

Virtual Mentor

American Medical Association Journal of Ethics
May 2013, Volume 15, Number 5: 455-459.

MEDICINE AND SOCIETY

Chronic Pain Patients and the Biomedical Model of Pain

Gillian Bendelow, PhD

Treating or alleviating pain is a primary role of medicine. What actually constitutes pain is subjective, value-laden, and difficult to define objectively and empirically, relying as the definition does on bodily signs and language, both of which are culturally embedded and subject to multiple interpretations. Biomedical theories of pain concentrate upon its neurophysiological aspects in both diagnosis and treatment. Hence, scientific medicine reduces the experience of pain to an elaborate broadcasting system of nerve signals, rather than seeing it as molded and shaped by the person who is experiencing it and his or her particular sociocultural context. The biomedical concept of pain is unsophisticated and oversimplified, often resulting in physicians' doubting the veracity of patients' reports of pain and the marginalization of such patients. We must incorporate engagement with the social and emotional context into medical understanding and treatments of pain to fully encompass its complex nature.

Pain in Biomedicine

The long-dominant conceptualization of pain has focused upon *sensation*, with the subsequent inference that it is able to be rationally and objectively measured. Biomedical practice traditionally assessed the nociceptive—"sensing harmful stimuli"—aspects of pain and employed the acute-chronic differentiation which did not necessarily take emotional aspects of pain into account. The observable links between test-confirmed physical disorders and expressions of pain are more obvious. On the other hand, one of the most complex and difficult types of pain to treat is *idiopathic* pain—that is, pain for which there is no observable or confirmable physical pathology. Often termed *chronic pain syndrome* and subsumed under the label of medically unexplained symptoms (MUS), these are illnesses or syndromes that cannot be defined in terms of organic pathology and are given low clinical importance. Frustrated by the seemingly intractable nature of idiopathic pain, practitioners often describe sufferers as "frequent fliers" or "heartsink" patients, further adding to their marginalization [1].

Other Concepts of Pain

As well as being a medical "problem," pain is not solely a creation of our anatomy and physiology but, in lay terms, is an everyday experience, emerging at "the intersection of bodies, minds and cultures" [2]. Moreover, defining pain is a semantic problem; in any language there may be wide variations in interpretation and meanings. Dictionary definitions of pain refer to any or all of the following:

PAIN [from the Latin *poena*, meaning penalty or punishment]

1. An unpleasant feeling caused by injury or disease of the body.
2. Mental suffering.
3. [old use] punishment e.g. on pain of death. [3]

In ancient Greece, the word used most often for physical pain was *algos*, which derives from roots indicating neglect of love. Another such word *akos*, literally meaning “psychic pain” from which we derive the English “ache” [4]. Implicit in these meanings is a much broader understanding of the multilayered cause and nature of pain—e.g., neglect of love can be the source of *algos*—than the narrowly defined Cartesian proposition which inevitably acts to divorce mental from physical states and tends to attribute single symptoms to single causes.

Indeed, the notion of that pain has a substantial emotional component, literally the obverse of pleasure, is much older than that of pain being a physiological sensation and can be traced back to Plato’s (429-347 BCE) deliberations of extremes and opposites in the *World of Forms*. Plato declares pleasure and pain to be the twin passions of the soul, the results of the interactions between earth, air, fire and water [5]. Aristotle (384-322 BCE) developed the pain and pleasure principles further, describing them as basic moral drives guiding human action, and believed the pain experience to be negative passion which had to be conquered by reason. He believed that pain was conveyed by the blood to the heart, yet excluded it from his classification of the five senses, instead preferring to describe it as “a quale [meaning “emotional quality”] of the soul; a state of feeling and the epitome of unpleasantness” [6]. Western literature, theology, and philosophy abound with considerations of the nature and purpose of pain (among many others, see Tillich and Kierkegaard [7, 8]), and the pleasure-pain dichotomy is constantly evoked and reinforced as in this passage from Montaigne:

Our well being is only freedom from pain, That is why the philosophical school which has given the greatest importance to pleasure has also reduced it to mere absence of pain. Not to suffer is the greatest good man can hope for... [9].

Conflict and Synthesis

The critique of the limitations of biomedicine has emerged from within medicine by those working in the area of pain, most notably pioneers like Melzack and Wall [10, 11] and Bonica [12]. Developments such as the widespread acceptance of Melzack and Wall’s gate-control theory of pain and the influence of the hospice movement have shifted the pain paradigm, increasing the emphasis upon cultural and psychological components and the need for a multidisciplinary approach.

Social science perspectives, in particular the sociological literature on chronic illness, offer a rich framework for understanding the experience of chronic pain by focusing on the *person* who is experiencing the pain. Using a focus on the person, as advocated by Dame Cicely Saunders [13], one of the founders of the hospice movement, rather than measuring so-called objective symptoms allows us to encompass more easily the full notion of pain, which includes psychological,

spiritual, interpersonal, and even financial aspects of chronic pain, as well as its physical aspects.

When the pain experience is considered in this light, concepts such as biographic disruption, narrative reconstruction, and illness adjustment [14-17] are valuable and have been adopted by enlightened practitioners. In relation to adjustment to chronic pain, Kotarba [18] charted the process of becoming a “pain-afflicted” person, in order to trace the continuity of personal identity. Using pain biographies he identified three stages in this process. First, there is the “onset” stage, which is perceived to be transitory and able to be dealt with by diagnosis and treatment. Here, pain is diagnosed as “real” by physicians, having a physiological basis. The second stage concerns what Kotarba terms the “emergence of doubt.” At this stage, treatment may not work, there is an increase in specialist consultations, but patients still feel in control in seeking the best care available. Finally, Kotarba terms the third stage the “chronic pain experience.” Following the shortcomings of treatment, the patient, at this stage, may return to the lay frame of reference and seek help within the “chronic pain subculture” [19].

Beliefs about pain have been shown to have an important effect on compliance with physical treatment interventions [20]. While, at a theoretical level, modern health care practice may acknowledge the holistic, multifaceted nature of pain, attempts to transcend mind-body dualism in practice have been controversial and difficult, especially in the case of chronic pain.

How Pain Is Treated Today

Pain clinics or pain centers are institutions developed specifically for the treatment of chronic pain syndromes (pain with no demonstrable cause was rarely treated before the 1970s.) The concept of having special institutions for treating pain originated with John Bonica, an anesthetist in the U.S. who recommended in *The Management of Pain* [12] that the understanding and treatment of pain would be best achieved through cooperation among different disciplines. The first pain clinic was set up in the U.S. in 1961 by specialists from thirteen different disciplines aiming to collaborate in a nonhierarchical manner. The subsequently developed pain centers throughout North America and Europe are characterized by diversity in provision, resources, organization of work, medical specialties, working principles, and therapies. They can be private organizations or affiliated with medical schools, university departments, or hospitals. A cross-sectional survey of pain centers in the U.S. [21] found wide variations in the treatment modalities offered, types of pain conditions treated, populations served, patient selection criteria, and diagnostic and etiologic frames of reference. First, they found multidisciplinary, comprehensive pain centers dedicated to all kinds of pain problems and offering a wide range of treatment modalities. Secondly, there were syndrome-oriented centers that treated only one kind of pain problem (e.g., headache or back pain). Finally, there were modality-orientated treatment centers that offered only one type of treatment modality (e.g., analgesic nerve blocks) [22].

Gradually, a refocusing on the sociocultural aspects of the pain experience using illness narratives and phenomenological accounts has influenced treatment in many contemporary pain clinics across the U.S. and Europe. Vrancken [23] reviewed the theory and practice of academic pain centers in the Netherlands, and identified five broad approaches to both theoretical and practical aspects of pain: namely somatico-technical, dualistic body-orientated, behaviourist, phenomenological, and consciousness. These approaches range from the use of traditional biomedical techniques such as nerve blocks, at one end of the spectrum, to interventions more orientated to managing chronic pain, rather than trying to find a cure. More recently, pain practitioners in the U.K. are encouraged by the National Institute for Clinical Guidance to use mind-body techniques, including cognitive behavioural therapy (CBT), mindfulness, and acupuncture, for idiopathic low back pain [24].

Conclusion

The phenomenon of chronic pain provides us with one of the clearest examples of the need to adopt integrative models of health care that take into account the relationship, not only between mind and body, but among mind, body, and society. The key to eliminating the stigma and marginalization experienced by many chronic pain patients is physicians' acknowledgement that pain is "real." This is still the most important aspect in the treatment of chronic pain [20].

References

1. Bendelow G. *Health, Emotion and the Body*. Cambridge: Polity; 2009.
2. Morris D. *The Culture of Pain*. Berkeley, CA: University of California Press; 1991.
3. Pearsall J, Trumble B, eds. *The Oxford English Reference Dictionary*. 2nd ed. Oxford: Oxford University Press; 2002.
4. Procacci P, Maresca M. A philological study on some words concerning pain. *Pain*. 1985;22(2):201-203.
5. Marshall HR. *Pain, Pleasure and Aesthetics*. London: Macmillan; 1894.
6. Bendelow GA, Williams SJ. *The Lived Body: Sociological Themes, Embodied Issues*. London: Routledge; 2002: 156.
7. Tillich P. *Systematic Theology*. Welwyn: Nisbet & Co; 1968.
8. Kierkegaard S. *Works of Love: Some Christian Reflections in the Form of Discourses* [1847]. London: Collins; 1962.
9. De Montaigne M. *In Defense of Raymond Sebond* [1592]. Beattie A, trans. New York: Ungar; 1959: 44.
10. Melzack R, Wall P. Pain mechanisms: a new theory. *Science*. 1965;150(3699):971-979.
11. Melzack R, Wall P. *The Challenge of Pain*. New York: Penguin; 1988.
12. Bonica J. *The Management of Pain*. Philadelphia: Lea and Febiger; 1953.
13. Saunders C. Care of the dying. *Nurs Times*. 1976;72:1003-1249.
14. Williams B, Thorn E. An empirical assessment of pain beliefs. *Pain*. 1989;36(3):351-358.
15. Bury M. The sociology of chronic illness: a review of research and prospects. *Soc Health Illness*. 1991;13(4):451-468.

16. Greenhalgh T, Hurwitz B, eds. *Narrative Based Medicine: Dialogue and Discourse in Clinical Practice*. London: BMJ Books; 1998.
17. Zinn JO. The biographical approach: a better way to understand health and illness. *Health Risk Society*. 2005;7(1);1-9.
18. Kotarba J. *Chronic Pain: Its Social Dimensions*. Beverly Hills, California: Sage; 1983.
19. Kotarba, 27.
20. 2003;57(11):2243-2252.
21. Csordas T, Clark J. Ends of the line: diversity among chronic pain centers. *Soc Sci Med*. 1992;34(4):383-393.
22. Csordas, Clark, 385.
23. Vrancken M. Schools of thought on pain. *Soc Sci Med*. 1989;29(3):435-444.
24. National Institute for Clinical Excellence. NICE clinical guideline 88: low back pain: early management of persistent non-specific low back pain [2009]. <http://www.nice.org.uk/nicemedia/live/11887/44343/44343.pdf>. Accessed April 15, 2013.

Gillian Bendelow, PhD, is a professor of medical sociology at the University of Sussex and a member of the advisory board of Chronic Pain Australia. She is the author of *Pain and Gender* (Pearson Education, 2000) and *Health, Emotion and the Body* (Polity, 2009) and co-author of *The Lived Body* (Routledge, 1998). Her work focuses on concepts of health and illness in contemporary health care.

Related in VM

[Physicians' Responsibility to Understand Patients' Pain](#), May 2013

[Pain and the Paintbrush: The Life and Art of Frida Kahlo](#), May 2013

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2013 American Medical Association. All rights reserved.