SECOND EDITION

Pain in Childbearing and its Control

Key Issues for Midwives and Women

Rosemary Mander

WILEY-BLACKWELL

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Contents

Introduction to the second edition

The dynamic nature of care in childbearing never ceases to be a source of amazement.

This dynamism manifests itself in a multiplicity of ways. Care providers, such as midwives, appear to both extend and intensify their skills and their areas of interest to address different aspects of the life of the childbearing woman. Because of my own developing range of interests and because of care providers' increasing interest in and understanding of the emotional aspects of childbearing, I aim, in this second edition, to further extend my approach to pain. In the first edition, the focus was predominantly on physical pain, with some attention to other forms of 'suffering'. This orientation reflected the then developing focus on what was becoming known as 'perinatal pain' (Niven & Gijsbers 1996).

Midwives' and others' ideas have moved on from the groundbreaking work of this admirable team of researchers. Thus, in this edition I will seek to develop my approach to what I called suffering. I will be giving more and more appropriate attention to emotional and other non-physical forms of pain. In this way, this book will meet the needs of a wide range of midwives, as well as other practitioners and students.

Pain as real

Through the medium of this book, I seek to present the reality of pain in childbearing. I will be discussing the extent to which pain is perceived by some disciplines as invariably negative. It may be interpreted as little more than just another medical problem which is caused by injury, surgery or disease; thus, it is viewed as demanding to be treated and resolved by whatever technical or pharmacological means are available. This impression is dominated by the masculine, medical and confrontational analogies of fighting and battle, seeking to convince us that pain needs to be defeated, by all the interventions in the medical armamentarium. Hence, the library catalogue presents me with titles such as: *Defeating Pain*, *The Challenge of Pain*, *The Conquest of Pain* and *Victory over Pain*. Such warlike views of pain are too simplistic to be acceptable, even less useful.

On the other hand, there are those who regard pain in childbearing as referring only to labour pain. I will be arguing that labour pain is uniquely and qualitatively different from any other form of pain known to humanity. Because labour pain is associated with healthy processes which are more than likely to lead to a satisfactory outcome, it has been

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described in terms of being a 'positive pain' or 'pain with a purpose' (Kitzinger 1996). This view of pain can be helpful.

As well as the possibly appropriate general focus on the pain of labour, I will argue that there are other forms of pain associated with childbearing. Some of these forms of pain may be associated with pregnancy-related pathological conditions. Some of them will be associated with the physiological changes of childbearing and, probably because of this association, tend to be neglected. I will be arguing, though, that there are still other forms of pain which the childbearing woman may encounter. These forms of pain may not be generally regarded as pain as usually understood. So the meaning of the term 'pain' may need to be deconstructed in order to understand how these phenomena justify such a label. These feelings may include the woman's reaction to her childbearing experience or other events. Equally, these feelings may be associated with human interactions, perhaps with those who provide care or those with whom she is in a loving relationship. In this book I will argue that such pain may be as real as the universally-recognised pain of physiological labour. But unlike healthy labour pain, these feelings will carry serious and long lasting consequences for the woman and those near to her.

Thus, I aim through this book to adopt a balanced approach to the topic of pain in childbearing. This approach will show pain as a real experience. I will be including both the positive as well as the negative aspects of pain, irrespective of how it has originated and who is experiencing it.

Women's experiences

It may be that women's experiences vary between the two extreme representations of pain mentioned above; but the limited research into the woman's experience of childbearing pain and the methods used to control it is an example of a reluctance to view pain as a part of the complete childbearing experience. Our previous narrow focus on, for example, the techniques used to relieve or remove the woman's pain has inhibited a complete or 'holistic' understanding of the woman's experience of childbearing. Such inhibition has been facilitated by the 'inexpressibility' of physical pain and the way in which pain splits the sufferer from those close by (Scarry 1985). Scarry goes on to remind us that this split is partly due to the 'unshareability' of pain, which is aggravated by the limitations imposed by language, especially English; as Virginia Woolf observed in this context, 'language at once runs dry' (1925). These phenomena have contributed to doubts as to the existence of childbearing pain, discussed in Chapters 5 and 6, which are compounded by professional reluctance to believe the accuracy of the sufferer's narrative. For these reasons, and perhaps in self-defence against reality shock, the woman sufferer may be overlooked, further weakening her already excruciatingly vulnerable position.

Thus, the political nature of pain emerges. Scarry's focus on the balance of power in the relationship between the sufferer and the attendant may be less than relevant in the context of childbearing. Or is it? To what extent are the 'caring professions' in a position to assist the childbearing woman to reduce or control her experience of pain? I intend that this book should illuminate a wide range of aspects of this situation in order to help you, the reader, to answer this question.

Orientation

This approach that I have outlined is partly a response to the reviews of the first edition of this book. While they were almost invariably positive, one of the reviewers criticised my approach for being too hard on medical practitioners. If it applies, I make no apology for any such approach; I am not entirely convinced, though, that such criticism is justified. This reviewer complained that I was too vigorous in my condemnation of our medical colleagues, while being too lenient with my fellow midwives. Such a comparison merits closer attention.

The crucial difference is found in the nature of the professionals' contribution. The midwife's unique selling point (USP) is his or her non-interventional support of the woman experiencing healthy childbearing. For this reason, the midwife may be censured for sins of omission, involving his or her cautious use of, for example, pharmacological pain remedies. Our medical colleagues, whose USPs depend on their actively intervening in what may be physiological processes, may be guilty of committing sins of commission. This is an altogether different scenario because there is a risk of actually creating pathology in an otherwise healthy situation. This grave possibility raises the spectre of iatrogenesis. Perhaps unfortunately, this is a concept which will re-emerge regularly, but hopefully not too frequently, throughout this book.

Thus, the balanced approach, for which I strive in this book, will take full cognisance of all aspects of the human and technical environment in which childbearing happens. That said, the question remains of what is meant by the term 'childbearing'. Although, giving birth is obviously crucial to childbearing, this term clearly encompasses more than labour and birth. This is the reason why I choose to use it. Throughout this book, childbearing is used to include any aspect of reproduction, beginning with the woman or couple thinking about conceiving a baby through to her or their establishment of parenting.

The midwife's experience

This book seeks to focus on the experience of pain faced by the childbearing woman. This focus is entirely appropriate. Given my remit, though, of extending the boundaries of my approach to pain, another aspect deserves to be at least considered. This aspect is the pain or suffering endured by the midwife providing care for the childbearing woman. In Chapter 2 I discuss the implications of the system of 'Care' for the woman and draw attention the institutionalised regime, common to many countries, which has been graphically termed 'iatrogenic rape' (Lesnik-Oberstein 1982). While the woman's experience has attracted attention, if not remedies, the experience of the midwife working with her tends to be disregarded. It is not impossible that the compliance demanded of the woman (Kirkham 1989; Svensson et al. 2007) may also be required of the midwife attending her. Thus, midwives with appropriate aspirations and expectations may find their achievements seriously curtailed by the system within which they practise, engendering feelings of suffering and pain at their failure to actualise these expectations. The midwife who stands up for the ideals which he or she knows to be achievable may find him or herself

the butt of 'horizontal violence' from colleagues who, similarly oppressed, are no longer able to raise their heads above the parapet. While measures are being begun to address these systematic challenges, the problem of the midwife's pain may not be easily resolved (Mander et al. 2010).

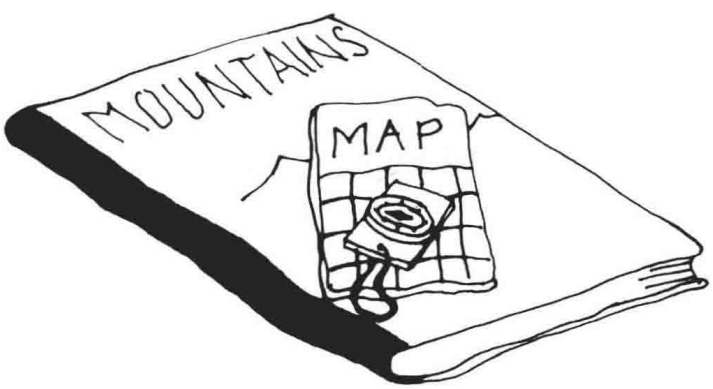
The chapters

Although the analogy of the journey is over-used to the point of being hackneyed, I use it for this book's theoretical framework because it emerged crucially from a research project focusing on women's perceptions of their experience of giving birth (Halldorsdottir & Karlsdottir 1996). Thus, in this book Part I, 'Before the Journey's Commencement', establishes the context for childbearing and the pain experience; this includes historical, cultural, theoretical and research related issues. Part II concentrates on 'Beginning the Journey', which comprises childbirth education, including the extent to which it prepares the woman for her complete childbearing experience, and pain in pregnancy. Part III, 'The Journey', focuses on labour. Despite the increasingly tenuous link between labour and pain as interventional pain control becomes more effective, I include in Part III the issues and the interventions which may be applied to many types of pain. These topics fit together because the experience of labour and the desire to address pain are probably equally universal. In Part IV, I consider the period after the birth for the woman and child as 'The Journey's End'. The conclusion is included in Part IV and draws together the themes which emerge.

Because of the 'bad press' which the term 'drug' tends to attract, throughout this book I endeavour to use the word 'medication' when discussing pharmaceutical products.

Part I

Before the Journey's Commencement



Chapter 1

Pasts and peoples

General background

When thinking or writing about any form of pain, I have a tendency to generalise my ideas. I don't think that I am unique in this respect. This is an inevitable way of attempting to manage an otherwise unmanageable concept. As the reader, though, you should keep in mind the artifice of such a strategy. Pain is above all an individual phenomenon. Only the person experiencing it is able to really know what that pain is like. Other people may think that they know what the pain is like. They may have experienced pain in the same part of the body, or possibly due to a similar cause, in the past. Alternatively, they have witnessed or even provided care for a number of people and think they know what a person who is experiencing this form of pain looks like. All of these people, whether they are experienced or whether they are witnesses, are mistaken. They are making assumptions which are either weakly founded or totally unfounded. Obviously, such unfounded assumptions carry serious implications for the person actually experiencing the pain.

For the present, though, I feel obliged to encourage the reader to keep at the forefront of his or her mind this 'health warning':

> Do not allow yourself to be lulled into assuming that you know what another person's pain is – that way lies danger.

This health warning applies not only to modern day experiences and practices. I venture to suggest that such a cautious approach should be applied equally to former peoples in their own times and settings.

In this chapter I plan to trace, first, the ways in which attitudes to pain have developed in certain societies over time. This section does not claim to be comprehensive because there are some societies whose literature is not accessible to me for linguistic reasons. In order to trace these developments, it is necessary to consider the major pain theories, together with significant exceptions. These historical views are then applied to childbearing pain. The second part of this chapter turns the focus to the association between culture and pain-related experiences and practices. This cultural orientation leads, inevitably, to consideration of the meanings which may be attributable to experiences of pain.

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Historical attitudes to and interpretation of pain

Ideas about pain and its control inevitably develop as society changes. As a result, even relatively recent ideas quickly become outdated. On the other hand, deeply held, perhaps ancient, ideas about pain in general and specific forms of pain may surface to manifest themselves in certain circumstances. I suggest that an experience as intense as childbirth is one of those circumstances.

Esther Cohen's analysis (1995) of early historical attitudes to pain demonstrates not only the crucial cultural component of pain, but also the temporal developments within those cultures. In his unique paper, which has stood the test of time, Donald Caton (1985) outlines how some of the attitudinal changes did or did not actually happen. His paper provides a useful framework for this section. Caton traces the gradual change from regarding pain as a mystical or divine intervention, possibly an emulation of a suffering deity, to a natural, secular phenomenon. Simultaneously pain was transformed from being considered generally, if convolutedly, beneficial. It has since come to be regarded as a universally destructive phenomenon.

In prehistoric tribal societies magical influences were held to be responsible for non-traumatic painful experiences (McKenzie & Parris 1997). Beliefs in these magical influences allowed women healers and the shaman or medicine man to assume powerful positions in attributing the cause and necessary punitive actions to remedy the pain. Such mystical convictions were gradually superseded by a trust in or fear of deities. In a similar way, in some cultures pain has been attributed to the absence of balance, or to the frustration of desires (Main & Spanswick 2001).

According to Caton (1985), early Greeks and Jews perceived pain as having a dual role. The first role of pain was to convey divine punishment to those who transgressed. McKenzie and Parris point to 'the curse of Eve' (see below) as an example of such divine intervention (1997: 2). Thus Greeks, such as Homer, attributed pain to arrows released by the gods. Such forms of external attribution were not uncommon and were similarly applied to a range of disease processes. The second role of pain in this setting was considerably more positive. Together with punishment, pain carried with it the opportunity for the person to show remorse for whatever 'sin' was said to have caused the pain. In this way, the penitent was able to achieve healing through cleansing, which brought redemption from the original transgression.

Similar ideas persisted from the fifth century CE through to the Enlightenment; under Judaeo-Christian influence, pain continued to be interpreted as divine retribution for wrong-doing. Through this powerful link spiritual leaders emerged as comforters and healers. Thus began the long-standing connection between the church and public health. Fundamental to these ideas was the church's dependence on the dogma of original sin, which materialised in woman's inherently evil nature (Yee 2003). Inevitably self-inflicted pain was eventually substituted for spontaneous pain in a form of 'pre-emptive strike' to prevent disease by appeasing or propitiating the deity. Thus, an element of magical thinking developed. During the Spanish Inquisition this concept was extended to inflict pain on others to achieve their purification (Glucklich 2001). Therefore, pain's dual role as both punishment and redemption emerges. These combined magical and mystical ideas became

expanded by logic and observation, such as of substances to ease pain. These observations led to suspicions that human-controlled phenomena were involved and not just superhuman agencies. Such observations included public health measures, like isolation, which occasionally limited the spread of bubonic plague.

From about 1600 the age of faith made way for the age of reason. A link became established between the study of nature and the understanding of divine laws. Thus, the scientific approach to knowledge emerged. Divine laws became relatively less significant, to the extent that the contribution of the deity was eventually questioned by the influential thinkers of the enlightenment. Up to this time changing attitudes had resulted in only minimal changes in treatment, because the methods available were so limited.

These two fundamentally important functions of pain underwent a series of transitions, not necessarily synchronously, with the Renaissance, the Age of Reason and the Age of Revolution. But, by the nineteenth century social changes were leading to philosophers, such as Jeremy Bentham (1748–1832), to consider pain as a totally natural phenomenon, devoid of either divine causation or redemptive capacity. With the increasing power of medical practitioners in the nineteenth century, aspirations to becoming a scientific discipline completed the transition to pain being regarded as predominantly secular. Without actually mentioning the terms, Caton implies the association between the changing perceptions of pain and the relative changes in the power base of the occupational groups regarded as professions. He eventually reaches the obvious conclusion that, through the self help and complementary health movements, both the causation and the remediation of pain have been comprehensively secularised through the assumption of responsibility for any pain by the affected individual. Thus, moral or religious interpretations of pain appear to have become largely obsolete in sophisticated settings.

Pain theory

In contemplating the theory on which our understanding of pain is founded, we need to remember that pain theories are precisely that. Their role is to facilitate our understanding of the relationship between two or more variables. Theories, like the comprehension which they engender, are in no way fixed or immutable. Thus, our understanding of pain needs to be regarded as dynamic. In the same way that 'ropes' and 'bells' (see specificity theory below) currently seem archaic, in the future it is not impossible that 'gates' (see currently accepted pain theory below) may similarly be viewed as anachronistic.

Our understanding of pain has clearly increased as human knowledge of anatomy and physiology has developed. I have shown, in the previous section, that there have been other influences; these include religious, philosophical, political and social aspects. In prehistoric settings, attitudes to pain would barely have justified the term 'theory'.

Bonica and Loeser (2001) outline the role of the ancient Greeks (fourth–fifth century BCE), such as Aristotle, in seeking the underlying sources and mechanisms of pain. The contribution of the brain and central nervous system was variably recognised, competing with the heart for priority. In ancient Rome (third century BCE), Galen was able to recognise nerve fibres as having a role in the transmission of pain sensations. By the Middle Ages, the part played by the central nervous system was being modified by perceptions of humoral functions.

Specificity theory

Although the term was not widely used until after the work of Schiff in the mid-nineteenth century, René Descartes was the original 'key philosopher' (Wall 1999: 20) who introduced the concept of dualism, which led eventually to specificity theory. Descartes (1596–1650) sought an anatomical and physiological explanation of the sensation of pain which had been recognised by Aristotle. Descartes employed the newly developed scientific method to find this explanation. By dissection and introspection, he came to regard the human body as no longer the 'temple of the soul' as espoused by the all-dominant church. Descartes proposed regarding the human body as a machine, controlled by physical principles (Melzack 1993). His dissections identified nerve fibres, on the basis of which he concluded that a specific system transmits impulses from cutaneous pain receptors to a cerebral pain centre. This mechanism was considered analogous with 'pulling on one end of a rope makes a bell ring which hangs at the other end to strike at the same instant' (Wall & Jones 1991). This approach to pain is summarised by the well-known drawing of the 'Boy with Foot in Fire'. Cartesian dualistic ideas continued to influence knowledge and therapy until well into the late twentieth century (Wall 1999). While Descartes is often blamed for modern mechanistic approaches to health, Mark Zimmerman considers that he does not deserve such a bad press (2005).

In the light of Charles Bell's (1774–1842) recognition of the separate flow of sensory information through channels in the spinal cord, in 1842 Johannes P Müller developed the doctrine of specific nerve energies. These energies were thought to comprise coded or symbolic messages which could be transmitted only by sensory nerves to the brain. A major flaw in this earth-shattering realisation was the belief that one single sense of touch encompasses all forms of pain.

Maximilian Von Frey developed Müller's work and combined it with physiological observation and newly introduced staining techniques to identify four types of cutaneous receptor organs or 'modalities'. This theory persisted in affirming direct links to an appropriate cerebral centre and, on the basis of surgery, such pain 'pathways' were identified in the anterolateral or dorsal quadrant of the spinal cord.

The strength of these forms of specificity theory lies in their physiological specialisation. The multiplicity of weaknesses of specificity theory, though, includes the psychological assumption of straight-through transmission and the absence of any allowance for personal or temporal variation in pain perception. This approach to pain has been blamed for the medicalisation of pain and, hence, impeding understanding and more effective remedies (Bendelow & Williams 1998).

Pattern theory

The weaknesses of specificity theory were clearly apparent to clinicians, so a search was begun to illuminate the complexity of transmission. The results comprise 'pattern theory'.

Following pathological observations, Alfred Goldscheider (in 1894) hypothesised that, together, central summation in the dorsal horn and stimulus intensity are the critical determinants of pain. John Bonica (1990a) referred to this as 'Intensive (Summation) Theory', but the emphasis was clearly on the stimulation spatially or temporally of

non-specific receptors. The earliest, or peripheral, pattern theory focused on intense peripheral stimulation being interpreted centrally as pain; physiological specialisation was effectively ignored. The lack of any theory addressing phantom limb/body pain was recognised by William Livingston, who in 1943 refined pattern theory to produce the central summation theory; a pattern of incremental and reverberatory circuits were thought to explain the otherwise inexplicable phantom pain experienced by amputees.

A still more complex hypothesis was advanced by Willem Noordenbos in 1959 in the form of the sensory interaction theory, according to which a rapidly conducting fibre system inhibits synaptic transmission in a more slowly conducting pain-carrying system. This theory further proposed a multi-synaptic afferent system within the spinal cord. Thus, the physiological stage was set for the gate control theory (see 'Currently accepted pain theory' below).

Affect theory

Integrated into other pain theories is one which for centuries stood alone as the only explanation of pain. This is the 'affect theory' of pain, which defines pain as an emotion, rather than as a sensation (Melzack & Wall 1991). Affect theory is closely linked with what Bonica (1990a) termed the 'Fourth' theory of pain, which differentiates the neurophysiological perception of pain from the cognitive aspects of the response to pain, as determined by a range of factors including culture and previous experience.

Psychological/behavioural theory

This chronic form of pain reflects disconcerting trends in general psychology, being summarised in terms of 'pain as behaviour'. It relates to the forms of pain sometimes known as 'psychogenic' and incorporates a response to cues which are part of the individual's environment. These forms of behaviour may be associated with triggers which led to the original pain experience (Fordyce et al. 1988).

Fear-avoidance model of pain

This model of pain, formulated by Johan Vlaeyen and colleagues in 1995, may not be unrelated to the psychological/behavioural theory (above). It essentially comprises fear of aggravating pain giving rise to the avoidance of certain beneficial activities (Moffett et al. 2004). Randomised controlled trials using this approach to pain show that it is amenable to non-pharmacological intervention, but that any benefits demonstrated tend to be temporary.

Currently accepted pain theory

The pain theory which is most widely and generally accepted was developed during the early 1960s by Ronald Melzack and Patrick Wall (1965). More recently another pain model has been introduced which is particularly relevant to midwifery, which will more appropriately be considered in detail in the light of the discussion on cultural aspects of pain (below).

Gate control theory

It is clear that, in the history of pain theory, the role of the central nervous system was insignificant, to the extent of the cerebral contribution being negligible. This imbalance was redressed by Melzack and Wall in the early 1960s, using new technology which permitted the electronic recording of individual nerve cells' activity. This work combined Melzack's study of the psychology of the somatic senses with Wall's interest in the physiology of the pain pathways to address certain paradoxes in our understanding of pain (Wall & Jones 1991: 129):

> the variable relationship between injury and pain
> that innocuous stimuli may elicit pain
> the location of pain discrete from the site of damage
> pain in the absence of injury or after healing
> changes in the nature of pain over time
> intractable pain with/without obvious cause.

Melzack and Wall built on the already well-recognised phenomenon by which gentle stimulation inhibited pain sensation to draw up the gate control theory of pain (Melzack & Wall, 1965); it explains persuasively the psychological aspects of pain, the physiology of pain transmission and the modulating influences. The gate control theory emphasises the body's in-built pain control mechanisms and provides a feasible explanation for the non-intervention or low-tech approaches to pain control, including psychological methods, back-rubbing and transcutaneous electrical nerve stimulation (TENS; Chapter 8).

This theory may be briefly summarised thus:

(1) The passage of nerve impulses from afferent fibres to spinal cord transmission cells and thence to local reflex circuits and the brain is modulated by a spinal gating mechanism in the dorsal horn. As with all central nervous system (CNS) synapses this transmission is controlled by mechanisms which either facilitate or inhibit the passage of the impulse.

(2) The spinal gating mechanism is influenced by the relative amount of activity in large diameter (low threshold myelinated afferent) fibres and small diameter (high threshold myelinated A-delta and unmyelinated C) fibres: activity in large fibres tends to inhibit transmission (close the gate) while small-fibre activity tends to facilitate transmission (open the gate).

(3) The spinal cord gating mechanism, which is now thought to operate in a number of sites including lamina 2 of the substantia gelatinosa of the dorsal horn, is influenced by nerve impulses descending from the brain.

(4) A specialised system of large diameter, rapidly conducting fibres (the Central Control Trigger) activates selective cognitive processes that then influence, by way of descending fibres, the modulating properties of the spinal gating mechanism.

(5) When the firing rate or output of the spinal cord transmission cells exceeds a critical level, it activates the Action System - those neural areas that underlie the complex, sequential patterns of behaviour and experience characteristics of pain. The critical level