

Chronic Pain Management

Edited by

CAROL BANKS MSc, RN

Basildon and Thurrock University Hospitals NHS Foundation Trust

and

KAREN MACKRODT MSc, RGN

Mid-Essex Hospital Service NHS Trust

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Foreword

Healthcare exists to prolong life and to improve health-related quality of life. Governments, which are servants of the people, provide a healthcare service for the people. What is it we want this service to achieve? When you look at what we do, it becomes apparent that most of what we spend our time and money on is improving health-related quality of life.

The presence of chronic pain is one of the main variables in determining health-related quality of life. Despite this, we are not so good at directing our healthcare system to do much about it. Healthcare systems have developed into structures where the emphasis is on treatment of the underlying disease with the presumption that this will manage the presenting symptoms. When this approach (the traditional medical model) does not always work we should ask ourselves why.

A Europe-wide telephone survey in 2004 of a random but representative sample of citizens in 16 countries found that 19% of the population had experienced chronic pain for more than 6 months and had suffered it in the preceding month. The actual average duration of pain was 7 years. The most common condition was 'back pain' (24%) and the commonest cause attributed by those asked was 'arthritis' (35%). One person in five had lost his or her job due to pain and a similar number had been diagnosed with depression; 40% felt that their everyday activities had been affected by pain. There was a considerable variation of prescribing practice for pain from one country to another. Only 2% volunteered that they had been referred to a pain-management clinic (www.painineurope.com).

The prevalence of chronic pain in our community is enormous. Many of those sampled would probably benefit from quite simple medical, educational and behavioural intervention. Some might well need referral to a specialist pain management unit and others might prove relatively intractable. We need to wake up to the reality that our traditional ideas about patient and pain management are undergoing a revolution. This revolution has occurred within the pain management specialties but now,

if we are to tackle pain in our society, we need understanding and commitment from all those involved in treating patients, many of whom will have unresolved persistent and intrusive pain.

Chronic Pain Management is deliberately aimed at this audience and as such will be a major contributor to patient welfare far beyond the pain-management clinic.

Simon Thomson MBBS, FRCA, FIPP
2004

Preface

Pain, and particularly chronic pain, is a debilitating and disabling condition. Persistent pain can interrupt all aspects of a person's life and every nurse will experience people who are suffering chronic pain with varied degrees of interruption to their lives. Those caring for people in pain need to be aware of the impact of chronic persistent pain on the lives of sufferers and those close to them in order to have any degree of understanding and empathy of the situation they are in.

The nature and complexity of pain create a challenge for any nurse coming into contact with a chronic pain sufferer. The nurse needs to recognize that there are many elements with equal complexities that form an indistinguishable part of the whole pain experience.

In our experience of working with chronic pain sufferers we have become aware of a gap in the literature pertaining to the nursing management of chronic pain patients. One of the inspirations for this book came from the publication of *Recommendations for Nursing Practice in Pain Management* (The Pain Society, 2002), which clearly defines the competencies required in order to underpin clinical practice with evidence-based approaches.

The aim of this book is to enable the reader to become competent in the assessment, planning and evaluation of an episode of care, while enabling the nurse to empower those experiencing chronic pain to understand their pain and ultimately to take responsibility for their own management.

It will cover many aspects of the chronic pain experience while attempting to identify the various models associated with the delivery of chronic pain techniques. It looks at the delivery of care by professionals working in both the community and hospital setting as well as looking at how those suffering pain can be involved actively in their management. However, it will only look at chronic pain management with respect to adults.

The editors have sought authors from different backgrounds – from academia as well as from health-professional arenas – thus striking a balance between theory and practice. The book has been set out with each chapter

containing learning objectives. The reader can try to achieve them through reflective practice.

Chronic Pain Management will be particularly useful for final year nursing students, qualified hospital and community-based nurses, and any health professional caring for people in chronic pain.

Reference

The Pain Society (2002) Recommendations for Nursing Practice in Pain Management. London: The Pain Society.

Contributors

Val Ali MSc, BSc(Hons), RGN, Lic.Ac. Consultant nurse in chronic pain, East Kent Hospitals NHS Trust

Carol Banks MSc, RN, Nurse specialist, pain management, Basildon and Thurrock University Hospitals NHS Foundation Trust

Jan Cooil MSc, MCSP, SRP, Superintendent 1 physiotherapist, Thurrock Primary Care Trust

Peter Croot BPharm, MSc, MRPharms, Pharmacy manager, Basildon and Thurrock University Hospitals NHS Foundation Trust

Ruth Madeleine Dallob BSc(Hons), MSc, RGN, DN Postgraduate Diploma Counselling, Counselling psychologist, South Essex Partnership NHS Trust

Alison Gray Palliative care sister, Macmillan Team, Mid-Essex Hospital Service NHS Trust, Chelmsford, Essex

Mark Johnson BSc, PhD, School of Health Sciences, Leeds Metropolitan University

Cristina López-Chertudi BSc(Hons), MSc, CPsychol(Clin), Chartered clinical psychologist, South Essex Partnership NHS Trust

Carol Mackintosh PGDip(HE), MSc, BA(Hons), RGN, Senior lecturer, Division of Nursing, University of Bradford

Karen Mackrodt MSc, BSc(Hons), RGN, Nurse specialist, pain management, Mid-Essex Hospital Service NHS Trust, Chelmsford, Essex

Tricia Rose MSc Psych, Accredited counselling psychologist, South Essex Partnership NHS Trust

Annie Sheldrake PhD, Clinical psychologist, Spectrum, Chelmsford and Essex Hospital, Chelmsford, Essex

Simon Thomson MBBS, FRCA, FIPP, Consultant in pain management and anaesthesia, Basildon and Thurrock University Hospitals NHS Foundation Trust, President of UK and Ireland chapter of the International Neuromodulation Society, Secretary of the World International Neuromodulation Society

Editors' note

The aim of this book is to enhance the use of the *Recommendations for Nursing Practice in Pain Management* developed by the Nursing Focus in Pain Management working party of the Pain Society (2002).

The Pain Society competencies use core elements of Benner's (1984) work in defining a path from novice to expert. Three levels of proficiency are highlighted: novice, intermediate and higher-level practice. This book aims to provide the reader with an understanding of the nature of chronic pain and how it affects the whole construct of the patient and surrounding environment. We have therefore concentrated on the competencies developed by the working party of the British Pain Society (formerly the Pain Society) at the novice and intermediate levels.

Recommendations for nursing practice in pain management are available from the British Pain Society website: www.britishpainsociety.org.

Nursing competencies in pain management

The competencies addressed in this book are as follows.

Chapters 3, 4, 5, 7, 8, 9, 10 and 11

Communicating with patients and clients in ways that empower them to make informed choices about their health and healthcare and actively to promote their health and wellbeing

At novice level

Recognizing, having knowledge of and experiencing the role of a patient's advocate in communicating accurate information to patients in pain. Strategies used to empower them.

At intermediate level

Planning for, and application of, principles used in information giving, which include assessing the needs of the patient in pain, teaching others to use these skills and the psychosocial principles inherent in empowerment. Analysing the effectiveness of such principles and approaches.

Chapters 4, 5, 6, 8 and 9

Assessing individuals holistically, using a range of different assessment methods and reaching valid, reliable and comprehensive patient and client-centred conclusions that manage risk and are appropriate to needs, context and culture

At novice level

Recognizing the importance of, having knowledge of and experiencing responsibility for the care of a defined group of patients who may be in pain, using strategies to minimize risk, assessing patients' needs and recognizing own limitations as an accountable practitioner. Accessing available pain specialists for help and advice if they are required.

At intermediate level

Planning for, and applying, risk-management strategies and ensuring that the ward or team uses valid and reliable methods of pain and risk assessment. Educating the ward or team in assessment procedures and observing outcomes. Accepting and prioritizing pain-management referrals.

Chapters 6, 8, 9 and 10

Determining therapeutic programmes that are based on evidence, in the interests of patients and clients, and that involve other practitioners when this will improve health outcomes.

At novice level

Recognizing the importance of, having knowledge of, and being able to administer analgesic and therapeutic regimens as prescribed by other healthcare professionals following safe practice guidelines, supervision and training. Referring patients to available pain specialist nurses as patients' needs require.

At intermediate level

Planning for and applying therapeutic regimens safely, recommending analgesics from prescription protocols, and prescribing and administering nurse-led interventions in pain management. Educating the ward staff or team to manage patients in pain using evidence-based practice.

Chapters 6, 8, 9 and 10

Managing complete programmes of care effectively by working in partnership with others, delegating aspects to optimize health outcomes and resource use, and providing appropriate support to patients and clients.

At novice level

Recognizing, and having knowledge of and experience in providing support for the management of complete episodes of pain and care. Understanding the importance of holism in patient care and in pain management. Undertaking delegated care safely and in accordance with the wishes of the patient.

At intermediate level

Planning for and delegating aspects of total patient care to staff following assessment of patients' needs and staff abilities. Promoting holism in pain management and auditing care outcomes.

Chapters 1, 5, 7, 8 and 10

Making sound decisions, which are ethically based in the interests of patients and clients in the absence of precedents and protocols, in partnership with patients, clients and other professionals.

At novice level

Recognizing, and having knowledge and experience of, the basic ethical principles inherent in pain management and nursing. Understanding professional and legal responsibilities of the nurse in the care of patients. Seeking advice from senior colleagues when ethical problems arise, precedents do not exist and standard protocols do not apply. Supporting the patients in informed choice or in order to make ethical decisions.

At intermediate level

Responding to a lack of precedents and protocols by planning for and applying an ethical approach to assessing, managing and delegating care of patients in pain. Educating others in using legal and ethical principles. Supporting and helping the development of protocols and standards to address ethical issues. Appreciating ethnic diversity in developing strategies for ethical approaches to the management of pain in cultural groups.

References

- Benner P (1984) *From Novice to Expert*. Sydney: Addison-Wesley.
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Introduction

It is often very difficult to manage chronic pain. Frequently there is no easy answer for the professional to give or for the patient to accept.

Chronic pain has different dimensions, which are often very much interwoven, so it is not always appropriate to use only one model of care. The medical model often refers to the organic causes of pain and needs to be involved in developing some of the answers. Patients with chronic diseases often develop chronic pain. However, not all patients suffering chronic pain can determine when or why the pain started.

This book will attempt to help the reader to understand the chronic pain experience from the perspective of the patient and the professional. It starts with an examination of models of care and works through the background of pain theories before looking at assessment and treatment strategies. The use of case presentations and learning objectives will challenge the reader to understand the links between the models and treatment/management strategies.

The authors acknowledge that it would be an impossible task to cover all options available for the treatment of chronic pain in this book. We feel that an understanding of acute pain has an important role to play in chronic pain, especially when acute pain is undertreated, so we have briefly discussed the link between acute and chronic episodes. We feel that it is important to explain some of the treatment strategies available to the professionals in developing planned episodes of care. Often the best way to manage a patient is by using multiple treatments. These treatments are not always developed sequentially – sometimes they overlap. We are also aware that many NHS trusts are unable to offer all that is available and presented within this book. Presenting them this way provides an opportunity for readers to challenge the merits of their practice as it stands now.

CHAPTER ONE

Models of health and illness

ANNIE SHELDRAKE

Aim

To provide an overview of the models used to understand chronic pain, the limitations inherent in the earlier models and the complexity needed to be incorporated in the later ones. To illustrate that the single most important factor in chronic pain management is that the individual is regarded as a whole, not a segment of compartmentalized pain.

Objectives

- To introduce the reader to a view that individuals with chronic pain need professionals and service provision that are focused on them as whole individual people rather than just body parts in pain.
- To provide an overview of models and theory construction in order that the reader can recognize different levels of explanation and how these impact upon understanding, care and treatment considerations.
- To provide the reader with an understanding of why the medical model is unsatisfactory when applied in isolation during the management of chronic pain.
- To highlight the development of thinking and model formulation with respect to chronic pain development and maintenance.
- To introduce the factors that are understood to contribute to a chronic pain experience and the models that have been formulated to meet current understanding.
- To provide a brief overview of a pain management programme.
- To illustrate the above with three case studies and draw together the presented points using the experiences of the three patients.

Chronic pain

It is impossible to imagine what it must be like to feel excruciating, unremitting pain every waking moment of one's life – to have something so unavoidable impinge upon every conscious moment so that your very being becomes the pain and nothing else exists outside of it. Every attempt to make the pain go away fails, every explanation's inadequacy becomes apparent. Still the pain remains and along with it the belief, wish and hope that something or someone will make it all go away and that life can return to the way it was.

This is the domain of chronic pain. The overall prevalence of chronic pain found within the general population in a region of Scotland was 53.8% (Elliott et al., 2002). Shamefully, perhaps, in 2004 there was still no definitive explanation for its development or maintenance. Perhaps, however, this just highlights the complex issues and range of factors that seem to contribute to an experience of chronic pain. In the context of limited understanding it is easy to imagine why people – chronic pain sufferers and professionals alike – become frustrated, despondent and helpless. However, there is an increasing understanding of what chronic pain is not (curable) and a changing view, as a consequence, of how to realistically approach chronic pain management without being burdened by the unrealistic expectation of a cure.

In this chapter the changing perspective will be explored by examining the progress and use of conceptual models that have promoted and developed understanding. First, a brief overview of models and theory construction will be presented in order to establish recognition of their importance in directing conceptualization, care and treatment considerations. Secondly consideration will be given to the theory and models that have traditionally informed explanations of pain, examining the impact and limitations these have had with respect to understanding chronic pain.

These limitations can be seen to provide the forum from which current thinking has progressed. The factors that need to be considered in explanation of the development and maintenance of chronic pain will then be explored together with the way in which they have been encapsulated in the construction of current models and theory to understand chronic pain.

In particular, the need to consider chronic pain using a generic biopsychosocial model will be explored together with the way in which this has been incorporated, not only in the approach to assisting individuals but also as an essential component of chronic pain-management programmes (PMPs). Three cases will be presented to highlight the impact of different levels of explanation and intervention on the management of chronic pain.

Levels of explanation

Scientific enquiry is about seeking to understand observable phenomena. The enquiry embarks on a systematic process of gathering information that may be formulated to aid understanding and, in the case of clinical settings, used to improve direct care. Empirical generalization and theory formation are two levels of explanation at which scientific systematization occurs. The first relates directly to observable information including characteristics, events or attributes. The second, theory formation, refers to unobservable possible explanations of why the observable characteristics, events, attributes may go together. Different theoretical approaches will formulate different explanations. Theory formation is an important aspect of understanding as it develops from and generates testable hypotheses that, in turn, substantiate or repudiate the theoretical formulation.

A further conceptual level of scientific organization is that of models. Models are closely related to theories but are more accurate representations of reality, highlighting those elements of the world under investigation. For example, an engineer may study the effect of wind on a specific car shape by creating a model of the car shape. In social sciences a model is usually created with symbolic components and the relationships between them specified. Each type of model, both the physical and the symbolic, makes explicit the known relationships between each element of study.

Why is it important to consider levels of explanation with respect to understanding chronic pain? A simplistic answer is that chronic pain is still viewed from a largely monocular, if dichotomous, perceptive. Traditionally a physical cause needed to be established, with the assumption that this could be eliminated or anaesthetized. If no physical cause was established the pain was labelled 'idiopathic'. It was then attributed to psychological causes with the implication that pain exists 'in people's minds'. By implication, the pain is then regarded by medical professionals as not real and the individual is seen as 'making it up'. Chronic pain, then, was regarded as either organic or psychological. Almost without exception, those suffering chronic pain have been on the receiving end of this belief system. Not only does this end up ensuring that they feel helpless and alone, it does not bring understanding of chronic pain any closer as these two positions are clearly inadequate explanations when considered in such a mutually exclusive way.

The less simplistic answer is that chronic pain develops over time and persists long after a physiological cause is assumed to have ceased. This persistence, in the absence of physiological factors, is curious and has challenged assumptions that pain is experienced only in the presence of noxious stimuli. Essentially pain can become benign but intractable.

The perception of pain therefore does not appear to 'behave' in a linear manner, remaining long after the original injury has receded and healed. As a consequence the management of chronic pain has challenged both medical and psychological understanding, remaining a particularly difficult problem.

The medical model

In medicine the medical model is perhaps the most familiar and prominent example of a symbolic representation of reality. The medical model in essence reflects an understanding about pathological processes by identifying observable consistent patterns of symptoms, their causes and the course of these symptoms. This model is primarily a disease model reflecting organic processes and does not include the role of psychological or social factors. It is a persuasive and powerful model that has, as a result, generated a fantastical faith in its ability to restore and cure.

Although the medical model is really a very pure linear model it is often used very generally when describing processes that appear to involve physical states to be managed by physiological means. In fact Bonica (1990) suggests that in chronic pain it is the pain that is the disease as it has become the malevolent force.

On the face of it, pain does appear to reside in the field of medicine, occurring as it does in the physical body. As a consequence the tools available to medicine – medication, surgery and physiotherapy – are, where necessary, applied to the management of the pain. The problem is that when pain becomes chronic it does not seem to respond at all well to these tools. In fact in many cases these tools may compound the problem and create different problems including doctor shopping, excessive pharmacological intervention, intrusive surgery, and increasing disability and suffering. It could be argued that this also reflects a poor understanding by physicians both of the state of being human and of the somewhat distorted use of the medical model. The fact is that the effects of environmental social events, psychological factors and emotions are all translated, interpreted and responded to by neurophysiological systems. These neurophysiological systems are sophisticated, holistic representations of us that do not exclude our perceptions and interpretations of our world and can exert precision conditioning and reconditioning. They are quite capable of distorting pain perception, increasing disability, and producing severe and unrelenting nociception. However, the medical model framework tends to be used without due respect to this level of neurophysiological sophistication and, as applied to chronic pain management, largely continues to exclude and ignore the multiple other factors that are implicated in chronic pain development.

As stated, pain has traditionally (and still is to a large extent) been considered from the perspective of a medical model. As the setting for most management of pain is in a hospital by medical-model-trained staff the questions for attention are primarily diagnostic and relate to cure. Which medical practitioner examines the pain will depend largely on which part of the body the pain occurs in and consideration is generally centred on the area of the body the pain manifests in. This is reinforced by the fact that most individuals know exactly where they are feeling the physical pain and generally have an exact knowledge when they acquired it.

During our pain-management programme, the pain anaesthetist used a wonderful analogy to help people understand this process. Imagine an elephant. Each specialist doctor has a particular part of the elephant that they are considering. If the medic is a tail specialist he or she is unlikely to consider the trunk. If the medic is an ear specialist he or she is unlikely to consider the stomach. And so forth. In fact they might not even recognize that they are dealing with a whole fully functioning elephant (it is a long way from one end of an elephant to the other!). This selective view of the elephant is important as it informs and increases understanding of specific parts, which are often very complex and specialized. However, the danger is that by not considering the whole elephant the view may be too selective and miss other things that are contributing to the problem. For sake of imagination, it may be that the poor elephant's trunk is sore because he is not eating the correct diet (organic/environmental), that he is bored and is using his trunk to ease his boredom (psychological) and that his trunk has become the object of another elephant's attention because it is also bored (social/environmental).

In response to their specific areas of expertise the experts also have a bag of specific and highly specialized medical interventions that they can use to 'treat' the part they are experts in. Added to this is the complication that the elephant really does want to feel well again so he will try anything. This is a jointly experienced pressure between the specialist and the elephant (psychosocial).

In most medical situations this compartmentalizing is acceptable and necessary and does not, in fact, create problems. However, in some areas of medicine, such as rehabilitation, palliative care, oncology and chronic pain, this view is considered to be too selective and does not provide a breadth of understanding about the individual to improve functioning. It could be argued that the aim of all interventions is to achieve functional restoration and this often necessitates consideration of the individual's psychological and social world as well as their physical one.

Early explanations of pain reflected this linear compartmentalized view. These included 'specificity' theory proposed by Muller in 1842 and 'pattern' theory proposed by Goldscheider in 1894 (for a comprehensive overview see

Melzack and Wall, 1996). Both perspectives considered pain purely as a physiological sensory response. However, these sensory models of pain were limited in predicative abilities and unable to explain a number of observable and interesting phenomena, which present as puzzling if nothing else.

The example of Beecher's (1956) account of soldiers, wounded at Anzio, is consistently quoted as highlighting the complex issue of pain itself. Soldiers returned with penetrating and horrendous injuries, required no analgesics and reported that they were not in significant pain. This, and laboratory work, led Beecher (1960) to draw a conclusion that no simple relationship exists between a stimulus that elicits pain and a response. At the other extreme is the butcher who, while hanging meat, suspended himself by the hook. Terrified he cried out in excessive pain. The hook, however, had not touched his arm – it had merely pierced his coat (Tuke, 1884). Both of these examples implicate the influence of meaning on the experience of pain, anticipation of future consequences and memory.

Other observations that theoretical understanding needs to explain include:

- amputees who are often in extreme and continual pain long after their wound and limb have been removed;
- pain often spreads from the site of the original injury to unpredicted and unrelated areas of the body;
- pain can persist even after the connections between the peripheral and central nervous systems have been surgically severed;
- pain can be reactivated by the gentlest stimuli and occur without the presence of any apparent stimulus;
- pain can become chronic and intractable.

Psychological explanations

Labelling chronic pain as 'idiopathic' led to a whole new area of explanation involving psychological exploration of individual characteristics that might have been causing the pain. Psychodynamic theorists regarded intractable pain as an expression of emotional disturbance arising from unconscious and unresolved conflicts. Conceptualizing chronic pain in this way led to research that examined the aetiological significance of early family relationships, socio-economic status, birth order, marital adjustment, depression and personality disorders. However, aetiological evidence is largely unsubstantiated and of questionable significance (Roy, 1985; Gamsa, 1990). Gamsa (1994) summarizes that, whereas there may be some individuals whose pain is caused by emotional conflict, a purely psychological explanation is not satisfactory for most people and again fails to consider the complexity of the presenting issues.

Behaviourists such as Fordyce et al. (1968) believed that the development of pain into a chronic state, and the maintenance of this state, occurs because pain behaviours such as facial and postural expression, verbalization, medication use and seeking medical explanation become reinforced. Taking the view that it is only through these behaviours that any of us can know that someone is in pain they proposed that these behaviours occur for two reasons: first as a 'respondent', which is the nociceptive (a nociceptor is a receptor preferentially sensitive to noxious stimuli) reflex to stimulation; second, as an operant, sensitive to pain-reinforcing consequences. Chronic pain, it is suggested, is the consequence of pain behaviours being reinforced long after the respondent element of the original injury has ceased. As a consequence a behavioural treatment for chronic pain would be to eliminate contingent behaviours (Turks and Rudy, 1983; Fordyce, Roberts and Sternback, 1985) and replace them with 'well behaviours'. A decrease in pain behaviour is therefore identified as treatment success.

That pain behaviours can be demonstrated to be under control of environmental influences does indicate that they may become maladaptive patterns of behaviour and open to amelioration. However, to regard pain behaviours as the sole contributor to chronic pain after the noxious stimuli are no longer present is also a linear perspective about the experience of pain. More importantly, though, just because people do not *show* that they are in pain does not mean they *are* not in pain. Often individuals in chronic pain will go to great lengths to 'hide' their suffering from family and friends, especially when they have been in pain for many years. This in itself can present as a problem, undermining the intimate levels of a relationship.

Investigation by cognitive theorists on intervening variables such as expectations, self-statements, beliefs, self-efficacy, attributions, locus of control and coping styles have established that these factors also contribute to the experience of pain (Turk and Rudy, 1983; Bandura et al., 1987; Turner 1991). Cognitive interventions that challenge meanings and thought patterns have been found to be effective in reducing the experience of pain and improving quality of life (Herman and Bapiste, 1981; Nicholas, Wilson and Goyen, 1992). These aspects will be considered where relevant later in the chapter and relate to a cognitive-behavioural understanding often incorporated in PMPs.

Biopsychosocial explanation

This is not a precision model but its tenet is central to understanding present conceptualizations of chronic pain. This is that there are three areas of interactive influence that affect an individual:

1. the *physiological* state of the individual's body, organs and organic processes;

2. the individual's *psychological* world, including interpretations, thoughts, feelings, responses (both internal and external) and learning; and
3. the individual's *external social/environmental* world. This includes the family such individuals live with, the family they were brought up by, the cultural context they live in, and the type and sources of information to which they respond.

These three areas are assumed to be intimately related and influential on each other. In using such a model there needs to be consideration and exploration of how, what, where and why each area contributes to the presenting observable phenomenon.

The evidence for considering chronic pain from the perspective of a biopsychosocial model is that the pain will not have eased with recovery, will probably have increased in sensitivity, lowering thresholds and increasing intensity, and will probably be poorly controlled by traditional methods. Poor control leads to psychological trauma, increasing emotional distress and creating a whole range of secondary debilitating problems. These include increased levels of anxiety and depression, fear of disability and societal stigmatization. Anger, frustration, helplessness, hopelessness and inadequacy are all commonly reported feelings associated with being in chronic pain. A significant decrease in all activities occurs and life is less likely to be seen as pleasurable. Increasing isolation and changes in intimate relationships are common. Socio-economic status often changes, which can cause further distress and suffering.

Case example: AD

To highlight the multiple levels of influence and the journey that an individual might take let us consider AD – a 57-year-old man who, in 1993, lifted a weight that he estimated as being twice as heavy as a 56 lb bag of potatoes. After a few days of intense pain he went to his GP who recommended seeing an osteopath. This proved unhelpful as the osteopath suspected he had a prolapsed disc. Eventually, after a number of weeks of physiotherapy to gain some mobility, he was admitted for surgery to have his L4–5 and L5–S1 discs removed. Decompression surgery was necessary again a few weeks later at L2 – the sacrum. For a few days after each surgical intervention AD was pain free. However, within days the pain had returned. AD describes these initial months as the ‘start of a long road of despair, as I could not accept what had gone wrong’.

AD then embarked on a process of trying to find pain relief. He received monthly epidurals, midazolam spinal injections and finally, in 1998, a spinal-cord stimulator was implanted following comprehensive physical and psychological assessment. At the same time as receiving all these he