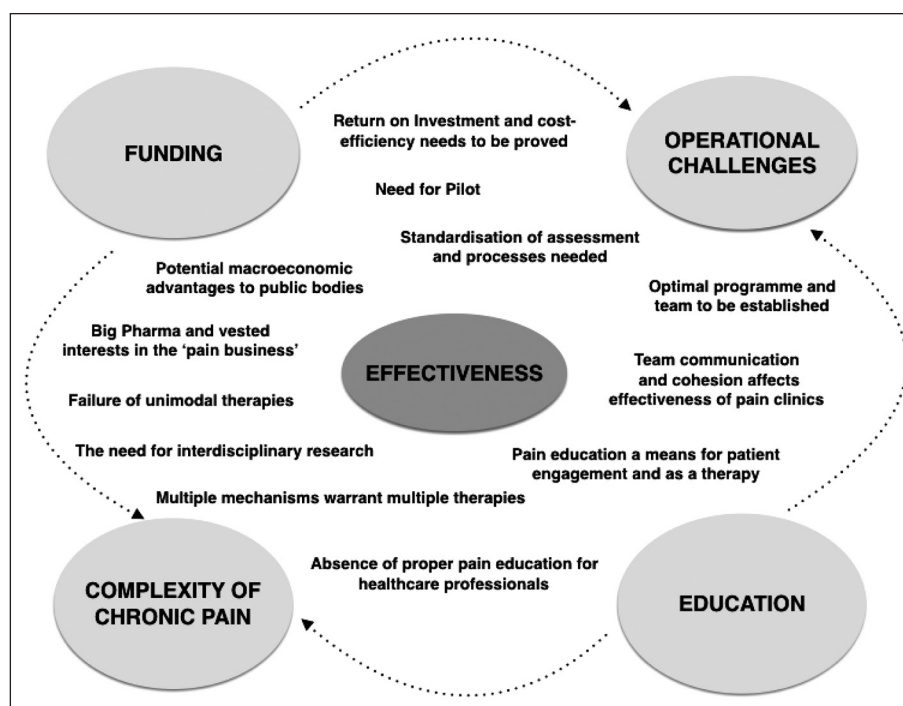


Figure 3: This Mind Map illustrates the main themes and sub-themes to emerge from the data. Core themes are represented by the four ovals in the periphery. They each have sub-themes, some of which are interconnected with other core and sub-themes, and are positioned accordingly. Ultimately, they are all connected (directly or indirectly) with informing us about the effectiveness (centre oval) of multidisciplinary approaches to the treatment of chronic pain (Waqās Ahmed, 2019).

Yet outside of the clinical programmes, there are bigger questions surrounding systemic social problems that sustain or even exacerbate the chronic pain epidemic. So, while a patient may be treated effectively during a multidisciplinary programme, their ability to sustain a healthy lifestyle or mind-set is overwhelmed by real-world social trends such as digital media and marginalization.

Conclusion

Summary of Discussion

A summary of the themes and their interconnections can be found in Figure 3. Overall, with the general effectiveness of the multidisciplinary approach now widely agreed – that is, we know what the best solution potentially looks like – policymakers and influential stakeholders that control budgets ought to invest in such further research to refine the approach and test it nationally through a pilot project.

With the IASP conference forthcoming in Summer 2021, it is important all relevant stakeholders are engaged to reach a consensus about the roadmap ahead. If the multidisciplinary method is undeniably the way forward, then surely the method needs to be refined and perfected, requiring both practitioner insights as well as scholarly research. As this paper has shown, each single approach to treatment itself offers multiple treatment possibilities.

Limitations of this research include the lack of perspectives advocating a single-disciplinary approach to pain treatment as well as perspectives from researchers and practitioners in geographic and cultural contexts other than Europe and the United States. Further research might focus on, or be more inclusive of, such perspectives.

Further Research Ideas

From these conclusions, two main questions arise: firstly, how could multidisciplinary treatments be further optimised – that is, be made more effective? Secondly, how could they be made more cost-efficient? The latter begs a wider, ethical debate around the need to support an approach that is known to reduce suffering and improve quality of life, notwithstanding the magnitude of the initial investment.

Further study should therefore focus on which combination is most effective for back pain or fibromyalgia, for example, and which treatments work well in conjunction with others and for which age, gender, personality type and physical condition. Optimising the ‘treatment algorithm’ or the ‘dream-team’ for each syndrome and patient segment ought to be the next phase of discovery. To that end, the multidisciplinary approach ought to permeate through every aspect of the development and delivery process – that being the pain research, the development of treatments and for the application of the treatments through the programmes.

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