

Exercise prescription for patients with non-specific chronic low back pain: a
qualitative exploration of physiotherapy practice

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Abstract

Background: Providing an effective exercise prescription process for a patient with non-specific chronic low back pain (NSCLBP) within the limits of time that a busy clinician faces is a challenging task. Emerging research has indicated that partnership in care and shared decision making are important for people with NSCLBP, and calls for further investigation into the approaches used to prescribe exercise.

Objective: To explore the characteristics and processes of physiotherapy exercise prescription for patients with NSCLBP, and investigate how shared decision making and patient partnership are addressed by physiotherapists in this process.

Design: A qualitative study using a philosophical hermeneutic approach. In phase one of the study eight physiotherapists were each observed on three occasions undertaking their usual clinical activities. They participated in brief interviews after each observation and a later in depth semi-structured interview. In phase two semi-structured interviews with eight patients including use of some brief patient vignettes was undertaken to provide a rich descriptive text of their personal experiences of receiving exercise as part of the management of their NSCLBP, and their involvement in decisions regarding their treatment plans. In depth iterative hermeneutic strategies were used to interpret the texts and identify the characteristics and processes of exercise prescription for patients with NSCLBP.

Analysis: Thematic analysis (Braun and Clarke, 1996) was employed to search for themes and patterns from the observations and interviews with physiotherapists and patients.

Findings: The findings provide a complex understanding of how physiotherapists regard and utilise exercise based management strategies for patients with NSCLBP. Patient partnership and shared decision making were rarely evident and were linked to the physiotherapists' clinical

orientations, cognitive and decision making processes, and assumptions about patients. The overall feeling of the patients was that the role they played in the therapeutic interaction was a marginal one, such that the therapist was dominant in structuring the interactions, leaving the patients feeling disempowered to question and contribute.

Conclusions: This research, by focusing on a patient-centred approach, makes an important contribution to the body of evidence relating to the management of NSCLBP. It challenges physiotherapists to critically appraise their approaches to the prescription of exercise therapy in order to improve outcomes in these patients.

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Contents

List of Tables.....	xi
List of Figures	xii
Glossary.....	xiii
Abbreviations	xxi
Chapter 1: Introduction and Thesis Overview	1
1.0 Introduction	1
1.1 Background – epidemiology and historical context	1
1.2 Exercise and chronic low back pain	5
1.3 Involving patients in clinical decision making: Evolution of the patient-centred approach	8
1.3.1 Patient-centred care	10
1.3.2 The patient as a unique individual	16
1.3.3 Sharing power and responsibility and engaging patients in decision making	17
1.4 Philosophy of physiotherapy and clinical practice	23
1.5 Motives for undertaking the study.....	26
1.6 Summary of the next chapters.....	29
1.7 Chapter summary.....	30
Chapter 2: Literature Review	32
2.0 Introduction.	32
2.1 Exercise and chronic low back pain	33

2.1.1 Evidence for the effectiveness of exercise therapy in the management of non-specific chronic low back pain (NSCLBP).....	33
2.1.2 Search strategy	33
2.1.3 Results	36
2.1.4 Limitations of included systematic reviews	37
2.1.5 Summary of included systematic reviews	38
2.1.6 Defining exercise interventions.....	39
2.1.7 Description of included systematic reviews	48
2.1.8 Summary	54
2.2 Musculoskeletal physiotherapy and patient-centred care.....	55
2.2.1 Search strategy	55
2.2.2 Results	58
2.2.3 Models of patient-centred care in musculoskeletal physiotherapy	63
2.2.4 Patient-centred care in musculoskeletal physiotherapy practice.....	65
2.2.5 Patients' preferences and experiences of exercise therapy for NSCLBP	74
2.2.6 The exercise dilemma or how to cope with clinical equipoise	77
2.3 Chapter summary.....	79
Chapter 3: Methods and Methodology.....	81
3.0 Introduction	81
3.1 Philosophical orientation	81
3.1.1 Ontology (What is real?).....	82
3.1.2 Epistemology (What is knowledge?)	84

3.1.3 Philosophical Hermeneutics	85
3.2 Choice of methodology.....	89
3.2.1 Rejecting objectivity	90
3.2.2 Researcher's pre-understandings.....	93
3.2.3 Sampling strategy	101
3.3 Methods of data collection.....	105
3.3.1 Observations - preparing to enter the field	108
3.3.2 Data collection and recording	109
3.3.3 Limitations of observations	115
3.3.4 Interviews.....	118
3.3.5 Type of interview.....	119
3.3.6 Relationships with the interviewees	123
3.3.7 Management of the interviews	125
3.3.8 Outcomes of the interviews.....	130
3.4 Ethical issues	130
3.5 Data analysis.....	134
3.5.1 Application of hermeneutic principles to the analysis.....	134
3.5.2 Step 1 – Creating the texts	137
3.5.3 Step 2 – Identifying interesting features.....	139
3.5.4 Step 3 – Initial coding.....	139
3.5.5 Step 4 – Development of themes.....	143
3.5.6 Step 5 – Refining the themes.....	144
3.5.7 Step 6 – Producing the report.....	148
3.6 Evaluating the quality of the research process.....	148
3.6.1 Credibility.....	151
3.6.2 Transferability	153

3.6.3 Dependability	154
3.6.4 Confirmability	155
3.7 Chapter summary.....	156
 Chapter 4: Findings - Phase One (Physiotherapists).....	157
4.0 Introduction	157
4.1 Main theme: Exercise as the mainstay of treatment.....	160
4.1.1 Sub-theme: It's just part and parcel of the package.	160
4.1.2 Sub-theme: Exercise prescription experts?	161
4.2 Main theme: I want them to exercise.....	164
4.2.1 Sub-theme: Defining the options available.....	164
4.2.2 Sub-theme: Anticipated benefits of exercise.....	166
4.2.3 Sub-theme: I try and get people to think about it from my point of view.....	169
4.2.4 Sub-theme: Checking patient understanding.....	175
4.2.5 Sub-theme: Checking patient's ability to implement the plan	177
4.3 Main theme: Which exercise? - the tension between evidence and everyday practice.....	179
4.3.1 Sub-theme: Interpreting the evidence.....	179
4.3.2 Sub-theme: The exercise needs to be fun	181
4.3.3 Sub-theme: It depends on what I find	182
4.3.4 Sub-theme: Giving therapy for therapists needs.....	187
4.4 Main theme: Compliance-orientated more than concordance based	189
4.4.1 Sub-theme: Lack of time	189
4.4.2 Sub-theme: Patient's current activity levels.....	191

4.4.3 Sub-theme: The fear of pain	192
4.4.4 Sub-theme: Keep it simple	195
4.5 Summary of the analysis	196
 Chapter 5: Findings – Phase Two (Patients)	 199
5.0 Introduction	199
5.1 Main theme: Patients’ expectations and patients’ needs are not synonymous	203
5.2 Main theme: Information is necessary but often not sufficient	206
5.2.1 Sub-theme: There was a fairly vague explanation of what might be wrong	206
5.2.2 Sub-theme: Review of management options	208
5.2.3 Sub-theme: Benefits of exercise	209
5.3 Main theme: Not all decisions need to be shared	211
5.3.1 Sub-theme: Patient differences over preferred decision making role	211
5.3.2 Sub-theme: There has to be an element of trust.....	217
5.4 Main theme: Wanting to be treated as an individual.....	220
5.5 Main theme: Ongoing support is important.....	223
5.6 Summary of the analysis	225
 Chapter 6: Discussion	 228
6.0 Introduction.....	228
6.1 Review of the study	228
6.1.1 Reliance on exercise	232
6.1.2 Treatment decision making.....	234

6.1.3 Interpretation of the term ‘exercise prescription’	239
6.1.4 Barriers and facilitators to implementation of shared decision making	241
6.1.5 Importance of information sharing	244
6.1.6 Improving communication skills and developing ‘activated’ patients	248
6.1.7 Making care personal	253
6.2 Strengths and limitations of this study	257
6.2.1 Strengths of the research.....	257
6.2.2 Limitations of the research.....	261
6.3 Self-understanding and changes to researcher’s pre- understandings.....	264
6.4 Conclusion.....	269
References.....	275
Appendix A Phase 1 - Participant Information Sheet [Therapist]	304
Appendix B Phase 1 - Interview & Observation Therapist Consent Form	308
Appendix C Phase 1 - Participant Information Sheet [Patient].....	309
Appendix D Phase 1 - Observation Consent Form [Patient]	313
Appendix E Flyer – Phase 2	314
Appendix F Phase 2 – Patient Participant Information Sheet	315
Appendix G Phase 2 – Patient Interview Consent Form	319
Appendix H Phase 2 - Patient Vignettes	320
Appendix I Contact Summary Sheet (T8P2)	322
Appendix J Phase 1 – Interview Schedule.....	324
Appendix K Phase 2 – Interview Schedule	326

Appendix L Example Coding Table for Phase One.....	328
Appendix M Example Coding Table for Phase Two.....	337
Appendix N Example Text Interpretation Summary (Phase One).....	345
Appendix O Example Text Interpretation Summary (Phase Two).....	348

List of Tables

Table 1.1 Dimensions of patient (person) centred care as identified from key conceptual writings (adapted from Duncan, Entwistle and Liddle, 2010).....	12
Table 1.2 Essential elements, ideal elements and general qualities of shared decision making: emphasis in commonly cited models (adapted from Makoul and Clayman, 2006).....	21
Table 1.3 Key proposed elements of shared decision making related to physiotherapy.....	22
Table 2.1 Key words used for searching electronic databases.....	35
Table 2.2 Summary of systematic reviews retrieved for closer inspection following database search.....	41
Table 2.3 Key words used for searching electronic databases.....	57
Table 2.4 Summary of qualitative studies.....	60
Table 2.5 Summary of systematic reviews.....	71
Table 3.1 The six phases of thematic analysis (reproduced from Braun and Clarke, 2006).....	136
Table 3.2 Criteria to critically appraise findings from qualitative research (adapted from Lincoln and Guba, 1985 and Finlay, 2006).....	150
Table 4.1 Summary of participant physiotherapists' key characteristics	158
Table 4.2 Themes and sub-themes relating to the characteristics and processes of exercise prescription and the degree to which physiotherapists involve patients with NSCLBP in decisions regarding their care.....	159
Table 5.1 Age and gender distribution of individual interviewees.....	201
Table 5.2 Employment status, LBP history, and attendance at physiotherapy.....	201

Table 5.3 Themes and sub-themes relating to the experiences, information and decision support needs of patients with NSCLBP	202
Table 6.1 Contrasting the study findings to the key elements of shared decision making	230
Table 6.2 Potential barriers to sharing decisions identified from this study	243

List of Figures

Figure 1.1 Spectrum of patient clinician interaction (Elwyn, Edwards and Kinnersley, 1999)	18
Figure 2.1 Results of search strategy (1)	37
Figure 2.2 Results of search strategy (2)	58
Figure 2.3 Patient reported dimensions of patient-centredness (Reprinted from Cooper, Smith and Hancock, 2008, with permission from Elsevier).....	63
Figure 3.1 Use of the hermeneutic circle as applied to this study (adapted from Paterson and Higgs, 2005)	88
Figure 3.2 The sequence of interviews with and observations of physiotherapists and their patients.....	106
Figure 3.3 Example of blank contact summary sheet (see Appendix I for a completed example)	114
Figure 3.4 An example of the two analyses conducted on each section of transcript, together with the resolved interpretation in the final column.....	142

Glossary

Adherence: The extent to which a person's behaviour corresponds with agreed recommendations from a healthcare provider (WHO, 2003).

Bias: Factors other than those investigated, which may influence the findings of a study (Parahoo, 2006).

Biomedical Model: The traditional approach to the diagnosis and treatment of illness. The physician focuses on the defect, or dysfunction, within the patient, using a problem-solving approach. The medical history, physical examination, and diagnostic tests provide the basis for the identification and treatment of a specific illness. The medical model is thus focused on the physical and biologic aspects of specific diseases and conditions (Waddell, 1993).

Biopsychosocial Model: Is a general model or approach positing that biological, psychological and social factors, all play a significant role in human functioning in the context of disease or illness. Indeed, health is best understood in terms of a combination of biological, psychological, and social factors rather than purely in biological terms (Waddell, 1993).

Bracketing: Scientific process in which a researcher suspends or holds in abeyance his or her presuppositions, biases, assumptions, theories, or previous experiences to see and describe the phenomenon (Gearing, 2004).

Codes: Identify a feature of the data that appears interesting to the analyst, and refers to the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon (Braun and Clarke, 2006).

Collaborative/Collaboration: An approach to healthcare in which goals and strategies for therapy are jointly planned and negotiated (Edwards *et al.*, 2004).

Compliance: The extent to which the patient's behaviour matches the healthcare provider's recommendations (WHO, 2003).

Conceptual (theoretical) framework: The use of concepts and/or theories to underpin a study (Parahoo, 2006).

Concordance: Involvement of patients in decision making, in which the health professional and the patient have an equal partnership. They share their knowledge and experiences with each other so that an understanding can be reached and a decision about the management of a condition can be made (Moffat, 2004).

Confirmability: Is concerned with ensuring that the researcher can be shown to have acted in good faith. Not overtly allowing personal values or theoretical inclinations manifestly to sway the conduct of the research and findings derived from it (Lincoln and Guba, 1985).

Constructivism: Is a theory to explain how knowledge is constructed when information comes into contact with existing knowledge that has been developed by experiences (Hammersley, 2000).

Credibility: The extent to which the findings of a study reflect the experience and perceptions of those who provided the data. They must also be credible to those who subsequently read the report (Parahoo, 2006).

Dependability: A term used as a parallel to reliability in quantitative research. One way for a research study to demonstrate dependability is for the process to be audited (Lincoln and Guba, 1985).

Effectiveness: The extent to which a specific intervention, when used under ordinary circumstances, does what it is intended to do. Clinical trials that assess effectiveness are sometimes called pragmatic or management trials (Parahoo, 2006).

Empirico-analytical: A form of reasoning or problem solving used as a means of identifying and assessing physical impairment. This approach has significant limitations, as a form of reasoning, in identifying and assessing the experience of disability (Edwards *et al.*, 2004).

Epistemology: The theory or science of the method or grounds by which knowledge is developed (Blaikie, 2000).

Equipoise: A situation in which a healthcare professional (and/or patient) does not have a clear preference as to which treatment option should be chosen (Elwyn *et al.*, 2000).

Evidence based medicine: The conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise and patients values and expectations with the best available external clinical evidence from systematic research (Sackett *et al.*, 1996).

Exercise (for spinal pain): Physical exertion, with instruction or advice of a physiotherapist, aimed at gaining increased movement of spinal joints, increased strength of spinal muscles, increased general fitness, building core stability and/or reducing symptoms. (CSP, 2006).

Exercise prescription: A specific plan of fitness or health-related activities that are designed for a specified purpose, which is often developed by a fitness or healthcare specialist for and in collaboration with the patient. Due to the specific and unique needs and interests of the patient, a successful prescribing process will be an agreement that builds on the experiences, beliefs and wishes of the patient to decide whether, when and how they exercise. The goal of exercise prescription should be successful integration of exercise principles and behavioral techniques that motivates the participant to achieve their goals (Suleman and Heffner, 2008).

Fusion of Horizons: Describes the activity of understanding. Each individual occupies a horizon and in attempting to understand another thing or person or text they extend their own horizon to embrace and 'fuse' with that of another (Lawn, 2012).

Hermeneutic circle: The hermeneutic circle is seen as the central organising concept in hermeneutics, in which interpretation through

understanding is achieved by the circular process of comparing the whole text with its constituent parts (Koch, 1999).

Hermeneutics: The theory or philosophy of the interpretation of meaning of a text. The main objective of hermeneutics is human understanding, understanding what people say and do, and why (Koch, 1996).

Heterogeneity: The condition or state of being different in kind or nature (Parahoo, 2006).

Homogeneity: Of the same kind or nature; essentially alike (Parahoo, 2006).

Hypothetico-deduction: A research strategy designed to test a hypothesis. A hypothesis is developed from a theory using deductive logic, and then tested using a research method, commonly a comparative experiment. If the hypothesis is not corroborated by the experiment (i.e. it is falsified), then the theory it is derived from is called into question (Edwards and Richardson, 2008).

Interpretivism: Is the belief that people continuously make sense of the world around them and different people may have different interpretations of the same phenomena. Interpretivism is a blanket term for a collection of approaches broadly called 'qualitative' that share an opposition to the logical 'positivists' notion of studying people as objects (Parahoo, 2006).

Meta-analysis: Is a form of research on research. It refers to methods focused on contrasting and combining results from different studies, in the hope of identifying patterns, sources of disagreement, or other interesting relationships that may come to light in the context of multiple studies (Parahoo, 2006).

Minimal Clinically Important Difference: Minimal clinically important differences (MCID) are patient derived scores that reflect changes in a clinical intervention that are meaningful for the patient (Wright *et al.*, 2012).

Non-specific low back pain: Non-specific low back pain is tension, soreness and/or stiffness in the lower back region for which it is not possible to identify a specific cause of the pain. Several structures in the back,

including the joints, discs and connective tissues, may contribute to symptoms. The lower back is commonly defined as the area between the bottom of the rib cage and the buttock creases. Some people with non-specific low back pain may also feel pain in their upper legs, but the low back pain usually predominates. The syndrome of radicular pain due to nerve root compression (sometimes called sciatica) is a different clinical syndrome (NICE, 2009).

Objectivity: A term used in research approaches in which the researcher remains detached from respondents by not letting their subjective views influence the data they collect and analyse (Parahoo, 2006).

Ontology: A direction in philosophy concerned with the nature of being and existence. Ontology describes structures, their properties and powers, and the interplay of mechanisms which produces events (Holloway, 1997).

Outcome measures: A physical therapy outcome measure is 'a test or scale administered and interpreted by physical therapists that has been shown to measure a particular attribute of interest to patients and therapists and is expected to be influenced by intervention' (Mayo *et al.*, 2011).

Patient-centred care: Care that is respectful of and responsive to individual preferences, needs and values, and ensures that patient values guide all clinical decisions (Committee on Quality of Health Care in America, Institute of Medicine Report - Crossing the Quality Chasm, 2001).

Phenomenology: The study of things as they appear to us - as they are perceived and experienced. In a general sense, phenomenology often means 'in terms of (our) experience'. The phenomenology of everyday life refers to our lived experience and consciousness (Hartwig, 2007).

Positivism: Positivism is a philosophy of science which claims that we can have "positive" knowledge of reality, through science. The founder of positivism, Auguste Comte (1798-1857), initially saw positivism as a third, improved stage of society, following on from a primary religious and then a secondary metaphysical stage. The confidence in knowledge claimed by

positivism should be compared with the more subtle approach which has come to be known as post-positivism (Holloway, 1997).

Post Modernism: This is an intellectual movement (towards the end of the 1950s) which rejects the notion of 'truth' and 'reality' as objective, and rationalism as the only way to think. Post modernists believe that knowledge is co-created (by participants and researchers) (Parahoo, 2006).

Preference sensitive: In circumstances where there are a number of options leading to different outcomes, and the 'right' decision depends on a patient's own particular set of needs and outcome goals, the condition is said to be preference-sensitive (Wennberg, 2010).

Prejudices (pre-understandings): Is a central concept in hermeneutics. Gadamer (1976) argued that prejudice is not something negative, erroneous or something we should try to eliminate, but that instead we only have access to the world through our prejudices, It is not so much our judgements as our prejudices that constitute our 'being'. Gadamer believed that it is impossible not to take them into the process of interpretation, arguing that it is only through our 'prejudices' that we can begin to understand, in other words there can be no understanding without having first understood (Gadamer, 1976).

Purposive sampling: This type of sampling involves the researcher deliberately choosing who to include in the study on the basis that these are the best available people to provide data on the issues being researched (Mays and Pope, 2000).

Randomisation: The process of allocating participants by chance to separate groups that compare different treatments or other interventions. Randomisation gives each participant an equal chance of being assigned to any of the groups (Parahoo, 2006).

Reflexivity: Is the continuous process of reflection by researchers of how their own values, perceptions, behaviour or presence and those of the respondents can affect the data they collect (Parahoo, 2006).

Respondent validation: Respondent validation, or as described in this research ‘text interpretation summaries’ includes techniques in which the investigator's account is compared with those of the research participants to establish the level of correlation (Mays and Pope, 2000).

Self-efficacy: Is the term used to describe how people judge their own competence or ability to succeed in specific situations to complete tasks and reach goals (Bandura, 1977).

Self-Management: Is an individual's ability to manage the symptoms, treatment, physical and psychosocial consequences and lifestyle changes inherent in living with a chronic condition. Efficacious self-management encompasses ability to monitor one's condition and to effect the cognitive, behavioural, and emotional responses necessary to maintain a satisfactory quality of life (Barlow *et al.*, 2002).

Self-Management Support: The assistance caregivers give patients with chronic disease in order to encourage daily decisions that improve health related behaviours and clinical outcomes. Self-management support can be viewed in two ways: as a portfolio of techniques and tools that help patients choose healthy behaviours; and a fundamental transformation of the patient–caregiver relationship into a collaborative partnership (The Health Foundation, 2011).

Shared decision making: Shared decision making is a process in which clinicians and patients work together to clarify treatment, management or self-management support goals, sharing information about options and preferred outcomes with the aim of reaching mutual agreement on the best course of action (Coulter and Collins, 2011).

Systematic Review: A form of literature review in which all available research studies on a particular topic are identified, analysed and synthesised (Parahoo, 2006).

Thematic Analysis: Is a method for identifying, analysing and reporting patterns (themes) within data. It minimally organises and describes the data

set in (rich) detail, and interprets various aspects of the research topic (Attride-Stirling, 2001).

Themes: A theme captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set (Braun and Clarke, 2006).

Transferability: A term used as a parallel to external validity or generalisability in quantitative research. A rich account or 'thick description' of the research findings will allow others to make a judgement about the possible transferability of the findings to other situations (Lincoln and Guba, 1985).

Triangulation: Is a process by which the same problem or phenomenon is investigated using a combination of different methods, theories, data and/or researchers in the study (Flick, 2007).

Trustworthiness: Confidence that the data is accurate and reflects reality. It establishes and assesses the quality of qualitative research that provides an alternative to reliability and validity (De Poy and Gitlin, 1998).

Volunteer sample: Is a sample of convenience over which the researcher has little control and is dependent on individual people volunteering to take part (Parahoo, 2006).

Abbreviations

ACSM: American College of Sports Medicine

CDSR: Cochrane Database of Systematic Reviews

CLBP: Chronic Low Back Pain

CSAG: Clinical Standards Advisory Group

CSP: Chartered Society of Physiotherapy

DARE: Database of Abstracts of Reviews of Effects

DESI: Decision Support Interventions

DH: Department of Health

GP: General Practitioner

HEP: Home Exercise Programme

HPC: Health and Care Professions Council

iCSP: interactive CSP

IU: Intolerance of Uncertainty

LBP: Low Back Pain

MCID: Minimal Clinically Important Difference

MESH: Medical Subject Headings

MSk: Musculoskeletal

NHS: National Health Service

NHS R&D: National Health Service Research and Development

NICE: National Institute for Health and Clinical Excellence

NSCLBP: Non-specific Chronic Low Back Pain

NSLBP: Non-specific Low Back Pain

OR: Odds Ratio

PEDro: Physiotherapy Evidence Database

PPA: Physiotherapy Pain Association

RCGP: Royal College of General Practitioners

RCTs: Randomised Controlled Trials

REC: Research Ethics Committee

SRs: Systematic Reviews

UK: United Kingdom

UWE: University of the West of England, Bristol

WCPT: World Confederation of Physical Therapy

WHO: World Health Organisation

Chapter 1: Introduction and Thesis Overview

1.0 Introduction

In this thesis I have used a hermeneutic research approach to explore the concept of exercise prescription as applied to patients presenting with non-specific chronic low back pain (NSCLBP) and to contribute to a broader understanding and interpretation of the patients' involvement in the decision making process. The study is introduced in this chapter. Firstly, I discuss the background to the clinical problem of NSCLBP, and introduce the role of exercise in its management. I then provide background information on the evolution of the patient-centred care approach, models of shared decision making, and how these fit with the philosophy of physiotherapy clinical practice. I will then discuss my personal and professional motivation for the study. Finally, I will provide a brief summary of the following chapters in this thesis.

1.1 Background – epidemiology and historical context

Low back pain (LBP) is a common, disabling and expensive disorder. Each year around 20% of the United Kingdom (UK) adult population will consult their General Practitioner (GP) about their back pain (Macfarlane, Jones and Hannaford, 2006). For most people substantial pain or disability is short lived and they soon return to normal activities, although a proportion develop chronic pain and disability. Hestbaek, Leboeuf-Yde and Manniche (2003) report that one year after a first episode of back pain 62% of people still have pain and 16% of those initially unable to work are still not working. It is this group who account for the majority of the substantial direct and indirect health and social costs associated with LBP. Maniadakis and Gray (2000) reported that the National Health Service (NHS) spent more than £1 billion pounds per year on back pain related costs which includes £512 million on hospital costs, £141 million on GP consultations, and £150.6 million on physical therapy treatments.

Back pain has typically been regarded as either 'acute' or 'chronic', with the literature offering different definitions in terms of time as to what constitutes acute or chronic low back pain (CLBP). CLBP is a long term condition commonly encountered by physiotherapists, which has typically been defined as 'pain that continues for longer than 3-6 months' (Spitzer, Le Blanc and Du Puis, 1987; Hayden, van Tulder and Tomlinson, 2005a; van Middelkoop *et al.*, 2010) and has been regarded by some as likely to continue indefinitely. However, Von Korff and Saunders (1996) propose that the course of back pain for most people presenting in primary care is recurrent and therefore not acute or chronic in the usual sense of these terms. Within the first year after an acute episode, 60-80% of patients will suffer a recurrence, suggesting that classifying patients with back pain as acute or chronic based on the duration of the initial episode alone may be inadequate. More recent guidelines (Chartered Society of Physiotherapy (CSP), 2006; National Institute for Health and Clinical Excellence (NICE), 2009) have used the term 'persistent' to describe pain that has been present for at least six weeks which may resolve partially or fully but may often recur. The term 'persistent' describes recurring pain of this nature more precisely than the word 'chronic', but for the purposes of this study the term chronic will be employed, as it continues to be the term most widely used in the literature.

Diagnostic triage (Waddell, 1999; Royal College of General Practitioners (RCGP), 1999) helps clinicians to determine the need for referral, investigation and management. Patients are triaged into one of three categories: non-specific mechanical LBP, nerve root pain or serious spinal pathology. Fortunately serious pathology is rarely encountered, and the overwhelming majority of people have non-specific mechanical low back pain (approximately 90%). A number of broadly similar definitions for non-specific mechanical LBP exist in the literature. The following has been taken from the NICE LBP Guidelines:

“Non-specific low back pain is tension, soreness and/or stiffness in the lower back region for which it is not possible to identify a specific cause of the pain. Several structures in the back, including the joints, discs and connective tissues, may contribute to symptoms. The lower back is commonly defined as the area between the bottom of the rib cage and the buttock creases. Some people with non-specific low back pain may also feel pain in their upper legs, but the low back pain usually predominates. The syndrome of radicular pain due to nerve root compression (sometimes called sciatica) is a different clinical syndrome” (NICE, 2009 p.4).

Although an advocate of diagnostic triage, Waddell (2005) has suggested that non-specific low back pain (NSLBP) is not a good clinical diagnosis as it fails to provide any biological basis for real understanding, with treatment often being based on unproven hypotheses. Attempts have been made to achieve consensus on the sub classification of LBP (McCarthy *et al.*, 2006), however NSLBP currently largely remains the accepted and agreed terminology.

For the purposes of this study I have defined non-specific chronic low back pain (NSCLBP) as:

Pain persisting for 8 weeks or more, or more than 3 episodes of pain within a 12 month period to reflect the recurrent nature of the condition.

Eight weeks was chosen as it is considered to be beyond the period of spontaneous recovery for most LBP (Pengel *et al.*, 2003).

Research on the primary care management of LBP was scarce until the 1980s. However the last three decades has seen the establishment of several scientific meetings, which in turn has promoted a proliferation of publications on this topic. Rest, bed rest and restriction of activity was deemed to be the accepted medical treatment for back pain and sciatica up until the early 1990s. However two key randomised controlled trials (RCTs) published in the 1980s challenged this approach. Gilbert, Taylor and Hildebrand (1985) concluded that those who had no bed rest reported a return to normal activities faster than those who had 4 days bed rest. Deyo,

Diehl and Rosenthal (1986) concluded that patients who were advised to take 2 days bed rest returned to work faster than those advised to take 7 days. These two studies radically changed the approach to the management of LBP, forming the basis for the Clinical Standards Advisory Group (DH, 1994) recommendations that shorter periods of bed rest were better than longer periods and prompting a change to a more active exercise based approach to the management of LBP.

The concept of exercise as a method to improve general (physical and psychological) well-being is not new, but began in the 1960s with the 'Sport for All' initiative in the UK. The emphasis was not on high levels of fitness and intensive exercise but on promoting moderate exercise to improve general health. More recently Sir Liam Donaldson in his official annual report 'On the State of the Public Health' (DH, 2009) described exercise as nature's cure, with physical activity being crucial to good health. He is quoted as saying:

"The potential benefits of physical activity to health are huge. If a medication existed that had a similar effect on preventing disease, it would be hailed as a wonder drug or miracle cure" (DH, 2009 p.21).

Aspects of exercise can be defined in many different ways according to intention, outcome and location. In terms of intention Caspersen, Powell and Christenson (1985) distinguish between physical activity and exercise, with physical activity defined as:

"Any bodily movement produced by skeletal muscles that results in energy expenditure" (Caspersen, Powell and Christenson, 1985 p.127).

and exercise defined as:

"Planned, structured and repetitive bodily movement done to improve or maintain one or more components of physical fitness or health" (Caspersen, Powell and Christenson, 1985 p.127).

Distinctions can be drawn in terms of the outcome of the behaviour, for example intensive physical exercise that improves cardiovascular fitness and moderate physical exercise that improves general health status, and in terms of location; occupational activity performed as part of the individual's work, and leisure activity carried out in the individual's leisure time.

Since the 1980s, research literature has increasingly explored advice to stay active and exercise in the management of LBP. van Tulder, Koes and Bouter (1997) concluded that exercise can be a relatively inexpensive, easily administered treatment method, which may prove to be the most effective solution for patients whose pain appears to be so resistant to many other treatment options. However, the usefulness of exercise has not gone entirely unchallenged, and a number of questions regarding its exact prescription and method of application still remain to be answered.

1.2 Exercise and chronic low back pain

The search for effective interventions for LBP has resulted over the past three decades in moves towards a biopsychosocial approach to the management of LBP (Waddell, 1993; DH, 1994; Von Korff and Saunders, 1996; Croft *et al.*, 1996). The available evidence suggests that as LBP becomes chronic, psychosocial factors become more important, and a purely passive approach to management should be avoided in favour of active exercise and rehabilitation. Emphasis should be on encouraging patients to stay active and continue normal daily activities, gradually increasing their physical activities along with encouragement to stay at or return to work as early as possible, with information designed to enhance the patient's ability to self-manage their problem (Waddell, 1993; DH, 1994; May, 2001a; 2001b). These recommendations are in keeping with pain theory regarding the importance of self-management, self-efficacy and a 'hands-off' approach in the management of CLBP (Thacker, 1997; Moseley, 2003).

The increased interest in an active approach to the management of CLBP led to a significant rise in the number of randomised controlled trials (RCTs), systematic reviews (SRs) and published guidelines informing the use of

exercise therapy in the management of persistent or CLBP (for example, Frost *et al.*, 1995 and 1998; Klaber Moffett *et al.*, 1999; Mannion *et al.*, 1999; van Tulder *et al.*, 2000; Freidrich *et al.*, 2005; Hayden, van Tulder and Tomlinson, 2005a; Hayden *et al.*, 2005b; Airaksinen *et al.*, 2006; CSP, 2006; Hettinga *et al.*, 2007; NICE, 2009). As a result of the generally positive research evidence, exercise is consistently recommended in current treatment guidelines for the management of non-specific chronic low back pain (NSCLBP).

The European Guidelines for the Management of NSCLBP (Airaksinen *et al.*, 2006) provide scientific evidence from RCTs endorsing the use of exercise. In the Chartered Society of Physiotherapy's (CSP) 'Clinical Guidelines for the Physiotherapy Management of Persistent Low Back Pain' (CSP, 2006), the key clinical recommendation for exercise was that people with persistent LBP should be given the opportunity to participate in an exercise programme, in a form appropriate and acceptable to each individual, following physiotherapy assessment.

These recommendations were further endorsed by the NICE (2009) published guidelines for the 'Early Management of Persistent Non-specific LBP', where again the key recommendation was that patients should be advised to remain active:

"Advice should be given to people with low back pain that staying physically active and exercising is likely to be beneficial, with consideration given to offering a structured exercise programme tailored to the person which may include the following elements:

aerobic activity, movement instruction, muscle strengthening, postural control and stretching" (NICE, 2009 p.10).

and that care should be patient-centred, with the patient actively involved in decisions concerning their care:

"Treatment and care should take into account patients' needs and preferences. People with non-specific low back pain should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals" (NICE, 2009 p.6).

It is now common practice for exercise to form part of the management offered to patients with NSCLBP. It encompasses a heterogeneous group of interventions ranging from general physical fitness or aerobic exercise, to muscle strengthening, various types of flexibility and stretching exercises. In physiotherapy clinical practice, an exercise prescription may be influenced by a number of factors, and can vary greatly in content and method of delivery (Battie *et al.*, 1994; Foster *et al.*, 1999; Gracey, McDonough and Baxter, 2002; Byrne, Doody and Hurley, 2006; Liddle, Baxter and Gracey, 2009). Exercise prescription is a term that is used in clinical practice and in the literature (Freburger *et al.*, 2009; Slade, Molloy and Keating, 2009a) although a convincing definition to explain what is meant by the term is often absent. To many a prescription may be seen as a way of transmitting authority and imparting a recommendation to a patient. For the purposes of this study it is defined as:

“A specific plan of fitness or health-related activities that are designed for a specified purpose, which is often developed by a fitness or healthcare specialist for and in collaboration with the patient. Due to the specific and unique needs and interests of the patient, a successful prescribing process will be an agreement that builds on the experiences, beliefs and wishes of the patient to decide whether, when and how they exercise. The goal of exercise prescription should be successful integration of exercise principles and behavioral techniques that motivates the participant to achieve their goals” (Suleman and Heffner, 2008 p.1).

Non-compliance with exercise programmes has significant implications for the effectiveness of physiotherapy interventions, healthcare costs and patient outcomes. Sluijs, Kok and Van Der Zee (1993) suggested that one third to two thirds of patients are non-compliant with prescribed exercise. Freidrich *et al.* (1998) reported that 50-66% of patients with CLBP demonstrate non-compliance with exercise regimes. Turk and Rudy (1991) have reported exercise as being the most common behaviour chronic pain patients fail to adhere to on a regular basis, which may simply be a rational response to their personal perceptions of their problems and anticipated treatment.

Researchers have considered patient non-compliance to be one of the most significant problems in current clinical practice which may be reflective of poor communication within the consultation and a failure to take account of patients' beliefs, expectations and personal autonomy to make choices regarding preferences for treatment (Slade, Molloy and Keating, 2009a, 2009b).

Providing an effective management plan incorporating an exercise prescription within the limits of time that a busy clinician faces is a challenging task. There is a tension between the demands of managing patient beliefs, expectations and anxieties and those of managing risk and managing time, with clinicians often seeking to control consultations in order to manage their time effectively (Dean *et al.*, 2005). Slade, Molloy and Keating (2009a) indicated that patient-centred care and shared decision making are important for people with NSCLBP, calling for further research into the methods used to prescribe exercise.

1.3 Involving patients in clinical decision making: Evolution of the patient-centred approach

As early as the 1970s the World Health Organisation (WHO) advocated that patients should be encouraged to participate in their healthcare (Bissell, May and Noyce, 2004). Over the past two decades there has been a gradual shift towards patient-centred care, particularly following publication of the Institute of Medicine's landmark paper, 'Crossing the quality chasm' (Committee on Quality of Health Care in America, 2001). This contemporary interest in involving patients in decisions about their own healthcare has been further shaped by a complex array of factors including:

- Increased range of health care options and interventions. Choosing between these options may involve a balance between benefits, harms and uncertainties.
- Moral reactions against situations in which people received interventions they subsequently would not have accepted had they been fully informed and given a choice.

- People becoming more autonomous and taking responsibility for their health and their healthcare, with a resulting increase in consumerism in healthcare focusing on patients' rights.
- The development of evidence based medicine and the increased availability of information relating to the likely outcomes of health care options (Edwards and Elwyn, 2009 p.17).

Despite the broad consensus that patient involvement is a good thing there are differences of opinion about what it might look like and how it should be promoted in practice, although a dominant basic conceptualisation has been identified which focuses on:

- Health professionals' disclosure and patients' understanding of information about a range of healthcare options and their likely outcomes.
- The question of who makes the decision and whether the chosen option is congruent with the patient's values and preferences (Charles, Gafni and Whelan, 1997).

The growing interest in the patient-clinician encounter and in the process of treatment decision making has meant that a number of terms have emerged in the literature relating to increased patient involvement and the changed power dynamic between patients and clinicians. These terms include: patient-centred care (Stewart *et al.*, 1995), participation and partnership (Coulter, 1997), shared decision making (Charles, Gafni and Whelan, 1997), evidence-informed patient choice (Entwistle *et al.*, 1998), informed (shared) decision making (Towle and Godolphin, 1999), mutuality (Gafaranga and Britten, 2003) and collaborative decision making (Edwards *et al.*, 2004). All of these have slightly different meanings and nuances, however the terms that have endured and have arguably the highest profile are patient-centred care (Stewart *et al.*, 1995) and shared decision making (Charles, Gafni and Whelan, 1997; Elwyn *et al.*, 2000).

Elwyn, Edwards and Kinnersley (1999) have argued that the process of shared decision making is integral to the wider concept of patient-centred care. Weston (2001) has referred to shared decision making as the crux of patient-centred care, in which the decision making process is jointly shared by patients and their healthcare provider. It is characterised by a broad balance in power and symbolic resources for each participant, the agenda is negotiated, the patient's values explored, and the clinician takes an advisory role regarding the patient's goals and decisions.

The concepts of patient-centred care and shared decision making will now be explored to clarify the differences and relationships between the two from the perspectives of the encounter between patients and healthcare providers.

1.3.1 Patient-centred care

Patient-centred medicine was introduced as 'another way of medical thinking' by Michael and Enid Balint (1969). The goal was to understand the complaints offered by the patient, and the symptoms and signs found by the doctor, not only in terms of illnesses, but also as expressions of the patient's unique individuality, his conflicts and problems. Stewart *et al.* (2003) assert that patient-centred care requires a willingness to become involved in the full range of difficulties patients bring to their doctors, and not just their biomedical problems. Two key distinctions have been identified in the literature which help clarify what patient-centred care is.

First, patient-centred care is contrasted with healthcare that is based on a biomedical approach, focusing on identifying and treating typical disease entities, and tending to regard specific interventions as always appropriate for particular problems. This approach gives insufficient attention to the diverse individuality of the people seeking care, and neglects the social, cultural and environmental context that shapes an individual's response to illness (Duncan, Entwistle and Liddle, 2010).

Patient-centred care is also contrasted with clinician-centred healthcare, geared to serve the interests of the professions or individuals who provide services rather than the persons seeking care. Balint *et al.* (1993, p.13) have described this as 'one person medicine'. In comparison patient-centred care is 'two person medicine' where the clinician and patient are working in partnership (Duncan, Entwistle and Liddle, 2010).

Early in its evolution the lack of a clear definition of patient-centredness hampered conceptual developments. A number of associated terms have appeared in the clinical and academic literature such as patient-centred care, person-centred care and client-centred care. Although distinctions can be made according to the context and issues to be emphasised there is sufficient similarity to treat them as variations on a theme. Table 1.1 outlines the core understandings of patient-centred care (including ideas about its main dimensions) from 9 papers covering different healthcare disciplines published over the past decade.

Though the term 'patient' is not widely used in certain healthcare settings or by particular professional groups, I have chosen to use the term patient-centred for this thesis as this is the term most widely used in the physiotherapy literature (Cooper, Smith and Hancock, 2008; Kidd, Bond and Bell, 2011). Readers should acknowledge that although patient-centred is used in the many discussions in this thesis a strong emphasis on 'the patient as person' is considered throughout.

Table 1.1 Dimensions of patient (person) centred care as identified from key conceptual writings (adapted from Duncan, Entwistle and Liddle, 2010).

Author , date	a) Concept considered b) Clinical settings /professions c) Study aim and approach	Core/key idea and identified dimensions of concept considered
Mead and Bower (2000)	a) Patient-centredness b) Medicine c) Literature-based consideration to identify dimensions of patient-centredness	'Patient-centred' medicine differs from 'biomedical model' in five dimensions: <ul style="list-style-type: none"> • Adopting a broader, biopsychosocial perspective • Attending to the patient as person (their biography, the personal meaning of their illness) • Sharing power and responsibility with the patient • Fostering a therapeutic alliance (recognising the value of doctor-patient relationships) • Recognising the importance of the doctor as person
Stewart <i>et al.</i> (2003)	a) Patient-centred medicine b) Medicine c) Comprehensive clinical/academic text to illustrate and provide evidence in support of a clinical method	The six interactive components of the patient-centered process are: <ul style="list-style-type: none"> • Exploring both the disease and the illness experience • Understanding the whole person • Finding common ground • Incorporating prevention and health promotion • Enhancing the patient-doctor relationship • Being realistic
Epstein <i>et al.</i> (2005)	a) Patient-centred communication b) Medicine c) Literature-informed theoretical analysis to inform approaches to measurement of patient-centred communication	Patient-centred communication (PCC) can refer to a style of practice or particular behaviours that serve a philosophy of patient-centredness. An operational definition includes: <ul style="list-style-type: none"> • Eliciting and understanding the patient's perspective • Understanding the patient within his or her unique psychosocial context • Reaching a shared understanding of the problem and its treatment with the patient that is concordant with the patient's values. • Helping patients to share power and responsibility by involving them in choices to the degree that they wish. Context influences the expression of PCC behaviours. Thus rather than the number and type of a specific set of behaviours, responsiveness and informed flexibility should be considered fundamental qualities of PCC.

Author , date	a) Concept considered b) Clinical settings /professions c) Study aim and approach	Core/key idea and identified dimensions of concept considered
McCormack and McCance (2006)	a) Person-centred nursing b) Nursing c) Literature-based development of a framework (theory) covering: prerequisites; environment; processes; and outcomes of person centred nursing	The person-centred processes that operationalize person-centred nursing include: <ul style="list-style-type: none"> • Working with the patient's beliefs and values • Sharing decision making • Engagement (connecting with the patient in relationship) • Having sympathetic presence (recognising and responding appropriately to the uniqueness of the individual) • Providing for physical needs
Sumson and Law (2006)	a) Client-centred practice b) Occupational therapy c) Literature review (thematic analysis) to enhance general understanding of key elements of client-centred practice	The idea of power can serve as a central organising framework for thinking about client-centred practice. Issues relating to power can be addressed through therapists: <ul style="list-style-type: none"> • Listening (to clients' concerns and perspectives) and communicating • Adopting partnership (as contrasted with authoritarian) ways of working • Ensuring clients have choices • Maintaining clients' hope
Leplege <i>et al.</i> (2007)	a) Person-centredness b) Rehabilitation c) Literature review: conceptual and historical analysis.	The concept of person-centredness has been introduced into the field of rehabilitation from various sources. It is multidimensional, having four main meanings: <ul style="list-style-type: none"> • Addressing the person's specific and holistic properties • Addressing the person's difficulties in everyday life • Regarding the person as an expert who should participate actively in their rehabilitation • Respecting the person 'behind' the impairment or disease

Author , date	a) Concept considered b) Clinical settings /professions c) Study aim and approach	Core/key idea and identified dimensions of concept considered
Cooper, Smith and Hancock, (2008)	a) Patient-centredness. b) Physiotherapy c) Framework analysis of semi-structured patient interviews	Six dimensions of patient-centred care from the perspective of patients experiencing chronic low back pain were identified: <ul style="list-style-type: none"> • Communication • Individual care • Decision making • Information • The physiotherapist • Organisation of care
Hobbs (2009)	a) Patient-centred care b) Acute health care nursing (USA) c) Literature review (dimensional analysis structured to identify perspective, context, conditions, processes and consequences) to clarify meaning of patient-centred care	The 'central organizing perspective' of patient-centred care is alleviating vulnerabilities. Vulnerabilities include <i>both</i> compromised physiological states (which patients seek help for) <i>and</i> threats to individual identity (which care provision can affect positively or negatively). The nurse-related 'conditions' for alleviating vulnerabilities (for patient-centred care) are: <ul style="list-style-type: none"> • Approaches patient as an experiencing individual, a unique whole person; • Generates a caring presence through various manifestations of availability, transparency, mutuality, compassion and concern. • Exhibits skills, knowledge and competencies, and profiles as [characteristically] benevolent, adaptive, creative, self-aware, and a life-long learner. • Has a rule orientation that enables appropriate determination of when and how the particular patient situation dictates deviation from established norms and standards.
Kidd, Bond and Bell, (2011)	a) Patient-centred care b) Physiotherapy c) Grounded theory analysis of patient semi-structured interviews	Five categories of patient's perspectives of patient-centred physiotherapy were generated from the data: <ul style="list-style-type: none"> • Clear communication • Confidence • Knowledge, expertise and professionalism • An understanding of people and an ability to relate • Transparency of progress and outcome

As can be seen from Table 1.1 patient-centred care has been analysed and conceptualised in various ways. For example Stewart *et al.* (2003) and Epstein *et al.* (2005) have considered it as a set of practices or clinical behaviours to support achievement of a vision of care. McCormack and McCance (2006) regard it as a theoretical framework that encompasses a way of working, care processes and outcomes. In contrast the Institute of Medicine (Committee on Quality of Health Care in America, 2001) regard it as a care concept to be aspired to as an example of healthcare quality.

The lack of clarity and agreement in the literature about what patient-centred care is, means that the key question for healthcare providers who aspire to deliver patient-centred care is – ‘what do they need to do to achieve it?’ From the literature two features of clinical level interactions stand out as being particularly important:

- Caregivers must have an awareness of and respect for individual patient beliefs, recognising that each patient is a unique and important individual (Michie, Miles and Weiman, 2003).
- Caregivers must surrender the need to control and decide for patients and in turn provide support for personal autonomy and people’s ability to make choices and decisions. To successfully achieve this, a sharing of power and responsibility between the caregiver and patient based on mutual trust and respect in an effort to understand one another’s perspectives, find common ground, reconcile differences between these perspectives, and reach agreement on the best course of action is required (Robinson *et al.*, 2008).

A further feature common to the two interactions above is the need for flexibility in approach to individual patients to prevent a recipe driven style, as clinicians’ communication needs to be appropriately responsive to the context of their interactions with individual patients.

1.3.2 The patient as a unique individual

When considering the values and attitudes or the ‘how’ of patient-centred care, the information of interest should go further than identifying the signs and symptoms required to formulate a diagnosis. The patient-centred practitioner should attend, listen, ask questions and encourage patients to share relevant information in order to develop an understanding of the patient as a person in terms of their unique individuality, needs and problems (Mead and Bower, 2000; Stewart *et al.*, 2003; Epstein *et al.*, 2005; Leplege *et al.*, 2007; Cooper, Smith and Hancock, 2008; Hobbs, 2009).

Providing information and checking people’s views and understanding about their condition or proposed management plan can all be taken as respect for the patient as a person with feelings and values that are important and not necessarily the same as those of the clinician or other patients (Burkitt-Wright, Holscombe and Salmon, 2004). Where clinicians show a positive interest and willingness to engage and respond to individual patient cues by acknowledging them in conversation, this is likely to be regarded as signalling respect for the patient as a unique individual.

Despite the fact that patient-centred care is multiply named and variously defined the most widely used and accepted definition is taken from the Institute of Medicine report ‘Crossing the Quality Chasm’ (Committee on Quality of Health Care in America, 2001). They defined patient-centred care as:

“Care that is respectful of and responsive to individual preferences, needs and values, and ensures that patient values guide all clinical decisions” (Committee on Quality of Health Care in America, 2001 p.6).

This definition presents a number of challenges as patients often bring a range of values to their care. They may also find it difficult to articulate clear preferences regarding healthcare options if they are unfamiliar with the health issues or healthcare interventions being proposed (Epstein and Peters, 2009). Patient-centred care should also not be simply regarded as giving patients choices or what they say they want (Epstein and Street,

2010). The clinicians' role should be in helping patients to review their own preferences by checking their understanding of the situation and how competent their reasoning has been (Bekker, 2010).

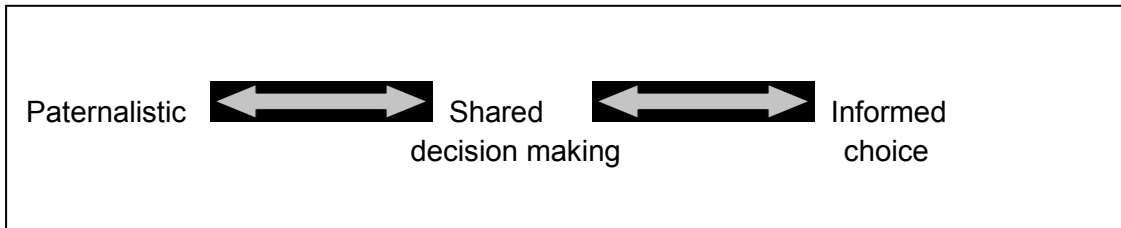
As the above definition from the Institute of Medicine (Committee on Quality of Health Care in America, 2001) implies, arguably the most important attribute of patient-centred care is the active engagement of patients in health care decisions which will now be considered in more detail.

1.3.3 Sharing power and responsibility and engaging patients in decision making

The literature reveals themes that identify that patients are not given enough influence, power or control in relation to their own healthcare to influence the decision making processes (Gafni, Charles and Whelan, 1998). The difficulties associated with clinicians apparently acting in patients' best interests and the emergence of the notion of independent choice (Entwistle *et al.*, 2010) has led to support for the idea that patients should be enabled to contribute actively to decision making.

'Evidence-informed patient choice' or the more commonly used term 'shared decision making' are concepts that have gained widespread appeal to both patients and clinicians (Moumjid *et al.*, 2007). Models of clinical decision making can be represented as a spectrum from a paternalistic model at one end, to the informed choice model at the other end, with the model of shared decision making in between (Elwyn, Edwards and Kinnersley, 1999) (Figure 1.1).

Figure 1.1 Spectrum of patient clinician interaction (Elwyn, Edwards and Kinnersley, 1999).



Traditionally the dominant approach to making decisions in the medical encounter has been one of paternalism (Parsons, 1951). In this model the patient seeks expert help and is expected to comply with the advice or treatment regime. It is a consulting style characterised by the clinician taking control and doing what is thought best for the patient, providing treatments based on a medical model without eliciting their preferences or views. The informed choice model is at the other end of the spectrum and describes a process whereby clinicians offer information to the patients about treatment choices which they are then left to make, with control over decision making vested entirely with the patient.

Sharing information and sharing decisions are not the same, they are separate goals within the consultation and require different skills. Shared decision making cannot occur unless preceded by the sharing of information. It also requires specific attention to be paid to how decisions are made in the consultation and the reaching of agreement over the treatment decision (Elwyn, Edwards and Kinnersley, 1999).

As with patient-centred care, the concept of shared decision making has been variably and loosely defined (Charles, Gafni and Whelan, 1997, 1999; Jansen, 2001; O'Connor, Llewellyn-Thomas and Barry, 2004; Makoul and Clayman, 2006; Coulter and Collins, 2011). O'Connor, Llewellyn-Thomas and Barry (2004) defined it as:

“The process of interacting with patients who wish to be involved in arriving at an informed, values-based choice among two or more medically reasonable alternatives (which may include ‘watchful waiting’)” (O’Connor, Llewellyn-Thomas and Barry, 2004 p.66).

This definition highlights the voluntary nature of the process, the scientific basis (‘medically reasonable’), the emphasis on values clarification in addition to information provision, and the possibility of arriving at a decision not to undergo treatment. A more recent definition has been offered by Coulter and Collins (2011):

“Shared decision-making is a process in which clinicians and patients work together to clarify treatment, management or self-management support goals, sharing information about options and preferred outcomes with the aim of reaching mutual agreement on the best course of action” (Coulter and Collins, 2011 p.2).

Models of shared decision making vary in the way they consider the roles and responsibilities of the patient and clinician. For example Towle and Godolphin (1999) suggest competencies for patients and clinicians as equal partners, whereas the model proposed by Elwyn *et al.* (2000) places more responsibility on the clinician to respond to or elicit the patient’s views. Questions have also been raised relating to patients’ preferred role in decision making, some suggesting that for shared decision making to occur, patients must share equally in the decision making process (Charles, Gafni and Whelan, 1997, 1999) while others contend that patients should only be involved in the decision making process to the extent that they desire (Edwards and Elwyn, 2006). Debate also exists as to whether the term ‘shared decision making’ implies the resulting or final decision be equally shared (Charles, Gafni and Whelan, 1997) or refers to sharing of the process (Edwards and Elwyn, 2006; Makoul and Clayman, 2006).

Makoul and Clayman (2006) conducted a systematic review of the literature aiming to establish the range of conceptual definitions of shared decision making, identify the most frequently invoked elements, and determine the most frequently cited models of shared decision making. They found that

only about one third of the articles provided a conceptual definition. Of the main elements of shared decision making named in the articles with a conceptual definition, only patients values/preferences (67.1%) and options (50.9%) appeared in more than half of the conceptual definitions. The most frequently cited models were those of Towle and Godolphin (1999); Elwyn and colleagues (Elwyn, Edwards and Kinnersley, 1999; Elwyn *et al.*, 2000; 2001a; 2001b), Coulter (1997) and Charles, Gafni and Whelan (1997) which are summarised in Table 1.2. The review concluded that whilst full agreement had not been achieved, the model developed by Charles, Gafni and Whelan (1997) was the one most commonly cited in the relevant literature.

Table 1.2 Essential elements, ideal elements and general qualities of shared decision making: emphasis in commonly cited models (adapted from Makoul and Clayman, 2006).

	Charles, Gafni and Whelan (1997)	Coulter (1997)	Towle and Godolphin (1999)	Elwyn et al. (2000)
Essential elements				
Define/explain problem		x		x
Present options	x	x	x	x
Discuss pros/cons (benefits and risks)	x	x	x	x
Patients values/preferences	x	x	x	x
Discuss patient ability/self-efficacy				
Doctor knowledge/recommendations	x			
Check/clarify understanding	x			x
Make or explicitly defer decision	x	x	x	x
Arrange follow up			x	x
Ideal elements				
Unbiased information	x			x
Define desire for involvement	x	x	x	x
Present evidence	x	x	x	
Mutual agreement	x	x	x	x
General qualities				
Deliberation/ negotiation	x		x	
Flexibility/ individualised approach	x	x		x
Information exchange	x			
Involves at least two people	x		x	
Middle ground	x			
Mutual respect		x		
Partnership	x	x	x	
Patient education	x			x
Patient participation	x			x
Process/stages	x	x	x	x

In the absence of a physiotherapy model, the above medical models have been compared, and the key elements considered necessary for a shared decision making process have been developed on the basis of my reading into a conceptual framework and summarised in Table 1.3.

Table 1.3 Key proposed elements of shared decision making related to physiotherapy.

Key elements	Descriptor
Develop a partnership with the patient	Shared decision making involves at least two participants – the clinician and the patient (mutual participation). The patients' preferences for participation are acknowledged
Definition of the problem and the options available	Clinician provides patient with information regarding diagnosis, prognosis and management options
Review of options pros and cons	Information is given to the patient on the management options risks and benefits in an unbiased way. It is also helpful to explore what other strategies patients feel may be available and relevant
Elicitation of patients values and preferences	Patients may be uncertain when asked to integrate their own preferences, because it may be novel to some and they may feel unfamiliar with biomedical information. The skilled professional will help patients express their views and guide them to explore their feelings and reactions to the relevant choices
Clinician recommendations	The clinician may share his treatment recommendation with the patient and/or affirm the patients treatment preference
Review of patient's ability to implement plan	The clinician provides opportunities for patients to develop a sense of control and enhance their self-efficacy to implement management plan
Check for clarity and understanding	The clinician ensures the patient understands the management options, and by asking questions ensures that the information underlying their treatment preferences is based on fact and not misconception
Make a decision or defer until later	The clinician makes or negotiates a decision with the patient including the possibility of doing nothing. Through mutual acceptance both parties share responsibility for the final decision

The above table is not designed to provide a standardised checklist of specific behaviours to be followed but aims to identify certain fundamental elements of a shared decision making process which, on a clinical level, is likely to be best achieved by fostering a real partnership. Many advocates of shared decision making suggest it as being most relevant in situations of uncertainty, in which no specific option exists that is best for everyone, and two or more clinically reasonable alternatives or 'equipoise' exists (which also includes the option to do nothing) (Elwyn *et al.*, 2000). It may also be relevant where the patient has indicated a desire to participate in the decision making process (Whitney, McGuire and McCullough, 2004). In situations of equipoise, patients' values and preferences may therefore be determinant in choosing a particular course of action and warrant patients' participation in decision making (Elwyn *et al.*, 2000).

1.4 Philosophy of physiotherapy and clinical practice

The physiotherapy profession does not have a rational theoretical framework that adequately describes and explains practice (Bithell, 2005). This has both theoretical and clinical importance as practitioners need to clearly distinguish the differences between patients' experiences of acute and chronic forms of pain and disability (Edwards and Richardson, 2008).

There is evidence that the clinical practice of many physiotherapists has been characterised by a strongly biomedical or biomechanical approach (for example: Jorgensen, 2000; Ostelo *et al.*, 2003; Daykin and Richardson, 2004; Frost *et al.*, 2004; Houben *et al.*, 2005; O'Sullivan, 2012). Physiotherapists have traditionally been taught to undertake a subjective and objective assessment following a structured format. This places an emphasis on the 'bio' assessment of the problem and places less emphasis on potentially crucial psychosocial factors. The content of the interview in terms of collecting biomechanical data has been given greater emphasis over the manner in which the consultation is conducted (Richardson, 1999). Thus the clinical practice of many physiotherapists has been characterised by a paradigm that is strongly biomechanical, based on assumptions about the

objective nature of truth or reality, and that knowledge is objective and measurable (Higgs and Titchen, 2000). This is, in turn, accompanied by a particular form of reasoning or problem solving based on an empirico-analytical framework.

It is important to recognise and acknowledge the appropriateness of an empirico-analytical framework in physiotherapy as a means of identifying and assessing physical impairment, such as where patients present with an acute injury with the primary aim being to decide on the source of the symptoms and formulate a diagnosis. It has significant limitations however, as a form of reasoning, in identifying and assessing the experience of disability for patients presenting with a chronic problem such as NSCLBP (Edwards and Richardson, 2008). The pressures of time and the anxieties physiotherapists face in trying to do 'everything' in the initial consultation, may lead to a focus on the major factors related to the pain, to the detriment of exploration of the patient perspective. Physiotherapists are thus challenged to integrate these two perspectives into a single approach (Watson, 2000).

A biomedical treatment model has been deeply connected with modernistic thinking of human beings and illnesses. Knowledge is seen as a representation of objective truth and reality, and clinicians are defined as the experts with empowering knowledge (Edwards and Richardson, 2008).

The emergence of postmodernism has challenged how we see and think about the world and our experiences in it, and reflects a philosophical perspective in which a clinician's knowledge, diagnosis and treatment plans are not 'objective truths' (Higgs and Titchen, 2000). Postmodernism favours the idea that a person participates in creating the world he or she lives in, observes and knows. In that paradigm both the clinician and patient are equal knowers who, by communicating together, create shared expertise (Higgs and Titchen, 2000). This has prompted a call for a theoretical model shift within which to base the principles of physiotherapy. As a result over the last couple of decades, a patient-centred care model has evolved (Larivaara, Kiuttu and Taanila, 2001) where the patient's experience and knowledge informs decision making based on an interpretive framework. This type of

partnership or patient led approach has been referred to variously as shared or informed decision making, evidence-based patient choice or concordance. The call for a shift to a patient-orientated biopsychosocial framework from a pathoanatomically-based therapist-orientated framework appears congruent with a patient-centred clinical method (Foster and Delitto, 2011).

The concepts of patient-centred care and shared decision making are complex and have been contested by some (Gillespie, Florin and Gillam, 2004) with their meanings perhaps open to misinterpretation by service users and providers of musculoskeletal care. Some clinicians would claim to be truly patient-centred, others would claim to be somewhat patient-centred and some may think they know what it means but have very different views to others (Moore and Jull, 2012). The core of current physiotherapy practice focuses on the management of chronic conditions, which means that physiotherapy has a changing role from providing treatments based on the medical model, delivered in acute settings, to adopting a patient-centred model, which emphasises managing conditions rather than curing them.

Patient-centred care requires physiotherapists to harness the active participation of their patients through the blending of the patient's knowledge of themselves, their circumstances, attitudes to illness and risk, values and preferences, with the therapist's knowledge base on the effectiveness and potential benefits and limitations of treatment options. Successful engagement of patients in their health and care is seen as the key component of developing a high quality healthcare system that is safe, patient-centred, efficient and effective (Thomson, 2008).

Successive UK governments have promoted the approach that patients and healthcare professionals should work in partnership, contributing equally in every stage of the health and care journey to try and ensure that all patients are 'fully engaged' in managing their health. In England it has been given a legislative footing in the white paper *Liberating the NHS: Greater choice and control* (DH, 2010), which placed new duties on the NHS to promote the involvement of patients in decisions about their treatment and care, and has been endorsed by the rhetoric of the 'no decision about me without me' strap

line. Being patient-centred does not necessarily mean that all information and all decisions should be shared, but it should involve taking into account the patient's desire for information and for sharing decision making and respond accordingly (Sanders *et al.*, 2013). Whilst there may exist an increasing drive for shared decision making to become widely instigated, it must also be acknowledged that shared decision making may not be what some patients want (Stewart, Anthony and Chesson, 2010).

Surveys and observational studies (Stevenson *et al.*, 2004) have indicated a mismatch between policy directives and clinician reports of the extent of shared decision making in practice. As therapists, it is easy to get drawn into the attitude of 'us knowing what is best for our patients' and telling them so, instead of transferring the locus of control to them, where it truly belongs (Berwick, 2009). Several authors have suggested that patients with NSCLBP who are undergoing exercise therapy would benefit from a patient-centred or shared decision making approach (Askew *et al.*, 1998; Trede, 2000; Slade, Molloy and Keating, 2009a). Therefore research that focuses on a patient-centred approach, taking into account issues such as decision making and how this accords with patient preferences and experiences, provides an invaluable contribution to the body of evidence in any field of physiotherapy (Berwick, 2009). This is particularly relevant in the management of NSCLBP, a condition frequently encountered in out-patient musculoskeletal physiotherapy practice, and one for which exercise therapy presents a common management approach.

1.5 Motives for undertaking the study

In recent years there has been a shift in the NHS from a focus on increasing the quantity of care delivered to a focus on improving the quality of that care as experienced by patients and their families. This shift has been driven by a number of challenges that are impacting across the UK, namely: rising patient expectations, the development of improved information and connectivity, advances in treatments, and a change in health care practice. The emphasis is on the need for patient-therapist interactions to be

collaborative in which goals and treatment strategies are jointly planned. This is all taking place within a context of financial insecurity and increasing budgetary constraints resulting in a sharp need to balance quality against value for money.

I am a clinician who specialises in the management of spinal problems with a particular interest in the consultation process and the quality of patient experience. Quality in healthcare is not solely about the impact of a specific intervention on the health status of a patient. Increasingly, practitioners and service providers are being required to consider, and report on, the quality of all aspects of the patient experience (NICE, 2012).

Personal observations of patients attending a specialist spinal clinic when questioned about their experience of physiotherapy treatment for their CLBP have identified comments such as:

“They just gave me a sheet of exercises to do”

These perceptions have been reinforced by on-line postings by physiotherapists on the iCSP forum discussing the merits of a ‘hands on’ versus ‘hands off’ approach to care:

“Unfortunately they often return with complaints about the way they were treated or in their words not treated! They were given a sheet of exercises, the next time they were asked if they had been doing the exercises and then told they did not need to come back!!” (Anon)

I reflected on the years of receiving such comments, and interpreted them to appear dismissive of the process and disappointed with the experience. I reasoned that this could indicate a failure by physiotherapists to attend to patients’ values and/or preferences, and a possible lack of patient involvement in the decision making process. As a consequence patients express dissatisfaction with their physiotherapy experience, which can result if a physiotherapist too rigidly imposes a management plan incorporating exercise onto a patient without reference to their health beliefs, knowledge about their illness, values and treatment preferences.

Whilst an exercise based management plan may be appropriate for many, a failure to involve patients in the decision making process may result in a lack of engagement, impacting on programme effectiveness and success. From clinical experience physiotherapists are likely to be aware that a prescribed programme of exercise may not always be accepted and carried out as instructed. Patients will evaluate it in a specific psychosocial context according to personal perceptions of the appropriateness of exercise, exercise self-efficacy, perceived behavioural control and perceived social norms. These together with many other factors influence the original prescription and recommendation until they are implemented in varying levels according to individual needs. Thus a patient's motivation and decision whether to comply with the recommended treatment programme is based on their personal perceptions of their problems and anticipated treatment. I was concerned by these personal observations, given that physiotherapy professional bodies are recognising that physical activity and exercise are integral to professional practice (World Confederation of Physical Therapy (WCPT), 2009) and place physiotherapists as exercise experts in contemporary clinical practice.

The practice of physiotherapy is mediated through contacts and interactions between individual clinicians and their patients. The centrality of this relationship complements the role of scientific evidence and defines the implementation of evidence based practice. To complement the biomedical research agenda, I considered there was an increasing need to understand why clinicians do what they do in the consultation, together with understanding the patients' perspectives, as the consultation is now more important than ever as a point of access, communication, understanding and delivery of healthcare (Taylor, 2009).

Therefore based on observations and patient reports of clinical practice, and personal interest in patient/clinician interactions in the management of patients with NSCLBP, I decided to explore the processes of exercise prescription and the degree to which clinicians involve patients in decisions regarding their care.

This thesis has been designed to fulfil two main aims:

Aim 1: to explore the characteristics and processes of physiotherapy exercise prescription for patients with NSCLBP, and how shared decision making and patient partnership are addressed by physiotherapists in this process.

Aim 2: to understand the experiences, information and decision support needs of patients with NSCLBP who have been offered exercise as part of their management plan.

Each of these aims will be addressed through separate phases of work, phase one (physiotherapists) and phase two (patients).

Alternatively these aims could be expressed as two research questions:

Question 1: What are the characteristics and processes of physiotherapy exercise prescription for patients with NSCLBP?

Question 2: What are the experiences, information and decision support needs of patients with NSCLBP who have been offered exercise as part of their management plan?

1.6 Summary of the next chapters

Chapter two: I provide a literature review in order to obtain information about the effectiveness of exercise therapy in the management of non-specific chronic low back pain (NSCLBP). I also explore the literature on the evolution of the patient-centred care approach, its application within musculoskeletal physiotherapy, and its relationship to patient's experiences and preferences of receiving exercise therapy as part of a management plan for NSCLBP.

Chapter three: Is divided into several parts. In the first part I discuss ontological and epistemological issues and identify my philosophical orientation as a rationale for selecting qualitative research through philosophical hermeneutics. I offer an explanation why the study rejects

objectivity and include a section in which I aim to reveal my pre-understandings or prejudices of the topic. I then provide details of the sampling strategy used. I continue by focusing upon the research setting, ethical considerations, methods of data collection and analysis, and finally conclude with a section reflecting on the quality of the research process.

Chapter four: I present the findings from phase one (physiotherapists) which was obtained from a variety of methods including, observation, informal field and semi-structured interviews. Four main themes relating to the characteristics and processes of exercise prescription, and revealing how decision making and patient participation are addressed by physiotherapists in the process were formed from the texts.

Chapter five: I present the findings from phase two (patients). Five main themes seeking to understand the experiences, information and decision support needs of patients with NSCLBP who have been offered exercise as part of their management plan were formed from the texts.

Chapter six: Offers a review of the study. I discuss the issues surrounding the findings in the context of the related literature. It explores the impact and relevance of the findings and outlines some recommendations for future research. It then reflects on the strengths and limitations of the study, and explores how the research has affected my pre-understandings. Finally in the conclusion I consider how successful the study has been in achieving my initial aims together with what it contributes to the physiotherapy research evidence base.

1.7 Chapter summary

In this chapter I have provided the background to the extent of the back pain problem facing society, how the management of LBP has changed over time, and how the increased acceptance of an active approach to management has led to the publication of clinical guidelines recommending exercise as a key management strategy. I have introduced the concepts of patient-centred

care and shared decision making to clarify the differences and relationships between the two. I have also considered the philosophy of physiotherapy practice and how a medical model of practice is being superseded by a patient-centred biopsychosocial framework. Finally I have set out my motives for undertaking this study.

In the next chapter I present a review of the literature that informs the aims of the study.

Chapter 2: Literature Review

2.0 Introduction

The purpose of this chapter is to review and critically appraise the research literature that informs the aims and research questions of the study. The aims of this research were to explore the characteristics and processes of physiotherapy exercise prescription for patients with NSCLBP, and gain a greater depth of understanding of how shared decision making and patient partnership are addressed by physiotherapists in the processes by also exploring the experiences, information and decision support needs of patients with NSCLBP.

In this literature review I aim to provide the research context of the proposed research. The literature review has been divided into two parts in which I identify, appraise and summarise the published evidence relating to:

1. The effectiveness of exercise therapy in the management of NSCLBP.
2. The evolution of patient-centred care models in musculoskeletal physiotherapy. A review of the patient-centred care approach and shared decision making within musculoskeletal physiotherapy practice and its relationship to patients' experiences and preferences of receiving exercise therapy as part of the management plan for NSCLBP.

2.1 Exercise and chronic low back pain

2.1.1 Evidence for the effectiveness of exercise therapy in the management of NSCLBP

Evidence based medicine has been described as:

“The conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise and patients values and expectations with the best available external clinical evidence from systematic research” (Sackett et al., 1996 p.71).

This involves evaluating the quality of clinical research, by critically assessing techniques reported by researchers in their publications, and integrating this with clinical expertise and patient values. Systematic reviews (SRs) and meta-analyses have taken their place at the top of the hierarchy of research evidence because they are considered less likely to provide ‘misleading’ information about the effectiveness (both therapeutic and financial) of an intervention (Sackett et al., 1996). Evidence based practice has become increasingly more important over the past decade and lies at the core of physiotherapy practice. The management of CLBP has been positively affected by the availability of more high quality scientific research and better use of critical appraisal techniques to evaluate and apply research findings (Chou, 2005).

2.1.2 Search strategy

A literature search was conducted using the following electronic databases: Medline, EMBASE, CINAHL, AMED, and DARE, PEDro (Physiotherapy Evidence Database) and the Cochrane Database of Systematic Reviews (CDSR). This is in line with the recommendations from studies of Minozzi, Pistotti and Forni (2000) and Woods and Trewheellar (1998) where both Medline and EMBASE are suggested to be used to ensure a comprehensive literature search because the overlap between these two databases is small.

The search strategy (Table 2.1) was constructed using a combination of free text and, where appropriate, Medical Subject Headings (MESH) as specific to each database. Free text terminology was based on the main concepts of exercise, chronic low back pain and reviews and adapted from the search strategy used for development of 'Clinical Guidelines for the Physiotherapy Management of Persistent Low Back Pain' (CSP, 2006). A broad definition of exercise was applied which encompassed a range of different terms used to describe exercise such as aerobic exercise, physical fitness, strengthening, flexibility, pilates and stabilising exercises. A wildcard function (*) was applied to certain terms to ensure all relevant endings were retrieved. American spelling was also taken into consideration for some terms. Boolean operators were used to expand the concepts (OR) and then to narrow (AND) to produce the most relevant results. These results were limited to Adult only and English language, no date limits were applied. This search was run in August 2011 and alerts were set up to check for any new publications so that the literature review could be updated.

A vast array of literature exists investigating the evidence for the effectiveness of exercise therapy in the management of NSCLBP. To make the literature review more manageable, a pragmatic decision was taken to confine this part of the literature review to appraising the evidence from SRs and meta-analyses. Articles were screened for inclusion based on their titles, then abstracts and finally full text copies were retrieved and analysed. The reference lists of the retrieved articles were reviewed to identify any other relevant articles.

Table 2.1 Key words used for searching electronic databases.

Exercise	Chronic Low Back Pain	Review
1. exercis*	19."low back pain"	29."meta anal**"
2."exercise therap**"	20."lumbar spine"	30.systematic
3."group exercis**"	21.lumbago	31.review*
4.stretch*	22."back ache"	32.overview
5.(mobilis* OR mobiliz*)	23."back pain".	33.29 OR 30 OR 31 OR
6.flexibility	24.19 OR 20 OR 21 OR	32
7.isometric	22 OR 23	34.18 AND 24 AND 28
8. pilates	25.chronic	AND 33
9.strength*	26.recurren*	
10. mckenzie*	27.persist*	
11.aerobic	28.25 OR 26 OR 27	
12."physical therap**"		
13."physical fitness"		
14."physical activit**"		
15.flexion		
16.extension		
17.stabil*		
18.1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17		

Inclusion criteria

SRs and meta-analyses were included which met the following criteria:

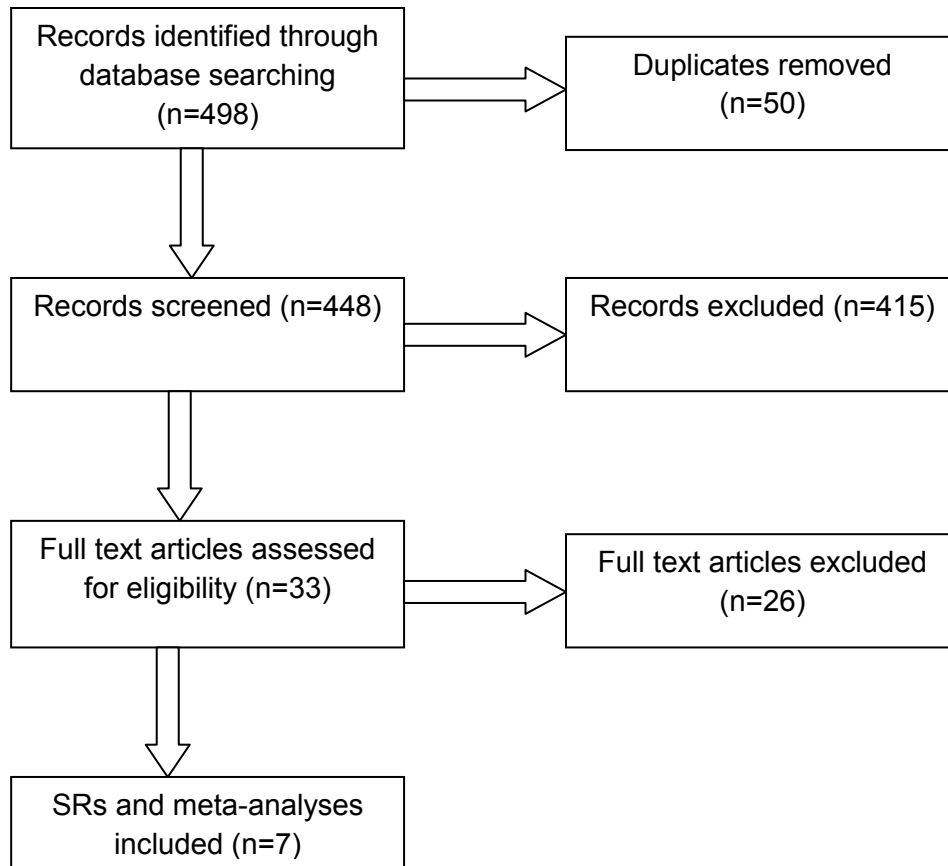
- i. They were reviews of non-specific persistent or CLBP (where non-specific was clearly and explicitly defined).
- ii. Treatment consisted of exercise therapy delivered in group environments or to individual patients, where exercise was the primary treatment under investigation.
- iii. The effectiveness of exercise was assessed using at least one of the following outcome measures: pain, back specific function/disability, sick leave/return to work.
- iv. They included patients > 18 years of age.
- v. The full review was published in English.

Exclusion criteria

- i. Patient groups with LBP associated with any of the following: pregnancy, nerve root pathology, surgery, inflammatory disease or known signs of spinal instability.
- ii. SRs were excluded if the definition offered for non-specific LBP did not broadly match that proposed by NICE (2009 p.4). Classifications of 'non-specific' varied widely and in some instances lacked clarity, for example leg pain was frequently not distinguished as referred pain or true radicular pain.
- iii. Papers were not SRs or meta-analyses.
- iv. Papers which reported on use of exercise as prevention strategies in workplace settings, or for specific subgroups (e.g. nurses).
- v. Papers were reviews of aquatic therapy, which was not the focus of this study (a decision was made to exclude aquatic therapy from this review as it is not a treatment that is widely available).

2.1.3 Results

The results of the search strategy are set out in Figure 2.1. Identification of suitable SRs proved challenging as patients with LBP clearly represent a heterogeneous population. The seven SRs revealed a total of 161 RCTs in a range of adult patients with NSCLBP.

Figure 2.1 Results of search strategy (1).

2.1.4 Limitations of included systematic reviews

SRs and meta-analyses have been considered for many years as reliable sources of evidence for the effectiveness of treatment in healthcare (SIGN, 2010). They often acknowledge, but do not necessarily always account for, the clinical and methodological differences across trials. From the SRs identified it is clear that combining the results of multiple smaller RCTs in SRs or meta-analyses can be difficult due to the variation in the nature of exercise interventions employed. This in turn means that interpretation of the literature can be confusing. Exercise programmes within individual RCTs differed in a number of ways such as dosage, duration, exercise type, level of supervision and inclusion of other treatment modalities (including ‘no treatment’, electrotherapy, traction, massage and manual therapy) and other forms of exercise therapy. RCTs also demonstrated a number of

methodological limitations including small sample sizes, lack of a power calculation, inadequate or unreported randomisation procedures, inadequate blinding, lack of analysis by intention to treat, and also inadequate or inappropriate use of statistical tests.

Improving the quality of RCTs through adequate description of the population of patients under investigation with clearly defined inclusion and exclusion criteria, and specifying exercise interventions more accurately including details on the type, intensity, duration, frequency and level of exercise compliance would help to enhance confidence in the findings regarding treatment effectiveness, and allow clinically more useful recommendations to be made.

2.1.5 Summary of included systematic reviews

A summary of the systematic reviews is set out in Table 2.2. It was noted that wide variations existed regarding the defining of parameters for acute and chronic LBP. van Middelkoop *et al.* (2010) and Hayden, van Tulder and Tomlinson (2005a) suggested that the usual classification of non-specific LBP according to duration is acute (< 6 weeks), sub-acute (between 6 weeks and 3 months) and chronic (longer than 3 months). Hettinga *et al.* (2007) defined CLBP as pain persisting for 6 weeks or more, chosen as it was deemed to be beyond the period of spontaneous recovery for much back pain. Some authors have used the term 'non-acute' in the literature to reflect patients with symptoms of greater than 4 weeks duration (Kool *et al.*, 2004; Oesch *et al.*, 2010). Lim *et al.* (2011) included trials of individuals with LBP lasting longer than 4 weeks which they considered as persisting beyond the acute phase. Temporal staging of NSLBP into acute, sub-acute and chronic has been challenged as the high recurrence rate of back pain suggests that it may be associated with persistent changes in the brain (e.g. central sensitisation) and therefore have a chronic component (Swinkels *et al.*, 2009). Whilst acknowledging this wide variation, the above mentioned papers have been included in the review as they were clear in their definition of NSCLBP, thus increasing the sensitivity of the findings as applied to this

research project. Some SRs included RCTs with patients experiencing acute, sub-acute and chronic LBP but were included where results for CLBP populations were considered separately for analysis.

2.1.6 Defining exercise interventions

The CSP (2006) has defined exercise as applied to the management of patients with spinal pain as:

“Physical exertion, with instruction or advice of a physiotherapist, aimed at gaining increased movement of spinal joints, increased strength of spinal muscles, increased general fitness, building core stability and/or reducing symptoms” (CSP, 2006 pp.31-32).

From the publications included in this review control groups, co-interventions, duration of intervention and type of exercise interventions showed a wide variation between individual RCTs in the SRs and across the SRs themselves. The range of exercise types covered by the included SRs can be summarised as:

- Mobilising, stretching or flexibility exercises – where the aim is to increase range of movement and ability to move.
- Strengthening exercises – general strengthening exercises, where the aim is to gain increased strength of the muscles around the spine, abdomen and rest of the body.
- Core stability, stabilisation, pilates or motor control exercises – where the aim is to improve control of the deep local stabilising muscles of the lumbar-pelvic region or ‘core muscles’ to improve posture and increase the ability of muscles to support normal trunk and limb movement.
- McKenzie exercises – direction specific exercises to treat symptoms of LBP.

- Cardiovascular/Aerobic exercises – where the aim is to increase general fitness and promote a healthy cardiovascular system through brisk physical activity that requires the heart and lungs to work harder to meet the body's increased oxygen demand.
- Walking programmes – where people are simply advised to walk regularly.
- General or mixed exercises – any combination of mobilising, strengthening or aerobic exercise.

These exercise interventions varied in terms of location, supervision and whether they were individual or group-based interventions.

Table 2.2 Summary of systematic reviews retrieved for closer inspection following database search.

First author	Faas (1996)
Review aim	To determine efficacy of exercises in patients with acute, sub-acute and chronic NSLBP
Review type	'Criteria based review'
Databases	MEDLINE
Types of studies	11 RCTs: 4 acute (<6 weeks), 1 sub-acute (6-12 weeks) and 6 chronic (\geq 12 weeks) NSLBP
Participants	507 adults, mean age and gender not specified
Interventions	Individual exercise therapy
Co-interventions	None stated
Comparison groups	No therapy, usual care, ordinary activity, bed rest, waiting list or placebo therapy, other type of exercise, back school
Outcome measures	Pain intensity, strength, disability, overall treatment effect
Quality assessment	Koes method scoring system
Data analysis	Quantitative – no Qualitative - no
Conclusions	Chronic NSLBP – some evidence of positive results for intensive extension exercises or fitness exercises

First author	Kool <i>et al.</i> (2004)
Review aim	To investigate whether exercise alone or as part of multidisciplinary treatment reduces sick leave in patients with non-acute NSLBP
Review type	Meta-analysis
Databases	MEDLINE, EMBASE, PEDro, Cochrane Library, PsychLIT
Types of studies	14 RCTs: non-acute NSLBP \geq 4 weeks
Participants	2817 adults
Interventions	Exercise alone or as part of a multidisciplinary intervention
Co-interventions	Physical therapy – heat, electrotherapy, traction; other interventions – relaxation, psychological group therapy, CBT interventions
Comparison groups	Usual care (rest, advice, medication, sick leave) and/or other treatments (Psychological interventions, other exercise, non-exercise physical therapy)
Outcome measures	Sick leave – number of days lost
Quality assessment	Modified 10 point PEDro scale
Data analysis	Quantitative – meta-analysis Qualitative – 4 tier hierarchy of evidence
Conclusions	Exercise alone or as part of a multi-disciplinary treatment, reduces sick leave in working adults with non-acute NSLBP in the first year following treatment

First author	Hayden, van Tulder and Tomlinson (2005a)
Review aim	To evaluate the effectiveness of exercise therapy for reducing pain and disability in adults with non-specific acute, sub-acute and chronic low back pain compared to no treatment or other conservative treatments
Review type	Systematic review with meta-analysis and meta-regression analysis
Databases	MEDLINE, EMBASE, Psycinfo, Cochrane Library, CINAHL
Types of studies	43 RCTs: chronic (> 12 weeks) NSLBP
Participants	3907 adults
Interventions	Exercise therapy
Co-interventions	Advice, medication, manual therapy and passive modalities
Comparison groups	No treatment, placebo or other non-exercise conservative treatment (33 trials)
Outcome measures	Pain, function, return to work or absenteeism and global improvement
Quality assessment	Jadad Scale
Data analysis	Quantitative – meta-analysis and meta-regression analysis Qualitative – based on quality
Conclusions	Exercise therapy consisting of individually designed programmes delivered with supervision may improve pain and function in chronic NSLBP

First author	Hettinga <i>et al.</i> (2007)
Review aim	To summarise the evidence for exercise interventions for the treatment of NSLBP of at least six weeks duration
Review type	Systematic review with pragmatic synthesis of higher quality evidence
Databases	MEDLINE, EMBASE, PEDro, CINAHL, AMED, Cochrane Library, library collection of Chartered Society of Physiotherapy (UK)
Types of studies	31 RCTs: NSLBP \geq 6 weeks
Participants	4048 adults > 18 years
Interventions	Exercise alone or accompanied by non-physiotherapy interventions e.g. physician care, medication
Co-interventions	Physical therapy co-interventions explicitly excluded; other co-interventions e.g. GP care, medication
Comparison groups	Other exercise groups of different types or dosage, placebo
Outcome measures	Pain intensity, function, psychological status, return to work/sick leave
Quality assessment	Modified van Tulder criteria (10 criteria)
Data analysis	Quantitative – change scores as a percentage of baseline scores Qualitative – based on studies which met three pre-determined criteria for higher methodological quality
Conclusions	Evidence from larger (\geq 40 in exercise group) high quality (\geq 5 on modified van Tulder score) RCTs with adequate statistical testing supports the use of exercise interventions for persons with persistent (>6 weeks) LBP. Strengthening exercises, aerobic exercises, general exercises, hydrotherapy and McKenzie exercises are the most effective

First author	Oesch <i>et al.</i> (2010)
Review aim	To determine whether exercise is more effective than usual care to reduce work disability in patients with non-acute non-specific low back pain, and if so, to explore which type of exercise is most effective
Review type	Systematic review with meta-analysis of RCTs
Databases	MEDLINE, EMBASE, PEDro, Cochrane Library databases, NIOSHTIC-2, and PsychINFO
Types of studies	23 RCTs: non-acute LBP with duration of >4 weeks
Participants	3785 participants, mean age and gender not specified
Interventions	Exercise alone (1:1 or in groups) or part of multidisciplinary treatment
Co-interventions	CBT approach, manual therapy, psychological pain management interventions, back school, relaxation, heat, electrotherapy, educational booklet.
Comparison groups	Other types of exercise, passive treatments, psychological pain management, usual care, relaxation, heat, exercise, no treatment
Outcome measures	Work disability data converted to odds ratios
Quality assessment	Three criteria recommended by Juni, Altman and Egger (2001) – concealed allocation, blinding of outcome assessor and intention to treat analysis
Data analysis	Quantitative – meta-analysis and meta-regression analysis , calculating odds ratios at 3 different follow up times Qualitative – based on quality
Conclusions	Exercise has a significant effect on work disability in patients with non-acute non-specific LBP in the long term Outcomes not dose dependant

First author	van Middelkoop <i>et al.</i> (2010)
Review aim	Give an overview of the effectiveness of exercise therapy in patients with low back pain
Review type	Systematic review
Databases	MEDLINE, EMBASE, PEDro, CINAHL, CENTRAL
Types of studies	37 RCTs, chronic > 12 weeks of non-specific LBP
Participants	3957 adults (>18years old), mean age and gender not specified
Interventions	Exercise therapy
Co-interventions	None stated
Comparison groups	No treatment, sham, placebo, usual care, back school/education, behavioural treatment, TENS, laser, passive modalities, manual therapy
Outcome measures	Pain intensity and disability
Quality assessment	GRADE approach
Data analysis	Quantitative – meta-analysis (weighted mean differences in pain intensity and disability) Qualitative – based on quality
Conclusions	Compared to usual care exercise therapy improved post treatment pain, disability and long term function. No evidence one particular type of exercise therapy is more effective than others

First author	Lim <i>et al.</i> (2011)
Review aim	To compare pain and disability in individuals with persistent non-specific low back pain who were treated with Pilates exercises compared to minimal or other interventions
Review type	Systematic review with meta-analysis
Databases	MEDLINE, EMBASE, PEDro, CINAHL, Cochrane library, ProQuest dissertations and thesis databases
Types of studies	7 RCTs: NSLBP > 4 weeks
Participants	194 adults, mean age and gender specified
Interventions	Pilates exercises
Co-interventions	None stated
Comparison groups	Massage, back school, standard physiotherapy, lumbar stabilisation exercises, control
Outcome measures	Pain intensity and disability
Quality assessment	Delphi list
Data analysis	Quantitative – meta-analysis calculating standardised mean differences for pain and disability Qualitative – based on quality
Conclusions	Pilates based exercises are superior to minimal intervention for pain relief, but are not superior to other forms of exercise to reduce pain and disability in patients with persistent NSLBP

2.1.7 Description of included systematic reviews

Seven SRs were identified which focused specifically on the efficacy of exercise in adults with NSCLBP, and which reported data on one of the three measures recommended by Bombardier (2000) as core measures in the evaluation of the effectiveness of treatment in spinal disorders; pain, back specific function/disability and sick leave.

With the exception of the earliest systematic review undertaken by Faas (1996), the SRs reflected contemporary approaches to systematic reviewing, including both a qualitative rating system and a quantitative meta-analysis. Heterogeneity amongst the RCTs included in the SRs included differences in interventions, control groups, the variety of co-interventions, and the duration of the intervention. This means the results should be interpreted with caution as some of these factors may have affected estimation of the effectiveness of exercise therapy in this patient group.

The oldest systematic review identified was undertaken by Faas (1996) which reviewed six RCTs of patients with NSCLBP, and offers a largely narrative account of the findings, reporting positive results for all trials comparing exercise therapy with placebo or waiting list control. Faas (1996) highlights the findings of Manniche *et al.* (1991) who reported positive results for high intensity exercise particularly when combined with high exercise compliance achieved through supervision.

The concept of high dose exercise programmes delivered in a supervised format is also highlighted by Hayden, van Tulder and Tomlinson (2005a). This systematic review was notable in that the authors characterised the exercise interventions in terms of programme design (individually designed, partially individually designed or standard design), delivery type (home exercises, supervised home exercises, group supervised or individually supervised), dose or intensity (< or > 20 hours of intervention time), which allowed for a more meaningful comparison of the exercise intervention sub groups. The findings from this systematic review are limited by the fact that

physical therapy co-interventions in the RCTs were allowed. The wide range of co-interventions used and the uncertainty about their effectiveness meant that they could not be accounted for in the analysis. The reference treatment that was chosen was a programme of standard design consisting of low dose home exercises only, with no additional interventions. The use of subdivisions of specific exercise interventions was used to explain the heterogeneity between exercise treatment groups. The use of group data for analysis however meant that no differences could be assessed for age or base line disability. Quantitative analysis was based on rescaled data for pain and functional outcomes, with minimal clinically important differences (MCID) in pain (20 points out of 100 point scale) and function (10 point out of a 100 point scale) based on recommendations from existing literature by Salaffi *et al.* (2004) and Bombardier, Hayden and Beaton (2001) respectively. The findings from both the univariate analysis and the multivariate random effects regression analysis found improved pain and function scores for: individually designed exercise programmes, supervised home exercise with therapist follow up, individually supervised exercise delivery strategies, and high dose or high intensity exercise programmes. Hayden, van Tulder and Tomlinson (2005a), reflecting on the limitations of their systematic review, comment on the low methodological quality of the RCTs with only 6 of the 43 trials chosen rated as high quality according to four key internal validity items - appropriate randomisation, adequate concealment of treatment allocation, adequacy of follow up and outcome assessment blinding.

Hettinga *et al.* (2007) acknowledged some of the methodological limitations of LBP studies identified in the published SRs by van Tulder *et al.* (2000) and Hayden, van Tulder and Tomlinson (2005a). They attempted to overcome these by only including those RCTs with a large sample size (≥ 40 subjects in the exercise group), good methodological quality, robust statistical analysis and RCTs where exercise was used as a single physiotherapy intervention for at least one group in the trial. Of the 31 RCTs originally identified only seven achieved all four criteria listed above and were included in the final review. Quantitative analysis detailing the percentage change in

pain in the exercise groups and the corresponding control/alternative intervention was set out in scatter plots which were well described in terms of indicating statistically significant findings between the groups, as well as taking into consideration group sizes. A qualitative analysis based on the type of exercises used with evidence taken from at least one large good quality trial with robust statistical analysis, found support for the use of strengthening exercises, (structured) aerobic exercises, general exercise, hydrotherapy and McKenzie exercises for pain and disability reduction. There was also evidence to support the use of strengthening exercise, McKenzie exercises, (structured/supervised) aerobic exercise and general exercise for improving psychological status and the use of McKenzie exercises and strengthening exercises for improving return to work.

One specific limitation of the systematic review by Hettinga *et al.* (2007) is that it included some outcome measures for pain, function, psychological status and return to work that were less well established and had not undergone adequate psychometric testing; although it was considered that this only had a minimal impact on the conclusions of the review which offered a more representative analysis of the true effectiveness of exercise, which has possibly been overestimated from smaller RCTs.

Two SRs (Kool *et al.*, 2004 and Oesch *et al.*, 2010) were identified which specifically investigated the effectiveness of exercise in reducing work disability/sick leave either alone or as part of multidisciplinary treatment in patients with non-specific non-acute LBP, with a duration of at least 4 weeks.

Kool *et al.* (2004) conducted a meta-analysis of sick leave related outcomes between experimental treatments (exercise alone or as part of a multidisciplinary package) and 'usual' care. As the primary outcome measure under investigation was sick leave, RCTs were only included if at least 90% of the patients under treatment were available for the job market, either employed or actively seeking work. The results of the qualitative and quantitative analysis (based on 12 comparisons undertaken between exercise and usual care) showed that treatments using exercise alone or as

part of a multidisciplinary treatment reduced sick leave in patients with non-specific non-acute LBP, with the effects being greatest in the more severely disabled patients, leading the authors to conclude that there is little evidence that early intervention is more effective in reducing sick leave.

Recognising the importance as an outcome of measuring the number of sick days, time on disability benefits and unemployment time, Oesch *et al.* (2010) undertook an updated SR to determine whether exercise is more effective than usual care to reduce work disability in patients with non-acute non-specific LBP, and also to explore which type of exercise is most effective. Twenty RCTs were included in the meta-analysis, allowing 17 comparisons of exercise with usual care and 11 comparisons of 2 different exercise interventions. A meta-regression analysis was undertaken with the exercise characteristics regarding programme design, delivery type, exercise dose and type of exercise as suggested by Hayden, van Tulder and Tomlinson (2005a); and work context and behavioural treatment approach (i.e. goal-contingent instead of pain contingent exercise, reinforcement of healthy behaviours, patients given self-responsibility for treatment, patient education regarding pain mechanisms, and pain coping strategies) as proposed by Schonstein *et al.* (2003). It has been suggested that low methodological quality in RCTs limits the internal and external validity of the results and thus may potentially mislead clinicians, and so in an effort to avoid over estimation of the effectiveness of different exercise characteristics, low quality RCTs were excluded from the meta-regression analysis.

Quantitative data synthesis found that when comparing exercise interventions with usual care, a statistically significant effect in favour of exercise on work disability was only found at long term follow up (closest to 12 months) (OR = 0.66, 95% CI 0.48-0.92), with possible explanations for lack of effectiveness at short term (closest to 4 weeks) and intermediate term (closest to 6 months) follow up being the required time needed to improve physical capacity, to modify pain behaviour or to search for work. These findings are in contrast to Kool *et al.* (2004) who reported that the

effectiveness of exercise on disability declined with increasing follow up duration.

Overall the OR of 0.66 suggests that the odds of improvement in work disability are in the long term 34% lower if only usual care rather than exercise is given. However the meta-regression analysis showed no significant differences between different exercise types, and contrary to the findings of Hayden, van Tulder and Tomlinson (2005a) home exercises seemed to be as effective as supervised exercises, and analysis did not show a greater effect of higher dose exercise interventions (>17 contact hours) on work disability.

Spinal stabilisation (core stability) exercises (including Pilates) for the management of LBP have gained popularity in recent years, the theory being that the preferential training of the stabilising muscles and their progressive integration into functional tasks reduces inappropriate muscle co-ordination patterns and possible reinjury of the spine. This approach has been developed in part due to evidence indicating specific neuromuscular alterations in the control and activation of the back and abdominal muscles in patients with LBP (Hides, Richardson and Jull, 1996; Hodges and Richardson, 1996).

There is strong evidence for the effectiveness of specific spinal stabilising exercises reducing pain in a 'specific' CLBP sub set of patients with radiologically defined spondylolisthesis and spondylolysis (O'Sullivan, Twomey and Allison, 1997); however the effectiveness on patients with NSCLBP has not been so well described. An exception to this is the paper by Lim *et al.* (2011) who undertook a SR with meta-analysis to compare pain and disability in individuals with persistent non-specific LBP who were treated with Pilates exercises compared to minimal or other interventions. Methodological quality of the seven RCTs identified for this review was assessed using the nine item Delphi list (Verhagen *et al.*, 1998) which revealed a mean score of 4.6. Drop out rates of 30% were noted in 4 of the trials and an intention to treat analysis was performed in only 2 of the trials.

In most of the RCTs participants received 8 to 12 sessions of Pilates based exercises at a frequency of 1 to 2 times per week over a span of 6 to 8 weeks, which could be considered reflective of normal clinical practice. Four of the 7 RCTs also monitored compliance through use of journals, diaries and log sheets.

Quantitative synthesis of the results used fixed or random effects models based on interpretation of commonality of effect size, and subgroup analyses were undertaken comparing Pilates versus minimal intervention and Pilates versus other forms of exercise. Results suggest that Pilates based exercises are superior to minimal intervention for reduction of pain in individuals with persistent non-specific LBP. However Pilates based exercises were no more effective than other forms of exercise to reduce pain. In addition, the Pilates exercises were no more effective than minimal intervention or other exercise interventions to reduce disability related to persistent NSLBP. These conclusions need to be interpreted with the acknowledgement of the limited number of RCTs in the analysis, the limited number of participants in each trial, and the clinical heterogeneity (with respect to Pilates intervention and chosen control/comparison intervention) across the trials.

A further recent systematic review was undertaken by van Middelkoop *et al.* (2010). Quantitative synthesis was not described in detail but was based on pooled weighted mean differences for pain and disability at short, intermediate and long term follow up. None of the differences found in this review reached a difference of > 10%, whereas in most studies a difference of 15-20% is defined as clinically relevant. In keeping with previous SRs, the authors reported that pain intensity and disability were significantly reduced by exercise therapy compared to usual care, but interestingly no significant treatment effectiveness of exercise therapy compared to no treatment/waiting list controls were found on pain intensity and disability. The systematic review also included 11 RCTs comparing different types of exercise with each other, and again as with previous SRs, very small to no differences were found. The methodological quality of the RCTs is noted for being of generally poor quality resulting in a high risk of bias. In their

discussion the authors recommend the use of strategies to improve adherence particularly if home exercises are prescribed through supervision and follow up support, and that a patient's preferences and expectations should be considered when deciding which type of exercise to choose.

2.1.8 Summary

One of the main criticisms of research into the effectiveness of exercise therapy in the management of LBP in RCTs is that the same therapy is applied to a heterogeneous group of patients, largely because a gold standard sub classification system for LBP is still lacking (Fritz, Delitto and Erhard, 2003). What is also evident from the literature reviewed is that exercise programmes may differ in a number of ways such as dosage, duration, exercise type, level of supervision and inclusion of other treatment modalities. Clinical trials involving patients with LBP also demonstrate a number of methodological limitations including variable definitions of what constitutes a diagnosis of NSCLBP; small sample sizes and a lack of power calculations; inadequate or unreported randomisation procedures; inadequate blinding; lack of analysis by intention to treat; and also inadequate or inappropriate statistical tests (van Tulder *et al.*, 2000; Ferreira *et al.*, 2010). As a result, it is not clear how the effectiveness of exercise is differentiated or mediated by factors such as: type of exercise, length of programme, exercise intensity, session duration, supervised or unsupervised programmes, individual or group programmes, degree of compliance or motivational factors. What is clear from the outcomes of the SRs is that certainly, compared to no exercise, an exercise intervention regardless of content seems to be effective in patients with NSCLBP in terms of reduced pain and improved function, and the effectiveness is similar when different exercise regimes are compared. In addition the delivery of individually designed exercise programmes together with regular supervision is considered more likely to improve NSCLBP prognosis than the type of exercises prescribed (Manniche *et al.*, 1991; Hayden, van Tulder and Tomlinson, 2005a).

Therapists continue to prescribe exercise regularly, with Liddle, Baxter and Gracey (2009) reporting that 98% of therapists use exercise to manage persistent or CLBP. However on the strength of the up to date available evidence, it is little wonder therapists hold different viewpoints regarding different exercise approaches, and the basis for decisions regarding current practice in this area is still not clear, as no specific exercise option exists that is best for everyone. So the optimal type of exercise for NSCLBP remains unresolved, meaning a number of clinically reasonable exercise alternatives are possible and a situation of clinical 'equipoise' exists, that is to say options need to be deliberated (Elwyn, Frosch and Rollnick, 2009). This finding has important implications for the first phase of this research when considering the characteristics and processes of exercise prescription, and how decision making and patient participation are addressed in the process.

In the second part of this literature review I will consider the evolution of patient-centred care models in musculoskeletal physiotherapy. I will review the evidence for patient-centred and shared decision making approaches happening within musculoskeletal physiotherapy practice, and explore how this relates to patients' experiences and preferences of receiving exercise therapy as part of a management plan for NSCLBP.

2.2 Musculoskeletal physiotherapy and patient-centred care

2.2.1 Search strategy

Shaw *et al.* (2004); Grant, 2004 and Gorecki *et al.* (2010) suggested that difficulties exist with the use of databases to search for qualitative research. These difficulties include inconsistencies with the indexing of qualitative research within the databases, and the difficulties presented by searching for the wide variety of research methods used by qualitative researchers.

Following guidance from a specialist librarian, a literature search was conducted using the following electronic databases: Medline, EMBASE,

CINAHL, AMED, and the Cochrane Database of Systematic Reviews (CDSR). The search strategy (Table 2.3) was constructed using a combination of free text and, where appropriate, Medical Subject Headings (MESH) as specific to each database. Free text terminology was based on the key dimensions of patient-centred care drawn from the papers identified in Table 1.1 (pages 12-14), and also from extensive reading of shared decision making texts, for example Shared Decision Making in Health Care Achieving Evidence-Based Patient Choice (Edwards and Elwyn, 2009). A wildcard function (*) was applied to certain terms to ensure all relevant endings were retrieved. American spelling was also taken into consideration for some terms. Boolean operators were used to expand the concepts (OR) and then to narrow (AND) to produce the most relevant results. These results were limited to Adult only and English language, no date limits were applied and alerts were set up to check for any new publications. This search was run in September 2011 and later updated in October 2012.

Table 2.3 Key words used for searching electronic databases.

Musculoskeletal physiotherapy	Patient-centred care or shared decision making
1. physiotherap* 2. "physical therap*" 3. 1 OR 2 4. musculoskeletal 5. "low back pain" 6. 4 OR 5 .	7. "patient centre*" 8. "patient center*" 9. "person centre*" 10. "person center*" 11. "client centre*" 12. "client center*" 13. "patient empowerment" 14. "patient involvement" 15. (collaborat* AND patient) 16. "therapeutic alliance" 17. mutuality 18. concordance 19. "power sharing" 20. (participation AND patient) 21. (patient AND partnership) 22. (patient AND choice) 23. 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21 OR 22 24. 3 AND 6 AND 23 25. "shared decision making" 26. "informed patient" 27. "patient choice" 28. "informed shared decision" 29. 25 OR 26 OR 27 OR 28 30. 24 AND 29

Articles were screened for inclusion based on their titles, then abstracts and finally full text copies were retrieved and analysed. The reference lists of the retrieved articles were reviewed to identify any other relevant articles.

Inclusion criteria

- i. Empirical research or reviews.
- ii. Focused on the concepts of patient-centred care, shared decision making or related terms relevant to the field of musculoskeletal physiotherapy (management of LBP alone would have resulted in too narrow a focus).

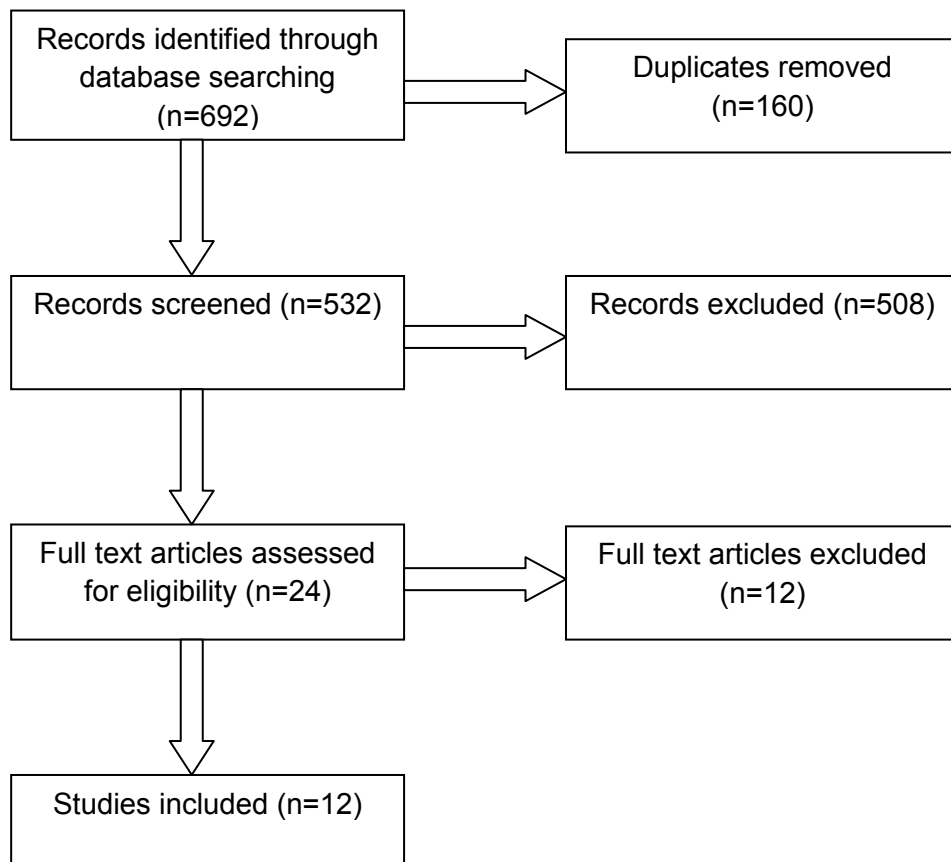
- iii. Published or readily accessible.
- iv. Available in abstract, journal article, or full report form.

Exclusion criteria

- i. They were case reports.
- ii. The studies were related to delivery of medical or surgical interventions.
- iii. Patient-centred care, shared decision making or related concepts were not the main focus of the paper.
- iv. Papers focused on patient-clinician interactions in areas of specialty in physiotherapy other than musculoskeletal or LBP management.

2.2.2 Results

Figure 2.2 Results of search strategy (2).



In this literature search I accept that patient-centred care and shared decision making are multi-dimensional concepts that are variously named and often poorly defined. The lack of conceptual clarity is both an academic and clinical problem, and it is likely to be for these reasons that few studies attempting to assess or explore the concept were found in the musculoskeletal physiotherapy literature. This finding is supported by Bainbridge and Harris (2005) who undertook a literature search to explore the concept of client-centred care and informed patient choice in physiotherapy. They found that these concepts were certainly more central to other healthcare disciplines such as occupational therapy, nursing and medicine rather than physiotherapy. Of the twelve studies identified, nine were qualitative studies which are summarised in Table 2.4 and will be presented first, and three were SRs which are summarised in Table 2.5 (see pages 71-73).

Table 2.4 Summary of qualitative studies.

Authors	Aim	Design	Setting	Participants	Conclusions
Harrison and Williams (2000)	To explore the nature of the power relationship in a physiotherapy treatment situation and to consider both the perspective of the patient and the therapist	Phenomenological study using semi-structured interviews	Musculoskeletal out-patient physiotherapy department	Five physiotherapists and five patients	Diversity of power manifestation occurs as part of therapeutic interaction, with a mismatch of perceptions between therapists and patients
Cooper, Smith and Hancock (2008)	To define patient-centredness from the patients perspective in the context of physiotherapy for chronic low back pain (CLBP)	Qualitative study using semi-structured interviews	Physiotherapy departments in one geographical area of the UK NHS	Twenty five patients who had received physiotherapy for CLBP	Patient-centredness from the perspective of CLBP patients is a complex combination of six dimensions: communication, individual care, decision making, information sharing, the physiotherapist and organisation of care
Thomson (2008)	To describe and interpret the interactions between therapists and their patients on a chronic pain unit	Ethnographic study	Chronic pain unit in one geographical area of UK NHS	Four physiotherapists and the patients they were observed managing	Three types of interactions were identified that appeared to influence the success of meeting the patient's goals

Authors	Aim	Design	Setting	Participants	Conclusions
Slade, Molloy and Keating (2009a)	To investigate what participants in an exercise programme for CLBP perceive to be important for engagement and participation	Qualitative study of three focus groups	Physiotherapy outpatient department in Australia	18 patients who had participated in an exercise programme, and had had low back pain for > 8 weeks	People are likely to participate in exercise programmes that are designed with consideration of their preferences, circumstances, and past exercise experiences
Slade, Molloy and Keating (2009b)	To investigate and summarise participant experience of exercise programmes for NSCLBP and the effects of these experiences on exercise participation and engagement	Qualitative study of three focus groups	Physiotherapy outpatient department in Australia	18 patients who had participated in an exercise programme, and had had low back pain for > 8 weeks	A gap exists between care seeker experiences of, and preferences for, exercise programmes for LBP
Larsson, Lijedahl and Gard (2010)	To describe how physiotherapists experience client participation in physiotherapy interventions	Qualitative study using phenomenographic interviews	Physiotherapy units in one geographical area of Sweden including orthopaedics as a speciality	Eleven physiotherapists	Three qualitatively different categories of client participation were identified, with variations in health paradigms and goal setting procedures. The three categories were: collaboration, guidance and expertise

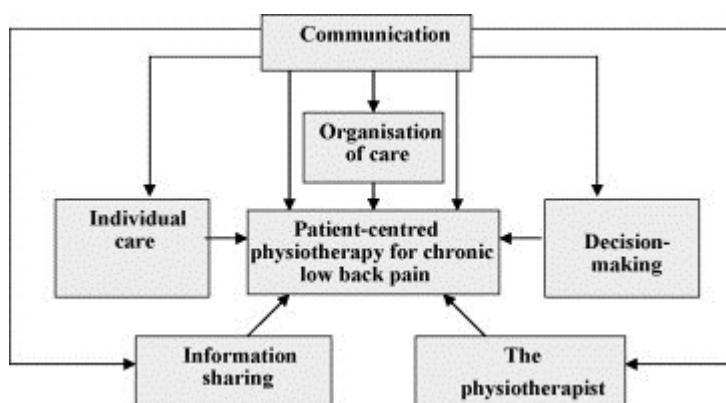
Authors	Aim	Design	Setting	Participants	Conclusions
Kidd, Bond and Bell (2011)	To determine patients' perspectives of components of patient-centred physiotherapy and its essential components	Qualitative study using semi-structured interviews to explore patients' judgements of patient-centred physiotherapy	Musculoskeletal out-patient physiotherapy department at a provincial city hospital in New Zealand	Eight patients who had recently received physiotherapy	Five characteristics relating to patient-centred physiotherapy were generated from the data: ability to communicate, confidence, knowledge and professionalism, an understanding of people and an ability to relate and transparency of progress and outcome
Parsons <i>et al.</i> (2012)	To explore patients and chiropractors, osteopaths and physiotherapists beliefs about chronic musculoskeletal pain (CMP) and its treatment and how these beliefs influenced care seeking and ultimately the process of care	Qualitative study using depth interviews with a purposive sample of clinicians and patients	Primary care setting in South east of England	13 CMP patients and 19 primary care clinicians (10 of which were physiotherapists)	Three main themes were developed. Adoption of a shared decision making approach to treatment may be useful particularly for long-term conditions
Cruz, Moore and Cross (2012)	To investigate the clinical reasoning processes of a sample of experienced therapists in musculoskeletal physiotherapy practice	Qualitative study using observations, interviews and patients notes	Physiotherapy departments in Portugal	Four experienced physiotherapists	The approach to reasoning and practice was more consistent with a biomedical model of care, showing dominance towards clinician-centred practice and reasoning

2.2.3 Models of patient-centred care in musculoskeletal physiotherapy

In this section I report on two key papers which in recognising the increasing commitment to ensure that healthcare is patient-centred, set out to determine models of patient-centred care based on patients' perspectives in the context of physiotherapy for CLBP (Cooper, Smith and Hancock, 2008) and musculoskeletal physiotherapy (Kidd, Bond and Bell, 2011).

Cooper, Smith and Hancock (2008) used a purposive sampling frame to recruit 25 patients who had received treatment for chronic or recurrent non-specific LBP and had been discharged up to 6 months previously. Semi-structured interviews exploring several aspects of physiotherapy for CLBP and patient-centredness were undertaken. From the data analysis two broad dimensions: the physiotherapy experience; and the process of physiotherapy were formed. Finally 6 key higher order themes emerged: communication; individual care; decision-making; information sharing; the physiotherapist; and organisation of care, which are displayed in Figure 2.3.

Figure 2.3 Patient reported dimensions of patient-centredness (Cooper, Smith and Hancock, 2008). (Reproduced with kind permission from Elsevier)



The findings revealed a number of themes in common with previously proposed patient-centred models such as Mead and Bower (2000) for example, 'individual care', 'the physiotherapist' or ('the doctor as a person') and 'decision-making' or ('sharing power and responsibility'). Communication

was seen as the most important theme which contributed significantly to the other themes, and played a role in participants perceiving treatment was individualised to their needs. Listening, understanding and getting to know the patient, allowing the patient to explain their problem and to ask questions were recurrently cited:

“You know I think it was the fact somebody was taking an interest I found surprising! It was something I’d never, ever been offered before” (Cooper, Smith and Hancock, 2008).

Interestingly Cooper, Smith and Hancock (2008) and Kidd, Bond and Bell (2011) found a balance of views regarding patients input into decisions regarding treatment. Stewart *et al.* (2000) referred to this as ‘the common ground’, the space in which clinicians use their understanding to respond to the unique needs of the patient. Some wanted more involvement in the decision making than they had experienced, with others not necessarily wanting to be actively involved as they perceived the physiotherapist as the professional or expert who should decide what is best for the patient, provided adequate information was well communicated.

“I’m coming here for advice and the people that I would expect to see are professionals. So, no, I came to listen and be told” (Cooper, Smith and Hancock, 2008).

A potential limitation of the study by Cooper, Smith and Hancock (2008) was that participants were being interviewed by a physiotherapist about their physiotherapy experience. The authors however considered that this did not in any way prevent negative viewpoints about physiotherapy from being disclosed.

The importance of communication highlighted by Cooper, Smith and Hancock (2008) is consistent with the study findings of Kidd, Bond and Bell (2011) who used semi-structured interviews of eight patients who had been purposively sampled to explore their perspectives of patient-centred physiotherapy based on what components of physiotherapy they perceived as important to them. The patients were recruited from a musculoskeletal

out-patient population, but the study failed to list any specific inclusion or exclusion criteria such as type of presenting condition, or to identify the relationship of the researcher to the participants. A constant comparison approach based on grounded theory was used to determine common themes and develop a model or theory iteratively from the data.

The data analysis and findings were thoroughly described and set out in table form and accompanying narrative which offered a thick description of the five categories of patients' perspectives of patient-centred physiotherapy which were: ability to communicate; confidence; knowledge, expertise and professionalism; understanding people and ability to relate; and transparency of progress or outcome.

Both studies highlight that no single dimension of patient-centred care exists without its reliance on other dimensions, and at the centre of this process is good communication. These findings provide a clear context to the construct of patient-centred care and what patients prefer in a clinical partnership. This insight into the dimensions that appear to be important to CLBP patients is significant given the aims of this thesis.

2.2.4 Patient-centred care in musculoskeletal physiotherapy practice

In this section I will review studies exploring the evidence for the application of a patient-centred or shared decision making approach in musculoskeletal physiotherapy clinical practice.

Some studies have linked the constructs to clinical reasoning and decision making (Cruz, Moore and Cross, 2012), therapeutic relationships/alliance (Hall *et al.*, 2010; Pinto *et al.*, 2012), power balance (Harrison and Williams, 2000), patient satisfaction (Hush, Cameron and Mackey, 2011) and collaboration (Larsson, Liljedahl and Gard, 2010).

Cruz, Moore and Cross (2012) explored patient-centred care within the context of clinical reasoning as it applies to musculoskeletal physiotherapy. Although based on a study of participants in Portugal, it revealed findings that are potentially applicable to UK physiotherapy practice. Using an interpretative hermeneutic research approach, four experienced musculoskeletal physiotherapists were observed interacting with patients for all treatment episodes. Data collection incorporated non-participant observation (obtained by video recording), field notes, semi-structured interviews and patients' notes. The focus of the semi-structured interviews was on understanding participants' thoughts about the observed clinical encounters and involved playing back of the video tapes to allow participants to articulate what they were doing and thinking about during the treatment sessions.

The relationship of the researcher to the participant therapists was not stated and therefore it is difficult to appreciate what and whether any specific power relationships existed that may have affected the data collection. Despite this the data analysis method along with strategies used to ensure credibility and quality of the research process was well described. Five themes emerged from the data that overall concluded that the physiotherapists' approach to clinical reasoning and practice was consistent with a biomedical model of care with a dominance towards therapist-centred practice more than an interactive and patient-centred process.

Adoption of a biomedical paradigm has been considered by some to be an unhelpful way of conceptualising and expressing patient problems (Thornquist, 2001). It has been apparent in physiotherapy in examples of unilateral goal setting (Payton, Nelson and Hobbs, 1998; Kerssens *et al.*, 1999; Daykin and Richardson, 2004; Parry, 2004). Daykin and Richardson (2004) in their study on patients with CLBP identified that whilst therapists believed in a mutually collaborative model, they were more comfortable with a therapist-centred biomedical model when it came to goal setting with their patients.

There are a number of potential limitations of the study by Cruz, Moore and Cross (2012) including the effects of being observed on clinical practice, the small sample size and the study location. However the study does reveal findings in terms of clinical reasoning and practices not fully endorsing a patient-centred care process that may be applicable to a broader population of physiotherapists and clinical practice behaviours.

Harrison and Williams (2000) aimed to explore the power balance of a clinical encounter involving patients seeking physiotherapy for a musculoskeletal problem. Semi-structured interviews were conducted with five patients and five physiotherapists, although no demographic details of either participant group in terms of clinical experience or presenting condition was offered. A deductive content-thematic analysis compared emerging data to existing knowledge and theory. Key themes relating to: therapist power base, patient power base, and environmental contribution to power base revealed a complex array of power variables which varied between physiotherapists and patients. The physiotherapists reported taking steps to minimise the power imbalance through joint setting of goals, yet still regarded themselves as the expert who would control the assessment and determine which and how treatments would be implemented. This professional control over both the processes and outcome was reported by the patients, with a feeling that they had little or no control during the therapeutic encounter. The authors concluded that there was a mismatch of perceptions between patients and physiotherapists, with patients' experiences ultimately not reflecting a collaborative patient-centred care model.

This notion of power balance was also highlighted by Thomson (2008) in an ethnographic study exploring physiotherapist's perceptions of their interactions with patients on a chronic pain unit. Four therapists were observed in clinical practice over a 6 week period, with interviews conducted after each observation to explore meanings of the observed actions. The authors noted that the most successful interactions were seen as those where there was a sharing of power, with neither the patient nor therapist

reliant on the other for decisions, in other words a patient-centred approach was adopted.

Larsson, Liljedahl and Gard (2010) in a phenomenographic study aiming to describe physiotherapists' experiences of client participation in physiotherapy defined three different categories of participation with critical variation in health paradigms and goal setting procedures. 'Guidance' and 'expertise' were both based on a biomedical perspective and an impairment based strategy, with goal setting and treatment decisions largely controlled by the physiotherapists. In contrast 'collaboration' was based on a biopsychosocial paradigm in which participation was built on collaboration and mutual understanding with a focus on interventions aiming to optimise the client's competence and function. Such an approach, it was suggested, requires a sharing of power and joint responsibility in intervention planning and goal setting, and a will to share power requires empathy, confidence and self-knowledge from the clinicians' perspective to make it possible for the clients to actively participate.

Parsons *et al.* (2012) attempted to define whether shared decision making between patients with chronic musculoskeletal pain and chiropractors, osteopaths and physiotherapists would improve patient care, by exploring beliefs about treatment and how these beliefs influenced care seeking and processes of care. Using a combination of focus groups to scope out the issues of importance to be explored later in in-depth interviews and an *a priori* coding framework approach to data analysis, three main themes were developed. Within the theme 'exploring development and tailoring of consultation and treatment strategies', patients reported wanting to establish relationships with healthcare professionals based on trust and who would involve them in the joint management of their condition. The authors recommended consideration of a shared decision making approach to treatment, but acknowledged that further training was likely to be necessary to enhance both patients' and professionals' comfort and confidence in adopting such an approach.

The three systematic reviews that were identified are set out in Table 2.5. Patient satisfaction has been acknowledged as an important patient-centred health outcome. Hush, Cameron and Mackey (2011) undertook a systematic review of studies addressing patient satisfaction of physiotherapy received for musculoskeletal problems. Based on defined inclusion and exclusion criteria, 15 studies were included, 6 of which investigated patients with back pain and the remaining seven investigated a mixed musculoskeletal population. A majority of the studies (9) were cross sectional surveys for which no formal methodological scoring to assess risk of bias was undertaken. Three qualitative studies were included and evaluated for risk of bias, and all were found to be of acceptable quality.

All studies identified therapist attributes as a critical dimension of patient satisfaction such as professionalism, competence, friendliness, and caring, together with the ability to communicate effectively in terms of explaining the problem and providing advice about self-management strategies. Two papers in this review by May (2001a, and 2001b) are particularly relevant to this thesis as they specifically explored patients' attitudes to, and satisfaction with, physiotherapy for LBP. Two thirds of the patients entered into the study had chronic, recurrent or persistent LBP. Semi-structured interviews based on a topic guide developed from the literature were undertaken, and the data subjected to framework analysis.

Overall patients valued a therapist who is friendly and sensitive to their needs requiring the skills of empathy and active listening. May (2001b) reported that patients wanted someone who is skilled and knowledgeable which inspires confidence, and provides them with a wide range of information about back pain and self-management as well as care that is personalised to their needs. Patients wanted to be listened to and involved in the treatment so that it is seen as a consultative, rather than a prescriptive process (Cooper, Smith and Hancock, 2008 and Kidd, Bond and Bell, 2011). It is interesting that an active patient role was noted as a 'novel' dimension relating to patients' desire to relinquish the role of passive recipients of care, in other words patients were looking for care that was 'shared' or more

patient-centred. May (2001b) concluded that healthcare seeking behaviours of patients with LBP can be influenced by communication and interpersonal skills of therapists and are arguably more important than hands on skills.

Hall *et al.* (2010) summarised studies that have considered therapeutic alliance as a predictor of outcome and adherence in physical rehabilitation. The systematic review included studies where there was a wide range of diagnoses, although the majority included patients with musculoskeletal problems. Perhaps unsurprisingly the systematic review indicated a positive correlation between therapeutic alliance, treatment outcomes and satisfaction with treatment. The SR by Pinto *et al.* (2012) aimed to identify which communication factors correlated with the construct of therapeutic alliance. Only one study from the physiotherapy literature was included, but the review concluded that there is evidence to suggest that styles of communication that facilitate the involvement and participation of patients in the consultation are associated with a positive therapeutic alliance.

Table 2.5 Summary of systematic reviews.

Authors	Hush, Cameron and Mackey (2011)
Review aim	To review the literature to determine the degree of patient satisfaction with musculoskeletal physical therapy and factors associated with satisfaction
Review type	Systematic review with meta-analysis of global satisfaction with care
Databases	MEDLINE, CINAHL, and EBM Reviews
Types of studies	15 studies (9 surveys, 2 clinical trials, 1 cohort study, 3 qualitative studies)
Participants	31,791 adults
Outcome measures	Patient satisfaction
Quality assessment	PE德罗 scale (clinical trials) and checklist of Greenhalgh and Taylor (qualitative studies)
Data analysis	Quantitative – meta-analysis (degree of patient satisfaction) Qualitative – based on quality
Conclusions	Interpersonal attributes of the therapist and the process of care are key determinants of patient satisfaction

Authors	Hall <i>et al.</i> (2010)
Review aim	To investigate whether the working alliance is related to outcome in physical rehabilitation
Review type	Systematic review
Databases	MEDLINE, EMBASE, PEDro, CINAHL, LILACS and PsychINFO
Types of studies	13 studies
Participants	Not stated
Outcome measures	Alliance between therapist and patient
Quality assessment	STROBE guidelines
Data analysis	Quantitative – Yes Qualitative – No
Conclusions	Alliance between patient and therapist positively correlates with treatment outcome

Authors	Pinto <i>et al.</i> (2012)
Review aim	To determine which communication factors correlate with constructs of therapeutic alliance
Review type	Systematic review with meta-analysis
Databases	MEDLINE, EMBASE, PsychInfo, Cochrane Library, CINAHL, AMED, LILACS
Types of studies	12 studies
Participants	Not stated
Outcome measures	Communication factors and constructs of therapeutic alliance
Quality assessment	STROBE guidelines
Data analysis	Quantitative – meta-analysis Qualitative – based on quality
Conclusions	Patient-centred interaction styles related to the provision of emotional support and allowing patient involvement in the consultation process enhances the therapeutic alliance

2.2.5 Patients' preferences and experiences of exercise therapy for NSCLBP

In line with a patient-centred model of healthcare, increasing attention has been paid to how patients' treatment preferences, values and expectations can be incorporated into the decision making process (Thomson, Bowling and Moss, 2001).

Slade, Molloy and Keating (2009a, 2009b) explored this area using a focus group study in which participants were recruited via an advertisement in local newspapers. Sixty nine people responded over a 6 week period and 18 were included, all of whom were patients with persistent or NSCLBP. Three focus groups were conducted to explore exercise programme experience, preferences, barriers and enablers. Data were analysed using a grounded theory approach, with credibility of the analysis enhanced by three rounds of coding to develop clear themes and categories. The focus groups identified a strong need amongst participants for an active role or partnership in their rehabilitation. They expressed anger and frustration when not listened to, when explanations and education were inadequate or not provided and when they were not credited for knowing their own bodies.

From Slade, Molloy and Keating (2009a) which focused principally on patient experiences of exercise programmes for NSCLBP, three sub themes emerged from the core theme of partnership in care: (1) engagement; (2) 'listen to me: I know my own body'; and (3) tell me: explain it to me so I can understand. The participants demonstrated a need for active involvement or 'engagement' in their management:

"I want some form of engagement with my health professional and I want to feel that it's a team effort not one or the other" (Slade, Molloy and Keating, 2009a).

Participants wanted a confidence based partnership with their care provider that included active listening; empathy and respect ('listen to me'), and to receive an explanation regarding the cause of their problem and rationale for

treatment ('tell me'). It is interesting to note that participants reported consulting with a range of healthcare providers, with 78% reporting most success with personal trainers. This may be a reflection on the issue of perceived 'lack of time' within the healthcare environment or due to the fact that patients may have received more support, feedback and motivation from the personal trainers that promoted greater patient engagement in the exercise.

Participants wanted recognition and acknowledgement of their own expertise and understanding of their condition and recommended that advanced care-provider communication skills are preferable for collaboration within patient-therapist relationships:

"There's one thing I'd like to add to all of that is listen. Listen to me. And listen to what I'm trying to tell youthey're not listening" (Slade, Molloy and Keating, 2009a).

Although the study by Slade, Molloy and Keating (2009b) was based on the same group of patients and methodology as Slade, Molloy and Keating (2009a) this second study focused more on patient preferences for exercise. All participants felt that participation was enhanced by familiarity with the exercise environment and knowledge gained from inclusion in previous exercise programmes. The setting of the exercise environment was seen as important with 16 of the 18 participants finding non-clinical settings more engaging than a health care environment as it was based more on health promotion and wellness than 'remediation of the injured'. Some felt the traditional rehabilitation programmes were not challenging enough and ceased to attend particularly when the individual's own exercise ability was not considered by the healthcare provider.

Participants wanted exercise programmes aligned with their fitness levels and previously acquired skills, and reported problems with compliance when they lacked confidence in the correct exercise performance. This was particularly noted when trying to perform exercises that isolated the 'core' muscles regardless of the teaching method. These findings are in keeping

with those of Turk and Rudy (1991), Campbell *et al.* (2001) and Escolar-Reina *et al.* (2010) who noted that when a patient perceives an intervention is more demanding, too onerous or too difficult to implement, they make a reasoned decision to discontinue the activity.

Interestingly all participants reported that they had developed preferred exercise styles over time. Through experience they were able to identify what worked for them including personal likes and dislikes, enjoyable activities, how to incorporate the exercises into daily routines, and feelings regarding level of supervision and tailoring of the exercises. There was notable variation in the preferred styles and programme design amongst the participants regarding individual versus group, unsupervised versus closely supervised, how to minimise disruption to daily life and routines, with the issue of time management as noted by Dean *et al.* (2005) being particularly important.

In terms of the communication skills of the care-provider, in common with May (2001b); Cooper, Smith and Hancock (2008); Slade, Molloy and Keating (2009a) and Kidd, Bond and Bell (2011) participants favoured a process that incorporated a healthcare providers willingness to listen, consider patients' experiences and views, particularly in assisting them to set both short and long term goals, and all preferred involvement in a process that was seen as collaborative and allowed for shared decision making:

“Asking me what I think, not saying this is what you should do” (Slade, Molloy and Keating, 2009b).

These two papers highlight that patients appear to want all clinicians to communicate effectively, encourage dialogue, validate the back pain, consider values and cultural influences, consider individual goals and circumstances, determine fitness levels and exercise experience and/or preferences, manage uncertainties about diagnosis, provide information and explanations, collaborate with goal setting and determine previous response to exercises for back pain.

Slade, Molloy and Keating (2009a, 2009b) concluded that a gap exists between patient experiences and preferences for exercise programmes for LBP, which could be improved by healthcare providers' willingness to listen, consider patients' experiences and views and incorporate these into exercise programmes. Recognising that patient-centred care and shared decision making are important for people with NSCLBP, they recommend that more research is needed into the methods used to prescribe exercise.

2.2.6 The exercise dilemma or how to cope with clinical equipoise

Foster (2007) stated that it seems justified to assess patients' treatment expectations and preferences and to try and use this information in clinical decision making, particularly in instances where different treatment options exist with little apparent difference in effectiveness and outcomes. On the strength of the above evidence, exercise therapy could be regarded as a preference-sensitive decision defined by equipoise (Elwyn, Frosch and Rollnick, 2009).

Acknowledging the above findings does not signal that every patient would necessarily want to be involved in treatment decision making (Cooper, Smith and Hancock, 2008; Kidd, Bond and Bell, 2011). Some patients may prefer not to make decisions relating to exercise and decline decisional responsibility. Recognition of the patient's preferred role was noted by Cooper, Smith and Hancock (2009) exploring patients' perceptions of self-management for CLBP. Some participants regarded the physiotherapist as the expert who should decide what is best for the patient, whereas others wanted more involvement in decision making than they had experienced.

These findings are further supported by Green, Jackson and Klaber Moffett (2008) in comparing different physiotherapeutic interventions and approaches to the management of neck pain and back pain and the consideration of the patient as an equal. They have suggested that patients may not always want to be treated as an equal, particularly when it comes to making decisions about treatment strategies. Patients appeared to be

happier being treated as equals during the assessment, when they wish to 'tell their story', but possibly prefer some guidance when making some treatment decisions. This variability was first highlighted by Charles, Gafni and Whelan (1997) who noted that patients' preference for information about their condition and possible treatment options was greater than preference to participate in treatment decision making. Reasons for patients not participating may be reflective of their personality characteristics or a situation specific response. Alternatively some patients may have learned through previous interactions that a more active stance is not well received by providers, and no matter how much the patient wants to participate if the clinician is not willing then shared decision making will not occur.

Physiotherapists continue to prescribe exercise regularly (Liddle, Baxter and Gracey, 2009), however non-compliance with exercise programmes continues to be a problem in clinical practice (McLean *et al.*, 2010) which has significant implications for the effectiveness of physiotherapy interventions, healthcare costs and patient outcomes. A Cochrane Review exploring interventions to improve adherence to exercise for chronic musculoskeletal pain in adults (Jordan *et al.*, 2010) concluded that, the type of exercise prescribed does not appear to influence levels of exercise adherence, but that patient preference should be considered in an attempt to increase motivation to initiate and maintain an exercise programme. In the context of shared decision making, a patient's decision to embark on an exercise programme for their NSCLBP may reflect a decision about lifestyle or behaviour change, a decision that only they can make because the responsibility for undertaking that change (for converting intention to action) is entirely theirs. Because behaviour change depends on the development of new knowledge and skills, and also on the confidence that comes through practicing new behaviours, change usually happens over time. As people become confident autonomous decision makers, they also become confident self-managers (Blissmer *et al.*, 2010; Du and Yuan, 2010).

2.3 Chapter summary

The aim of this study was to explore the characteristics and processes of physiotherapy exercise prescription for patients with NSCLBP, and gain a greater depth of understanding of how shared decision making and patient partnership are addressed by physiotherapists in the process. A review of the literature has provided some background to the exercise prescription characteristics and processes identified in this research. It has highlighted the complexities of research exploring the effectiveness of exercise therapy for patients with NSCLBP, where the lack of evidence of any specific effects, means that the optimal type of exercise for NSCLBP remains unresolved. Options exist and need to be deliberated, and if health professionals and patients agree, an ideal situation for shared decision making exists.

In addition it has considered studies exploring the concept of patient-centred care or shared decision making as it applies to musculoskeletal physiotherapy practice and the provision of care for patients with NSCLBP. The evidence from these studies suggest that models of patient-centred care centre on good communication with many patients wanting to establish relationships with healthcare professionals based on trust and who would involve them in the joint management of their condition. However papers exploring the clinical practice of physiotherapists indicate that it is still often driven by a biomedical world view, in which the balance of power often results in unequal opportunities for patient participation in decisions regarding their care (Harrison and Williams, 2000; Cruz, Moore and Cross, 2012).

Freidrich *et al.* (2005) proposed, that for successful management of patients with NSCLBP, the choice of which exercise to prescribe is perhaps not as important as the consideration that needs to be given as to how the idea of exercise therapy is negotiated with the patient using a patient-centred approach. On the evidence from this literature review, there is a clear need to enhance understanding as to why clinicians do what they do in the consultation, together with understanding the patients' perspectives, using a

methodology able to provide an in-depth understanding about the process of exercise prescription and the degree to which clinicians involve patients with NSCLBP in decisions regarding their care, a task that the researcher will deal with in the following chapter.

Chapter 3: Methods and Methodology

3.0 Introduction

In this chapter I present an account of the design of the research and focus on principal decisions and my reflections underpinning the methods of enquiry employed. I focus on my philosophical orientation and the reasoning for choice of methodology. I will also highlight the strengths and limitations of the chosen methods of data collection, including personal reflections on the effort to collect a credible data set. I will also set out the reasoning for my choice of research participants, surrounding ethical issues, discuss the data analysis framework selected and explain the reasons for that choice. Finally I will critically reflect on issues relating to the quality of the research process.

3.1 Philosophical orientation

The aim of this study was to investigate the approaches used to prescribe exercise for patients with NSCLBP, and explore how shared decision making and patient partnership are addressed by physiotherapists in the process of exercise prescription. It was conducted from an interpretivist-constructivist perspective which sees the world as constructed, interpreted, and experienced by people in their interactions with each other and with wider social systems (Lincoln and Guba, 1985; Bogdan and Biklen, 1992; Crotty, 1998; Higgs, 2001).

Higgs (2001) commented that the central goal of the interpretive paradigm is:

“To seek to interpret the world, particularly the social world, (and where) knowledge ... comprises constructions arising from the minds and bodies of knowing, conscious and feeling beings ... generated through a search for meaning, beliefs, and values, and through looking for wholes and relationships with other wholes” (Higgs, 2001 p.49).

My early reading about qualitative research during the planning phase of this research was extensive. As part of this reading I became aware that most

research is informed by philosophical underpinnings that originate in unacknowledged and implicit philosophical traditions. Despite my breadth of reading I struggled to come to terms with the concepts of ontology (exploring the nature of reality, or what it means to be a person) and epistemology referring to the philosophical question “How do we know what we know?” and “What is knowledge?”

However it became apparent that to understand what happens in research, how we make meaning and decisions regarding selection of an appropriate interpretive framework to guide the analysis, it needs to be informed by how we reflect our own position on the nature of reality. There are many positions on the nature of reality and in this instance I have reflected on three.

3.1.1 Ontology (What is real?)

One consideration is to regard the nature of reality as an objective position based on a Cartesian mind-body split, in which we consider the world as detached observers and to see ourselves as others see us. This realism asserts that there exists a single reality that is independent of the observer and which operates according to irrefutable laws, many of which take a cause-effect form. Truth is defined as a set of statements that is isomorphic to reality (Koch, 1996, 1999).

Edmund Husserl, a German philosopher is recognised as the founder of phenomenology (Husserl, 1931). Through his transcendental philosophy, to describe things as they appear through consciousness could also be viewed as a culmination of the Cartesian traditions. The researcher, in this instance guided by Husserl’s ideas, would understand that the purpose of enquiry is to describe a phenomenon’s general characteristics without making assumptions or judgements about the world. Husserl’s approach referred to the notion of phenomenological reduction or ‘bracketing’ meaning that to investigate phenomena in this way requires a bracketing out or exclusion of the enquirer’s pre-conceptions or pre-understandings about existence or nature of an objective world. Husserl considered this the only way of assuring methodological trustworthiness. Thus the emphasis on a pure

description of experience could be regarded as an empiricist conception of knowledge. The key question with representation of this nature is whether bracketing in terms of putting aside all that has fashioned one's beliefs and understandings is possible and believable (Koch, 1996).

Martin Heidegger (1962) examined the ontological status of Husserl's philosophy by developing an existential phenomenology. He believed understanding was not possible because of knowing, rather it was possible because of relationships. Hans-Georg Gadamer (1976) following on from Heidegger developed his philosophical hermeneutic approach, in which he declared that nothing can be encountered without reference to a person's background understanding, and every encounter entails an interpretation based on the person's background in its 'historicity' fused with the experience of the researcher and placed in context (Koch, 1996). The relationship between the researcher and the object of the study is active and meaningful, and is fundamental to the understanding of intersubjective meaning. Husserl's idea was to bracket preconceived ideas and leave them behind. Gadamer believed that it is impossible not to take them into the process of interpretation, arguing that it is only through our 'prejudices' that we can begin to understand (Koch, 1996). In other words, there can be no understanding without having first understood (Fleming, Gaidys and Robb, 2003). Thus interpretation becomes a merger of data sources or what Gadamer referred to as a 'fusion of horizons'. Gadamer believed that understanding as an ontological precondition of being human means to be fundamentally predisposed toward participating in interpretation as a self reflexive process that takes into account one's understanding as a historically situated endeavour. This gives a sense of what Gadamer means by 'effective historical consciousness' (Lawn, 2012 p. 68).

3.1.2 Epistemology (What is knowledge?)

An epistemology of physiotherapy practice that can justify and legitimise the sources of knowledge that underpin the clinician-patient relationship, as well as the use of physical interventions in effective practice has not been fully explored or defined (Richardson, 1999; Edwards and Richardson, 2008; Kerry, Maddocks and Mumford, 2008). The scientific process and quantitative research paradigm have provided an important means and contributed significantly to the practice of physiotherapy, based on an analysis of causal relationships between variables. This dualist objectivist epistemology asserts that it is possible for an observer to remain detached from a phenomenon being studied (subject-object dualism) and exclude any value considerations from influencing it (Koch, 1999).

My belief is that there is no single enduring truth waiting to be discovered by scientific procedures that is to say an objectivist position is not feasible. In contrast a constructivist epistemology asserts that the researcher and the research subjects are interlocked in such a way that the findings of an investigation are the literal creation of an enquiry process. In other words there exist competing interpretations based on participant's and researcher's views and the historical context, and based on a shared reality of language and traditions both past and present we can experience a 'fusion of horizons' (Koch, 1999). Gadamer (1996 p.306) stated that 'understanding is always the fusion of horizons', but acknowledged that the fusion of horizons of interpretation is nothing that one ever reaches, as the horizon of interpretation is not fixed, it changes constantly and is modified over time (Lawn, 2012).

On a personal level, if one acknowledges that understanding and interpretation are as important as explanation, informed by language and historicity then hermeneutics as both an ontological and epistemological theory of interpretation is a core philosophy of science for qualitative research. It encourages awareness of the pre-understandings we bring to our research, to read the data carefully and deeply and circle through it repeatedly in stages linking up aspects of the analysis in a self reflexive

process (Koch, 1996). Therefore in summary the methodology I have chosen for this research embraces a constructivist epistemology. In addition a practitioner-as-researcher model (Fagerberg and Norberg, 2009) was used to give professional insight into the experiences of the participants and develop a deeper understanding of the phenomenon of exercise prescription.

3.1.3 Philosophical Hermeneutics

Hermeneutics was derived from Hermes, the Greek messenger of legend who bore knowledge and understanding between the gods and mortals. Modern hermeneutics has been developed by Heidegger (1962), Gadamer (1976, 1996), Ricoeur (1981) and Habermas (1990). It is regarded as both an ontological and an epistemological theory of interpretation that philosophers have developed in relation to, and in reaction against, claims of knowledge acquisition based on the disengaged researcher. Taylor (1985) argued that hermeneutics is fundamental to the epistemological underpinnings of social science research, where the methods of qualitative research must have their epistemological basis in the act of interpretation as the ontological properties of the objects of research are fundamentally distinct from those of the natural sciences. A different language is needed to understand these interpretations of social and cultural meaning, and it is as part of the dialogic process of understanding that qualitative enquiry is methodologically bound to a hermeneutic circle.

Hermeneutics has been criticised for its conceptually elusive nature (Kinsella, 2006). The goal of a hermeneutic approach is to seek understanding, not to offer an explanation or a procedure of understanding, but according to Gadamer (1996) to clarify the interpretive conditions in which understanding takes place. There are three key philosophical assumptions or constructs that inform hermeneutics as a strategy for knowledge creation:

- Fusion of horizons - For Gadamer (1976 and 1996) hermeneutical understanding was the result of a dialogue between the past and our present which occurs when there is a 'fusion of horizons' between the two, which includes attention to the prejudices individuals bring to the interpretive event. In this research the historical horizon of the past was the material found in the literature on topics relating to exercise prescription for NSCLBP, patient-centred care and shared decision making, together with my personal and professional background, and the present horizon was the text. Analyses which are based on the work of Gadamer view data as 'text'. In this research text was in the form of observation field notes, and transcribed interviews (informal field and semi-structured). The horizons of the researcher and participant were then embedded through the hermeneutic circle to form a new horizon identifying the meaning or essence of an experience. According to Gadamer (1996) a horizon is the field of vision, that is everything that can be seen from a particular vantage point. Interpreting a text is like looking for something new in it, seeking its hidden meanings and interpreting it in a new way.
- Dialogue – meaning emerges through a dialogue or hermeneutic conversation between the text and the enquirer (Koch, 1999). For a text to become an object of interpretation it must ask a question of the interpreter. A unique characteristic of hermeneutics is its openly dialogical nature, returning to the object of enquiry again and again, each time with an increased understanding and a more complete interpretive account (Packer, 1985).
- Hermeneutic circle – Gadamer used Heidegger's concept of the hermeneutic circle (see Figure 3.1) which is seen as the central organising concept in hermeneutics. It is based on an iterative process of comparing the whole text with its constituent parts. Interpretation was enhanced by use of the practitioner-as-researcher model (Fagerberg and Norberg, 2009) so that getting into the hermeneutic circle meant using my own experiences or pre-

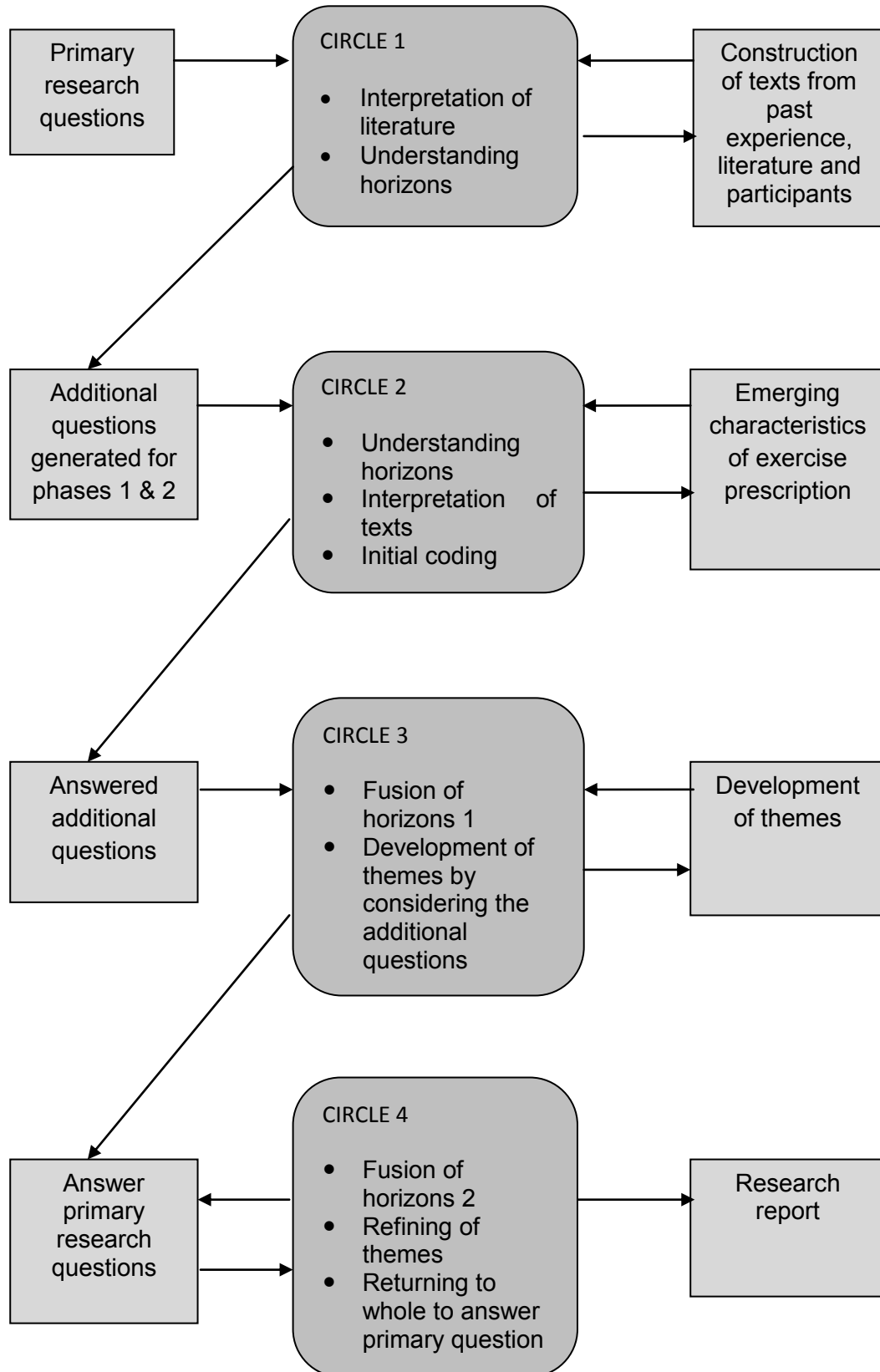
understandings as a physiotherapist working with patients with NSCLBP to better appreciate physiotherapists' experiences in clinical practice. Paradoxically it is these that make understanding possible in the first place, and yet these prejudices and expectations are at the same time a potential impediment to true understanding of the text.

Bontekoe (1996) has described the traditional hermeneutic circle:

“The circle has what might be called two poles – on the one hand, the object of comprehension understood as a whole, and, on the other, the various parts of which the object of comprehension is composed. The object of comprehension taken as a whole is understood in terms of its parts, and....this understanding involves recognition of how these parts are integrated into the whole” (Bontekoe, 1996 p.3).

In other words understanding only occurs when the researcher recognises the significance of the various items that they notice, and recognises the way those particular items relate to each other. As a result of my background reading I reasoned that qualitative research by its very nature is informed by hermeneutic thought which resonated with my own beliefs on the nature of knowledge and reality. So philosophical hermeneutics based on the work of Gadamer (1976) was used as the guiding philosophical orientation for this research, on the basis that interpretation is a process that permeates every activity.

Figure 3.1 Use of the hermeneutic circle as applied to this study (adapted from Paterson and Higgs, 2005).



3.2 Choice of methodology

This study was informed by the interpretive paradigm of enquiry, guided by a philosophical hermeneutic approach. For the first phase participant physiotherapists were observed undertaking their usual clinical activities and were later interviewed about their clinical decisions. In the second phase patients were interviewed about their experiences and perspectives regarding the management of NSCLBP using exercise therapy, and their involvement in the decision making processes regarding their care. I aimed to contribute to the knowledge and understanding gained through exploration of the prescription of exercise for patients presenting with NSCLBP, revealing how decision making and patient participation are addressed in the process.

Philosophical hermeneutics provided an opportunity to engage participants in bringing to awareness, describing and interpreting a particular aspect of clinical practice and making this accessible to the interpretation of the researcher. Hermeneutics involves the construction and interpretation of texts. In depth iterative hermeneutic strategies were used to interpret the texts in order to produce a deeper understanding or interpretation of a human phenomenon (in this study, the prescription of exercise for patients with NSCLBP and the decision making processes involved). Other qualitative research strategies such as ethnography, which might focus on understanding and portraying a broader concept like culture of a workplace, or descriptive phenomenology, focusing on lived experience were considered less suited for this purpose.

Some literature appears to suggest that what physiotherapists say they do contradicts what actually happens (Daykin and Richardson, 2004). Therefore the focus of the first phase of this study was in observing how physiotherapists interacted with their patients and how they articulated their practice. It was vital not to jump to conclusions based on one observation but to follow this up with further observations and interviews, which was based on Gadamer's (1996) view that the participants and researchers understanding will develop over time.

3.2.1 Rejecting objectivity

Positivists believe that objectivity is a characteristic that resides in the individual scientist who is responsible for putting aside their biases and beliefs and seeing the world as it 'really' is. Epistemological models such as post positivism, post modernism and constructivism have challenged the notion of objectivity and reject the idea that any individual can see the world perfectly as it really is (Hammersley, 2000).

Acknowledging that we bring to research our worldviews complete with what we know or think – it was not possible to separate *me* from the research. I inevitably, through my background and role, brought pre-understandings and prejudices to the research process, as my own thoughts are not something I felt I could eliminate, or according to Husserlian phenomenology, 'bracket' (Gearing, 2004). The research process then involved working in partnership with the participants and data to create an interpretation of their reality. This notion of creativity between the researcher and the data is supported by Freshwater and Avis (2004) who disputed the concept of findings just 'emerging' from qualitative research. Gadamer (1996) views an awareness of historically informed prejudices as a basic contention of understanding:

"A person who believes he is free of prejudices, relying on the objectivity of his procedures and denying that he himself is conditioned by historical circumstances, experiences the power of the prejudices that unconsciously dominate him....A person who does not admit he is dominated by prejudices will fail to see what manifests itself by their light" (Gadamer, 1996 p.360).

Gadamer (1976) also presents a positive concept of prejudice and argues that:

"Prejudice is not something negative or something we should try to eliminate, but that instead we only have access to the world through our prejudices. It is not so much our judgements as our prejudices that constitute our being" (Gadamer, 1976 p.9).

In other words, prejudices are not necessarily erroneous nor necessarily distortions of truth but merely the conditions by which we encounter the world as we experience something. We take prejudices (value positions) with us into the research process and these assist us to understand (Koch, 1996).

From my early readings of research methodology and as a physiotherapist who had been socialised through physical science research traditions I had considered that prejudices or biases were negative influences compromising research validity, but as I later reasoned they cannot be done away with or simply 'bracketed' by employing certain methods. This thought was reinforced by reading Finlay (2003) who commented that:

"We should no longer work towards abolishing the presence of the researcher; instead subjectivity in research is transformed from a problem to an opportunity" (Finlay, 2003 p.5).

Thus I reasoned that bias or prejudices are inevitable in any research, although these are not always fully known, understood or acknowledged by the researcher, and it could be argued that undertaking a research study may make biases more transparent for the researcher. Gadamer's hermeneutics (1976), which depend on the notion of pre-understandings to determine or limit subsequent interpretations of meanings, was congruent with my belief that to suspend the subjectivity of the researcher would be impossible, similar to the views of Greene (1995) who commented that:

"Whoever we are, we engage the traditions made available to us against the background of our lived lives and the prejudgements we have made over time. Recognising the influence of prejudgements and historical traditions on the manner in which we engage with the world around us and others that we encounter and the texts we read, has important implications for interpretive work" (Greene, 1995 p.10).

A critical self-awareness of my professional background along with that of the participants was brought into the hermeneutic circle. As part of that process I was able to scrutinise my role in the observations and interviews, and challenge how my own experience as a physiotherapist and my views

and prejudices were interacting with the participant narratives to create an understanding and interpretation of those narratives. This continuous process of reflection by the researcher is known as reflexivity which for this study was not just a case of reflecting how I may be affecting the research in terms of my personal feelings and experiences, but also of how I was participating in the continual negotiation of meaning which was constantly evolving.

Reflexivity is not a normal part of research conducted within the positivist paradigm because of the assumption that the researcher is objective to the research process. However within an interpretivist paradigm the role of the researcher needs to be acknowledged and accounted for by critically examining their assumptions and actions and through being self-conscious and self-aware about the research process, which may include reflections about their relationship with the participants, the way they feel while carrying out the research and the effects of their observations on the people under study.

At various points in this thesis my own personal reflections and reflexive or critically self-aware evaluations are presented in a different font. Within this study reflexivity has been applied to:

1. Details of the research process and context of the research, including reflection on the methods of data collection, the framework used to interpret the data, and the study findings.
2. Disclosure of researcher's pre-understandings.

3.2.2 Researcher's pre-understandings

Researchers underpinning their work with the philosophy of Gadamer are required to identify their pre-understandings or prejudices relating to the topic. Acknowledgment of pre-understandings in hermeneutics enhances transparency and helps the researcher assess to what degree the subsequent interpretation is influenced by their preconceptions. Acknowledging preconceptions also raises awareness of changes in the researcher's understanding as the interpretation proceeds. These understandings are derived from coming to know oneself better through considering the ways other people experience the world. However, since a researcher's pre-understanding may conceal meanings of a text, in line with the Gadamerian based research method suggested by Fleming, Gaidys and Robb (2003), the following section seeks to identify and reflect upon my pre-understandings. My aim is to convey to the reader details of my own experience and by so doing make explicit how some of these intersubjective elements, might have impacted on the data collection and analysis. This will enhance the transparency and trustworthiness of the research, and also act as a vehicle for interpretations and more general insight.

As a student and subsequently junior physiotherapist practicing in the early 1980s I recall my training as being very much directed towards attending to patients in a mechanistic way. Clinical reasoning aimed at identifying and treating physical dysfunctions such as abnormal movement patterns, joint stiffness, muscle weakness and pain. Clinical acumen was determined by the clinician's ability to make a diagnosis and administer an effective treatment. I was taught to treat patients in the anticipation of making them better, that is to say my training and clinical practice was aligned to the biomedical model. Around this time the biomedical model was coming under close scrutiny. One of the first to challenge the model was George Engel in the late 1970s. He believed that to understand and respond adequately to patients' suffering, and to give them a sense of being understood, clinicians must attend simultaneously to the biological, psychological, and social dimensions of illness (Engel, 1977). He offered a holistic alternative to the

prevailing biomedical model that had dominated healthcare practice since the mid-20th century. His new model came to be known as the biopsychosocial model which is now the most widely accepted approach to the management of chronic pain. Waddell (1999), an eminent authority in the management of LBP, concluded that a biomedical approach to the assessment and management of CLBP by healthcare practitioners would not only result in inadequate understanding of disability associated with chronic spinal pain, but also poor treatment outcomes.

On a personal level I continued to adopt a largely biomedical approach to clinical practice and considered it to be standard until a change of job role in the early 1990s. I became more involved on a daily basis with the management of patients with LBP and developed a closer working relationship with colleagues from other specialties, in particular, pain management (with whom I had not worked with previously). It was through discussions with these colleagues, increasing exposure to patients with CLBP, and attending a course run by Louis Gifford a physiotherapist who set up the Physiotherapy Pain Association (PPA) and has been tireless in emphasising that patients should be taught skills to self-manage their low back problem so that long-term they are less likely to experience pain-related disability, that I began to think critically about my clinical practice and that of my peers. The result was an increased recognition of the importance of integrating the patient's thoughts, beliefs and fears with the body. In 2000 I undertook an audit of physiotherapy clinical practice for patients with LBP and can recall vividly at the feedback session I gave, being challenged as being '*too biopsychosocially orientated*', which I countered with the response that you can either be too '*bio*' or too '*psychosocial*', but you cannot be too '*biopsychosocial*'. It appeared to me at that time that physiotherapy practice was not only failing to keep pace with the emerging biopsychosocial philosophy of care, but that physiotherapists were potentially putting up barriers in making the transition to a biopsychosocial model.

There are several possible reasons for this: the physiotherapists may have considered that changing their practice was too hard to contemplate, they

may have been perfectly happy with the results witnessed from their current treatment, or they felt comfortable in adopting a hypothetico-deductive reasoning process common to the biomedical treatment model as a means of identifying and managing physical impairments. This model may present clinicians with a situation of predictability and symptom certainty in order to simplify decisions and enhance confidence in their role.

Another strong influence on my own personal worldviews around this time was the paper by Frost *et al.* (2004), in which the authors' objectives were to measure the effectiveness of routine physiotherapy for patients with low back pain, compared to an assessment session and advice from a physiotherapist. The authors concluded that a course of physiotherapy is no more effective than an advice session with a physiotherapist for people with low back pain of more than 6 weeks duration. At 12 months the authors reported that there was no statistically significant difference in the disability index between the two groups. I considered that the good intentions of the study were lost in the reactionary aftermath and the demedicalisation of the situation by the popular media. I also felt that if nothing else it should encourage the physiotherapy profession to keep re-evaluating its role in the management of CLBP, and consider a number of issues such as: questioning the natural history of the problem, asking patients about their expectations of physiotherapy and what is important to them, and what are our core physiotherapy skills and what should they be? It prompted me to write a letter of reply to the *Physiotherapy Journal* (Letters to the editor / *Physiotherapy*, 2005) an excerpt of which follows:

“The paper by Frost et al. (2004) should provide an opportunity for physiotherapists to review their whole philosophy. Of course the patient in acute pain is looking for some control or quick resolution of their symptoms, but for many patients with ongoing or recurrent symptoms, quick control or resolution of pain may not be possible. In these circumstances, education and support in the acquisition of self-management strategies is what we should be providing. Have we ever stopped to question why so many patients continue to be re-referred? Perhaps it is because we are not dealing adequately with the above.”

We also think we are good communicators, but are we? How often do therapists explore the patient's beliefs and expectations concerning their problem and its management and what they want as an outcome from a consultation? It is no wonder that if we do not consider these issues, patients are generally disappointed with management. However, you cannot be a good communicator and deal with often complex issues of patient's fears, beliefs, expectations, etc. if you do not understand the problem you are dealing with.

So what is so wrong with one session of advice and reassurance; why does it make us feel inadequate in some way? If we actually understood the evidence-based management of low back pain better and communicated more effectively with our patients, we would actually find that that is what a vast majority want from us” (Stenner, 2005).

However slow it has been to ‘catch on’, most physiotherapists would now regard their approach to the management of LBP as aligned to the biopsychosocial model. The biopsychosocial model has continued to evolve and has highlighted the importance of the patient-clinician perspective (Engel, 1977). The past decade has also seen an increasing push towards a partnership approach to healthcare provision, ensuring that clinicians and services meet the needs of patients in a responsive, compassionate and empathetic manner. New models of active participation and shared power and responsibility between patients and clinicians have challenged physiotherapists to further rethink their approach to practice (Larsson, Liljedahl and Gard, 2010). The common goals of shared decision making, supported self-management and patient-centred care is to support people from being passive recipients of care towards being active participants in managing their own health and healthcare. These models locate the patient centrally in the professional relationship, with support for the notion that an understanding of the patient’s perspective, together with a sharing of power and responsibility would further develop a therapeutic alliance within a biopsychosocial framework.

It is my belief that there are many misunderstandings about what patient-centred care means in practice, or what constitutes the key principles of

shared decision making. Rather than making a true philosophical shift to patient-centred care and shared decision making many clinicians attempt to incorporate it into their current practice without a true appreciation of what it means. I feel I can state this from a perspective of a clinician who firmly believed his approach was patient-centred and regularly shared in decisions with patients. However, in undertaking this research and the extensive reading around the topic I realise that although I always involved the patient, I was not consistently sharing in decisions, and my practice was, on occasions, more aligned to an informed choice model of giving information to the patient regarding treatment choices with control over the decision vested in the patient.

As part of my preparation for this thesis I undertook a literature review to identify the evidence for the effect of exercise therapy in the management of NSCLBP. This review reinforced my own understanding of the literature in determining that when compared to no exercise, an exercise intervention regardless of content seems to have a positive effect on patients with NSCLBP in terms of reduced pain and improved function, and the effects are similar when different exercise regimes are compared. These findings reaffirmed my own perceptions that for patients with NSCLBP patient engagement in exercise, and not particular types of exercise, may be a more appropriate approach to improve outcomes for the patient.

Therefore my observations and clinical experiences prompted me to question what might be happening in clinical practice and in doing so I considered two fundamental questions:

1. What are my experiences and observations of physiotherapists assessing and managing patients with NSCLBP?
 - a) One of my concerns is the belief that physiotherapists are afraid of missing serious pathology. In doing so they seem to spend valuable time following a strict pattern of enquiry driven by assessment forms, on occasions missing valuable patient cues, and collecting vast amounts of information a lot of which is ultimately redundant in terms

of influencing their decision making. As a result they are potentially neglecting the second and arguably most important part of the consultation in terms of allowing sufficient time for explanation, reassurance, discussion and negotiation of management options, giving the patient opportunity to ask questions and arriving at a mutually agreed decision as to how physiotherapy management should proceed.

- b) I also considered that therapists were concerned about making a patient's pain worse and as a result would choose treatment or a management approach that, in the main, was less likely to exacerbate a patient's symptoms. It has made me think – Are physiotherapists afraid of a patient in pain, or concerned about the consequences of increasing a patient's pain?
- c) I also believed that physiotherapists were not gaining the patient's confidence or adequately dealing with their agendas. Commonly I have heard patients say '*they were very nice but.....*' patients did not necessarily want to appear overtly critical but perhaps felt physiotherapy had not adequately addressed their needs or concerns.
- d) In terms of exercise prescription my experience has been that patients have been given exercises to do by the physiotherapist, some have reported doing them religiously and others not at all, but a commonly recurring theme was that many patients did not really want to be doing them, or if they did they were not aware of what they could expect in terms of anticipated benefits.
- e) As physiotherapists talk to and discuss things with patients most would claim their practice to be patient-centred. However I have reservations as to whether they thoroughly understand the principles of patient-centred care. My perceptions are that generally the physiotherapists' more than patients' values guide most clinical decisions.

2. What are my perceptions about what determines physiotherapy practice?
 - a) The therapists potentially have a lack of knowledge or understanding of CLBP as a pathological entity, in terms of how to define it, how to explain it to patients and how to explain what role physiotherapy and/or exercise can or cannot play in its management. In particular I am not certain physiotherapists are confident working with a patient with chronic pain. I suspect many have difficulty in explaining to patients that management such as exercise therapy is not necessarily going to reduce their pain, but primarily it is aiming to improve their function and reduce their pain related disability, and give them a tool by which to optimally self-manage.
 - b) I have a sense that the therapists often take ownership and responsibility for the patient in pain and the patient's pain, feeling the need to try and help everyone and particularly reduce their level of pain.
 - c) Although most staff would now profess to practice according to a biopsychosocial model, they are still struggling to integrate the mind with the body, in terms of how to deal with some psychosocial factors identified at assessment, and particularly identifying the patient's main agenda or goals. Patient-centred care and shared decision making may equally be perceived as just another process or model rather than a new way of working to improve care processes and clinical outcomes.
 - d) Despite staff being more aware of the 'choice' agenda and offering this to patients, it is still not common practice to offer choice to patient's regarding management options. In particular the option 'to do nothing' does not seem to exist.
 - e) I am conscious that most patients are given exercises in one form or another. This may be because it is seen as an appropriate management approach supported by clinical guidelines, or because

the physiotherapists perceive a need to be seen to be doing something.

- f) Physiotherapists' practice is possibly constrained by 'lack of time' and the pressures of an ever increasing workload.

Lack of time and the ever increasing pressures on individual clinicians and services to improve and provide evidence of quality in a climate of increasing financial insecurity, means that providing an effective exercise prescription process within the limits of time that a busy clinician faces is a challenging task. There is a tension between the demands of managing patient beliefs, expectations and anxieties and those of managing time, with clinicians often seeking to control consultations in order to manage their time effectively. When one stops to consider all the factors necessary for effective delivery of an exercise programme it is not a straightforward or easy option. I was keen to explore this phenomenon in more detail, and so this research was divided into two phases. Firstly to explore the characteristics and processes of physiotherapy exercise prescription, revealing how decision making and patient participation are addressed in the process, and secondly to understand the experiences, information and decision support needs of patients with NSCLBP who have been offered exercise as part of their management plan.

3.2.3 Sampling strategy

Phase one - after much deliberation I selected the organisation where I was employed as the study site because the organisation operates a county wide community based musculoskeletal physiotherapy service with the staff having a wide range of experience and exposure to patients with NSCLBP. This sample was therefore purposively chosen on the basis that the people were best placed to contribute to an understanding of and provide data on the issues being researched (Mays and Pope, 2000). But then in choosing my employing organisation as the study site I also acknowledge that I wanted the research to have some local application.

In its broadest sense all qualitative sampling methods could be considered as 'selective' as they involve a subjective choice on behalf of the researcher in the selection process. Denzin and Lincoln (1994) have suggested that:

"Many qualitative researchers employpurposive, and not random , sampling methods. They seek out groups, settings and individuals where the processes being studied are most likely to occur" (Denzin and Lincoln, 1994 p.202).

Despite various potential limitations and criticisms, a purposive form of sampling was felt to be appropriate in this instance, as a focus on one physiotherapy service would allow a close and detailed observation of a small number of practitioners.

The inclusion criteria are listed below:

Patients (phases one and two)

- Adults (>18years)
- LBP > 8 weeks or 3 or more recurrent episodes within 12 months
- Currently attending or previously attended for physiotherapy
- Received exercise therapy as part of their management plan

Physiotherapists (phase one)

- Health and Care Professions Council registered Physiotherapists
- Involved in the treatment of patients with NSCLBP
- Experience of using exercise therapy as part of a management plan for patients with NSCLBP

The following exclusion criteria were applied:

Patients (phases one and two)

- Unable or unwilling to give consent
- Unable to understand or communicate in the English language
- Had CLBP but had not participated in an exercise programme (phase two of study only)
- Had CLBP associated with any of the following: pregnancy, inflammatory joint disease, nerve root pathology, cauda equina signs, or any other potential red flags such as suspected malignancy, infection or spinal fracture (some of which may not have emerged until the observation had commenced)

Physiotherapists (phase one)

- Unable or unwilling to give consent

The potential participant physiotherapists' were approached initially by e mail contact by the researcher, which contained a brief description of the study, a participant information sheet (therapist) (Appendix A) and a consent form (Appendix B). The researcher contacted potential participants who indicated a wish to take part but failed to return their consent forms after 2 weeks, to ascertain whether they still wished to be involved. Using this approach eight

physiotherapists were recruited to the study from seven different physiotherapy departments across the organisation.

For the observation data collection periods, patients with the relevant presenting condition of NSCLBP were identified by the participant physiotherapists beforehand from their GP referral and approached directly by me prior to their first assessment. I introduced myself as being part of the clinical team, but explained that I was acting in this instance as a researcher. A participant information sheet (patient) (Appendix C) explaining the research was supplied and informed consent obtained in writing (Appendix D).

The role of researcher can be placed on a continuum between insider and outsider. Defining where on this continuum the researcher sits can be complex and may not always be defined in simple terms. Therefore I was aware that 'emic' (insider) and 'etic' (outsider) perspectives were not categorical (Narayan, 1993). In this instance I was an insider to the profession, and as an employee, an insider to the organisation. However despite being a clinician, my clinical role was such that I had not practised clinically in an outpatient physiotherapy department for the last 15 years, and had not worked directly in a clinical capacity with any of the participants. Therefore to some extent although clearly an insider I also felt to a certain degree I was working as a visitor. My rationale for this was based on the fact that my employing organisation operates two distinct but allied services, an Orthopaedic Assessment Service and a Musculoskeletal Physiotherapy Service which work in close collaboration and as part of a clinical pathway for the management of orthopaedic and musculoskeletal conditions. My clinical role was in the Orthopaedic Assessment Service and not the Musculoskeletal Physiotherapy Service where this research was undertaken.

However as a Consultant Physiotherapist in the study organisation I was very conscious that many people may have been reluctant to have their working practices observed by me. Yet over the preceding 2 years staff within the service had regularly been exposed to a culture of mentoring and clinical supervision, which at times involved direct observation and feedback

on clinical practice. As staff were used to this system it may have been a reason why they were willing to participate. I was aware that researching one's own peer group had the potential to bring with it many pitfalls, and the issue of trust becomes more important raising questions such as: would my relationship with the research participants have an impact on their behaviour? However this concern was balanced by the view that it potentially helped to facilitate trust and confidence in the researcher-participant relationship which allowed me to establish rapport with the participants early in the data gathering process, providing access into their clinical world and thoughts, and allowing the interviewees to feel comfortable and talk more openly. Personal and psychological issues on my part did emerge, in terms of a sense of anxiety or hesitancy on entering the field, and the feeling of unease and concern regarding trust, role and loyalty in choosing to study participants from within my employing organisation, as to whether I was exploiting my relationship with the staff and how the study findings may affect the on-going professional relationship.

Phase two – recruitment of patient participants for phase two of the study was achieved by using information posters which were displayed in the waiting rooms of physiotherapy departments and community based spinal assessment clinics within the organisation chosen for this study. The use of this A4 poster (Appendix E) for recruitment supports purposive sampling (Mays and Pope, 2000). It deliberately attracts potential participants who consider they have the relevant experience to contribute to the research. Participants were therefore self-selecting or volunteering which may have reflected their personality, personal interest in the research or that they had strong views concerning their experiences that they wanted to share. Therefore my sample in part was determined by who was prepared to be included in it. I allowed for a period of seven months recruiting participants. During this period ten patients came forward, two patients withdrew due to personal reasons, and so finally eight patients were recruited to the study.

Individuals who expressed an interest were provided with a patient participant information sheet (Appendix F) and after reading this confirmed their willingness to be contacted by the researcher. The researcher telephoned potential participants to briefly discuss and answer any concerns regarding the research and to clarify that the patient was experiencing NSCLBP and had received exercise as part of their physiotherapy, and to arrange a convenient time and venue for the interview. Participants were sent a copy of a consent form (Appendix G) and the sheet of patient vignettes (Appendix H) to read prior to the interview. The consent form itself was signed prior to commencing the interview, once participants had had the opportunity to ask any further questions.

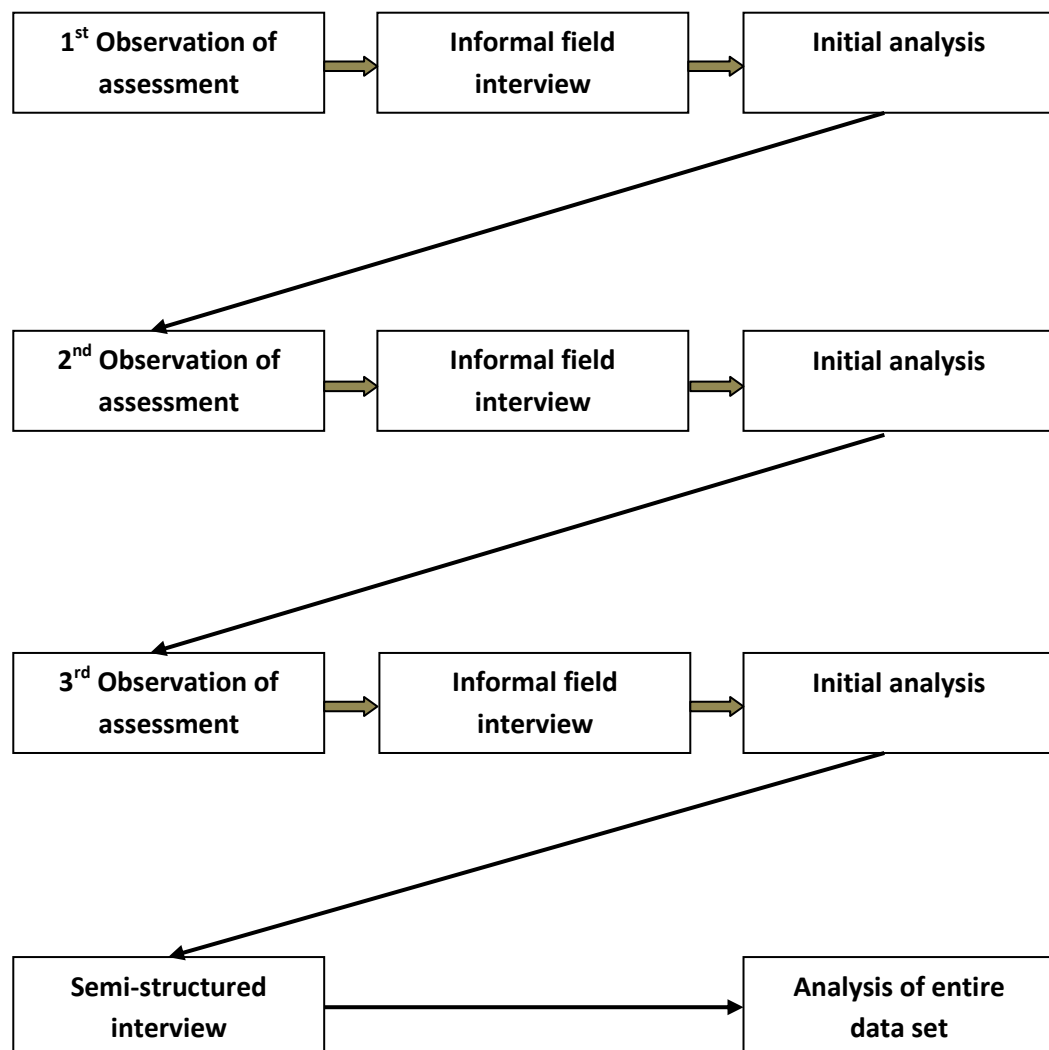
3.3 Methods of data collection

Most research aiming to explore the degree to which decisions are shared in a clinical encounter has been limited to viewpoints from an observer (Dy, 2007). Observations alone are restricted to what is observable or audible, and take no account or assess the perceptions of those involved in the process. Yet evidence exists that patients and clinicians differ in their evaluations of such encounters (Saba *et al.*, 2006) and there is little evidence to show how these perceptions correlate with those of external observers. Taking these factors into consideration the following methods of data collection were chosen.

Phase one - a multiple methods triangulated approach was adopted to examine from different perspectives, the characteristics and processes of exercise prescription, and how decision making and patient participation were addressed by physiotherapists in the process. As I was observing a patient-clinician interaction it was not possible to position myself as a participant observer. So for phase one an overt non-participant observation role, together with informal field interviewing and semi-structured interviews after the observation period were chosen as suitable methods to gain an understanding. The concept of non-participant observation is challenging as no matter how unobtrusive a researcher tries to be the researcher is still

likely to influence the social dynamics and social interactions of the participants. Therefore it is difficult to know how much my presence affected the patient-therapist interaction, or the therapist's normal clinical behaviours and practices. For example, I was conscious that the physiotherapists seemed to afford greater emphasis on data collection, than the manner of how the consultation was conducted, resulting in less time being available for reassurance, explanations and shared discussion regarding management planning, although this was something I had anticipated that I might witness prior to the observations.

Figure 3.2 The sequence of interviews with and observations of physiotherapists and their patients.



Each participant physiotherapist was observed on three separate occasions with three different patients, with an informal field interview immediately following each observation and finally an in depth semi-structured interview was undertaken after the observation period (See Figure 3.2). Observations can give us an insight into human behaviour, but not the meaning participants give to their behaviour (Parahoo, 2006 p.349). This understanding can be enhanced when used in combination with other methods such as interviews. I considered that the use of observations and interviews fitted well with my research question and epistemological stance to gain a greater depth of understanding of the phenomenon, in terms of directly observing the physiotherapists, and using interviews to define how the physiotherapists gave meaning to and interpreted their clinical practices. The importance of observation in addition to other data collection methods is that much of the thinking involved in clinical practice occurs at a rapid and subconscious level. Feedback or prompting on observed behaviours can serve to prompt recall and awareness of thinking, and enable practitioners to verbalise their reasoning, reflect upon it, and explain the rationale for it. This was utilised during the interviews when aspects of the observed encounters were discussed.

Triangulation refers to an approach to data collection in which evidence is collected through a range of different means to acquire differing perceptions and meanings (Webb *et al.*, 1966; Flick, 1992). Swanwick (1994) has commented that:

“In combining observations and interviews, if participants can explain what they intended by their behaviour, it will supplement the observational data” (Swanwick, 1994 p.9).

Further reflections on my claim to triangulation are explored in section 3.6.1. Fielding and Fielding (1986) suggested that there are two concerns to take into account when deciding on a triangulated research design. Firstly incorporate at least one method of data collection that is designed to illuminate the process of interaction itself, and secondly one that describes and interprets the context in which the interaction occurs.

It was considered that this multiple methods approach facilitated interpretation by allowing for a more complete understanding of what was being studied, in terms of asking why physiotherapists practice in the way they do and clarifying any inconsistencies between what physiotherapists say and do.

Phase two – for the second phase of this study patient's personal narratives obtained from semi-structured interviews provided a rich descriptive text of their individual experiences of receiving exercise as part of the management of their LBP. It allowed for an in-depth exploration to reveal an understanding of what patients think about decisions made regarding treatment.

Fleming, Gaidys and Robb (2003) recommend that researchers go back to participants for a second or third talk. Their opinion is based on Gadamer's (1996) view that understanding depends on the particular historic situation that is to say that the participants as well as researchers understanding will develop over time. In this thesis it became apparent that it was a challenge to interview participants about a phenomenon that is unfamiliar to them. I considered that all interviewees gave me as rich a dataset as they could, and I found no need for follow-up interviews. However, all participants received an invitation to contact me if they had something to add, or if the interviews raised any questions in their minds. No one made this second contact.

3.3.1 Observations - preparing to enter the field

As a novice researcher undertaking a part time PhD with no previous experience of 'observing', contact was made with a social anthropologist from a neighbouring acute healthcare trust. Her experience in the use of observation methods was helpful in giving me some guidance about recording and keeping field notes. I had considered using instruments designed to measure shared decision making in clinical practice from an observer point of view such as the Braddock scale (Braddock *et al.*, 1997) or

the observer OPTION scale (Elwyn *et al.*, 2003). However I decided that use of such scales may not be appropriate as they may not adequately capture the essence of sharing decisions. I also wanted to be as receptive as possible to all visual and audible stimuli even if it did not seem relevant at the time.

I valued the advice offered by the social anthropologist to enter the field of observation with an entirely open mind and just record 'what I see', which would allow for a more open minded and more context sensitive approach. Having read the ethnographer Geertz's (1993) work I attempted to record 'everything'. However, I formed a basic misunderstanding about the nature of 'thick description'. I understood such descriptions to be full of detail, although I now understand such accounts to be highly interpretive.

In preparation for data collection and to gain experience, three pilot observations were undertaken, field notes written up and feedback sought which was generally positive and encouraged me to have the confidence to begin formal data collection.

"I've really found it fascinating to look at your data. It's beautifully organised and you'll have a really usable dataset from this. I think you've got a good balance of recording what you saw and heard and your interpretation. The interpretation looks sensible, and I like the fact that you use question marks to indicate where you're not sure about interpretation - that works well I think. The level of interpretation is about right as do the issues that you raise". (Feedback from Social Anthropologist).

3.3.2 Data collection and recording

'Observing' was a more complex task than I had ever imagined, and whilst I made the time to read and talk to experienced researchers, on my first day 'in the field' I wondered what it was that I should be doing. There appeared to be few if any 'answers' to the numerous difficulties I encountered with this method. I noted these concerns in my reflective journal:

Feeling quite nervous today about the observations from a number of different angles:

That I won't really know what to record and what to omit, am I going to be 'too' selective?

My prior reading and understanding will bias what I see and hear i.e. will I be more worried about what I don't see or hear rather than recording of actual events.

I am still concerned about the therapist, will they feel comfortable with my presence, and have I coerced them into collaborating with me?

These and other issues emerged that required attention, and their impact on both the processes and products of the research needed to be assessed, both by the researcher and by the consumers of this research. It was also important given my professional role and links to the participants, to make the research process as transparent and honest as possible. It is to these issues that I now turn.

Observations involved systematically watching the participant physiotherapists in order to develop a clear impression of their working practices and behaviours in terms of their approach to exercise prescription and the patients' involvement in the process. Each observation was treated as a unique event with no predetermined categories or notions as to the discrete behaviours that might be observed (Pretzlik, 1994). However based on my pre-understandings and past experiences I was conscious of taking into the field some idea as to what I expected to observe, whilst acknowledging that this may change with time as more data were gathered and as I gained experience in the setting.

I negotiated with the participant physiotherapists days on which observations would take place. Patients who had been referred by their GP with a stated diagnosis of CLBP were booked onto the physiotherapist's list and were approached by me prior to commencement of the assessment to ensure that as far as possible they fitted the criteria for inclusion in terms of the duration of symptoms (>8/52 or a history of 3 or more episodes in the preceding 12

months). All patients were given a participant information sheet (patient) (Appendix C) and offered the opportunity to ask any questions prior to seeking their written consent (Appendix D) for me to observe their assessment.

If during the course of the assessment patients were found to have symptoms related to inflammatory joint disease, nerve root pathology, cauda equina signs, or any other potential red flags (signs of serious pathology) such as suspected malignancy, infection or spinal fracture, or the patient's problem was not related to their back then data collection was abandoned (this happened on 3 occasions). I was keen to stress that my emphasis lay in observing the physiotherapists more than the patients themselves. No patients refused to participate.

Fieldwork was undertaken over a series of separate days rather than in blocks of consecutive days. Completing the fieldwork in this way gave me time to prepare and write up field notes, transcribe interviews and undertake some initial data analysis, identifying interesting features that could be explored in subsequent fieldwork (see Figure 3.2). This is in line with the approach advocated by Gadamer (1996) to help facilitate the process of understanding.

This seemed in retrospect to be a good approach as I found the observations tiring in terms of the level of concentration required and striking the right balance between the recording of dialogue and descriptions of the participants and actions. My early observations were however much less detailed than later ones due to my undeveloped research skills in obtaining data. This subsequently became easier as I gained more experience and familiarity with the process, and as the observations became more 'focused' onto factors and processes influencing the prescription of exercise.

Observations more than interviews are subject to interpretation by the researcher in terms of what they choose to observe. Emerson, Fretz and Shaw (2001) acknowledge that field notes are a form of representation which are inevitably selective. Things that seem significant are recorded, and things

that do not seem significant are ignored or left out, and this depends upon the researcher's professional and personal worldview.

This concerned me in the initial stages of data collection in terms of capturing what seemed to be relevant and not 'missing' other events, actions or dialogue. I dealt with it in part by undertaking pilot observations and receiving feedback. However my background and 'tacit' pre-understandings and knowledge of the phenomena under study meant I was always torn between recording what 'was observed' and what I felt I should be observing. Braddock *et al.* (1999) noted that some elements of shared decision making rarely occur, and, as a result, researchers attempting to code encounters often find themselves documenting what is lacking instead of what is present. In my reflective journal I noted my 'prejudices' or the way in which my 'horizon' was operating. Some of the first entries into my reflective journal concerned my beliefs that therapists were failing to actively listen to their patients, and struggling to deal with the complexities of a patient with chronic pain:

I felt I witnessed evidence of therapists using some principles of motivational interviewing and asking appropriate questions regarding patient's agendas, but then the management plan was not necessarily reflective of the answers given by the patient. Is this a case of not listening or the therapist taking an approach they are comfortable with – is this a way for the therapist to feel in control? Is this the case with patients who have complex/chronic/multiple problems?

Are therapists demonstrating active listening by their body language but failing to acknowledge what is being said i.e. valuable potential cues from the patient regarding preferred exercise approaches such as swimming?

Accordingly, the accounts I produced for my field notes were arguably very scant as I attempted to adhere to the 'observables' rather than the 'interpretables'. Despite this, I was acutely aware that observation is an interpretive act.

Having read the literature it became clear that there were significant differences over how, where and when field notes should be written that

record what the researcher learns and observes about the activities of others and their own actions, questions and reflections (Emerson, Fretz and Shaw 2001). This self-reflection is part of 'reflexivity' which is considered important in ensuring the rigour in qualitative studies as it gives the researcher the opportunity to account for their presence, behaviours and preconceptions during the research process. Cutcliffe (2003) has reported scepticism in the ability of researchers to engage in 'reflexivity' as they are not always conscious of their own cognitions. As I was adopting a constructivist perspective it was important to try and consider how my presence and positioning might have influenced the research process and its outcomes. Therefore a 'reflective journal' with 'reflexive' notes was used during and after the observations and interviews. I did not find this a particularly easy process, as I was initially unsure about recording my concerns about the research process and how it was emerging. At first it appeared to be time consuming with little obvious benefits. It also exposed one to being honest, open and critical about one's own research at an early stage which did not feel comfortable. So the journal initially contained a record of early emergent thoughts and themes. However as the research progressed opportunities arose for a more thoughtful analysis of the research experience. My own personal thoughts and feelings about the relationship between me as the researcher and the participants, and the research methods, developed with time and were built into the research.

I was acutely aware that entirely avoiding researcher influence on participants is an idealistic improbability. For this study, note taking was kept as unobtrusive as possible. I chose a process of writing key words and brief notes while in the field which were then completed in considerable detail as soon as possible (to enhance accurate recall) away from the research setting, and prior to the next observation. They consisted of a descriptive record of what was seen and heard, and were immediately followed by an initial analysis through the use of contact summary sheets (see Figure 3.3) as suggested by Miles and Huberman (1994, pp. 51-54) as a means of leading to more focused fieldwork.

Figure 3.3 Example of blank contact summary sheet (see Appendix I for a completed example).

Salient Points	Code/Themes
1. Describe the situation and people involved	
2. What were the main issues or themes that emerged from this contact?	
3. What new features emerged as salient, interesting or illuminating.	
4. What information, variables or hunches were not acquired during this contact and need to be focused on in next contact.	

I had some concerns about my ability to record the dialogue verbatim, and as such consideration was given to the use of audio-recordings not transcribed but kept on file as a back-up to check the written notes. In the design of this study I considered that language would be one of many resources used to discover how practice was constructed, rather than using a detailed examination of words as a topic in its own right. So I undertook some pilot observations and practised scribing without looking down in order not to temporarily disengage with the encounter. By doing this I felt reasonably confident at the time of beginning data collection in capturing the essence of the observation.

Selection and memory became crucial not only in my choice of what to observe but also in remembering that episode long enough to commit it to meaningful and accurate recording. However, fallibility of memory is as much a problem for researchers as for others, as to remember something is to reconstruct thoughts.

So remembering is more accurately seen as re-remembering. As such, the field notes were reconstructions of what appeared to happen. I would observe something note it down on site, then remember it again back at my desk to enter it onto the computer. Such activity is fraught with missing something in the translation. Further, my written observations were constructed through language and so further re-remembered (Berger and Luckmann, 1967). Throughout this process I was engaged in the hermeneutic circle of understanding as I considered each part of the whole encounter. Through this I was situating my prejudices or 'horizon' as a physiotherapist in the re-engagement process with the data, from which I found my 'vision' of the meaning of the physiotherapist-patient encounter extended.

My naivety and lack of research experience is such that at the time of beginning data collection I felt comfortable with the decision not to use audio-recordings. However in retrospect this was a decision that I now regret, but I only really became conscious of questioning this decision at the point of data analysis with an emerging feeling as my analysis progressed that my field notes were scant and lacked detail and hence dependability with regard to the details specifically of the dialogue.

3.3.3 Limitations of observations

Observations as with other methods have their limitations, some of which have been highlighted above regarding selectivity bias in the writing of field notes, and potential ethical issues which are highlighted below. In practical terms one of the other main problems is the potential effect of the researcher on those being observed in terms of influencing them to behave in ways that they would not normally behave, the so called 'Hawthorne Effect' (Landsberger, 1958). I became even more aware of myself as the 'research instrument' and the potential effect of this upon both the processes and products of the research. It is to a consideration of these issues in terms of my experience as a non-participant observer that I now focus.

Clearly in overt observation the effect of the observer's presence cannot be totally eliminated. I was aware that my presence in the scene must have had an effect. If nothing else, the observation notes were a record of physiotherapy practice in the presence of a physiotherapist observer. This view is supported by Kemmis (1980 p.43) who noted that the 'observed', at least to the extent that it is something which can be researched or understood, simply does not exist independently of the observer. However some authors believe that it is not always possible for people to change their normal behaviour and sustain it for long periods. Mulhall (2003), based on her experience, felt that most professionals are too busy to maintain behaviour that is radically different from normal.

The researcher is arguably the person best placed to know whether their presence has in any way influenced the data they have collected, and details were recorded in my reflective journal:

Felt that my presence potentially had an effect on therapist, not sure it had any effect on patient? The therapist acting less naturally, perhaps more formally.

Therapist asking questions in a prescribed format – order was somewhat haphazard and lacking coherence or structure – not sure how my presence might have influenced this, were they nervous or just wanting to appear thorough?

Therapist not probing for further information on certain responses. Is this normal practice or influenced by my presence?

However the evidence from one of the physiotherapists when directly questioned about how they found the observations personally was generally reflective of and in keeping with the views of Mulhall (2003).

"I would honestly say I wouldn't have done anything different whether you were there or not" (T8)

Clearly it is difficult to know whether this participant's comment was an honest appraisal on their part or whether it was said to reassure me as the researcher.

I was very aware of the potential for 'role conflict', and also mindful of the existing power differential as a senior member of the clinical team observing and interviewing peers which could have been harmful in terms of the physiotherapists questioning their competence or reflecting on their clinical practice and their approach to the use of exercise therapy in the management of patients with NSCLBP. I was keen that staff tried to view me as a social science researcher and not a senior colleague/clinician, in the hope that they would perceive me as less judgemental. Yet it is acknowledged that it may be impossible for staff to change their perspective of someone who they recognise as a clinician/senior colleague. Interestingly Lipson (1991) suggested that the best and richest data emerge from a situation where the participants trust the researcher. This view has been supported by Mulhall (2003) who speculated that a healthcare professional undertaking observations in their own place of work were more likely to be trusted than an outsider. I am not sure in retrospect whether this was the case or not as I had nothing against which to benchmark.

I was also conscious of being too close to the subject matter and the research participants, making it difficult to maintain balance between clinician/researcher roles, which could have compromised the trustworthiness of the research. This was particularly evident in situations where the physiotherapists started to engage me in conversations following the observations. In these instances it was necessary to weigh up whether refusing to enter into conversation on the topic would in any way alienate the physiotherapists and in turn compromise the richness of data to be gathered from interviews. On a couple of occasions I found myself wanting to engage in these conversations as I sensed that discussing issues informally may enrich the data. However I decided against it stating the reasons why I did not want to enter into discussions on the basis that this may influence their response to me in the interviews. Despite my initial concerns in doing this the physiotherapists immediately appeared to understand my reasoning.

Another potential limitation inherent with observational methods relates to the Rosenthal Effect (Rosenthal, 1964) which refers to the phenomenon in which the greater the expectation placed upon people the better they perform. I

was mindful of this in the design of the therapist participant information sheets (Appendix A) which highlighted that the study was exploring the approach to exercise prescription but it did not mention any information about the use of a shared decision making approach. I considered that withholding this information did not constitute deception but was necessary, along with the need for me to be aware of 'observer effects', in terms of not communicating this information to the participants during informal discussions away from the field. It was equally important to consider the way the questions were worded in the interviews so as not to influence the participants' responses as this would have also compromised, in part, the trustworthiness of the research.

3.3.4 Interviews

Interviews are helpful in examining the context of experiences, and can be a way of exploring differences between people in similar situations. Interviews are also a way of helping people make explicit things that are normally implicit such as feelings and understandings. Corbin and Morse (2003) describe three modes of interviewing: structured interviews, unstructured interviews and semi-structured interviews. The different interview methods are not just responses to different research needs but also embody different ontological and epistemological perspectives, with different methods representing different understandings of the social world and how it is portrayed.

There are several issues which shed light on my decision to use informal field interviews and semi-structured interviews. These issues are considered in more detail in the following sections: type of interview, relationships with the interviewees, management of the interviews, and outcomes of the interviews.

3.3.5 Type of interview

Phase one - for this phase of the study two types of interview were employed, informal field interviewing and semi-structured interviews.

Informal Field Interviews were an addition to the original design which was born out of discussion with other researchers. They suggested that use of this type of interview would allow for a more relaxed interaction, allowing participant physiotherapists to speak more freely and openly, whilst gaining a better understanding of the setting and participants' views related to individual care episodes. This would in turn provide a rich data source to complement the observations and provide a basis for questions to be asked in the semi-structured interview.

I sought physiotherapists' permission to digitally record the informal field interviews.

In general 4 main questions were asked of the participants:

- a. What factors influenced the decision to prescribe exercise for this patient?
- b. What factors influenced the choice of exercise?
- c. How would you sum up the patient's understanding of the role of exercise in their care?
- d. What factors did you consider that may influence this patient's engagement with the exercises? How did you address these?

These field interviews were kept as informal as possible, although inevitably a degree of informality was lost due to the decision to digitally record the interviews. I hoped that my social proximity to the interviewees would do much to foster the sort of relationships necessary to produce detailed and high quality data. I was keen to allow the physiotherapists time and

opportunity to explain their approach to patient management, in terms of what they did.

These field interviews provided a rich source of information which proved very enlightening in the overall analysis, offering a degree of context to individual care episodes. They also proved useful in generating prompts for further discussion in the main semi-structured interviews. They equally provided a valuable opportunity for me to practice asking questions within the research process.

Semi-structured Interviews formed the largest data set, and were undertaken with each physiotherapist within two weeks of completing the observations. I used a flexible structure consisting of open ended questions that defined the area to be explored, at least initially, and from which I could diverge in order to pursue an idea in more detail (Britten, 1995). According to van Manen (1997):

“The art of the researcher in the hermeneutic interview is to keep the question (of the meaning of the phenomenon) open, [and] to keep himself or herself and the interviewee orientated to the substance of the thing being questioned” (van Manen, 1997 p. 98).

The interviews involved asking questions to help participants explore the meaning of the topic and to probe for further thoughts and reflections. The tool of data collection is the interview guide (Appendix J), which for this study focused on exploring physiotherapists' perspectives on the characteristics and processes of exercise prescription for patients with NSCLBP. It was developed to incorporate a variety of factors from the observations, informal field interviews, and from the literature review of qualitative studies of patients with NSCLBP and the utilisation of exercise therapy in the management of NSCLBP.

In keeping with an interpretive phenomenological position Holloway and Fulbrook (2001) note how interviewers should be aware of their own mind set regarding the research topic, particularly when interview questions are being developed, because personal knowledge and experience inevitably shape

them. Therefore the interview guide was subjected to comment and scrutiny from my supervision team which was repeatedly pruned and refined to focus on key areas of interest.

A pilot interview was undertaken with a colleague on two separate occasions, who then provided feedback. I struggled in the initial interview to avoid the use of closed questions, particularly in my follow up questions. To address this I added the following to the interview guide to act as a prompt for me.

'Tell me more' 'How did you feel?' 'What do you mean by that?' 'I don't quite understand that' 'How', 'what', 'when', 'where', 'who'

This process also allowed me to reflect analytically on my role as an interviewer, considering factors such as volume and tone of voice, active listening through use of appropriate facial expression and eye contact as a means of encouraging people to continue to talk or talk more fluently or confidently. My initial thoughts were that undertaking an interview would be a straight forward process as I had considered that it was closely aligned in many respects to the type of approach used to elicit information from patients in clinical practice. This however proved to be a wrong assumption, as whilst I was fully cognisant with the statement by Measor (1985) that:

"You have to listen, but you also have to look as if you are listening"
(Measor, 1985 p.62)

and was aware of the importance of the non-verbal dimensions of interviewing, my first attempt at the 'research interview' unlike the familiar clinical interview lacked coherence. On reflection it was too directive with a tendency to focus on the script, not paying enough attention to the respondent and their replies, or allowing them to tell their story. Whilst open-ended questions were used to encourage reflection and rich description of ideas and experience, I failed on occasions to invite the participant to elaborate on their answers using examples and experiences. To become a competent interviewer it was necessary for me to take a systematic and reflective view of myself and my approach to this role.

The semi-structured interviews built upon one another as different characteristics and processes emerged, and as such the interview guide was used in a formative way and adapted during the data collection on the basis of the observations and informal field interview findings. As such it became clear to me that each subsequent semi-structured interview produced a richer data set, partly on the basis of the formative approach but also as I gained more confidence and skills in the interviewing process.

Phase two – for the second phase of the study, patients were interviewed using a semi-structured approach. This was a change to the original research proposal, and this amendment was approved by the National Research Ethics Committee (South West 3) and National Health Service Research and Development (NHS R&D). The move to individual interviews was considered to have significant advantages over the originally planned focus group method, the main anticipated benefits being:

1. Participants would have longer to talk without interruption by others, allowing them to present more detailed and complex information.
2. The researcher would have the opportunity to follow up areas of interest with an individual participant, encouraging reflection and a richer description of ideas.
3. An individual interview would allow the participant to expand upon their personal experiences and views in more depth.
4. An opportunity would be afforded to explore social and cultural contexts which may influence patients' views about roles in treatment decision making.
5. There would be an opportunity to generate information about what patients perceive as barriers to shared decision making and the kinds of interventions (if any) that would help them adopt a more active role.

Building on my first experiences, the main difference from the interviews used in the first phase of the study was that I attempted to keep the semi-structured interviews more open and conversational. In an effort to achieve that I used some brief patient vignettes (Appendix H). The vignettes offered different examples from the observations during which exercise was prescribed and differing levels of patient involvement in decision making were highlighted. The aim was to enable the patients to discuss more fully how their experiences were similar or different to the people in the vignettes. In a way the vignettes may have validated how they felt which made them more open about their own experiences.

3.3.6 Relationships with the interviewees

Qualitative interviews are characterised by flexibility and versatility with the researcher being responsive and sensitive to the interaction in order to obtain in-depth information about the phenomena being studied. A skilled interviewer will use responses from the participants to guide data collection, probing for further information, depth and clarity. The manner in which this is elicited will have a direct impact on the quality of information obtained (Sorrell and Redmond, 1995), which is also dependent on the quality of the relationship with the interviewees (Measor, 1985).

Phase one - as I was interviewing physiotherapists from within my own employing organisation, it was important to reflect on how the data being collected could have been influenced by the power relationships and how I was perceived by the participants. Further reflections on this are noted below.

The hermeneutic experience is characterised by an interview style that is open and the interviewer being aware of their body language and concentrating on the process of listening. Koch (1996) recommends an approach where the exchange is entirely open and no specific questions are asked. For this study I had prepared a broad series of questions aiming to foster flexibility and facility to address individual issues. However it was

apparent that in spite of my intentions to be flexible the first interview was conducted in a somewhat regimented and rigid format. Whilst 'probes' were used in an attempt to extend the narrative, the interview was quite brief, some of the responses received were possibly of questionable relevance and, as a result, a limited amount of data was obtained. The following entry in my reflective journal summarises my feelings:

Felt the interview with xx physiotherapist was not overly successful in terms of outcome. xx appeared to be bored by the process (perhaps nervous) this was reflected in their responses which were incomplete in some instances or failed to answer the question asked in others. I felt I did my best to probe for as much information as possible, but also felt uncomfortable at the thought of repeating questions where I felt I didn't get a good answer.

These acknowledged limitations of the first interview was in part related to my anxiety, but on reflection, had I taken more time and been a bit more relaxed, this may have helped the interviewee to divulge more. Following this first interview I re-read Gillham (2000) and Arksey and Knight (1999) and reflected on my interviewing style, particularly the use of probes.

I was conscious of not turning the interviews into an interrogation by repeating an unanswered question which is an issue noted for novice researchers by Price (2002). This situation was further complicated by knowing the participants and not wanting them to feel uncomfortable with the interview experience. However it was important that the interviews uncovered physiotherapists' views regarding exercise prescription, and so unpacking brief, and on some occasions, responses of limited relevance by the use of probing questions was necessary. I had some concerns that by interviewing participants that were known to me, and who were likely to have perceived me as the 'expert' that by using probes the physiotherapists would feel that I was searching for a specific response or the 'right' answer. This is frequently referred to in the literature as 'demand characteristics' (Gomm, 2008 p.167) or in other words, what it is that the participant thinks the situation demands. Part of this demand will depend upon how the researcher phrases questions, but also will consist of all cues that the participant may

pick up, such as the behaviour and body language of the researcher, and what answers the participants feel would lead them to be viewed as they would prefer. These effects are equivalent to the 'expectancy effects' or Rosenthal Effect (Rosenthal, 1964) highlighted previously in section 3.3.3. As a consequence I stressed on many occasions that there were no right or wrong answers, or indeed a hidden agenda, but that I needed to explore the issues with them in a way that is meaningful to them.

Phase two – as patients were being interviewed by a physiotherapist about their physiotherapy encounter this may have affected their willingness to be open about their experiences. In order to mitigate against this I introduced myself as a researcher. However, for ethical reasons, I was open to participants in disclosing to them my professional background, and this information was also provided on the letter inviting participants to take part. However, this knowledge did not appear to prevent participants from giving an honest appraisal of their physiotherapy experience, and a rich insight into a wide range of views was obtained.

3.3.7 Management of the interviews

Phase one - as part of my preparation I had read several accounts and texts setting out how to conduct interviews (McCracken, 1988; Britten, 1995; Arksey and Knight, 1999 and Gillham, 2000). For most studies one of the first considerations in undertaking an interview based study is access to the research site and secondly obtaining the cooperation of the participants. In this study, participants had consented to be observed and interviewed, so were aware that an interview would be undertaken. The informal field interviews with the physiotherapists were undertaken immediately following the observations in as a relaxed and informal manner as possible, and typically lasted no longer than five to ten minutes.

For the semi-structured interviews I wanted to conduct the first interview at the participant's place of work so that the interviewee would be in a familiar

environment. This was achieved by using a walled room away from the main physiotherapy department which proved quiet and convenient and not subject to any interruptions. By planning ahead I was able to accommodate all participants on the sites in this way.

All the interviews were digitally recorded. It was apparent when transcribing the informal field interviews that on occasion the participants had a tendency to 'tail off' towards the end of sentences which then proved difficult to transcribe accurately. So for all subsequent interviews, interviewees were reminded of the importance of speaking clearly at all times.

I found it hard to strike the right balance with the first interviews between being a researcher and wanting to undertake the interview in a formal manner, and being a colleague and thus not wanting to appear too 'unfamiliar' to the interviewees in my approach. The interview commenced with a scripted verbal reminder for the participant of the research agenda by explaining the significance of the study, its potential benefits and the importance of all views. I explained how the interview would be conducted, and how long I anticipated it would last. I also briefly read through the interview questions in advance so as to give the interviewees an idea of the topics to be covered so that they could gather their thoughts, but also to reassure them that there were no 'surprises'. At this point I reaffirmed my commitment to the research ethics code in that no identifiable data would be transcribed. The interview was not commenced formally until the interviewee was ready to begin.

Oakley (1981 p.44) has suggested that the more the interviewer and interviewee share in the way of characteristics and previous experience the more successful the interview is likely to be. As I was interviewing peers and thus had knowledge of the culture, politics and issues of the study setting, I was concerned that it would be difficult to get people to talk as freely and openly as I needed for my research, but apart from the first interview this was not a problem.

Arksey and Knight (1999 p.98) talk about the use of 'ice breaker' or 'easy to answer' questions relating to general background details. McCracken (1988) advocates the use of general and nondirective questions ('grand tour questions') to open the interview so as to give the respondent an opportunity to tell their own story so I began each interview with a very broad open question:

'Management of chronic back pain can be a challenging area of physiotherapy practice and there are many different approaches to helping people with this problem. Exercise is one of these. To start us off, can you please tell me a little about your experiences of using exercise therapy for patients with NSCLBP?'

The questioning then followed a logical sequence with questions exploring but not limited to the following areas of interest:

- i. How the nature of NSCLBP is explained to patients.
- ii. How the role of exercise as part of their management plan is explained to a patient with NSCLBP.
- iii. What factors influence the decision to include exercise as part of the management plan?
- iv. What factors influence the prescription of exercise such as: exercise type, exercise frequency, patient preferences?
- v. What factors are therapists most commonly aware of that may affect a patient's engagement with exercise?
- vi. What strategies or actions do they take to overcome those factors mentioned above?

Arksey and Knight (1999) have suggested that:

"What is left out of a conversation can sometimes be as important as what is included" (Arksey and Knight, 1999 p.101).

Clearly through my own background knowledge I was able to identify incomplete replies or omissions. As a consequence there were occasions during the interviews where I found myself wanting to comment on their replies, but as the participants were known to me I did not want the

interviewees to feel ill at ease with the answers they had given, so tended to avoid such practice. I was mindful of closing the interviews by thanking the interviewees for their co-operation but also by reaffirming how valuable their comments and observations had been.

Phase two – the interviews for phase two did not raise so many concerns as my confidence grew with increasing experience of conducting interviews. However I wanted to play down the interview situation to make it as relaxing as possible to facilitate a more open exchange in line with Koch's (1996) suggestion to let the patients tell their story in which ever way they wished. As for phase one I had prepared a broad series of questions aiming to foster flexibility in exploration of the topic area (Appendix K), exploring but not limited to the following areas of interest:

- i. Describing their history of LBP and experiences of physiotherapy and receiving exercise therapy as part of the management for their CLBP.
- ii. Recollection of any key facts and information that they were given with regards to their CLBP.
- iii. How did they feel about exercise as part of the management plan for their CLBP?
- iv. How well informed they were regarding the exercise programme chosen in terms of the anticipated benefits? And was it linked to any personal goals?
- v. Consideration of the vignettes.
- vi. Whether an exercise programme matched with their treatment preferences, in terms of what they were hoping for from seeing a physiotherapist?
- vii. Whether different approaches to exercise were discussed and their involvement in the decisions regarding the proposed exercise programme.
- viii. Exploring their general views on patients' involvement in treatment decision making?

I introduced the use of vignettes to act as a trigger for patients' thoughts about their own experiences, and as a way of encouraging patients to talk as openly as possible (Appendix H). To address the power imbalance, in terms of I knew what was coming but the participants did not, I decided to send out the vignettes to the participants before the interview so that they would have time to read them properly. I felt that this approach was unlikely to change their own story, but it would enable them to discuss more fully how their experiences were similar or different to the people in the vignettes. Each vignette was based on examples of clinical practice from past experience or what I had witnessed from observations in phase one, although certain details were altered.

The first vignette described a patient who was self-managing with exercise but due to increasing symptoms was seeking reassurance that it was acceptable to continue to exercise. The second vignette concerned a patient with CLBP who had received a lot of treatment in the past including a programme of exercises. Despite the patient's negative comments regarding past experience with exercise, the physiotherapist continued to give the patient a home exercise programme (HEP) with the option for further follow up left open to the patient to decide. The third vignette concerned a patient who was already successfully using swimming to help manage their LBP. Following assessment the physiotherapist reassured the patient that pain is not a sign of harm or damage, but then advises the patient to stop swimming on the basis that it might be aggravating the problem and advises patient about a HEP avoiding any exercises that increase the pain, with a three week follow up arranged. The fourth vignette concerns a patient who in part has accepted her LBP but wants to ensure it does not impact on her ability to walk her dog. The physiotherapist acknowledges the patients main goal and together they work out an exercise based management plan to help the patient achieve her goal.

3.3.8 Outcomes of the interviews

The outcomes of the interviews took the form of digital recordings followed by typing up into a written record. All interviews were transcribed within 24 hours of completing the interviews. Transcribing and preliminary coding of the early interviews helped in several ways. Firstly in terms of being able to listen to myself and gain feedback about my interviewing skills which was invaluable, with each interview my confidence and skill in conducting the interviews increased. It also identified areas for further exploration which helped to direct later interviews. Fleming, Gaidys and Robb (2003) noted that discussion of key points from previous interviews in subsequent interviews is essential to be true to Gadamer's description of the hermeneutic circle, and through such feedback and subsequent dialogue shared understandings between researcher and participant can be reached and the hermeneutic circle experienced.

The transcription of these interviews was an enormous undertaking requiring an investment in time in the order of 150-160 hours. The most heralded feature of the process of transcription is that in so far as it was undertaken by the researcher, it facilitated early and deep immersion in the data, and a familiarity through further reading of the transcripts. As a novice researcher I had some initial concerns about how the transcripts should be set out, but having considered the literature regarding transcription convention (Arksey and Knight, 1999 Ch.10; and Poland, 1995) and after taking advice from my supervisors it was decided to focus on a convention that captured as far as possible an 'accurate' record of the spoken words.

3.4 Ethical issues

This study was given full ethical approval by the University of the West of England, Faculty of Health and Life Sciences Research Ethics Subcommittee and National Research Ethics Committee (South West 3). Research and Development approval was granted by the R&D executive group of Somerset Primary Care Trust. The following issues were considered from an ethical perspective.

Phase one - as the first phase of the study was being conducted in my place of work, negotiating access was not a problem. As a consequence many of the participants were known to me because of their role. I gave careful thought to my relationship with the participants and grappled with ethical issues relating to recruitment and their preparation to participate in this research. In particular I was very mindful of the existing power differential as a senior member of the clinical team, and as such there was a concern that staff may have felt obliged to participate. From an ethical perspective I did not have direct line management responsibility for any of the participants, and it was emphasised on several occasions that it would not be viewed negatively if staff chose not to participate. I was particularly keen to ensure that the participants did not feel coerced into participating, reassuring them that there were no specific reasons related to their performance why they had been invited to participate, and also that there were no hidden agendas related to the study. The participant physiotherapists were recruited in accordance with the approved ethical protocol. It was important for the 'trustworthiness' of the study that all participants felt relaxed and confident in the research situation and that they were aware that all information collected would be confidential, with any mention of names or personal details made during the interviews or observations not transcribed to ensure these remained completely anonymous. Written consent (Appendix B) was obtained after potential participants had a chance to read and discuss with me details of the research as set out in the participant information sheet (therapist) (Appendix A).

For observation sessions patients with the relevant presenting condition were identified by the participant physiotherapists and approached directly by me. I introduced myself as being part of the clinical team, but that I was acting in a research capacity. A participant information sheet (patient) (Appendix C) explaining the research was supplied and informed consent obtained in writing (Appendix D). I was aware of the ethical code stipulating that a prospective participant must be given sufficient time to decide whether or not to take part and at least 48 hours must be given between the giving of the participant information sheet and obtaining of consent. The design of this

study meant it was not possible to uphold these timescales which was made clear on the NHS Research Ethics Committee (REC) forms which were considered by the National Research Ethics Committee (South West 3) and approved on 25th March 2011 with no ethical issues raised.

Mander (1995) has said that it is not always possible to maintain confidentiality, concluding that in the course of research, confidentiality carries many benefits for all parties, but may present the researcher with some practical difficulties. I was conscious that obtaining informed consent and entering the world of the physiotherapists to record what they observed still carried some threats to confidentiality and anonymity. For this study this was evident from two fronts. As the researcher I was aware of my moral obligation to protect participants from being identified by the others, but this proved impossible to uphold as by entering the field to perform the observations it was clear to other staff members who was participating in the research.

The data were transcribed as soon as possible after the observational sessions or interviews and analysed at an NHS site and saved on a password protected computer in a password protected document. Every effort was made to respect participants' rights at all times by the use of code numbers in the report, and not attributing any quotes or comments to individuals in ways that would permit the individuals to be recognised.

All identifiable information was removed or changed, and the data protected in accordance with the Data Protection Act (1998) and the NHS Research Governance Framework (DH, 2005).

Copies of all observational field notes and interview transcripts and any personal information provided in writing (e.g. signed consent forms, contact details) was kept securely within a locked filing cabinet at the researcher's place of work. They will be retained for a period of ten years in accordance with the NHS Research Governance Framework (DH, 2005), after this time they will be destroyed.

As a novice researcher undertaking research with my own peer group, I was aware of personal issues emerging, such as a sense of anxiety that I was exploiting my relationship with the staff and how the study findings may affect the ongoing therapeutic relationship. I was also mindful of the potential adverse effects for the physiotherapists in terms of them questioning or reflecting on their clinical practice and their approach to the use of exercise therapy in the management of patients with NSCLBP. Through my experience and clinical skills I was prepared for these situations should they have arisen through a willingness to discuss the implications for professional practice as a consequence of being involved in the research. As with recruitment to the study it is difficult to know whether the staff felt any uneasiness regarding their clinical practice. All staff were offered the opportunity of a debriefing session to discuss any concerns or issues that had arisen either during the observations or the interviews. The retrospective evidence is that some of the staff felt they benefitted from the experience. The following comments were made by two of the participants:

“Thanks for the feedback today, it was really helpful. Put it into practice straight away with good results and felt more comfortable with the overall approach” (T3).

“Thanks for today I really enjoyed the chat aspect of it all” (T1).

For others it seemed to encourage them to be more reflective of their clinical practice:

“In thinking about what I was going to say in this interview I was trying to think of what training that backs up what I do on twice daily thrice daily basis and I don’t think I have. People always want to practice manipulating or mobilising the lumbar spine but I don’t do that very often. Thinking about this I think it is something I need to address” (T6).

Phase two – the use of posters for recruitment with patients self-selecting was the first stage of a stepwise consent process which is an important ethical aspect of this part of the research. This recruitment strategy meant that patients were not under any external pressure to agree to take part which they might have experienced had they been approached directly by

the researcher or another clinician. The consent form was signed at the beginning of the interview, once the participants had the opportunity to read and discuss the participant information sheet (Appendix F) and to ask questions about the research.

As with phase one, the data were transcribed as soon as possible after the interviews and analysed at an NHS site and saved on a password protected computer in a password protected document. All identifiable information was removed or changed by the use of pseudonyms in the report.

3.5 Data analysis

Having discussed the data collection issues and methods, in this section I will explain the data analysis method selected and reasons for this choice.

By using observation field notes and interviews during fieldwork I was faced with a large amount of information that had been gathered from the participants. The next challenge related to how to analyse the data, how to document this experience and most importantly how to make sense of it all.

3.5.1 Application of hermeneutic principles to the analysis

Interpretation of the texts was guided by the principles of Gadamerian hermeneutics since the research goal was to interpret and understand the characteristics and processes of physiotherapy exercise prescription with a specific focus on the decision making processes and experiences from those who are most likely to know and understand this practice, the clinicians and patients. The concept of the hermeneutic circle based on an approach adopted by Paterson and Higgs (2005) (see Figure 3.1), was used to guide the text interpretation process which in turn was based on interpretation of the relevant literature and the perspectives of the research participants. Guided by hermeneutic principles, interpretation in this context was not an objective explanation or neutral description, but an engagement with and laying out of the comprehension of the text which says: *'this is what I believe*

the person or text is getting at' and/or 'do I have a sense for something that the participants themselves are perhaps not aware of?'

Braun and Clarke (2006) noted that several patterns or meanings could be identified across any dataset and have suggested that the purpose of analysis should be to identify those relevant to answering a particular research question. They define thematic analysis as:

"...a method for identifying, analysing and reporting patterns (themes) within data. It minimally organises and describes your data set in (rich) detail. However, frequently it goes further than this, and interprets the various aspects of the research topic" (Braun and Clarke, 2006 p.79).

Braun and Clarke (2006) intended this method to be used flexibly and for any variations to the method to be clearly explained to ensure transparency. Although this six phase method appears to be linear, they recognise that in practice a researcher will move between phases 2, 3, 4 and 5 in an iterative manner, moving back and forth between data analysis and the developing themes, in order to re-examine the data in the light of any developing themes (see Table 3.1). This process is congruent with the hermeneutic circle which is a key of Gadamer's approach.

Table 3.1 The six phases of thematic analysis (reproduced from Braun and Clarke, 2006).

Phase of analysis	Description of the analytic process
1. Familiarizing yourself with the data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back from the analysis to the research question and literature, producing a scholarly report of the analysis.

On reading the paper by Braun and Clarke (2006) two factors emerged which reinforced my choice of thematic analysis for the data analysis. Firstly the way it offered a way into qualitative research to learn the mechanics of coding and analysing qualitative data systematically, thus providing core skills for conducting other forms of qualitative analysis. Secondly its flexibility, in that as a method it is relatively independent of theory and epistemology and so could be applied across a range of theoretical and epistemological approaches. Determining themes and sub-themes as part of the data interpretation needs to reflect the importance of the data to the research question, hence the importance of a flexible approach.

In the next section, the specific method used is detailed, discussing the variations from Braun and Clarke's method, and explaining the reasons for these variations.

The process for interpretation of the texts was -

Step 1: Creating the texts, listening, reading and being immersed in each participant's texts.

Step 2: Making notes of initial ideas, interesting features and messages in their texts.

Step 3: Each text was divided into units of meaning (codes), identifying interesting features and choosing codes to capture the meaning in the texts.

Step 4: Grouping the codes into tentative sub-themes and themes after finding commonalities in the texts.

Step 5: Reading and interpreting texts as a whole with repeated return to the supplementary questions and texts in a process of deepening understanding; refining the specifics of each theme, and the overall story the analysis tells, generating clear descriptors for the themes.

Step 6: Producing the report, relating the analysis back to the research aims and literature, and producing a scholarly report of the analysis.

It is to details of this process and issues that I now turn.

3.5.2 Step 1 – Creating the texts

I entered the hermeneutic circle by clarifying my pre-judgements about physiotherapy exercise prescription, in terms of how I had experienced it, and my perceptions underpinning clinical practice. Acknowledging that my own horizons and prejudices would evolve through the research, this was the first attempt to understand the topic by seeking to interpret the horizons I had created through past experience. Reflecting upon potential bases of interpretations from other sources two further text sets were constructed:

a) A review of the literature concerning effects of exercise therapy in the management of NSCLBP, the concepts of patient-centred care and shared

decision making, and patients experiences and preferences of receiving exercise therapy as part of the management plan for NSCLBP.

b) The texts, comprising field notes and interview transcriptions from physiotherapists and patients regarding characteristics and processes of exercise prescription for NSCLBP.

Reading the literature facilitated an understanding of the way authors had interpreted key concepts relating to physiotherapy exercise prescription. Using the hermeneutic circle the aim was to understand the practice of exercise prescription from the horizons of other authors. Gadamer (1996) emphasised the essence of the right questions for elaboration of the hermeneutic situation, he further stated that there is no understanding without the activity of questioning. Therefore in line with the approach adopted by Paterson and Higgs (2005) for phase one (physiotherapists), four supplementary questions were developed which aimed to provide a greater context to the fusing of horizons between the texts and the researcher:

- What is the value physiotherapists place on the role of exercise therapy for patients with NSCLBP?
- What are the types of decisions physiotherapists make regarding exercise prescription for patients with NSCLBP?
- What are the processes used to make those decisions?
- How does clinical practice relate to recommendations from current clinical guidelines and health care policy?

For phase two (patients) guided by Sepucha *et al.* (2008), perspectives on determining the quality of the decision making process led to three supplementary questions being developed:

- How informed was the patient before embarking on a particular treatment or self-management programme?
- Did the treatment selected match their preferences or what was important to them?

- Did the clinician give serious attention to informing and involving the patient in the decision process?

I transcribed the interviews within 24 hours of conducting each interview. The audio recordings from the interviews were personally transcribed verbatim, to maximise familiarity with the data, and were set out in a Microsoft word table format. Data were anonymised at this stage. Field notes from the observations were set out in a similar format.

3.5.3 Step 2 – Identifying interesting features

Each observation case was summarised in line with Thorne's (2000) argument that summarising the data is a useful process that enables the researcher to boil down 'the complexity of the data in hand'. To achieve this contact summary sheets as suggested by Miles and Huberman (1994 pp.51-54) were constructed which consisted of bullet points about the main or important issues that emerged. This was a good technique for providing quick information about each case and identifying issues for exploration at subsequent observations and interviews (Appendix I).

3.5.4 Step 3 – Initial coding

It is worth mentioning that data analysis took a great deal of intensive work and organisation due to the quantity of data collected from the field. There are numerous software packages such as the data analysis package NVivo designed to enable the researcher to undertake qualitative analysis (Parahoo, 2006). I attended a three day NVivo course and spent several hours trying to become familiar with the software package. In spite of my perseverance and due to a lack of experience in managing such qualitative analysis software I ultimately decided to adopt a manual rather than software assisted approach to data management and analysis. This decision was not solely based on my struggles to master the software but on my own perceptions that a manual approach would enable me to have a greater immersion in the texts. I had great concerns at the time that this approach

would be frowned upon by my supervisors, and so it came as a great surprise (and relief) when they were very supportive of my decision to use a manual approach to analysis rather than using the qualitative research analysis software, as they had all experienced similar dilemmas. I reported further reflection in my reflective journal:

Working in one dimension on a computer screen does not feel comfortable and complete; a manual approach seems in some ways to be more 'hands on'. A manual approach allows for easier and increased engagement with the data and almost a feeling of knowing the whole dataset better.

One of the aspects of hermeneutic circling is going back to 'touch base' with the research aims. From this focus hermeneutic circling between text parts and emerging whole picture of exercise prescription begins the process of exploring the horizons of the participants. Similar to the strategy adopted by Jeffrey and Foster (2012), and as part of the dialogical nature of hermeneutics, each text was read repeatedly in an attempt to identify units of meaning. While reading each of them I used highlighting pens and started writing memos in the margin of the texts in the form of early potential codes arising from the texts.

A hermeneutic view resists the idea that there can be one single authoritative reading of a text and recognizes the complexity of the interpretive endeavour which involves laying out ones interpretation of the text. Using an MS Excel spreadsheet an initial mainly descriptive attempt at coding was written in the third column of the spreadsheet, which was then hidden from view before a second attempt at coding based on a tentative interpretation from the researcher's horizon was written in the fourth column. Once completed, both columns were uncovered, and a final coding based on a conclusive interpretation was written in the fifth column of the spreadsheet. My intention through this process was not only to be thorough, but to draw on my interpretative resource to make sense of what had been said. Though this process was time consuming it facilitated a detailed familiarity with the data and increased my experience at coding allowing me to find more suitable

meanings for the participants' narratives through the iterative use of the hermeneutic circle. Two examples of this method are presented in Figure 3.4.

For this study no inter-observer comparison of the data analysis was undertaken. This decision was based on the fact that one of the basic tenets of philosophical hermeneutics is that a dialogue takes place between researcher and text, or reader and interpretations, acknowledging that the researcher and reader bring to the analysis her or his own pre-understandings with respect to historical awareness. The codes and themes emerging from the text are therefore not always the same for different researchers because perfect agreement when analysing the same material would not be expected. Therefore a second reader of the texts may have different pre-understandings and so may not have shared my interpretation but they should be able to follow the way in which I came to it (Koch, 1994). My PhD supervisors provided a level of dependability, facilitating refinement of the thematic analysis through peer review and auditing (Seale, 1999) and were able to confirm that the research findings were an accurate representation of participants' experiences.

Similar to the approach adopted by Lindseth and Norberg (2004) researching lived experience based on a phenomenological hermeneutical method, coding tables (Appendices L and M) for each of the participants were then constructed with the illustrative data extracts numbered to reference the transcript from which they were drawn, with a summary of the extracts aiming to interpret the apparent meaning of what was observed or what participants were saying.

Figure 3.4 An example of the two analyses conducted on each section of transcript, together with the resolved interpretation in the final column.

Participant	Transcribed text	First analysis attempt	Second analysis attempt	Conclusive Interpretation
T1	<i>I must admit for every LBP I have coming in through my door I pretty much will always give them exercise. So I must admit I don't think about it too hard its just part and parcel of the package that I like to give, and it would be the first thing I would choose to do rather than do something else first, so rather than doing hands on treatment or try acupuncture or do something like that I will always go down the road of exercise first.</i>	Has a standard/conditioned approach to managing patients with this condition. Approach is therapist centred with exercise always first line of treatment.	Always uses exercise, seems to regard it as a standard way of treating LBP, almost the default approach to treatment.	Exercise is the mainstay of treatment. Doesn't think about its use too deeply as it is part of normal first line treatment approach (default approach).
T6	<i>The type of exercise, yes they do actually. Weakness and tightness in various muscle groups which I think is one of the quickest, tightness in muscle, muscle groups often addressing those properly often brings the quickest results I think. Similarly weakness gluts weakness in particular, strengthening and stretching in those sorts of areas, as I said I think I get quite good and quite quick results with some patients.</i>	Type of exercise is determined by objective assessment findings. Exercise programme chosen is based on exercises to address identified mechanical or structural problems.	An exercise programme based on objective assessment findings, offers a mechanical solution for biomechanical factors identified at assessment.	It depends on what I find. A mechanical cause demands a mechanical solution.

3.5.5 Step 4 – Development of themes

This step was addressed by a manual approach of identifying the common patterns in the texts to form potential themes and sub-themes, searching for the presence or absence of illustrative data extracts relating to these themes from each participant which were then later used to prepare the individual text interpretation summaries (Appendices N and O). The apparent absence of data from a participant that had been highlighted in other participants triggered a review of their texts to ensure these data had not been missed, but also in doing this I was conscious of the issue of 'importance' in terms of the need to provide adequate examples to evidence a theme, but at the same time not selecting a theme purely on the basis of its prevalence within the data. A good example from my analysis relates to the theme 'Exercise as the mainstay of treatment' which although only commented on directly by five of the participants the strength of responses was such that I felt it should stand as a theme in its own right. From my initial coding I had started to get a feel for themes existing within the texts, in my head and in my journal, which I constantly constructed and de-constructed. Some common themes were identified along with supportive illustrative extracts which provided answers to the supplementary questions using a hermeneutic approach to analysis, and were reflected on by using the hermeneutic circle by comparing the text items and the whole and returning to the original transcripts and coding tables. For example from the texts created from the physiotherapists in phase one the supplementary question: 'What are the types of decisions physiotherapists make regarding exercise prescription for patients with NSCLBP?' was effectively captured by the themes 'Which exercise? - the tension between evidence and everyday practice' and 'I want them to exercise.'

Different positions have been considered as to when one should engage with the literature relevant to your analysis. Early on in my study, my readings around 'researcher bias' and engagement with the literature in the early stages of analysis (Braun and Clarke, 2006) meant that initially I was torn between becoming more knowledgeable on the topic I had chosen to

research, and in my quest of 'getting it right' not overtly compromising my study. However in characterising the philosophical orientation of my study I read about hermeneutics and the notion of how 'a fusion of horizons' including an appreciation of how past experiences and material found in the literature could be embedded within research data in the act of data interpretation, which gave me reassurance regarding my approach.

3.5.6 Step 5 – Refining the themes

This step involved a recursive process and was essentially concerned with quality checking. Firstly to check the themes against the collated data extracts and explore whether the themes work in relationship to the data. It was at this stage I decided to use the individual text interpretation exercise, also known as respondent validation or member checking, as a technique to increase the credibility of the research data (Doyle, 2007). Individual text interpretation summaries were sent to each participant to allow them to comment on the accuracy and critically reflect on the extent to which the interpretations made by me reflected the experience of the phenomenon as it was understood by them (Appendices N and O).

Expecting a participant to read through the whole analysis is asking a lot of that person and may affect their judgement, therefore to achieve this I chose between 6 and 10 illustrative extracts for each of the participants across a range of themes and subthemes and sent a copy to each individually with a specific question:

Is my interpretation of data extracts taken from your interview and observation sessions reflective of the theme I have assigned it to?

(Physiotherapists)

Is my interpretation of data taken from your interview reflective of the theme I have assigned it to? (Patients)

Individual text interpretation assumes that the analysis is both comprehensible to participants and acceptable to them. It may be neither for reasons that have nothing to do with accuracy or credibility but may have a lot to do with ideology as it may be in their interest to protect their 'socially presented selves'. I had some concerns in undertaking this process with the physiotherapists from phase one of this study as since the observations and interviews had been performed I was aware that the staff had received training in the principles of shared decision making and its application to clinical practice and so was concerned the physiotherapists reflecting on their new learning may question the authenticity of my data and the quotations used. So in seeking their feedback I stressed that the extracts themselves could not be changed, but I was interested in seeking their opinions on the themes the extracts had been assigned to. Participants were asked to give their feedback in writing, and satisfied the need for Level 1 review, checking if the themes work in relation to the coded extracts (Braun and Clarke, 2006).

Feedback was received from six of the eight physiotherapists from phase one. All felt the themes were a good reflection of the data extracts:

"I am happy with my comments, and don't feel the need to add or change anything" (T1).

"The interpretation summary looks good. I agree with how you've allocated the comments to your themes" (T6).

"I agree with the interpretation, specifically the identified themes seem a fair reflection of the illustrative data and in the main part to my thoughts and practice" (T4).

For participant T4 it led to a further reflection on what they described as their drive to provide specific exercise of some description for patients presenting with NSCLBP and why this approach should be any different to managing patients with other chronic pain conditions:

“This provides an interesting reflection point for me because this is not something I would do with other chronic pain conditions such as fibromyalgia where all my focus would be on pacing, thought processes/beliefs, lifestyle factors, and encouraging general exercise” (T4).

Feedback was received from three of the eight patients from phase two, all were happy with how the data had been interpreted.

“I am happy with my comments and how you have set them out.”(Phil)

“I have nothing I wish to add to this, it seems a reasonable summary of what we discussed.”(Trudy)

“I found some of the questions in the interview quite challenging, so I hope my answers were ok. I think I am happy with the way my comments have been summarised” (Mike)

Checking if the themes work in relation to the entire dataset (Level 2 analysis) was undertaken as an iterative process using the following questions taken from Braun and Clarke (2006) to guide my decisions:

- Is this a theme?
- What is the quality of the theme (does it tell me something useful about my dataset and research question)?
- What are the boundaries of this theme (inclusions and exclusions)?
- Is there enough meaningful data to support this theme?
- Are the data too diverse and wide-ranging (does the theme lack coherence)?

The goal of this process by using the hermeneutic circling process was to assess the significance of the themes in light of the research aims and existing literature. Remembering that themes give shape to the shapeless, my aim through the text interpretation process was firstly to establish whether my interpretations were anchored in the experiences of the

participants and secondly to produce a research product offering the reader an understanding or illumination of the exercise prescription process for patients with NSCLBP. The main themes and sub-themes were further refined through continuation of the iterative process, until it was believed that optimal understanding of the texts had been achieved and when it was thought that other physiotherapists would be able to recognise the phenomenon from their own experience. Therefore to test this decision, in line with approaches used by Debesay, Naden and Slettebo (2008) and Jeffrey and Foster (2012), the key themes were presented to two other physiotherapy colleagues working with patients with NSCLBP. Their opinions were sought through informal discussion. The feedback received during these discussions highlighted that the main themes and the interpretation were acknowledged as familiar to the experiences of these physiotherapists:

1. **Does it tell a story?** *“Yes, I think you have very cleverly weaved the patient and physio comments and interpretations into a very cohesive whole. There is a very clear storyline, and subplots that hold together well. I suppose one of the risks with this type of writing is that you may end up repeating yourself, but somehow or other you have avoided this pitfall. It is also very readable, clear, concise without flannel or waffle – which is quite a feat!”*
2. **Do the themes work in relation to the data?** *“I think you have done very well to pick main themes and sub-themes from the data and comments you have recorded. You have interpreted the comments and summarised the themes very clearly.”*
3. **Are the themes familiar to my experience as a physio?** *“Undoubtedly, you have raised many of key themes that I have observed not only in my own practice, but the practice of others. The perception that exercise is the mainstay of physiotherapy is a long held belief... you have nicely unpacked some of the confusions and challenges that that belief leads to in practice – things like “I feel like I must give exercise because it is what the patient expects”, “I need to tell them what to do because I am the expert”, the assumptions and generalisations that physio’s make about their patients and their ability to engage, or not engage with physical activity... these are all part of my experience.”*

This feedback provided valuable evidence regarding 'fittingness' in that the findings are meaningful and applicable in terms of the physiotherapists' own experiences.

3.5.7 Step 6 – Producing the report

The final step of the thematic analysis is detailed in the next two chapters. It is acknowledged as a pragmatic outcome, which has been constructed to advance understanding of exercise prescription in this patient group. The character of the study does render it non-objective and incomplete in that it is linked to my perspectives as the researcher, and therefore is ready to be challenged when better insights come along as meanings are infinite and always expanding themselves, thus no meaning saturation can exist (Koch, 1999).

3.6 Evaluating the quality of the research process

This research is based on the philosophical hermeneutic approach of Gadamer (1976) in which the hermeneutic circle, dialogue, fusion of horizons and 'prejudice' are fundamental concepts for understanding this interpretive work.

One of the biggest challenges with qualitative research is how to ensure quality as there is no consensus regarding quality standards, which should be applied to all qualitative research, because of the variety of ontological and epistemological positions and research methods which qualitative researchers adopt (Seale, 1999; Mays and Pope, 2000; Willig, 2001; Spencer *et al.*, 2003; Ballinger, 2004; Finlay, 2006). Indeed Green and Thorogood (2004 p.243) subscribed to the opinion that the idea of quality criteria is a logical impossibility. To set the scene for a meaningful discussion about the quality of this research it is important to remember the ontological and epistemological reasoning which underpins it. This explains the claims which the research seeks to make, and focuses the discussion about managing its quality.

Considerable debate exists within the literature about the relevance and utility of the application of positivist criteria to qualitative research, such as reliability, validity and generalisability and how they could be assessed (Seale, 1999; Spencer *et al.*, 2003; Finlay, 2006). This debate is somewhat outdated, because much of science has shifted significantly to a post-positivist epistemology, influenced initially by the publication of "The Logic of Scientific Discovery" by Karl Popper (1959), and the work of subsequent writers such as Bhaskar (1975) and Hammersley (1992). Interpretive research is not intending to 'prove' its findings, or to test them. Therefore, it is not appropriate to test the quality of interpretive research using the same criteria (reliability, validity and generalisability) used for hypothetico-deductive research. The research outcome should therefore be expressed in tentative language, as further research would be required to substantiate, extend, or contest the findings. As a qualitative researcher, I would argue that it is more appropriate to focus upon the trustworthiness of the research 'process', and criteria other than validity and reliability will therefore now be considered based largely on Lincoln and Guba's (1985) translation of criteria to evaluate the trustworthiness of findings (see Table 3.2).

Table 3.2 Criteria to critically appraise findings from qualitative research (adapted from Lincoln and Guba, 1985 and Finlay, 2006).

Quantitative Term	Qualitative Term	Methods to ensure quality
Internal Validity	Credibility	Text interpretation summaries; prolonged engagement in the field; data triangulation; reflective journal
External Validity or generalisability	Transferability	'Fittingness' or thick description of setting/participants
Reliability	Dependability	Audit – researcher's documentation of data, methods and decisions
Objectivity	Confirmability	Audit and reflexivity (self critically reflexive analysis of methodology)

This scheme outlines some of the core elements to be considered in an assessment of the quality of qualitative research, and taken as a whole it is generally agreed that research needs to be 'trustworthy' in the sense of being able to demonstrate both rigour (process) and relevance (end product). Also it is important that we endeavour to be transparent, to strive for what Savin-Baden and Fisher (2002) referred to as 'honesties' in research and as Madill, Jordan and Shirley (2000) put it:

"Qualitative researchers have a responsibility to make their epistemological position clear, conduct their research in a manner consistent with that position, and present their findings in a way that allows them to be evaluated properly" (Madill, Jordan and Shirley, 2000 p.17).

I will now consider each of these criteria individually and consider the evidence that rigour had been attended to in the research process.

3.6.1 Credibility

Koch (1994) argues that credibility is enhanced when researchers describe their experience as researchers. As such I have attempted to take up the gauntlet set down in the paper by Mantzoukas and Jasper (2004) demanding that reflective writing be more visible within the methodological process and findings sections of research reports. Through use of reflexivity I have highlighted my dilemmas in deciding on my research methods, achieving a robust data set and concerns relating to power issues in terms of my interactions with research participants. I have reflected on whether my insider status has compromised the credibility of this study which is difficult to evaluate. By following the philosophical hermeneutic approach of Gadamer (1996) in which the researcher works with the participants and data to create an interpretation of their reality, an insider position could be viewed as potentially enhancing credibility, as I had valuable knowledge and experience of the research context which when conducting the enquiry was possibly used to obtain richer data. I was familiar with the clinical setting and language the participants spoke, which provided greater access to their world without the need to constantly ask for clarification. Although this may be a disadvantage if researchers ascribe meanings to certain words or jargon, behaviours, and decisions, with which participants differ (Minichiello *et al.*, 1995). In an effort to guard against this I attempted to maintain what van Manen (1997) referred to as 'hermeneutic alertness', where the researcher steps back to reflect on the meanings of situations rather than accepting their pre-judgements and interpretations at face value.

Another approach was through use of individual text interpretation (respondent validation) summaries aiming to establish whether my interpretations were anchored in the experiences of the participants, and were congruent with the participants' views in terms of whether their individual data extracts fitted with the themes I had assigned them to. However I was conscious that returning to the research participants for verification of the findings has been challenged by some authors such as

Giorgi (1994). However following Ashworth's (1993) critical exploration of participant validation, I chose to do it on moral-political grounds, but also on the reports from other phenomenological researchers that participants benefit from being treated as equals in the research process, and are interested to hear the researcher's interpretation of what they have shared (Doyle, 2007). This approach also allowed for Gadamer's notion of the 'fusion of horizons' as returning the data interpretation to the participants offered the opportunity to stimulate shared understandings.

Trustworthiness of the findings was ensured by collecting data for phase one while the physiotherapists were engaged in their everyday work, and by using multiple sources of data I was able to claim that I was engaging in triangulation. Triangulation was introduced into discussion of qualitative methods by Denzin (1970 p.310) to refer to an approach that uses multiple observers, theoretical perspectives, sources of data and methodologies, with the emphasis tending to be on methods of investigation and sources of data. It has been argued that different methods involve divergent assumptions about the very nature of the social world (ontology) and about how it can be understood (epistemology) (Blaikie, 1991; Flick, 1992). As a result these arguments have challenged the interpretation of 'triangulation' as checking the credibility of an interpretation based on a single source of data by recourse to at least one further source that is of a different type.

Perhaps the most common meaning of the term routinely employed by researchers that use different methods to investigate a certain domain of social reality from two different viewpoints or angles is that whilst they might not be useful to corroborate each other, they do yield a fuller and more complete picture of the phenomenon concerned if brought together. My reading of Flick (1998) who wrote that:

“Triangulation was first conceptualized as a strategy for validating results obtained with the individual methods. The focus, however, has shifted increasingly toward further enriching and completing knowledge and towards transgressing the (always limited) epistemological potentials of the individual method” (Flick, 1998 p.230).

was the main factor influencing my decision to use different but complementary methods of data collection. This approach was also useful to facilitate the dialogical strategy of hermeneutics, interpreting data from different sources with a view to resolving the epistemological divides.

I have reflected on my use of different data collection methods and my potential claim to triangulation, and have considered that these forms of triangulation highlighted above are investigative strategies. In this study I adopted the process of triangulation in relation to triangulation-as-seeking-complementary-information, such that my intention was to use triangulation that offered evidence to inform judgements, not techniques through which I could claim guaranteed truth or completeness of my data.

3.6.2 Transferability

It was not my intention in this study with a limited focus, to make claims about the generalisability or transferability of its findings. Acknowledging that a text never has only one meaning (Lindseth and Norberg, 2004) it is likely that the findings from this thesis can be transferred to other similar situations. Sandelowski (1986) has used the term ‘fittingness’ for evaluation of research reports when its findings can ‘fit’ into contexts outside the study situation and when its audience views its findings as meaningful and applicable in terms of their own experiences.

In this chapter I have attempted to provide transparency of the research method and in the next chapter detailed discussion of the findings including many original participant quotes. Aspects of the outcomes from this research will however require further study in different settings, because they are as

much a feature of the 'receiving context' as the 'sending context'. In the meantime a cautious reader should be able to glean adequate information about the 'sending context' from the research report (transparency) to decide whether the findings have the potential to be relevant to their own situation.

3.6.3 Dependability

One way for a research study to demonstrate dependability is for the process to be audited. Sandelowski (1986) has suggested that a study and its findings are auditable when another researcher can clearly follow the decision trail used by the investigator in the study, and the researcher's position vis-a-vis the research process is transparent and another researcher could arrive at the same or comparable but not contradictory conclusions given the researcher's data, perspective and situation. There are two aspects to the idea of dependability that I feel are worthy of further comment related to this research.

Firstly using the peer support of my supervisory team, details relating to problem formation, development of research questions and proposal, selection of research participants, ethical issues, data analysis decisions; and the trail of decisions, theoretical, philosophical and methodological were discussed and debated at all stages of the research process to establish that procedures were being followed and theoretical inferences were justified.

Secondly my previous experiences unquestionably influenced my interpretive perspectives and ways of constructing meaning and therefore it is unlikely that I could be certain that another researcher would have arrived at the same conclusions as me. However, through acknowledging my pre-understandings, and use of a reflective journal I attempted to record my 'prejudices' or the way in which my 'horizon' was operating. From the first few observations and interviews I noted in my journal that I was aware of the physiotherapists' failure to attend to patient cues regarding issues of importance to them, which when I entered the field, I felt was something I

might witness. For example in my journal record from one observation I wrote:

Felt the assessment lacked coherence and structure. Got the sense the therapist wasn't sure what to make of the patient responses and seemed reluctant to probe for further information and clarification on what I thought were some important issues. Am I witnessing evidence that therapists seem to be demonstrating active listening by their body language, but failing to acknowledge what is being said in terms of valuable potential cues from the patient in particular with regards to preferred exercise approaches?

Yet there were other occasions when my pre-understandings were challenged:

I undertook two observations today with xx. I was struck by the therapist's active listening skills and their ability to pick up on patient cues regarding issues of importance to the patients and cues that had an influence on the ultimate management plans for each patient. This is a skill I have not witnessed or is evident in others I have observed. I need to explore in the formal interview what has influenced their development of this approach and what specific training if any has underpinned their approach.

3.6.4 Confirmability

Morse *et al.* (2002) noted that the concept of confirmability might not be applicable to approaches inspired by phenomenology or critical paradigms in which the researcher's experience becomes part of the data such as philosophical hermeneutics.

Using a hermeneutic approach and the concept of a fusion of horizons I have argued that the research account and my findings are likely to have emerged in a specific interpersonal context and so the research report is therefore of my creation, dependent on my perspectives and one for which I have taken full authorial control.

3.7 Chapter summary

In this chapter I have presented an account of the design of the research and focused on the principal decisions underpinning the choice of research methods, data analysis, and strategies I have adopted to try and ensure the quality, integrity and rigour of the research. Throughout this chapter I have been aware of the quality issues which are rather more imperceptible, and which relate to the process of the research, for example issues such as the quality of the observations and interviews, and the extent to which I was able to craft an appropriate and searching interview approach. It is these human, intangible, 'craft' elements that are perhaps the most important aspects of the qualitative research process, and yet the hardest to communicate (Seale, 1999). In an attempt to achieve this I have tried to resist the temptation to present a purist account and offer more of a reflective account of my thoughts and feelings of how I had both affected and been affected by the research process on the grounds that reflexivity includes exposing for the reader the inherently 'disordered' nature of research. The outcome of the data analysis will now be presented in the following two chapters.

Chapter 4: Findings – Phase One (Physiotherapists)

4.0 Introduction

In this chapter I present a summary of the themes which were developed as a result of the data analysis of the individual physiotherapist texts. Sub-themes conveying similar meaning were compared within the main themes and in relation to the whole using the hermeneutic circle. Throughout this chapter, by adopting the philosophical hermeneutic approach of Gadamer, I acknowledge that my professional background and pre-understandings based on past experiences influenced the way I interpreted the data and selected the illustrative data extracts, rendering it as non-objective and bound to my context and perspectives as the researcher. In keeping with my chosen philosophical orientation, for both this and the following chapter, my own personal reflections and how I have used my experience in gaining an understanding and interpretation of the data are set out in a different font in sections that I have termed reflective comments.

Between June 2011 and December 2011 using a purposive sampling approach, eight physiotherapists were recruited to the study from seven different physiotherapy departments. Twenty seven patient observation sessions (3 patients were subsequently found to have presented with conditions other than NSCLBP which did not fit the inclusion criteria, and so were excluded from the analysis), 24 informal field interviews and 8 semi-structured interviews were conducted. The demographics of the eight physiotherapists are set out in Table 4.1.

Table 4.1 Summary of participant physiotherapists' key characteristics.

Physiotherapist	Gender	Band	Number of years qualified	Self-estimated percentage of weekly workload = NSCLBP
T1	F	6	19	30%
T2	F	7	11	40%
T3	F	6	10	70%
T4	M	6	4	15%
T5	F	5	3	5%
T6	M	6	6	15%
T7	M	5	2	10%
T8	F	5	3	45%

Four main themes relating to the characteristics and processes of exercise prescription, and revealing how decision making and patient participation are addressed in the processes were formed from the texts (see Table 4.2).

Each sub-theme and theme has coded extracts to illustrate the theme which are represented as a series of numbers in brackets. For example: (T3.29). Using this coding convention the first number '3' represents the participant physiotherapist and the following number '29' the coded extract taken from the semi-structured interview.

Where the extract is taken from an observation or an informal field interview it is represented by 'O' in front of participant physiotherapist number, for example (OT3 (22).13). In this instance the number in brackets represents the number of the patient observed (22) and the second number '13' the coded extract.

Table 4.2 Themes and sub-themes relating to the characteristics and processes of exercise prescription and the degree to which physiotherapists involve patients with NSCLBP in decisions regarding their care.

Main Themes	Sub-themes
1. Exercise as the mainstay of treatment	<ul style="list-style-type: none"> • It's just part and parcel of the package • Exercise prescription experts?
2. I want them to exercise	<ul style="list-style-type: none"> • Defining the options available • Anticipated benefits of exercise • I try to get people to think about it from my point of view • Checking patient understanding • Checking patients' ability to implement the plan
3. Which exercise? - the tension between evidence and everyday practice	<ul style="list-style-type: none"> • Interpreting the evidence • The exercise needs to be fun • It depends on what I find • Giving therapy for therapists needs
4. Compliance-orientated more than concordance based	<ul style="list-style-type: none"> • Lack of time • Patient's current activity levels • The fear of pain • Keep it simple

4.1 Main theme: Exercise as the mainstay of treatment

This theme is constructed from two sub-themes; 'It's just part and parcel of the package' and 'exercise prescription experts?' It focuses on what I interpreted as the physiotherapists' reliance on exercise as a key management strategy and their concerns over their competence to deliver it effectively.

4.1.1 Sub-theme: It's just part and parcel of the package

What I found particularly striking was the way physiotherapists regarded exercise as the 'default' approach to care for this patient group in respect of possibly not thinking about its use too much, as it was a treatment approach they would always consider using.

What was not apparent was the reasoning behind such widespread use of exercise. Physiotherapists may have been using exercise therapy to fit with clinical guideline recommendations, or it could be that its use is based on more deep-rooted factors. For example it may be that therapists feel too constrained by time or feel less confident with manual therapy techniques, and so giving exercise is seen as the easy option and almost the conditioned approach, or that it fits the bill of doing something in the context of an intervention:

"I must admit for every low back pain I have coming in through my door I pretty much will always give them exercise. So I must admit I don't think about it too hard it's just part and parcel of the package that I like to give, and it would be the first thing I would choose to do rather than do something else first. So rather than doing hands on treatment or try acupuncture or do something like that I will always go down the road of exercise first." (T1.31-33)

"To be honest I would include it in almost all treatment of chronic low back pain in some shape, manner or form." (T6.30)

Apparently not giving too much thought to the use of exercise was reinforced by comments from one physiotherapist who was very open in describing their use of exercise as customary practice:

“I think habit would be a good start point, not exclusively but in most patients a good 90-95% I would include exercise and I think that is habit and part the belief that I feel it helps.” (T4.24)

Reflective comment:

In my research journal I noted that the physiotherapists’ reasoning suggests the potential for adoption of a standard ‘menu’ based approach whose impact and outcomes are assumed to be comparable for clinically similar patients. In other words exercise seemed to be a conditioned approach based in part on therapists’ interpretation of its value to patients.

Conversely the apparent reliance on exercise as the mainstay of treatment made me question why it rarely seems to feature when topics for training are discussed. It may be that there is a widely held assumption that therapists have the necessary skill set to deliver exercise effectively. The answer to this question is in part answered in the next sub-theme, in which physiotherapists talked about their struggles to deliver it effectively.

4.1.2 Sub-theme: Exercise prescription experts?

Norris (1995) suggested that exercise should be described as the distinguishing skill of physiotherapy, as exercise therapy, more than any other clinical skill, sets physiotherapists apart from any other profession involved in the treatment of LBP. However it emerged that physiotherapists expressed doubts about how well their training had prepared them to effectively deliver what they considered to be the most important management strategy for patients with NSCLBP. Many felt their undergraduate training had left them ill prepared to effectively deliver exercise based interventions, feeling that their skill set was developed more from craft knowledge, post graduate course attendance and working with peers.

For one physiotherapist, involvement in this research offered a chance to reflect on their training to support their clinical practice. I had ethical concerns about this prior to the study, in terms of the physiotherapists questioning their clinical practice but in retrospect it may have offered them a

personal insight and a chance to reflect, and perhaps supported my view that exercise prescription was an infrequently thought of or practised skill:

“I think I received anyway very little training as an undergraduate student and almost exclusively learnt on the job, a little bit of in-service training I think, but very little formal or structured training on what I think is very and probably the most important treatment area for chronic low back pain”. (T6.10-11)

“I’ve never thought about it before but in thinking about what I was going to say in this interview I was trying to think of what training that backs up what I do on twice daily thrice daily basis and I don’t think I have. People always want to practice manipulating or mobilising the lumbar spine.” (T6.92-93)

My concern about clinicians having an assumed level of knowledge and skill to deliver exercise was highlighted by physiotherapist T7 who had this to say:

“I initially did a BSc in Sports Science, as my first degree, that didn’t influence my exercise prescription but it certainly helped me to understand the benefits of exercise. But in my post graduate training where I did the MSc in physiotherapy, um it was actually very, very poorly dealt with, exercise prescription as a whole was an assumption rather than formally taught. And even more so potentially in which we prescribe exercise or talk about exercise as physiotherapists, in a health counsellor or motivational role, this aspect was barely touched on at all, maybe a couple of hours in a 2 year degree. So I think that was actually very poor, there was no real input behind the psychology of said techniques which I think can be important, and as I said already it was assumed we could do that, it was a given. Where in actual fact I think we can be quite poor at it. People might have the knowledge of exercises, but not the skills to enable them to get the patient to engage in the exercise” (T7.95-98).

Physiotherapist T7, throughout the period of data collection, provided a unique case example of how through working with peers and reflective practice they had developed and adapted their consultation style. This had had a significant impact on their clinical practice relating to exercise prescription resulting in a transformation from the traditional patient–caregiver relationship into a more collaborative partnership. In the following

extract they describe how, through involving patients in interactive rather than didactic communication, they had learnt to exchange information with the patient rather than just delivering it to them. As a result, they aimed to empower patients to take control of the process regarding the choice of exercise that is aligned to their own needs and preferences:

“I’ve had no real formal training but I’ve picked up various idea’s and ideals on exercise, and getting people to engage in exercise from a couple of my colleagues one in particular -----, that’s been quite good in kind of giving me ideas of how to manage these patients. It has predominantly been around the subjective interviewing of these patients, getting them to hopefully generate their own ideas about how they could then make, um, lifestyle change, complete lifestyle changes, with regards to the use of exercise so that they engage better. If they engage better, with whatever exercise they have sort of come up with or generated themselves, I then feel that their outcome longer term will be far greater than if its prescribed, poorly given, not what they want, not what they’re expecting, and not what they need. So that has basically changed my perceptions really and beliefs of how to manage these patients.” (T7.5-10)

This approach contrasted with how many of the other physiotherapists viewed their skill set, which focused on the benefits of increasing their repertoire of treatment strategies. For those attending post graduate courses, this generally resulted in them learning specific exercise based approaches, which in their opinion gave them the ‘tools’ to confidently manage this patient group:

“If it wasn’t for the fact of dipping my hand in my own pocket and going out and doing courses, I really wouldn’t have this many tools in my tool bag as I do now to go and tailor my exercise prescription to my patients needs.” (T5.64)

“I suppose a lot of my use of exercise has come down to various courses I have done, primarily probably McKenzie actually, so McKenzie part A, where I find that gives me a good way of analysing out movement direction and then the appropriate exercise programme to give out from that, so that’s probably what I base a lot of my stuff on rather than anything else. I am actually quite happy with what I do. I can’t think of anything else I would do differently, I’ve got my

background in McKenzie and my background in core stability, um, and so I'm quite confident what I do offer patients from that point of view.”
(T1.12)

4.2 Main theme: I want them to exercise

In this theme I consider some of the essential elements physiotherapists talked about and were observed doing that underpinned the way decisions were reached. In developing this theme the principles of shared decision making as set out in Table 1.3 (p. 22) was used as a conceptual framework, and although divided into different analytical stages, in reality they may occur together or as an iterative process. The main theme was constructed from five sub-themes: 'defining the options available', 'anticipated benefits of exercise', 'I try and get people to think about it from my point of view', 'checking patient understanding' and 'checking patients' ability to implement the plan'.

4.2.1 Sub-theme: Defining the options available

Data from the physiotherapists' texts suggests that they were eager to offer exercise based interventions. Elwyn *et al.* (2000) have suggested that an important context for shared decision making is the existence of 'equipoise' – where the clinician does not have a clear preference as to which treatment options should be chosen, and provides information to the patient on the management options in an unbiased way. It aims at helping patients play an active role in decisions concerning their health, which is the ultimate goal of patient-centred care. Evidence from this study suggests that based on either their personal preference for and experience of different interventions or what they considered to be the weight of evidence supporting exercise based approaches, physiotherapists were more inclined to recommend exercise than 'hands on' or other passive modalities of treatment:

“In the past I have tried manual therapy and yes it gives good temporary relief but I find I struggle to get long term lasting relief.”
(T1.27)

“I do refer to the fact that the weight of evidence suggests that in the longer term exercise based approaches are the more effective approaches. Um, sometimes hands-on approaches give a short term benefit but a long term benefit is not well established.” (T4.21-22)

“I suppose in contrasting manual therapy for example to exercise therapy I might say there is a small and variable evidence base for the use of manual therapy but there is a mounting and growing body of evidence for the use of exercise and exercise therapy in the treatment of low back pain” (T6.26)

There may be a whole range of other factors influencing the desire to use exercise such as helping patients in becoming effective self-managers, but equally it may be that as with the first theme highlighting physiotherapists views of exercise as the mainstay of treatment it is as much the ‘default’ approach to management of this patient group.

A number of physiotherapists talked about how they would manage situations in which patients were indicating a preference for a specific treatment approach by engaging in deliberation with the patients regarding these requests. A skilled clinician is regarded as one who helps patients express their views and guides them to explore their feelings and reactions to relevant choices (Edwards and Elwyn, 2009 p.75). Although patient-centred care may not simply be regarded as giving patients what they want, in an effort to maintain a working relationship with patients, and potentially avoid the threat of patient ‘conflict’, physiotherapists often reported complying with patients’ requests. They then saw this as an opportunity to coerce patients into accepting an exercise based approach. This was based on their *own* values in that *they* thought it was an important component of the overall package of care:

“For people who say they would like or imply they would like hands on treatment or acupuncture, I would still then talk to them about the importance of exercise and that role; so if somebody really is looking for something else I will offer that as well, but I would still want them to try exercises on top of their other requests.” (T1.36-37)

“I think I would typically include exercise even if their expectations were more towards acupuncture or something else, so then they get a combination of things in that case. I would normally in that case do whatever the other treatment was in order to facilitate them to be able to exercise either specifically or generally”. (T4.33)

4.2.2 Sub-theme: Anticipated benefits of exercise

Involving patients in decisions cannot occur unless preceded by the sharing of information about diseases and treatments and most patients want more health information than they are usually given, which includes honest assessments of the risks and limitations, but also likely treatment benefits (Elwyn, Edwards and Kinnersley, 1999).

For the physiotherapists many of the perceived benefits were driven by a biomedical worldview concerned with framing the problem in terms of underlying mechanical causes, such that the perceived benefits of exercise in terms of increasing spinal mobility and strength, and pain management/reduction featured quite prominently:

“Because you are thinking about, well I’m thinking about a mechanical cause for the problem and therefore aiming for a mechanical solution i.e. something, the basics of something are tight or weak”. (T4.4)

As part of the observations, I noted physiotherapists reliably asking patients what their expectations of treatment or physiotherapy were. Some patients mentioned either directly to get rid of the pain *“to get rid of the pain”* (OT6 (7).12) or indirectly *“cure me whatever you think will help me”* (OT1 (16).15) relief of pain to be one of their expectations of treatment.

In these instances where patients were exhibiting an external locus of control (Wallston *et al.*, 1976) and the potential for unrealistic expectations considering the chronicity of their problem, there was no evidence of the physiotherapists engaging patients in discussions regarding the realities of attaining such an outcome or how patients felt this could be best achieved. If these expectations were felt to be unachievable, no discussions were had as to what else would serve as an acceptable goal or outcome. Overall the

physiotherapists were divided in their opinion as to how exercise could help manage painful symptoms. Some saw exercise as a way for patients to gain more control over their pain and manage their symptoms more successfully:

“All in all I’m trying to explain that exercise can essentially help keep backs healthy shall we say, tissues pliant, which might in turn make them have a higher level of functioning, which in turn should hopefully help them manage painful symptoms better, if they are seeing it’s not restricting their life. I never say to someone that exercise is going to completely get rid of your pain but it might help you manage it a little bit better, and that’s kind of how I explain it”. (T7.24-25)

For others there was a perception that the main reason people with NSCLBP were attending for physiotherapy (and therefore the main reason for using an exercise based approach), was to seek treatment and resolution of their pain. Some of the physiotherapists voiced the opinion that this was more likely to be achieved by doing the correct form of exercise:

“I think the primary reason for giving someone exercise is to help out with their pain, so at the end of the day that’s why they’ve come to see us, so hopefully you are giving them something that can address the pain aspect of their complaint.” (T1.43-44)

“I would always aim to use exercise as a means to improve someone’s back pain in this instance over a period of time. I try to explain it to patients that their pain might not go away, um but that it’s more likely to, if they do the right sort of exercise”. (T6.78)

The findings from the texts left me considering whether physiotherapists sometimes get torn between the dilemma of trying to offer immediate results in terms of reduced pain, balanced against knowing they are dealing with a long term health condition and the alternative option of supporting patients to develop behaviours, knowledge and skills to manage the consequences of the pain, and to become effective self-managers. I am confident that physiotherapists do not genuinely believe that for a majority of patients with NSCLBP that significant reduction of pain is an achievable goal. I am fairly certain that if I had asked that very question directly, most if not all of them would have said ‘no’.

Reflective comment:

I have reflected on what drives this practice. Acknowledging and moderating a patient's health beliefs can prove demanding, and lead to challenging discussions with the patient about the problem of persistent pain, issues of acceptance and possible limitations of some treatments such as exercise therapy. Many people expect healthcare providers to intervene in order for their lives to continue unchanged. An inability to meet this expectation can lead to worsening of symptoms anger and frustration, and on occasions well-meaning clinicians can unwittingly collude with this unrealistic expectation. In other words is there a drive to maintain a strong partnership with the patient in terms of trying to avoid a sense of conflict. For some NSCLBP patients if pain reduction is known to be an expectation of treatment, do physiotherapists feel that they have to align their treatment approach to match with the patient's expectations? Aligning their treatment approaches to connect with the patient's experiences of living with LBP is likely to avoid any negative reaction from the patients, but in thinking about the likely outcomes in this patient group, physiotherapists need to consider how the patients will respond if their pain does not improve. Treatment programmes incorporating coping strategies involving regular exercise to minimise pain related disability (rather than pain reduction), is of major importance for the effective long-term self-management of symptoms associated with NSCLBP. This sense of wanting to work in partnership with the patient and thereby avoid a conflict situation may for the therapists diminish their sense of discord between the patient's expectations of therapy in terms of pain reduction and a treatment approach focusing on increasing activity despite the pain.

The findings from this study are consistent with previous research in that goal setting was not a frequently reported or widespread observed practice within the treatment sessions (Parry, 2004). For a therapeutic relationship to be successful involving exercises, the anticipated goals of treatment must be realistic, achievable and agreed to by both parties through a process of discussion and deliberation. Goal setting is considered by some (ACSM, 2000) to be the most important undertaking in developing a programme of regular exercise. Simply providing advice on exercise schedules is unlikely to be sufficient.

From the interviews only two physiotherapists mentioned exercise as being helpful to achieve patient directed goals:

“I always like to see what they would like to achieve, what is their objective, and sometimes it’s nice to split that into short term and long term goals”. (T3.36)

“Any particular needs that they might have lifestyle wise that you could think exercise could help them achieve. So if let’s say, the patient wants to walk a mile to the shops and back, and you are questioning and the barrier to that is that it’s too great a distance it’s too far. Try to ask things like ‘how do you think or we might work together to make that easier’, see whether they can generate their own ideas of be it pacing strategies, be it use of regular medication. Whatever the barriers might be try to get them to generate the way to overcome it, again just so that they are more likely to engage and adhere to what they, and then they’ve come up with the idea so they’ll buy into it straight away, rather than being told, you must do this, this, this”. (T7.75-77)

There are some instances where if doubt exists about a patient’s potential for progress, therapists may actively avoid talking about goals, which may be an explanation for why only two episodes of goal setting were observed. Also it could be that as patients sometimes struggle to understand the concept of goal setting, coupled with the constraints of time, physiotherapists may actively avoid it in order to prioritise their limited time on treatment delivery (Parry, 2004).

4.2.3 Sub-theme: I try and get people to think about it from my point of view

In this sub-theme I identify the characteristics of practice within this group of physiotherapists concerning the way they made management decisions, and reflect the degree to which physiotherapists involved patients in the decision making process.

I observed that physiotherapists developed a rapport with patients early in the assessment process through greeting the patient and checking their

personal details, introducing themselves and their role, clarifying how the consultation would proceed and attending to the patient's physical comfort.

Through most of the observed assessments they listened attentively to the patient's story, and this was reinforced by use of appropriate body language such as head nods, eye contact, and positive affirmations when patients described their own attempts to self-manage. By this behaviour one may discern a degree of patient-centred behaviour was being exhibited, however this contrasted with the way physiotherapists made and shared making those decisions with patients. For many of the physiotherapists the ultimate choice regarding exercise was based on their judgement as to what they felt was best for each patient.

"I think in terms of the exercise I will tend to work out what I think is best and run through them and see if they are happy to do it, but I won't necessarily ask them lots of questions before deciding on the specific programme." (T4.42)

This approach is supported by further examples (from the observation and informal field interviews) where patients were noted to offer explicit information and cues with regards to experiences with exercise interventions as part of treatment previously received or current exercise regimes. In these instances although the physiotherapists seemingly acknowledged the patients' comments, this was rarely reflected in their decision making. As part of a patient-centred care approach clinicians should attend, listen, ask questions and encourage patients to share relevant information and experiences in order to develop an understanding of the patient as a unique individual (Michie, Miles and Weiman, 2003). In this study I observed physiotherapists readily eliciting this information, but decisions were then seemingly driven by the physiotherapist's goals or values rather than those of patients.

"I try and get people to think about it from my point of view. I want them to exercise so that they actually get used to getting their spine moving again." (T1.18)

In a shared model this behaviour of trying to persuade patients of a therapeutic recommendation is legitimate as long as a safe environment for patients to express their views is created, including the need to listen and understand why they may prefer a different management option (Charles, Gafni and Whelan, 1997). Evidence of trying to get patients to accept the therapists recommendations was demonstrated in the observation of one patient who talked about regularly consulting a manual therapist in the past, he expressed an opinion of how much this had helped him before:

“My muscles are knotted up, I don’t know, the manipulator helped, I didn’t realise how much until he wasn’t around.” (OT1 (17).8)

The physiotherapist informed the patient about their assessment findings, tight muscles and stiff joints in the base of the spine. It was suggested exercise would be one of the best ways to stretch it out and make it move easier. The patient’s response to this suggestion was:

“I’ve tried exercise religiously in the past, it made no difference it was ridiculous.” (OT1 (17).14)

Despite the patient expressing doubts about an exercise based approach the physiotherapist continued to prescribe an individual exercise programme which was not necessarily based on the patient’s preferences. The physiotherapist although aware of this expressed some reservations about the patient’s compliance:

“He had tried exercises in the past from a previous physio, not sure how long ago now. Um, that he didn’t find helpful even though he said he had tried them religiously, so it is difficult to know as to how compliant he will be. I think he was willing to try them again, I think he felt it was important to give them a go.” OT1 (17).20-21)

In this instance the physiotherapist was endeavouring to encourage the patient to see and accept things from their perspective. On reflection the outcome was only likely to lead to frustration from both sides as the patient may feel they have not really been listened to and their preferences for

treatment have not been addressed. The physiotherapist in turn is likely to have felt frustrated by the patient's attitude to their recommendations. In another observation, one patient expressed a clear concern about undertaking any exercise other than the aquarobics she was already doing. The physiotherapist acknowledged the patient's own efforts to exercise with a positive affirmation, but continued to give the patient an individually designed exercise programme based on what they thought to be important findings from the assessment:

"We need to improve your movement and function, but not in lying. We can give you plenty to work on with strengthening your leg and your middle."

"I go to aquarobics as it's really the only exercise I can do that doesn't hurt."

"Fantastic, but I want to get your legs stronger." (OT5 (12).19-22)

The same physiotherapist talked very openly in their interview about not really involving patients in terms of understanding their exercise preferences:

"I have to say I don't particularly ask the patient what they want. I don't really ask my patients at all." (T5.40)

Their rationale for this was on the basis that patients are unfamiliar with biomechanical information, and would therefore defer to the physiotherapist to determine what is in the patient's best interest with little or no patient participation:

"I think if you went to a patient with very little anatomical knowledge, and went right: You have the choice of doing core based exercises or working on pelvic stability or core stability or for example if they had discogenic pain we can go down the McKenzie route and give you lumbar spine extensions, they would look at you with a bit of a blank look on their face, and just go 'I don't really know what you are talking about'. So you always get patients on board with regards your treatment programme but I think giving them so much choice, they can often get confused in what you are actually asking and what you want to get from them." (T5.39)

“Sometimes patients just want as they would do when they go to a GP a prescription of in this case exercise, they don’t want to go well you’ve got A, B and C, what would you like to do? Because that is almost too much for them.” (T5.58)

It was particularly interesting to note this physiotherapist’s use of terminology and medical jargon. Whether this was consciously chosen to support their perspectives on discussion of patient preferences, or reflects terminology they would use in a clinical encounter is unclear. However if it were the latter, it is likely to lead to a situation in which the physiotherapist retains power, ultimately denying the patient a clear understanding and hence the opportunity for input into the decision making process.

For a number of other physiotherapists, the decision was aligned more to an informed choice model (see Figure 1.1, p.18) with control over how and which exercises to perform vested in the patient, based on their perception of which seemed most beneficial from a list of exercises determined by the physiotherapist. This type of decision making model may offer a situation of compromise which suits both the patient and therapist:

“So I say to my patients I just want you to try these and choose the ones you like to do and find beneficial and stick with those, so while I do give them a big list I expect them to trim it down to what they want.” (T1.61-62)

“I will give you a big selection of exercises, and you can work out which ones are best for you” (OT1 (18).14)

“Don’t think you have to do the whole sheet just mix and match.” (OT2 (19).13)

In contrast to the above examples physiotherapist T7 offered a unique case example, reflecting on what they describe as the old medical model of being told what to, describing a different practice approach more aligned to a shared or collaborative model:

“Some people find it really difficult to step away from the old medical model if you like, they are used to coming to see someone, being told what to do and being quite passive in their treatment.” (T7.49-51)

“If they engage better, with whatever exercise they have sort of come up with or generated themselves, I then feel that their outcome longer term will be far more greater than if its prescribed, poorly given, not what they want, not what they’re expecting, not what they need. So that has basically changed my perceptions really and beliefs of how to manage these patients.” (T7.9-10)

They also demonstrated a positive interest and willingness to attend to patient cues. From the interview they related back to one of the patient observations, and explained how they had picked up on the patient’s main goal, and the subsequent exercise approach was designed to help build the patient’s confidence to achieve their stated goal. This episode is interesting in that the topics or targets for goals were elicited from the patient rather than supplied by the therapist:

“Certain cues if people are trying to make, making the right noises about things that might be. If I can use last week as an example, the lady saying ‘you know I’m backed into a corner, I’ve reached a low, I’m accepting of my condition and now I’m going to come out fighting’. To her fighting was I’ve started to increase my walking a little further each day, she had almost generated her own pacing ideas and strategies so she was quite accepting then of what I had to say with regards to exercise.” (T7.70)

“I tried to pick up on the things that she was mentioning were important to her, such as wanting to walk without a stick and be normal, and to be fair to her she seemed like she tried herself to make lots of positive steps forward to manage her condition, she had already pretty much figured out a walking pacing programme to her, and walking was the most important thing. So I didn’t really have to feel I had to sell too much in that sense with exercise, because I think she was already bought into it. The options I then discussed with her about further exercise I felt was just because I felt she was low in confidence with other bits and bobs and just to help her along the way she just needed a bit of a helping hand.” (OT7 (5). 22-23)

With the exception of that one physiotherapist there appeared to be a degree of power asymmetry in that the responsibility for making the decisions lay largely with the physiotherapists. This may be part of the functioning necessary for achievement of clinical activities such as exercise prescription

as it establishes and maintains the clinical relationship in terms of both parties treating the clinician as the one to provide authoritative treatment and care. Accepting the fact that not every patient would want to be involved due to information and power imbalances in the relationship, from the physiotherapist texts little evidence emerged concerning involvement of the patients in management decisions. They were rarely asked to identify their own values or preferences, what was important to them or what would serve as an acceptable goal or outcome from the consultation or episode of care.

Reflective comment:

At the time of writing my field notes I frequently commented on the positive body language of the therapists: maintaining good eye contact, appropriate verbal responses to indicate active listening, strong rapport established. On reflection therapists were listening to the patient's story but perhaps not always listening to the patient's words or interpreting and reflecting on these cues.

4.2.4 Sub-theme: Checking patient understanding

To effectively participate in decision making, patients should have some understanding of their problem, the benefits and limitations associated with management options, and have an opportunity to analyse this information in respect of their own values (Coulter and Collins, 2011). Little time appeared to be spent informing patients on the nature, diagnostic complexities and natural history of their LBP. When an explanation was offered it was often very brief and contained little detail:

"Your back is stiff and you have a couple of levels of what we would call age related change" (OT5 (12).18)

"I say that it's very difficult to be specific, that it's very very common and that reassurance to be honest is more important than the explanation itself" (T6.14).

Physiotherapists were aware of the importance that a patient understands and is given accurate and realistic information relating to the possible benefits of an exercise programme:

“The first thing you have to do is get that patient understanding and get that patient to believe that by doing exercises or activity is beneficial and giving them some evidence that that works is important”. (T3.43)

“So your own explanation of why they are doing exercises, if a patients got a good understanding of why they are doing something they are more likely to do it.” (T5.43)

“I always explain why I think each exercise is going to be beneficial. I think if a patient understands that they are more likely to do them. Um, and I would give them appropriate tools to remember those exercises, ‘physio tools’ for example.”(T6.51-52)

However the physiotherapists frequently questioned whether their explanations had gone far enough and there was little evidence of acknowledging the importance of checking that the benefits of exercise accorded with the patients’ own values or treatment preferences, such that on occasions they questioned whether some patients would actually return for their scheduled follow up appointment:

“On reflection I should have probably explained a little more to her what benefit the exercises would bring. But I think she probably has a reasonable understanding that the I hope she has a reasonable understanding that the muscles, her core will support her back.” (OT6 (8).23)

“I’d like to think she has taken on board everything I’ve said, um and that therefore she had a fairly good understanding. I have misgivings however, I wonder whether she fully appreciated what I was saying, or the way I said it. Um, I’d be interested to find out whether she has done any of it or in fact comes back.” (OT6 (7).22)

“I should probably have addressed that a little bit more with him actually. I more told that chap actually that exercise was the best way to manage his condition, um, so if he buys into that and understands it as a concept then that’s great, but it’s never great when someone tells you something’s good without believing it, so it will be interesting to see. He was quite switched on and seemed to take on board what I was saying but again it’s never great just telling someone things, and I did with him say the best way to manage his condition is with exercise. So maybe I could have been a bit more (I don’t know

collaborative in the prescription of that. So I don't know what he would have taken away if I'm honest." (OT7 (6).31)

4.2.5 Sub-theme: Checking patient's ability to implement the plan

In this sub-theme I outline the different ways physiotherapists made judgements of a patient's ability to implement a management plan incorporating exercise. Self-efficacy describes how people judge their own competence or ability to succeed in specific situations to complete tasks and reach goals (Bandura, 1977). Poor self-efficacy could explain a patient's low confidence in their ability to overcome obstacles to initiating, maintaining or recovering from relapses in exercise. How the physiotherapists in turn assessed a patient's ability to initiate and maintain an exercise programme varied considerably. For some it was based on seeking the patient's agreement or consent by asking if they were happy to try exercise or whether they agreed to a management plan involving exercise:

"I suppose with their readiness to change and do exercise I will give people treatment options and if they say they are happy to try exercises then I'll go for that, um, yeh I must admit that's all I tend to do really." (T1.72)

"I tend simply to ask the patient if they feel that engaging in exercise would be helpful for them and they are happy to do so. Um, I know I guess that leads to a lot of them saying yes simply because they are here and that's what I am telling them possibly. So I ask them if they feel they would be happy to exercise, and if they feel it's appropriate. A good proportion of the time I will say 'look this is what I think is up, this what I think will help you, what do you think, do you agree and are you happy to do that?' (T4.49-51)

In these statements there is evidence to suggest a tendency to provide perceived beneficial treatments over informed patient choices based on a process of implied consent. One could argue that the therapists are considering a partnership based approach in terms of involving patients, yet it does not capture the importance to the patient of undertaking exercise and ultimately their confidence to instigate and maintain the exercise programme as part of a shared agreement.

For some physiotherapists their assessment of a patient's ability to implement an exercise programme was based on their subjective judgement of a patient's likelihood to adhere to their suggestions determined by the patient's behaviours and responses during the assessment. This suggests the tendency for some therapists to form negative stereotypes of patients further detracting from adoption of a patient-centred clinical approach. From the following comments one might conclude that very little shared decision making is likely, leaving the therapists frustrated with patients who failed to comply with their suggested advice or treatment regime:

"I think I make a judgement, a subjective judgement on whether I think that person would be adherent to a certain type of exercise programme and I advise them to carry on in that manner." (T6.35)

"A consultation is obviously a two way process, and as therapists we're human, we can't be on 100% form, tip top form every time we assess and treat someone, and if a patient has come to an assessment and gives me the impression they're not 100% engaged or enthused or optimistic I'm much less likely to be enthused, engaged and optimistic, I think" (T6.84).

"How they present to me, how you know when you're going through the assessment, um, what they're saying to me what they're coming back to me with. I often find the ones that are more ready to engage in exercise want to come back and just check they are doing it right. The ones that say yeh yeh ok, no don't bother to print them out for me, yeh yeh yeh. You know and I have a pretty good idea I'm not going to see them again and I'm not sure that I feel that sort of things have just gone in one ear and out the other and they haven't really engaged in what I've been saying." (T8.24-26)

For one physiotherapist however it was a case of working in partnership with the patient, identifying the possible stage the patient was at in the change process, using importance and confidence scales to assess patients' self-efficacy to exercise and helping patients identify solutions to possible barriers to exercise:

"For some people that come to see you with chronic low back pain particularly, they're still very much in terms of models of behavioural change may be not even accepting of their condition yet and are still

looking for that quick fix whatever it might be that immediate pain relief / cure whatever it is. So if they're not at that stage yet, you can maybe imply a few ideas that might help them to reach that stage. Um and when they are, then perhaps come back and engage in physiotherapy again, so I'd probably say that's one of the biggest things I try to pick up on." (T7.64-65)

"A really good way to highlight what peoples thoughts are and whether they are ready to engage, is if I talk to them about exercise and then say 'so if we say exercise is going to be of benefit or could help, how important would it be for you?', and they're making noises 7, 8, 9, 10 'it's very important for me'. Then you can then go onto perhaps dealing with confidence issues around that importance. If in that scale you say 'how important is exercise to you', 1, 2, 3 again that's a way perhaps they're not ready yet. But then in that if they're saying those sorts of things you could then challenge them. 'How do you think, or how could you make that more important?'" (T7.72-73)

4.3 Main theme: Which exercise? - the tension between evidence and everyday practice

This theme can be broken down into a range of sub-themes which capture what physiotherapists felt needed to be considered when deciding on the type of exercise to be prescribed. It encapsulates the struggle to balance competing priorities of research evidence, patients' preferences, as well as their own attributions and perceived professional role.

4.3.1 Sub-theme: Interpreting the evidence

All physiotherapists talked about how they interpreted the evidence base with regards to exercise, with an appreciation that there was little evidence to suggest the superiority of one form of exercise over another. This finding in some ways surprised me as from past experience, and the therapists' talk of increasing their range of exercise approaches, I had anticipated that practice was being driven by the increasingly wide acceptance and training in the principles of specific approaches such as core stability. However there was seemingly a widely held belief that engaging patients in some form of

exercise in general terms or in a manner and form acceptable to the patient and not particular types of exercise was the most important factor:

“Evidence tends to imply that any form of exercise that we do is going to be helpful in the long run, it’s just about getting out there and doing it.” (T1.48)

“One thing to add looking around the literature there’s not much difference in outcomes between exercise classes, individual home exercise programmes, general exercise. Um,... you know whatever the form of exercise might be, there’s not one that is potentially better than the other. So it doesn’t matter what type of exercise you give people at the end of the day, it’s trying to get them to engage in said exercise. So it doesn’t matter whether you learn or become a professor in pilates or a professor in walking the dog. If you can get someone engaged, in whatever it might be, that’s where we potentially as therapists are not too hot, because we can prescribe what we think is good, but it might not be anything near to what the patient thinks is good”. (T7.56-57)

In further support of this belief one noteworthy finding was the view held by a number of physiotherapists regarding the perceived limitations of a ‘specific’ prescribed home exercise programme (HEP). My surprise stemmed from what I had witnessed in the field, in which provision of HEP was common place.

One physiotherapist voiced a particularly strong view:

“I think that with the evidence base being that general exercise is just as useful in the treatment of chronic low back pain as specific physio based exercise programmes. You should never treat a chronic low back pain patient with purely physio based exercises.” (T5.29-30)

Another considered that a HEP was unlikely to be an effective approach in this patient group as the patients would be less likely to comply with an exercise programme perceived as ‘boring’ and possibly not offering immediate tangible benefits:

“I think a home exercise programme of what are often particularly boring exercises, a patient is likely to do them in the short term I suspect, but only if they see some improvement in their pain.”(T6.56-57)

4.3.2 Sub-theme: The exercise needs to be fun

Several physiotherapists talked of the need for patients to ‘enjoy’ exercise to want to engage in it and continue doing it. In doing so physiotherapists were potentially taking into account the influence of patients’ values and perspectives on the type of exercise, and on factors that could empower patients to take control by generating their own ideas on exercise or undertaking an exercise programme that is familiar to them. This is an important factor with regard to exercise as between the early stages of adoption and later stages of continued exercise, intrinsic motives such as enjoyment are essential (Ingledew, Markland and Medley, 1998; ACSM, 2000):

“I think if you can get a patient doing something else, something fun like going for a walk, going to an exercise class, or whether there is a social element i.e. a pilates class, or yoga class or even something like badminton or tennis, some regular aerobic exercise. Um, I suspect they’ll enjoy it more, therefore they are more likely to do it which is important and they are more likely to continue doing it which is more important.” (T6.59)

The importance of respecting the patients’ perspectives and preferences with regard to exercise and giving these primacy over the physiotherapists’ views was acknowledged as important, as was a recognition that just telling patients what to do in terms of exercise was unlikely to engender behaviour that would be sustained in the long term:

“I guess some patients come in with specific ideas or they are already attending yoga or pilates, and I think it’s worth taking on board what they bring in with them rather than what you think – if that makes sense.” (T4.63)

“With exercise prescription, I don’t overly like prescribing specific ideas and imparting too much onto the patient that has come from me, again simply because, if someone tells me to do something 10 times,

3 times a day. I'll probably do it for 3 days and then never do it again.” (T7.44-46)

“My take on things is that um, with regards to exercise and different forms of exercise. People are going to have the best outcomes if they whatever you um ... are trying to get them to do they enjoy it, so they are going to continue to do it. Um, that's the most important thing actually; they enjoy it, if they don't it's just going to be a short term change. If you can get some, you know work on or build on ideas or exercise beliefs that people enjoy they are more likely to commit to that in the long term, and it's the long term commitment to this, to exercise in my eyes or in my opinion that is going to really have the positive effect on their life.” (T7.54-55)

Reflective comment:

If physiotherapists have an appreciation of emerging collaborative care models and feel that a physiotherapist designed HEP is often of limited value in this patient group, why is it still common practice as evidenced in the next sub-theme, and what is the main driver that influences this practice? I reasoned that the physiotherapists, through making these statements are perhaps reflecting on an awareness to try and avoid such an approach, but their attitude to reasoning and practice is such that interventions based on an impairment-based strategy aligned to a biomechanical paradigm, and for which a specific home exercise programme is often prescribed are part of their normal routine. In this way focus of the interaction on the clinical condition and not the person, characteristic of the traditional biomechanical model, retains a stronger influence on their practice, as they feel more competent and confident to manage structural or mechanical problems.

4.3.3 Sub-theme: It depends on what I find

In this sub-theme I discuss findings that contrasted to the previous two sub-themes, and recognise the importance physiotherapists gave to discovery of the source of the patients' complaints. A noticeable finding that emerged from the observations was the percentage of available appointment time taken up establishing the extent of and source of patients' complaints through subjective questioning and objective examination, with the pain presentation, history, and reproduction generally being the main focus. A

range of physical tests were employed to determine positive and negative evidence for the possible source of the patient's pain. This approach is consistent with empirico-analytical reasoning and a pattern recognition approach common to physiotherapy practice, and was an anticipated finding prior to the observations. The extract below illustrates an example of this:

A 21 year old female patient presented to one of the physiotherapists. The physiotherapist greeted the patient in the waiting room and showed them to a cubicle. The physiotherapist offered a warm friendly greeting inviting the patient to make themselves comfortable and introduced themselves. They then clarified the consultation structure as to what would happen and why. The patient's personal details were checked, and the patient asked to sign to indicate consent to assessment. Then using a clipboard resting on their lap, leaning forwards with direct eye contact with the patient, the physiotherapist began the consultation with an open statement: *"Ok we've had a referral from your GP indicating you had an injury lifting at work"*. (OT6 (7).2).

The patient (a care worker) began to tell their story:

P – *"I was helping a patient to stand using a standing aid but slipped and fell. I jarred my back and fell forwards and landed on patient this was about 3 months ago"*

T – *"Ok, what happened at the time?"*

P – *"I felt immediate pain in my low back and radiating up the spine and had to take some days off. I was off work for 2 weeks, back for a few days and then off again, the patient has been stopped from using aid"* (OT6 (7).3-4).

After the initial description of an injury at work the physiotherapist took control in terms of deciding what to talk about, and when and how to talk about it, *"ok fine"*, *"any symptoms in legs?"*, *"any pins & needles in legs?"*, *"does it affect your sleep?"*, *"is there a better or worse time of day?"* (OT6 (7).5-6).

The objective assessments were in the main a continuation of the physiotherapist-directed history taking, but were found to vary more in terms of the time taken (5-25 minutes) and the range of tests employed. The physiotherapists appeared very sensitive, and on occasions I felt perhaps oversensitive to the patients' reactions to assessment. This resulted in them repeatedly asking the patients pain related questions (*"what does that feel like?"*, *"what about that is it sore up the muscle?"*, *"how does it feel?"*). This could be interpreted as the physiotherapists refining their ideas regarding patient's pain sources and mechanisms through positive and negative findings, demonstrating an empathetic attitude to the patient in pain, or alternatively could be interpreted as the physiotherapists exhibiting a concern about increasing the patient's pain as a result of the assessment process.

Reflective comment:

In the interviews five physiotherapists talked about the non-specific, mechanical and recurrent nature of LBP and how it was difficult to identify a particular structure at fault, therefore it left me wondering how much the objective assessment ultimately influences the choice of exercises to prescribe. In my reflective journal I made several entries questioning the relevance of physiotherapists' objective assessments, as some of the tests used in the assessment seemed somewhat random and I'm not sure what information they will have given the physiotherapist:

Were they performing some tests because they have been taught to do it without considering the relevance in individual cases, or did they just want to appear thorough because of my presence? Whilst I acknowledge the patient perspectives in terms of expecting to be examined, were physiotherapists doing it to genuinely see if biomechanical factors emerge that would influence their decisions regarding exercise? Were they doing it to fulfil the requirements regarding clinical standards and documentation, and to appear thorough in my presence? Or were they doing it as a way of assessing the patient's willingness to move, fear avoidance behaviour, and likelihood of the patient's engagement in a movement/exercise based management plan?

The formal interviews offered further insight into the above when the physiotherapists were questioned about what factors they took into

consideration when deciding on the type of exercise to prescribe. Seven of the physiotherapists stated they would base their decisions regarding the type of exercises primarily on their assessment findings. Generally the objective assessment in terms of finding positive and negative evidence towards specific postural, structural or biomechanical problems predominated in determining the exercise prescribed. Physiotherapists reported that this would frequently result in them constructing an intervention based on an individually 'tailored' home exercise programme (HEP) in the belief it was offering a mechanical solution for mechanical problems identified at assessment, 'treating the target' or presumed cause of pain. This approach fits the traditional physiotherapy paradigm with its emphasis on back pain as a 'mechanical' problem, and focusing on patients in a mechanistic way (Marcum, 2004). Such an approach is only likely to reinforce the passive role of patients and restrict their participation in and control over their management (Trede, 2006).

"It depends on what I find, so if I see somebody who has quite a specific limitation in one direction over another then I will try and address that, but if I see somebody who is just struggling to move in any direction then I will try and address all aspects gently. If somebody comes into me who has pain and very good movement I will then go down a road of general fitness." (T1.41-42)

"Because you are thinking about, well I'm thinking about a mechanical cause for the problem and therefore aiming for a mechanical solution i.e. something, the basics of something are tight or weak". (T4.4)

"Overall once I've decided to include it, the objective assessment plays a very large role in the choice of specific exercises, absolutely." (T4.35)

Although use of a HEP was a strategy commonly adopted, some of the physiotherapists also reported that it was not necessarily prescribed in isolation but may be combined with advice to patients about generally keeping active or encouragement to engage in a programme of general exercise that the patient found fun. Despite this my overall impression

(supported by the patient perspectives in phase two) was that in general the advice regarding general exercise played a secondary role:

“It normally starts with a prescriptive exercise programme to suit that person with the suggestion that they find some form of fun exercise they are most likely to continue”. (T6.62)

“I mix it to be honest depending on the patient, so you know if somebody is lacking in end range extension I will give a McKenzie end range extension to work into the dysfunction, but also prescribe a generalised programme of activity”. (T3.40)

From the interviews and observations it was apparent that the decision to prescribe an individual HEP was a common practice, and the primary approach, although in part this could have been driven by physiotherapists' interpretations of patients' expectations and remarks regarding exercises, noted from the observations, such as: *“to be given some exercises to make me pain free”* (OT4 (13.6)); *“I want exercises that will help not hinder”* (OT5 (11.7)); *“I want some exercises to increase my movement and strengthen it”* (OT1 (18.9)).

Do physiotherapists, possibly based on their perceived professional role, have a feeling that they have not done their job properly unless they have given the patient a specific regime of home exercises? Does this approach help to reinforce their own professional identity as 'physiotherapists', and offer a way for the therapist to remain in control of the situation? Or is it a conditioned approach or as one physiotherapist described it 'habit'? Whatever the drivers, it is clear that reported and observed practice was seemingly in contrast to how the physiotherapists talked about the limitations of a HEP, the importance of patients undertaking some exercise they 'enjoy', and their interpretation of the evidence base for exercise.

4.3.4 Sub-theme: Giving therapy for therapists needs

This sub-theme, although derived from accounts by only three of the physiotherapists, has been included as a sub-theme as it offers a deeper and perhaps more honest reflection by the physiotherapists themselves on the tendency to be *'wanting to give the patient something'*, and potentially to be prescribing exercises in a recipe driven format. However there was awareness that for some this may have become customary practice or perhaps habit, and that a conscious effort was needed to try and avoid such an approach:

"What has been happening I think is physio's like to give something. I think historically we have been very used to prescribing and saying right here is your sheet of exercises this is what you have to do, you know you need to do this 3 times a day, you know that sort of thing. But it's very much I would say probably being conscious of trying not to do that." (T2.39-40)

One physiotherapist talked very openly about the 'pressure' to give patients something, particularly when they had a sense that a patient was unlikely to return for further treatment. In interpreting this, it is difficult to know what drives this behaviour, and it is something that I should have explored more deeply in the interview, however it seemingly reflects a situation that serves the physiotherapists' needs more than the patients' (fulfilling a perception of what 'I should do' as a physiotherapist). It also possibly reflects a situation where the option 'to do nothing' does not seem to sit comfortably with some physiotherapists.

"I think the pressure comes from lots of different angles, it probably comes from myself, in that I want to give them something to take away from the session, if only it's an exercise or two to take away I feel I should give the patient something." (T6.69)

Possibly as a consequence of this perceived pressure to give the patient something, they also talked about how this might result in patients being given a recipe of exercises that the physiotherapist was equally comfortable with:

“I think people have got a set formula of exercises the ‘go to’ exercises if you like, and they’re trotted out”. (T6.86)

Once again physiotherapist T7 offered a unique and insightful perspective in believing a philosophical shift is needed as to how physiotherapists think about their role, in terms of adopting more of a health counsellor role, and not becoming entrenched in a traditional biomechanical therapeutic delivery model:

“For most back pains for the first 4 months I’d qualified I’d give them the same exercise sheet with the same 3, 4, 5 exercises, and a bit of advice, and it didn’t work. So you know I started to think why isn’t this working, why aren’t they coming back, why are they not getting better? , and then through those questions led to me to sort of further discussions with people who manage patients slightly differently and that’s where I started to adjust my practice somewhat.” (T7.14-16)

“If they take a passive role, so they’re not generating ideas and we as physio’s then prescribe what we think is best. I don’t think that is going to have a positive effect, or whether we as therapists are trying to be ‘therapists’ which is no bad thing, but try to almost treat the patient if you like for ‘therapy needs’ rather than patient expectations.” (T7.67)

“Perhaps more on a more philosophical level if you like, not think of ourselves as therapists but more taking on a role of a health counsellor, so you are trying to counsel someone in to changing their beliefs or behaviour in the long term, and not sitting with your therapist hat on ‘I am going to give you therapy, because I am a physiotherapist’.” (T7.94)

Reflective comment:

As part of my pre-understandings I articulated the thought that physiotherapists still appear to give exercise in one form or another to virtually all patients, and considered this may reflect a need to be seen to be doing something. Therefore the fact that some of the physiotherapists were apparently happy to talk about this openly, gave me reassurance that in terms of the power relationships between me and the physiotherapists, they felt confident to discuss these sensitive practice issues.

4.4 Main theme: Compliance-orientated more than concordance based

A traditional approach to healthcare has emphasised the importance of determining and overcoming barriers to compliance or adherence to healthcare advice and treatment. Within the physiotherapy literature a number of barriers predicting poor adherence to exercise based interventions have been identified such as: low levels of physical activity, low self-efficacy, anxiety, increased pain levels during exercise, lack of time and poor social support or activity (Jack *et al.*, 2010).

In this study physiotherapists talked about the factors they recognised as most likely to impact on a patient's ability to engage with an exercise programme, but in an attempt to mitigate against such factors they would adopt strategies such as keeping the exercises simple. I interpreted this approach as a form of 'bargaining' or trying to obtain compliance to their suggestions and expert recommendations, rather than concordance, in which power, responsibility and control are shared equally between the patient and physiotherapist.

4.4.1 Sub-theme: Lack of time

One perception of using exercise as a management strategy for NSCLBP is that it requires considerable commitment in terms of time and some degree of alteration to lifestyle (Dean *et al.*, 2005). Seven of the physiotherapists talked about how the social circumstances and busy lifestyles of the patients resulted in their perception of patients having little time available to exercise. By eliciting this information it could be argued that the physiotherapists were adopting a patient-centred approach in terms of understanding the patients in terms of their unique individuality and conflicts so that treatment could be tailored to fit in with the other demands on their time.

“Is their work full time, do they have young children, so fitting in their exercise programmes to fit their lifestyle so that will again increase their compliance and enable them to realise you understand about their lifestyle and therefore your treatment is going to fit in with that.” (T5.26)

However this claim to a patient-centred approach could be countered by the tendency for physiotherapists to inadvertently stereotype certain patient groups, leading in turn to the formation of assumptions. For example, there was a general belief that patients with busy lifestyles would be those who would be less likely to engage with an exercise programme:

“In terms of their lifestyle, if someone’s busy, be it work, family, keeping a roof over their head, they’re less likely, they’ve got less time therefore less leisure time, they’re less likely to do the exercise. If someone has more time and more motivation they’re going to do more.” (T6.72)

This perspective was evident from the observation and informal field interviews. In the first case the physiotherapist remarked how they felt that as the patient was off work they would be more likely to exercise:

“I asked her in written format and verbally to do the exercises at least 2 or 3 times a day and throughout the day, because she is off work and therefore would be able to do them.” (OT6(7).23)

In the next case a patient with a 9 month old baby was given exercises to do, but the physiotherapist on this occasion formed an assumption the patient would have little time available to undertake exercise, and so the exercise programme prescribed was largely dictated by this perception:

“Ok, um, she was single mother with a 9 month old baby, so exercises she could do at home, um,... with um... fairly simple exercise she could do while the baby was asleep. Ok, well as I said the fact she’s a single mother and would find it difficult to um, exercise for long or stick to set times for exercise, so I tried to give her fairly simple advice to do them throughout the day as and when and given the opportunity”. (OT6 (8).22)

Physiotherapists also perceived that patients needed to make time in their day to exercise and believed it was important for patients to consider exercise to be part of a normal daily routine. They seemed to interpret a patient's articulation of limited time as a potential excuse as to why they may not engage with exercise:

“A lot of patients say particularly those who work full time, I haven't got time to do my exercises, and I often give them a programme that only consists of 3 exercises that only take 3-4 minutes to do 2-3 times a day. I say 'do you have enough time to make a cup of tea or brush your teeth' and they'll go 'yes', and I say 'this is just exactly the same it is something you have got to slot in, in your life that will be part of your lifestyle now for the foreseeable future'.” (T5.47-48)

My interpretation of the texts was that a conflict existed between the physiotherapists wanting patients to exercise and acknowledging that pressure of time is likely to impact. I interpreted that in most cases that the decision to exercise is likely to be determined by the therapist with the negotiation being around how it can be incorporated into the patient's lifestyle. In other words a case of eliciting a solution to potential compliance problems, rather than whether an exercise based approach was important to the patient and fitted with their management preferences.

4.4.2 Sub-theme: Patient's current activity levels

In this sub-theme physiotherapists talked about how a patient's current, or on occasions assumed level of exercise, influenced their decisions regarding the use of exercise based management strategies. In doing so physiotherapists were echoing the evidence from the research literature that patients with a poor exercise history were less likely to engage (Jack *et al.*, 2010), but they were also demonstrating evidence of decision making based on their own perspectives:

“If they are already active, they are more likely to do a specific exercise programme because they have already got that mind-set of being active.” (T5.44)

Other physiotherapists talked about an implicit awareness of a patient's likelihood to acquiesce to the idea of a specific exercise programme based on their own 'reading' of the patient in terms of their reported activity levels and behaviours during the assessment, and even on occasions the patient's outward appearance:

"I guess it comes from a reading of the patient as they are talking about how they are behaving already and if they are doing absolutely nothing and don't seem very keen to do so then its lessening the likelihood of engagement." (T4.52)

"I suppose in summary I tailor it around their working lives, any evidence that they might exercise already, which they would tell me and you can tell to a certain extent from the person sat in front of you, how much exercise someone does." (T6.34)

The most notable feature of the two sub-themes above is the tendency for the physiotherapists to form assumptions and make generalisations about certain patients based often on their social circumstances, leading to a misunderstanding of the patient as a person in terms of their unique individuality and needs.

4.4.3 Sub-theme: The fear of pain

Worsening pain during exercise is regarded as a potential barrier to patients undertaking an exercise programme (Jack *et al.*, 2010). Based on the literature one might expect this to focus on patient fears, however what was most apparent from this study were the physiotherapists reported concerns of increasing pain by using an exercise based intervention and the need to try and avoid this risk. As a result exercises were seemingly prescribed often in a pain contingent more than goal contingent manner.

Physiotherapists were aware of the influence of psychological factors and underlying pain beliefs, and talked about the importance of 'normalising' LBP and reassuring patients:

“I try and talk them about how pain is very normal; pain is not necessarily sinister, and so therefore you know pain is not a reason to fear, it doesn’t mean harm or damage.” (T1.77)

“I always try to use the – pain doesn’t necessarily equal damage line, which I think most people get anyway.” (T6.17)

Yet in spite of offering messages aimed at reducing patients’ fear or anxiety about pain, and thereby reinforcing the notion that pain should not prevent patients from safely participating in an exercise programme, several physiotherapists talked about using exercises specifically chosen to avoid exacerbating patients’ symptoms. This was accompanied by messages to avoid pain or to stop if exercise increases the pain. Indeed increasing pain with exercise was clearly regarded as negative and likely to give a bad impression of physiotherapy:

“I see no benefit in giving people exercise that’s only going to irritate them and make them worse so I try and find a movement pattern that actually makes them feel better or what I suspect is going to make them feel better and so therefore I use that”. (T1.39)

“With repeated movements pain should improve but if it increases then stop and come back to physio”. (OT3 (22).11)

“I think it’s quite important to follow these people up to make sure first of all whatever we suggested in terms of exercise isn’t worsening their pain, because that’s a bad thing, they’d also then have a bad impression of physiotherapy and might not see another physiotherapist on the back of that.” (T6.79-80)

One physiotherapist spoke in very directive terms about telling patients that they would have to ‘cut out’ certain exercises that they felt may aggravate the patient’s back pain. When asked to explain their reasoning behind two particular instances where that practice had been observed, they struggled to justify their reasoning, raising a question as to whether some practice is conditioned or habituated rather than rooted on a strong evidence based rationale:

“If they’re doing some form of exercise which I think is aggravating or irritating their back, then I’m much more likely to tell them I ‘think you are going to have to cut that out’, tell it to them straight if you like, if I’ve got a good rapport with that patient, and that’s a very difficult thing to define I think” (T6.74-75).

Interviewer – “So if I could summarise that, are you saying that for some patients with non-specific chronic low back pain, that there are some exercises you would advise them to avoid doing? I noticed that in our observations you advised one patient in particular who was running, and one who was doing breaststroke swimming not to do those exercises. Can you tell me a little more about that? “

“If I remember the examples rightly it was not to do them in the short term until they got stronger. Yeh, actually thinking about that I don’t know what evidence that is based on” (T6.76).

Evidence of unclear or mixed messages may represent fear avoidance or worry amongst clinicians in relation to managing patients with NSCLBP (Linton, Vlaeyen and Ostelo, 2002; Houben *et al.*, 2005) which in turn is likely to have a significant effect on outcome if patients pick up on these mixed messages. Many of the physiotherapists in this study advised patients that pain was not a signal of damage or harm, and yet were concerned about the exercise programmes increasing pain, with this concern seemingly stronger than their beliefs and messages regarding pain and damage. It is very difficult to interpret what the main driver is surrounding this practice but I believe it is most likely to be based on the drive to avoid negative patient feedback or complaints, although interestingly, explicit consideration of medico-legal issues did not emerge in any discussions.

Physiotherapist T7 offered a unique case example in that as with the other physiotherapists they were keen to offer reassurance to patients and almost ‘normalise’ LBP, but in instances where increasing pain with exercise was identified they did not talk about advising patients to stop but talked about importance of education, identifying possible reasons such as activity ‘cycling’ (going from doing a lot of activity to doing very little) and identifying solutions such as 1:1 support to reassure patients to keep up the exercise:

“Lots of reassurance that it is normal, and it’s not associated with damage, whatever their beliefs maybe with regards to their low back pain. Educate, that it will be part of a process of getting things moving, that haven’t perhaps been moved or used in such ways for a while, and try to talk about or find out a little bit about why symptoms have increased, whether they are describing a ‘boom/ bust cycle’ things like that. In the initial instances if pain with exercise was a barrier then think of ways you could support them through the initial stages be it 1:1, be it in a back group, be it with myself, whatever it might be, that can help them realise that it’s safe and it is ok to exercise.” (T7.78-82)

4.4.4 Sub-theme: Keep it simple

In this sub-theme physiotherapists talked about use of a ‘simple’ exercise programme as the solution to the perceived compliance problems such as patient fears, lack of time, perceived difficulties of mastering certain exercises, or where concerns existed about exercise increasing the pain:

“His pain level was really high and his movement was very limited, so therefore I went for a very easy going simple form of exercise, so just sort of basic spinal mobility exercises just to get his back moving.” (OT1 (16).22)

“If they’ve got a fear avoidancy sort of scenario from their subjective, then I’ll actually give them simple exercise more directed at reducing that, so exercising in a safe environment, so maybe sort of stuff like cat/camel type exercise, getting them used to lumbar movements without the fear of bending while they’re standing up.” (T4.35)

“The most important thing I think is that the patient is going to do them, that’s my view, but if from what they are telling me during the subjective or assessment they’re likely to show low adherence, then I’d meet that low adherence I just want to make sure that they do something that’s simple and not particularly difficult or challenging and get them on board that way, and then up the intensity.” (T6.46)

“I don’t want to give the patients a lot of things that they are gonna to me if you keep the exercises simple and those exercises I feel are very simple but effective they do what they say they do (well hopefully they do) but they are quite easy to teach a patient. You don’t feel the patient is going to go away and get them completely muddled up whereas if you give them more stability or stabilisation or try and work your back strengthening there’s more scope for them getting

them wrong. The more uh you're doing an exercise programme you've really got to supervise so then you've got to get them back in again and check them, otherwise it's no good giving them the exercises. So I think something keeping it simple or keeping them very, just three or four exercises if done on a regular basis certainly from my experience from other patients they've been beneficial." (OT8 (2).14-16)

This theme has highlighted that the physiotherapists reported approach to exercise prescription is founded on an understanding of the patients' unique circumstances and potential barriers to exercise. However the findings suggest that for a majority of the physiotherapists, rather than working in partnership and exploring patient preferences regarding exercise, they feel a responsibility to find solutions to these problems and hence their ideas and exercise recommendations. This is based on a compliance-orientated approach defined as the act of conforming, acquiescing, or yielding.

4.5 Summary of the analysis

These findings provide a complex understanding of how physiotherapists regard and apply exercise based management strategies to patients with NSCLBP. Although I originally thought I could judge the degree to which physiotherapists shared in decisions with patients, as a result of my reading I became increasingly aware of the complexities of decision making and how no reliable measure had been developed to assess it. Therefore how could I decide what form of decision making was occurring? The best I could hope to achieve through a fusion of horizons was to assess whether some of the principles of shared decision making were evident in the data to give me an overview of how physiotherapists construct and articulate their practice.

As anticipated, exercise was a frequently adopted management strategy, and was regarded by many as the default approach to treatment. However, despite its frequent use, physiotherapists expressed concerns that their training had left them ill prepared to effectively deliver exercise based interventions.

With health problems being defined and management approaches chosen on a socially constructed basis, with interaction part of this process, the second theme, 'I want them to exercise', considered how decisions were made. From this theme and indeed throughout the data, diversity in practice was evident in that one physiotherapist's outlook clearly varied from the others in that they rejected the notion of Cartesian dualism embodied within a biomechanical model of practice in favour of a biopsychosocial perspective of collaboration in which the patient and physiotherapist entered into an equal partnership. For the majority however, decision making was seemingly driven by the physiotherapist's goals or values rather than arrived at by consensus, with the patient's readiness and willingness to instigate the proposed plan based on an implied consent model denoting something that is done *to* the patient instead of *with* them, a passive rather than an active, participative shared decision making process.

The third theme, 'Which exercise? - the tension between evidence and everyday practice', focused on the type of exercise and revealed a tension between the physiotherapists interpretation of the evidence and their everyday practice, with many of their exercise recommendations being based on physical impairments and pain patterns derived from assessment. It appeared that the physiotherapists often faced an apparent discord between wanting the patient to exercise as part of health related behaviour change and offering a 'specific' exercise programme designed to offer more immediate or tangible benefits in terms of increased muscle strength or reduced pain, aligned to their own empirico-analytical reasoning and/or the patient's own health beliefs and expectations. This feeling of discord in terms of holding two conflicting thoughts was described by Festinger (1957) as 'cognitive dissonance'. Festinger (1957) also argued that those who experience it are often motivated to reduce it. In this instance working in partnership with the patient by prioritising biomechanical approaches over a biopsychosocial collaborative one, may allow the physiotherapists to avoid a conflict situation by diminishing the sense of discord between the patients expectation of pain reduction together with adopting an approach in line with

their perceived professional role, against a management approach focusing on increasing activity despite the pain.

For the final theme, 'Compliance-orientated more than concordance based', assessment of collaboration and patient participation must be seen in the light of what clinicians regard as relevant and important juxtaposed with their assumptions and clinical orientations (Thornquist, 2006). Based in part on the desire of the physiotherapists to encourage NSCLBP patients to exercise, the notion of fostering patient engagement suggested a tendency towards a compliance based approach. Physiotherapists attempted to get patients to conform in some way to the recommendation to exercise in which the patient-clinician collaboration can be understood and reasoned in an empirico-analytical manner with a privileging of clinician authority, rather than a concordant approach based on involvement of patients in the decision making (Edwards *et al.*, 2004).

The overall analysis of data reveals how the physiotherapists practised, and this frequently resulted in unequal possibilities for patient participation. This was in turn linked to the physiotherapists' assumptions, clinical orientations, cognitive and decision making processes. This perception of apparent asymmetry in decision making is, however, not necessarily wrong and may be part of an interaction that is collaboratively produced by the patients and physiotherapists to establish and maintain the clinical relationship. To investigate this further details concerning how NSCLBP patients interpret their experiences and preferences for involvement in decision making regarding exercise interventions will now be explored in phase two.

Chapter 5: Findings – Phase Two (Patients)

5.0 Introduction

Physiotherapy literature contains little condition-specific qualitative data on patients' experiences and perspectives of involving them in decisions regarding their care. In the second phase of this study I present a summary of the themes that were developed as a result of analysis and gaining an understanding of the individual texts, which in this instance consisted of patients' personal narratives obtained from semi-structured interviews. These provided a rich descriptive text of their personal experiences of being prescribed exercise as part of the management of their NSCLBP, and their involvement in decisions regarding their management plans.

Traditional measures that examine adherence to treatment guidelines do not provide any information about the quality of decisions such as the extent to which treatment decisions match patients' preferences (Sepucha, Fowler and Mulley, 2004). For example, if a patient agrees to an exercise programme suggested by the physiotherapist, this does not necessarily mean they participated in the decision making process, or that the decision was based on the patient's informed preferences. Activated patients who are well informed to make personally-relevant decisions about their care tend to make healthier lifestyle choices, are more likely to adhere to treatment recommendations, are better at self-managing chronic conditions and they often use less healthcare (Picker Institute Europe, 2010). For physiotherapists when considering interventions for a long term condition such as NSCLBP, matching the right person with the right care, will lead to benefits for both the patient and the health care system.

Research exploring the concept of decision quality (the extent to which treatment or management decisions reflect the considered preferences of well-informed patients), has mainly focused on conditions for which surgery is a treatment option. However Sepucha *et al.* (2008) have suggested that

the key issues to be considered in terms of measuring the quality of the decision making process regardless of the decision being contemplated are:

- How well informed was the patient before embarking on a particular treatment or self-management programme?
- Did the management option selected match their preferences?
- Did the clinician give serious attention to informing and involving the patient in the decision process?

From these questions, two pertinent issues stand out. Was the patient informed and did the choice of management options reflect their informed preferences.

In philosophical hermeneutics there can be no understanding without the activity of questioning. Gadamer emphasises the essence of the right questions for elaboration of the hermeneutic situation. The above three questions taken from Sepucha *et al.* (2008) were therefore used to provide a means of fusing horizons between the voices of the patients, the researcher and recognition of past experiences using the hermeneutic circle (Gadamer, 1976, 1996).

Patients for phase two were recruited between December 2012 and May 2013. Ten patients agreed to participate. Two subsequently withdrew for personal reasons, so that in total eight individual interviews were conducted. Tables 5.1 and 5.2 set out patients' demographics and details regarding employment status, back pain experience and number of physiotherapy appointments.

Table 5.1 Age and gender distribution of individual interviewees.

Age (years)	18-24	25-34	35-44	45-54	55-64	65-74	Over 75
No. of women	0	0	1	2	1	0	0
No. of men	0	0	2	1	0	1	0

Table 5.2 Employment status, LBP history, and attendance at physiotherapy.

Participant pseudonym	Employment status	Years of LBP	Total number of physiotherapy appointments
Phil (P)	Employed (FT)	15	3
Mike (M)	Employed (FT)	14	2
John (J)	Retired	40	2
Andy (A)	Employed (FT)	28	1
Liz (L)	Retired	32	1
Kim (K)	Employed (PT)	1	1
Trudy (T)	Employed (PT)	16	6
Sarah (S)	Employed (FT)	22	1

What was evident from the interviews was that patients are not a homogeneous group. Although all patients in this study presented with NSCLBP, they had different values, health behaviours and opinions about their experiences and the extent to which they wanted to be involved in

decisions regarding their care. Five main themes relating to the experiences, information and decision support needs of patients with NSCLBP who had been offered or received exercise as part of their management plan were formed from the interviews (see Table 5.3).

Table 5.3 Themes and sub-themes relating to the experiences, information and decision support needs of patients with NSCLBP.

Main Themes	Sub-themes
1. Patients' expectations and patients' needs are not synonymous	
2. Information is necessary but often not sufficient	<ul style="list-style-type: none"> • There was a fairly vague explanation of what might be wrong • Review of management options • Benefits of exercise
3. Not all decisions need to be shared	<ul style="list-style-type: none"> • Patient differences over preferred decision making role • There has to be an element of trust
4. Wanting to be treated as an individual	
5. Ongoing support is important	

As for phase one each sub-theme and theme has coded extracts to illustrate the theme which are represented by a letter representing the first letter of each patients pseudonym (T) and a series of numbers in brackets. For example: (T1.29). Using this coding convention the first number '1' represents the number of the interview and the following number '29' the coded extract taken from the semi-structured interview. For the reasons

outlined in section 3.3 (Methods of data collection) it became apparent that it was a challenge to interview patients about a phenomenon that is unfamiliar to them. No follow-up interviews were conducted and so the first code number '1' only was used.

5.1 Main theme: Patients' expectations and patients' needs are not synonymous

In this theme I highlight the differences between patients' expectations of physiotherapy and what was important to them. From phase one, evidence emerged that the physiotherapists frequently questioned patients about their expectations of physiotherapy. The patient interviews suggest that their expectations of physiotherapy were likely to be driven in the main by previous experience, information from informal 'lay consultations' with other back pain sufferers, or their interpretation of what they thought physiotherapists do rather than necessarily what was important to them as an outcome from the episode of care:

"I expected to be given exercises because it's sort of what I expect a physio to do is suggest repetitive exercises to help with the back problem". (J1.20)

"I don't know what I was hoping to get when I went there actually. I have been to physio in the past so I knew sort of what was going to happen, he was going give me a sheet of exercises to take home and do". (S1.34)

"To be honest I wasn't quite sure what to expect from the physio appointment other than this vague idea that I would be given exercises only because other people who I have spoken to, that is what their experience has been, a set of exercises that they have to complete regularly". (P1.53-54)

The findings from the interviews suggested that for this group of patients in contrast to their reported expectations their main needs or requirements centred on gaining a greater understanding of the causes of their back pain

and/or some help with the pain. This finding is in keeping with previous research exploring aspects of care about which patients with non-specific LBP express satisfaction (Verbeek *et al.*, 2004; Salmon, 2006; Liddle, Baxter and Gracey, 2007; Slade, Molloy and Keating, 2009a), in which two aspects occurred most frequently. Patients want to know the cause of their pain and/or a diagnosis, largely to legitimise their pain, and they want instruction or advice with regards to back pain management in terms of a comprehensive approach and pain relief. For many they did not recall being asked about what they described as their goals or what was important to them:

“I think I really wanted to know what was going on more than anything else. I wanted to know more about my back and I suppose sometimes you don’t get that, I wanted more understanding”. (T1.27)

“Perhaps a clearer diagnosis of what the problem was and how the exercise relates to the problem, but at that point I hadn’t really been given a clear explanation”. (P1.78)

“I suppose I went there because I wanted to be straight, and get rid of the pain. You put your trust in them that they understand what you want, but it wasn’t discussed and I wasn’t asked”. (S1.18)

“The main goal I had was to get rid of the pain; it was pain relief, because I didn’t want to keep taking tablets.” (L1.14)

“I wanted to better; I wanted the pain to stop. I just wanted some help”. (K1.11-12)

“My goal was pain reduction and thereby giving me more resilience in doing digging, DIY or whatever and work in particular for which I have to wear armour for, so it was those issues that was my goal, to get rid of the pain from sneezing in particular which can drop me to my knees”. (A1.21)

“We didn’t set any goals it was just an attempt to manage the problem and specifically the pain, so there were no goals set. But I didn’t raise any goals of my own really, and I wasn’t asked by the physiotherapist”. (P1.26)

When the patients were asked in the interviews about whether the treatment or management decisions reflected their management preferences, I noticed that for some there was a little hesitancy or perhaps uncertainty about how to answer the question. My interpretation of this uncertainty was that it was possibly based on the fact that some may not have really thought about it before and that articulating their preferences was something that was novel and unfamiliar, perhaps because they had never been asked. In contrast others may make a conscious choice not to articulate their preferences, in order to preserve the differential status between themselves and the clinician, in terms of trust in the clinician to be advising on the authoritative approach (as evidenced in the sub-theme – ‘there has to be an element of trust’).

For many patients a lack of knowledge and understanding of their condition is likely to influence their appreciation of what is achievable in terms of an outcome, and further hinder their ability to articulate preferences linked to realistic goals. Taking the above factors into consideration it is perhaps not surprising that for some patients it may be illogical to expect them to participate in treatment decision making.

Reflective comment:

I reflected that it is possible that physiotherapists’ reliance on exercise as the main intervention could be in part based on their misinterpretation of the patient’s expectations. This does not mean that receiving exercise as a management intervention would necessarily be met with lower levels of patient satisfaction providing the physiotherapist offers an opportunity for the patient to express their views, including the need to listen and understand why a patient may prefer a different management option. This finding was not something that I had necessarily considered before, but suggests that physiotherapists should think carefully about the wording of questions aiming to elicit patient perspectives so that it focuses on obtaining details on what matters most to the patient.

5.2 Main theme: Information is necessary but often not sufficient

In this theme I present patients' views on how their reported need for information and understanding related to their diagnosis, together with information on their management options, including advantages and limitations, was met by the physiotherapists.

Patients want more information than they are often given about their problem and management options. To effectively participate in the decision making process, clinicians need to facilitate patients' understanding of their health condition, the different management options, the advantages and limitations associated with different management options, and an opportunity to assimilate this information with their personal belief and value system (Elwyn, Edwards and Kinnersley, 1999).

5.2.1 Sub-theme: There was a fairly vague explanation of what might be wrong

Several of the patients talked about how their desire for information related to their diagnosis and what it meant for them was often inadequately addressed. The findings suggest that the value of this information was perhaps to provide reassurance and allay fears or uncertainties about the cause of their problem, more than its potential use as an aid to decision making:

“Advising someone it’s nothing serious is good and something people want to hear, I wanted to hear that.” (A1.22)

“I think reassurance is a huge part of it for any patient, they want to know that there’s nothing serious”. (K1.13)

“There were no explanations with any models as to why I’m getting the current problem, what nerve, bone, is and how you can tell the difference. Maybe we don’t need to know that but it’s one of those things that everything that you learn and are told, certainly from someone in authority reassures you, and if they say it’s generally because of this or generally because of that, it helps you to understand it and why you are doing the exercises as well”. (A1.13)

A meaningful explanation of the problem was clearly very important, but although it was often inadequately addressed, a couple of patients (Phil and Liz) were uncertain as to whether it was the physiotherapist's role to be providing an explanation or diagnosis. For those patients who did not feel they received an adequate explanation, it left them questioning the legitimacy of undertaking an exercise based approach to management:

“She’s not a GP she’s a physio, I feel she did her best for what she is qualified to do. She’s a physio she’s not there to do a medical examination in the sense that a GP or consultant would”. (L1.31)

“I think I came away not really having an understanding of what the cause was. Whether that was because I didn’t ask I can’t remember, but maybe I didn’t ask, or maybe it was my expectation that it wasn’t the physio’s job to explain it, maybe it was the physio’s job to explain what to do about it rather than explain what the cause of the pain was. I had a vague analysis of the problem from my GP and I didn’t receive for whatever reason from the physio an explanation either, so I did feel through the process up to that point that I hadn’t had it explained to me what the actual problem was”.

Interviewer – “So how did you feel about doing exercises not necessarily knowing what was wrong with your back”?

“I think I felt the same as when I was prescribed painkillers because I felt that there was a fairly vague explanation of what might be wrong with my back I wasn’t sure whether what was being suggested was targeted enough because it wasn’t made clear what the problem was. So I wasn’t quite sure how people knew how to remedy the problem if they didn’t know or that information wasn’t passed onto me”. (P1.4-9)

“For me they didn’t have a clue what was wrong they didn’t have an idea, and in my opinion if you have no idea what’s wrong with someone you can’t prescribe anything, or at least you have got to have a good reason why you are prescribing that exercise”. (M1.67-68)

Interviews with the physiotherapists from phase one revealed that little time is spent educating patients on the nature, diagnostic complexities and natural history of LBP (Sub-theme 4.2.4: ‘Checking patient understanding’). This finding was echoed in the patient interviews. Despite operating in a predominately biomechanical paradigm, physiotherapists seem to try and

avoid medicalising or giving structural explanations for non-specific back pain. Consequently some physiotherapists might find it difficult to formulate a meaningful explanation to the patient that legitimises their pain whilst at the same time not reinforcing psychosocial obstacles to recovery such as fear avoidance beliefs, heightening the patient's anxiety that their spine is vulnerable to damage. For some physiotherapists it may prove easier to offer a brief explanation or in some cases no explanation at all.

5.2.2 Sub-theme: Review of management options

In this sub-theme I present data from the interviews which suggest that there was little evidence of the patients being offered a choice of different management or treatment options, although it is something that some of them would have valued. One of the principles of a shared decision making approach is that patients should be offered information on management options. Subsequently, the therapist's role is to assist the patient in evaluating the evidence for and against each option in an unbiased fashion, remembering that this may also include the option to take no action (see Table 1.3, p.22). The therapist needs to be sensitive to the potential for framing or presenting information in such a way that it is more supportive of their choice than that of the patient:

"I was given my management plan which was exercise, but that was just delivered to me. No other options were discussed it was just a case of 'this is what I'm going to prescribe for you'". (A1.16)

"I guess I wanted something different but I don't know what. I don't know what else different he could have done, I wasn't offered any choice, other than an exercise that was different. He just told me to stand up, showed me how to do the exercise and told me to go home and do it every hour in front of a mirror for 4 days and come back and see me on Friday. I was told that was what I needed to do." (S1.40-41)

“The two options or the two things that were suggested to me were to continue with my level of exercise that I was doing already and complement it by doing the three exercises I was given on the printed sheet. I wasn’t aware, but I have actually looked recently at the clinical pathway and suggestions of how treatment might progress, and see if there are some options in terms of slightly more alternative approaches such as acupuncture.” (P1.15-19)

Exercise is likely to be seen by many physiotherapists as a way of facilitating self-management, and the first line approach to encouraging patients to take more responsibility for their care. Perhaps the only way physiotherapists can work effectively with people with long term pain is to restrict interventions to those that they feel comfortable with and/or believe have moderately good evidence, or that they can deliver within the pressure and time constraints that many experience. This is likely to restrict the potential for other options to be offered. Based on evidence from both phase one (physiotherapists) and phase two (patients) of this study, physiotherapists are likely to favour exercise based management strategies, as Liz commented: “everyone says it’s all about exercise” (L1.32).

5.2.3 Sub-theme: Benefits of exercise

Evidence from patients’ interviews suggest a lack of understanding of why they were doing the prescribed exercises and what to expect in terms of benefits, although some formed an assumption based on the naming of the exercises. This finding links with phase one sub-theme 4.2.4: ‘Checking patient understanding’, in which the physiotherapists frequently questioned whether their explanations had gone far enough. A significant challenge for the clinician in dealing with patients with NSCLBP is to adequately inform patients of the likely treatment benefits in a meaningful non-technical way that ideally accords with their treatment preferences and goals, and takes into consideration the chronic and recurrent nature of LBP:

“The lady went to the computer and looked at whatever exercises she has got on the programme and chose some for me and printed me off a sheet. I imagine it was to loosen or strengthen the muscles, but I made that assumption myself.” (K1.9)

“They didn’t really tell me the reason for doing the exercises or how the exercises were going to help. Yes they named the stretches such as a ‘hip stretch’ which kind of suggested it was going to stretch the hips and gave you an idea, but at the time I didn’t really know and she didn’t show me what muscles we were dealing with. So it was suggestive information, I didn’t know why I was doing the exercises”. (M1.17)

Trudy talked about how her experiences in physiotherapy compared to seeing other healthcare professionals. She felt that time constraints made it difficult for her physiotherapist to explain the benefits of exercise, and that this affected her willingness to exercise:

“I think the exercises the doctor and my friend gave me were more helpful. Sometimes you are just given exercises told to go away and do them, come back, ‘how are you, are you doing your exercises?’ But then you are told to keep doing them to go away and come back, it seemed very clinical. Whereas with the homeopath she was explaining everything and you get an idea of how the muscles work and more understanding, so I did more of her exercises because I understood why I was doing them. I am very flexible and she explained about that if my muscles are stronger, if I work on my core muscles it will support my back more. But with the physio I wasn’t told these things and maybe that’s because they haven’t got the time to do that because there are so many people they have to see.” (T1.16-17)

I formed an early and consistent view from the interviews that physiotherapists cannot expect patients to express their preferences when they feel they have received insufficient information. The lack of quality information given to patients could be based on the physiotherapist’s doubts about a patient’s potential for improvement with an intervention such as exercise, and they therefore actively avoid talk about the likely benefits of exercise. Alternatively it could represent a conscious decision on behalf of the therapist to retain control of the situation (power asymmetry), or that they are experiencing uncertainty in their own mind as to whether their treatments are targeting the cause, the symptoms or the consequences of the problem.

5.3 Main theme: Not all decisions need to be shared

In this theme I focus on evidence from the interviews suggesting that patients demonstrated a degree of heterogeneity in their preferences for participation in treatment decision making, and for some the potential for contradiction regarding the role they wished to adopt. These findings suggest that whilst there may exist an increasing drive for shared decision making to become widely instigated, it must also be accepted that shared decision making may not be what some patients want.

5.3.1 Sub-theme: Patient differences over preferred decision making role

In this sub-theme I outline the different patient perspectives regarding their role in decision making. My interpretation of the patients was that in the main they wanted information, understanding and more involvement in the process of deliberation than in making the final decision. This was particularly evident with Andy who initially expressed a clear view that it was down to the clinician to decide what was in the patient's best interests on the basis that patients can have misattributions about their problem. He justified his views as being driven by his own line of work in which he would expect to follow instructions from someone in authority.

"I see it differently, It's not about what we want to get as we can have misconceptions, I think we need to be told what we need and what we are going to get and be realistic". (A1.28)

However he maybe had a sense of discord in that he talked about the care he had received as being very 'directive' possibly on the basis that he had not been involved in the discussions.

"They were very directive it was the case of this is what you need to do, and it was like it was this is the only thing you need". (A1.50)

This is consistent with the study findings of Longo *et al.* (2006) who concluded that most patients prefer a consultation in which they contribute but do not have sole responsibility for the decision taken.

In Andy's case his preference for the clinician to take the lead in making the treatment decision should not be interpreted as evidence that he did not want to be involved in the decisions about his care, as irrespective of his preference for involvement it seems he felt slightly aggrieved and may have felt more confident and satisfied with the decision had he perceived he had had some input.

Just as each person can have different health behaviours, so too can they have differing values and opinions regarding the extent to which they want to be involved in decisions. This heterogeneity in decision making was further demonstrated by considering the views of Kim, Sarah, Liz and Phil. Phil held a strong view with regards to having a treatment intervention imposed upon him:

"I think having exercise imposed on people in my experience and when I have spoken to other people about it as well I don't think it really works because people aren't realistically going to keep up the programme. But if some other form of exercise such as walking, cycling or swimming can do the same thing (I don't know whether they can) but if they can, that might be a better suggestion". (P1.71-72)

For Kim and Sarah the importance of the patient/healthcare professional interaction and building a relationship based on a collaborative approach and aligned to the patients' needs and treatment goals was key:

"I think there is a very fine line between the doctor doing what is right and involving the patient, but it all depends on the patient and building a relationship of exactly what they need". (K1.35)

“Not just another sheet of exercises which I have been given in the past, told to go home and do them and come back. Maybe ask me what I want to do, what is my goal here; what is your aim here. Basically I just wanted to go to work and be able to sit in my chair for longer than 10 minutes, so that was one of my goals which was a big problem.” (S1.39)

Demographic characteristics such as age may influence the extent to which people want to share in decisions. Studies suggest that some older patients may prefer a more paternalistic or directive style of interaction with clinicians (Rotar-Pavlic, Svab and Wetzels, 2008; Teh *et al.*, 2009) and this may have been the case for Liz in the sense of her struggles to understand the changing dynamics of decision making and also her desire to have a clinician-directed relationship in terms of preferring the clinician to make the decision:

“It’s a little bit well ‘you make the decision not me’, they want you to make the decision I don’t know why, but the medical profession seems to have gone down this route a lot. I think the professional should be making the decisions including the need for a follow up appointment. I think it’s a general NHS attitude now to say well if the patients got a real problem they’ll come back and perhaps it’s the same with the physio, perhaps it’s a modern way of dealing with it.” (L1.21)

Based on the patients’ interviews, assumptions and generalisations about their preferred level of involvement in decision making cannot be made. In other words a ‘one size fits all’ approach to engaging patients in decision making is not appropriate. The data from this study suggests that it is dependent on a number of factors such as the attitudes, opinions, past experiences and life experience of patients.

Characteristics of the management decision being considered such as the specific condition, type of care and supporting evidence base, may also determine how feasible it is to share the decision between clinician and patient (Elwyn *et al.*, 2000; Légaré *et al.*, 2008). As part of the interviews a hypothetical question was posed aiming to explore patients’ thoughts on their

desired level of involvement in a decision over an exercise programme compared to an intervention such as surgery for their LBP. Perhaps it was not surprising that all of the patients talked of wanting to be more involved in decisions regarding surgery rather than exercise on the basis that exercise was a “*lighter issue*” (M1.63) and “*minor stuff*” (A1.49) compared to surgery. The need for control and the perceptions of benefits and risks for individual circumstances were important issues that influenced patients’ reported desire for greater involvement in the decision regarding surgery which is consistent with previous research findings relating to the perceived level of risk involved in the decision (O’Neill, 2003):

“I would expect to make the decision to go ahead I wouldn’t expect the doctor to take the power from me if you like and say we are doing it.” (M1.64)

“I’d want to be in control as this is happening to me, whereas with physio and exercises it is not quite like that.” (K1.32)

It may be that patients’ perceptions of the potential for benefit and low substantive individual risk value of exercises makes it a decision that is possibly perceived as ‘less’ important and one for which some may be happy to defer to the healthcare professional to advise on the correct course of action.

“I suppose it’s the level of intervention I suppose, because the lower level of intervention which would be the exercises, the implications of those going wrong are not quite as bad as the implications of surgery going wrong so you would want to be consulted a bit more and be more involved in the surgical decision making. But I suppose in theory you should be equally involved in both but you naturally lean towards wanting to be consulted about the surgical option because it’s a more scary option.” (P1.76-77)

Physiotherapists keen to promote a collaborative approach need to be mindful of this in terms of deciding the extent to which individual patients want to be involved in decisions over their care and consider that patients’ desire for information and understanding relating to their LBP is perhaps stronger than their desire to be involved in the decision making. This was

clearly the case for Mike who firstly wanted a better understanding of his LBP in order to contribute to a more meaningful discussion around treatment options:

“It wasn’t a case necessarily of wanting to be more involved with maybe the exercises I wanted to be involved with understanding what was wrong with my back. I feel you need to be more involved with what is wrong, a little bit more explanation on....., perhaps using a model or chart to explain what the issue could be, and then from there ask me where I needed or wanted to go with this”. (M1.57-59)

As part of the interview, vignettes (see Appendix H) were used to help focus the discussions and seek patient views on how in each case they felt the patient’s care had been managed. Patients’ perspectives on the vignettes are strongly represented in this theme as they focused principally on how the options for management were decided and the patient’s role in the process. Although the vignettes were based mainly on real patients I did have some concerns that patients would potentially struggle to appreciate any salient differences in decision making regarding the delivery of exercise highlighted in each story, particularly if they have never truly experienced a partnership approach to making decisions about their treatment and healthcare. In the interviews patients were simply asked to voice their views on how they felt each case had been managed and what they saw as potentially positive (or negative) in each scenario.

All patients commented on the noticeable differences in approach taken by the physiotherapist to management and involvement of the patient in the decision making in vignette four (see Appendix H), with some contrasting it to the approach taken in vignettes two and three (see Appendix H). Factors highlighted included: the joint approach, the patient had been listened to, identification of the patient’s main needs and a programme devised to address these needs:

“The physio is trying to focus on her confidence. They are having a discussion, the physio is obviously trying to manage the situation together, and it’s not a doctor/patient thing. It’s: ‘come on right I’ll support you we can do this together’, and she’s involved in it. On this occasion she has included the patient. In two and three they didn’t include the patient; they were more of a clinical diagnosis, whereas the last one was inclusive of the patient.” (K1.22-23)

“I think if this were me I would be quite happy with what I’ve been given here. He has listened to me, understands what I want to achieve, I have been given options of things that could be done. I felt the exercises would help and to go to the physio department for exercises as well would make me feel happier as there is some support and someone to watch you doing the exercises. I think the main thing is that the physio has listened more to the patient than certainly number two and three, and has understood more of what the patient wants.” (S1.31-32)

“I think the patient has been listened to more and they’ve made an effort to incorporate what she wants to achieve into the exercise plan. There have been targets set as well in terms of distance or time walked so it does seem to be more structured and it’s not the case of being given some exercises and being told to go away and get on with it, so it is a very structured and good response”. (P1.48-51)

“I like this one. The physio seems to be listening to her and discussing different options of treatment. Joan obviously doesn’t feel confident about exercise so they have equally discussed different ways of exercising, so the physio is obviously listening and understands she is fearful, but she is working with the patient rather than talking over and working against her, she is working with her, so I like this approach”. (T1.24-25)

“This one is very good, but what she is searching for is obviously her concern is her dog, and so is looking at her quality of life, and this one the exercise plan is about walking with targets under guidance. See it seems to be more of a structured programme with targets set which infers an ongoing care plan rather than there’s some exercise sheets get on with it. The patient is going to go out thinking that what they went in with they have come out with answers to and a plan to achieve this. So the patient’s needs have been addressed, it’s much more geared to the patient, it’s less generic. Mine just felt generic”. (A1.38-39)

“It appears to be a different physiotherapist who has put themselves into the individual more and understood more about what the patient wants. So a little bit more care, a little more interest in their life and making sure they have a positive outcome”. (M1.48-49)

It was quite surprising to find how readily all the patients identified and talked freely about a clear difference in approach to patient care in vignette four. They talked in terms of the approach being taken as more collaborative, with the management plan aimed at achieving what was important to the patient. Patients’ talked about the approach being: *“very good”, “very structured and good response”, “more care”, “I like this one”, “inclusive of the patient”*. In interpreting these responses I acknowledge that the use of vignettes may not truly reflect patients’ views when they are actually taking part in a true-life consultation, but it does suggest patients are likely to have some insight into different approaches to care that may potentially reflect their personal underlying values.

5.3.2 Sub-theme: There has to be an element of trust

From the interviews a number of the patients talked about the need to have trust in the healthcare professional to be doing the right thing, on the basis of being the ones with the necessary knowledge to know what is best. Trust in health care professionals can have a significant impact on patients preferred role in decision making (The Health Foundation, 2012). This could be viewed as an expression of preference, or one that maintains the clinical ‘relationship’ with the clinician seen as the expert, but equally it should not necessarily be interpreted as evidence that the patients did not want to be or to feel involved in decisions about their care:

“I think you ultimately defer to the professional because they know what they are talking about, you don’t know so you need guidance from the professional, but it should also be a joint thing as well, because sometimes it’s trying to find the time. I was told to do them three times a day, and there are times when you can’t do them three times a day. But, yes I would still go with the physio; ultimately they are the professionals so you ultimately go with what they give you”. (T1.30-31)

“You rely on them I suppose, you think they are the professionals, they give the advice and if you follow it hopefully you will get better”. (L1.35)

“I was given some exercises and you take what you are given and rely on that experience. I think if a doctor says do this or a physiotherapist says do that, I think we have to accept they are the expert on that, and that’s what they are telling you to do. Yes we all know we have the right not to do it, but he’s basically saying if you want to get better you have got to do this, and I have no problem with being told what to do, but what I would like is to be able to come back and be re-assessed.” (A1.26-1.32)

“You do need to respect the fact that the person that is helping you the physiotherapist, doctor, personal trainer or whoever, they do know in theory and practice what they are talking about, and so therefore you should trust them more.” (M1.58)

“She is a professional, it’s not my area of expertise, I couldn’t dismiss someone’s opinion because they are there to help me and they wouldn’t give me something that was irrelevant to do, so I will go with it.” (K1.33)

“With the physio exercises, no, it was very much a one way conversation. But how much of a contribution I could have made to that side of things was probably minimal as I don’t have any experience of physio exercises. I accepted what I was given on the physio side of things as I have no knowledge of them and I expected to be given the right information”. (P1.63-67)

In spite of the fact that many of the patients talked about deferring to the professional to make the final decision, this was balanced with a sense that many equally felt obliged or in some cases resigned to comply with the advice or recommended exercises. The extent of the patients’ perceived lack of information, knowledge and confidence to contribute to the treatment decision appeared to equally influence their confidence to challenge any treatment decision:

“I sort of when I was given the exercises to be honest I kind of had that sinking feeling knowing that I would probably keep it up for 2 weeks and then it would start to slip and I think there was a certain inevitability about that really because even though they only take 15 minutes a day maximum, it’s still quite difficult to find the time, well not find the time but to allocate the time and remember to do them. I found that difficult, so I find being given regular exercises to do every day I pretty much know from the outset I’m not going to keep them up”. (P1.21)

“I came out thinking ‘oh back on the exercise trail again’. I followed what I was told to do because you feel well I’ve got to try this and go down that route”. ((L1.37)

“Perhaps I should have been a bit more assertive and said ‘no I’m not doing that exercise it is way too painful, the pain level is too much for me.’ But you put your trust in these professional people. There was no discussion it was ‘go away and do it, come back and see me on Friday’.” (S1.42)

“It did feel like it was 4 exercises and that’s what they gave to everybody, and I guess I didn’t think to say how about this. If I had been more in tune with what was going on with me a could have been a little bit more challenging and taken them out of their comfort zone which is where I think they were. No it felt like ‘this is your prescription, go away and take it’.”(M1.54-56)

Reflective comment:

The above comments left me considering whether physiotherapists recognise and acknowledge the respect and trust placed in them by patients to be doing the ‘right’ thing. Perhaps more importantly do they appreciate that this sense of being trusted as a professional to be providing the authoritative knowledge and treatment does not mean that the decisions they make will always accord with the patients’ preferences if they fail to ask what is important and what matters most to them.

5.4 Main theme: Wanting to be treated as an individual

In this theme I present the patients reflections on their experience of receiving an exercise based intervention as part of their care, in which a number talked about their frustrations of feeling that the care they received was not particularly personalised and as such they talked about feelings of being treated as: *“simply a number”, “I felt like I was one of many”, “it felt very conveyor belt”, “they give you a set of exercises and that’s more or less it, they have finished with you” and “it was very generic”*. One of the dimensions highlighted in the model of patient-centredness from the perspective of the CLBP patient by Cooper, Smith and Hancock (2008) was the need for care to be individualised with patients *“wanting to be treated as a person and not a number”*. The findings from this study are in keeping with the findings by Cooper, Smith and Hancock (2008) in that patients talked of feeling *“like I was simply a number with back pain”*. Most patients felt the approach from the physiotherapist was standardised and directive in terms of deciding that the patient was going to benefit from exercises and determining the exercises the patient would do, which were not necessarily tailored to their unique needs and circumstances:

“What it felt like, to put it plain and simply when I went in there I felt like I was simply a number with back pain, and I realise, especially now, there are a lot of people with back pain, but I felt like I was simply a number. I went in there she had 4 exercises written down which I’m sure she tells every patient irrelevant of what they find and we did the 4 stretches same as the next person would have done the same 4 stretches, even though that person may be 20st heavier or significantly older.” (M1.18-19)

“In broad terms it felt very conveyor belt. I think it was very generic, it was ‘ok so you have got back pain, yeh your movements are not great, you are tall and thin and people like that suffer, and I’m going to give you some exercises’.” (A1.3-5)

“I can’t put my finger on it but it was just the way I felt she was coming across to me. It was like ‘here we go again someone else with back pain’. With the physio I felt like I was one of many, which I probably was, but that is how it came across.” (T1.12)

The opinion of many of the patients that the care they had experienced was not personalised to their needs was also highlighted by their reflections on the care received by the patient in vignette two (see Appendix H) in which they felt the patient was not necessarily being listened to with regards to his perspectives and previous experiences with exercise, with a feeling that the care delivered in this case was as Phil described it an 'off the peg' solution:

“The physio is carrying on with their ‘that’s what we do, this is the job, and we’ll print the exercises and that’s all we can do for you sort of thing’.” (K1.17)

“I wouldn’t have been happy if it were me, the patient’s not happy as he said it was ‘ridiculous’ so he’s not happy being given exercises again, because he has already done that and it’s not helped. You feel like all I’m getting is a load of exercises thrown at me and nothing..... I would know if I came back in 3 weeks I would be in exactly the same situation as before.” (S1.24)

“He’s been given what the physiotherapist has suggested which is probably what the first physiotherapist suggested 20 years ago when he first went in with back pain, so, I don’t think the patient has been listened to really and I think he has been continually offered an ‘off the peg’ solution to the problem and nothing that is personalised.” (P1.33-34)

Many patients reported that physiotherapists often enquired about their current activity levels and own forms of exercise, but apart from a brief acknowledgment of the patient’s own efforts to exercise and encouragement to continue, the patients had the sense that the physiotherapists’ priority appeared to be on offering an individualised home exercise programme:

“One of my concerns, that any of the sports I do such as cycling were actually bad for my back. I can remember people telling me that drop handlebar bikes are bad for your back, but I ride one, is that good or bad for my back”?

Interviewer – “You talked there about the sort of exercises you normally or would like to do. So were different approaches to exercise discussed with you and were you involved in the discussions about the type of exercises you could do”?

“No, and there was no discussion about the exercise I did do, I think that was just passed over there was no talk about what was good or bad”.

Interviewer – “Sounds as if you would have liked to have been more involved in discussions about your own exercise, because as you say you had some concerns perhaps it was doing more harm than good”?
“Yes I would have liked to have discussed things a bit more, but the exercises were just delivered. The exercises were ‘this is what I want you to do’, it’s a set time slot, ‘I’ve heard what you said but this is what I want you to go away and do’, again very generic”. (A1.44-46)

“It was like an initial consultation, what do you do, how do you do it, where do you do it? I was doing a bit of yoga, but I didn’t have the opportunity or time to go out and do a class or anything else.”

Interviewer – “So in terms of whether you were best to continue with that exercise, or the physio giving you exercises, what discussions did you have about what you would prefer”?

“None, I was given the exercises and that was it.” (K1.25-26)

For those patients who reported carrying out the physiotherapist suggested exercises, many felt they added little value to what they were already doing other than to provide them with some reassurance that it is ok to be active:

“It was completely impractical to do the exercises as I was advised. The exercises didn’t really offer a lot above what I was already doing. I had taken control of my own pain before seeking professional advice.” (K1.37)

“She explained this and that was ok, and that she was going to give me a sheet of exercises to carry out based on where I felt the pain etc and what I was already doing myself with the pilates and that, and she just gave me a sheet with about 8 stretching exercises on, a lot of it I was already doing through the pilates class.” (L1.6)

“I suppose she had agreed with what I already knew that exercise helps LBP and everyone impresses this upon you, and so it just confirms in your mind yes you have got to keep doing this to keep your back going as such.” (L1.11)

5.5 Main theme: Ongoing support is important

In this theme I highlight a factor that emerged repeatedly in the interviews, and was further emphasised by patients in their discussion of the vignettes, which was the issue of follow up appointments and further access to physiotherapy. Although a follow up appointment or review by the physiotherapist was an important element of patient-centred care and patients' perceptions of self-management identified by Cooper, Smith and Hancock (2008, 2009), it was something that I had not necessarily anticipated would be such a significant factor affecting the patients experience, but it was based on the patients wanting further appointments to provide support, ensure correct exercise performance and to monitor progress.

“The implication come back if you want really hits home ‘that I don’t want you to come back, you know I don’t feel I need to see you again’. I think that takes the drive out of yourself because you are not going back and you are not thinking I need to be more flexible when I go back otherwise he’ll wonder what I have been doing. What I would like is to be able to come back and be re-assessed.” (A1.33)

“I did ask at the time if it wasn’t to work how quickly I could access physio again having had to wait 2 months to see her in the first instance. I was a little concerned that I didn’t have access to someone like that, that was my main fear.” (K1.3)

For the physiotherapists it may be difficult to strike the right balance in terms of available time for follow up appointments and promoting a self-management approach. Information provision alone is unlikely to be sufficient to motivate sustainable behaviour change and improve clinical outcomes, as some of the components found to work well to support self-management include: involving people in decision making, setting goals and following up on the extent to which these are achieved over time, forming a patient/healthcare provider relationship and proactive follow up (Wagner, 1998; Lorig and Holman, 2003; Cooper, Smith and Hancock, 2009).

My interpretation of patients' comments was that they felt that they needed some form of a longer-term relationship with the physiotherapists who they could trust and who they could get involved in the joint management of their condition. However the pressure on the NHS and therapists to increase patient throughput was interpreted by some patients as a lack of interest in them as a person. As a consequence they held a feeling that the physiotherapists' main aim was to reduce contact overall, rather than to support a different pattern of contact which ultimately left them feeling dismissed or that they were complaining unnecessarily:

"I know like everyone else the NHS is suffering, and physio is on a self help basis. You used to go the physio once a week and they would see if there was any improvement at all, but now it's more or less on a self help basis. They give you a set of exercises and that's more or less it they have finished with you." (J1.41-44)

"It's all very well to be told yeh yeh its fine and now you can go about your business and carry on your exercises. But the fact of the matter is most people, me especially I would want to feel positive so I would want to go back to feel there are some benefits. It just seems like this is what you have got to do, this is going to work now get on with it." (M1.23)

For Trudy and Mike it was almost as if they perceived that they had been left in a therapeutic void with nowhere to turn and no one to support them:

"It's all well and good you going to a physio and them saying you have got to do this, if you don't do this it's not going to get any better you need to help yourself, and you come out and burst into tears and think I can't help myself I don't know how to help myself. You can try and do the exercises but you haven't got the motivation there." (T1.35)

"I wasn't given any contact details, and the minute I walked out and the doors closed behind me I felt I was in a prison when I walked out and I couldn't get back in. I had to go and see the doctor which I had bad experiences with trying to get physio in the first place." (M1.69)

The findings suggest that opportunities for patients to receive ongoing support may be a key success factor for some. This poses an interesting question in terms of whether physiotherapy services given the increasing

demands and reduced resources are able to meet patient needs to the extent that they feel they require. If this is to be achieved it may need a radical change in how physiotherapy is delivered to patients with NSCLBP.

Reflective comment:

Perhaps the word treatment should be removed from the vocabulary of care for this condition, so that clinical practice and resources are redirected to ‘focus on the individual’ supporting patients to manage the consequences of living with NSCLBP. Adoption of such an approach would challenge what is often delivered in clinical practice in terms of a ‘focus on the disease’ with an attempt to treat the cause or the symptoms.

5.6 Summary of the analysis

These findings provide a detailed insight into patients’ perceptions and experiences of receiving exercise based management strategies. Any discussions about therapeutic decisions should begin with an understanding of the patients’ perspectives. The findings from this study demonstrate that the framing of questions to establish a patient’s agenda needs to be considered carefully. It appears that for this group of patients in the first theme, ‘Patients’ expectations and patients’ needs are not synonymous’, their expectation of what they felt they were likely to receive from physiotherapy was in contrast to what they wanted and what was important to them.

In the second theme, ‘Information is necessary but often not sufficient’, all patients talked about wanting accessible and understandable information particularly relating to the cause of their problem and management options. Their need for a better understanding of their LBP was arguably greater than their desire to receive a therapeutic intervention or to be involved in decision making. For the therapists this means providing trusted information for a non-specific problem that legitimises the patient’s pain whilst not enhancing their fears. Based on the evidence from this study, this continues to be a difficult challenge for the professional and, based on patient reports, an often

inadequately undertaken task. The limited evidence of the patients being offered a choice of different management options led to an overall feeling that the role they played in the therapeutic interaction was a marginal one, such that the therapist was dominant in structuring the interactions.

In the third theme, 'Not all decisions need to be shared', patients reported some ambivalence over their role in decision making, which was shaped by a complex array of factors such as lack of understanding, trust in the health care professional, and the type and level of decision being considered. An exercise intervention seemed to be regarded by many as a 'minor' decision for which patients in the main were happy to defer to the health professional, which may have also been determined in part by their lack of confidence in contributing to and challenging some decisions. The clinical implication of this is that physiotherapists need to consider each patient's desire for involvement in decision making and tailor their approach accordingly, that is to say responding in a flexible manner to each patient's unique needs.

Patient-centredness means developing an understanding of the patient as a person in terms of their unique individuality, preferences, needs and values. In theme four, 'Wanting to be treated as an individual', the strength of the patients' responses suggests that of the clinical level interactions considered essential for care to be patient-centred, individualisation of the intervention, to be treated as a person and not a number, with care tailored to their needs and not based on set routines may be of particular importance to patients with NSCLBP. This individualised approach to care was further emphasised in the final theme, 'Ongoing support is important', in which patients talked about feeling that the physiotherapist's aim was to reduce contact overall, which was in contrast to the significance patients placed on developing an ongoing therapeutic relationship.

For physiotherapists keen to promote a patient-centred approach, it is essential to consider that certain dimensions of patient-centredness as identified by Cooper, Smith and Hancock (2008) are likely to hold different values and importance to some NSCLBP patients than others. So although

shared decision making has been referred to as the crux of patient-centred care (Weston, 2001), certainly for this group of patients an understanding of their problem and an individualised care package appeared to be more valued than involvement in decision making. These findings suggest that being flexible and responding to each patient as a person is necessary to prevent standardisation of care common to a disease-specific and/or a clinician-centred care approach.

In the next chapter I discuss the issues surrounding the findings, and explore their impact and relevance in the context of the related literature.

Chapter 6: Discussion

6.0 Introduction

In this thesis I have documented the process of the research and interpreted the data generated to investigate the approaches used to prescribe exercise for patients with NSCLBP, and explored how shared decision making and patient partnership are addressed by physiotherapists in the process of exercise prescription. In this chapter I discuss the findings from within a conceptual framework drawn from the principles of shared decision making, as illustrated in Table 1.3 (p.22).

Data analysis has led to a deeper understanding of the ways in which exercise interventions are prescribed by physiotherapists for patients with NSCLBP and provided insights into the various ways in which decisions were reached and how patients viewed their role in the process. My understanding developed through this thesis has potential implications and relevance to physiotherapy education and clinical work, as the results can form a basis for discussion and future research. This chapter is divided into the following sections: Review of the study, including implications for clinical practice and further research; Strengths and limitations of this study; Self-understanding and changes to the researcher's pre-understandings and Conclusion.

6.1 Review of the study

I have discussed in the Methods and Methodology chapter, that rather than creating knowledge the aim of a hermeneutic enquiry is understanding, which is achieved by a fusion of the researcher's and participants' horizons. The resulting data interpretation is my comprehension of the data achieved through observing, reading and listening. The overwhelming impression of the physiotherapist perspectives derived from this research is how the culture of adopting a reductionist approach to dealing with a complex disorder such as NSCLBP has been perpetuated and the problems identified

many years ago in the research literature with adopting such an approach are still evident in clinical practice.

Data analysis has revealed how the key elements of shared decision making as illustrated in Table 1.3 (p.22) are reflected in the findings from this study, which are summarised in Table 6.1. The findings have led to a deeper sense of the potential mismatch that exists between the rhetoric of health care policy, in terms of increased patient participation and engagement in decision making, and what happens in clinical practice. Part of the explanation for this mismatch could be based on how sharing of decisions is viewed and defined by both physiotherapists and patients. The findings from this research suggest that the attitudes, practices and skills of clinicians are likely to be the most significant factors influencing the degree to which patients feel involved in decisions about their care. The understanding gained from this study is now discussed further in the context of relevant literature.

Table 6.1 Contrasting the study findings to the key elements of shared decision making.

Key elements	Descriptor	Study Findings
Develop a partnership with the patient	Shared decision making involves at least two participants – the clinician and the patient (mutual participation). The patients' preferences for participation are acknowledged	Clinicians developed a rapport with patients early in the assessment process. Patients however reported some ambivalence over their role in decision making, which was shaped by a complex array of factors such as patients lack of understanding, patients trust in the health care professional, and the type and level of decision being considered
Definition of the problem and the options available	Clinician provides patient with information regarding diagnosis, prognosis and management options	Little time appeared to be spent informing patients on the nature, diagnostic complexities and natural history of their LBP. A meaningful explanation of the problem was clearly very important to the patients, but was often inadequately addressed. Clinicians were more inclined to recommend exercise and specific approaches to exercise than other options
Review of options pros and cons	Information is given to the patient on the management options, risks and benefits in an unbiased way. It is also helpful to explore what other strategies patients feel may be available and relevant	Clinicians used the argument that the weight of evidence supports use of exercise. Patients talked of a lack of understanding as to why they were doing the exercises and what to expect in terms of benefits
Elicitation of patients values and preferences	Patients may be uncertain when asked to integrate their own preferences, because it may be novel to some and they may feel unfamiliar with biomedical information. The skilled professional will help patients express their views and guide them to explore their feelings and reactions to the relevant choices	Patients' preferences for management were rarely explored. Patients were often asked about their expectations of physiotherapy, but often responded according to their interpretation of what they thought physiotherapists do rather than necessarily what was important as an outcome from the episode of care

Key elements	Descriptor	Study Findings
Clinician recommendations	The clinician may share his treatment recommendation with the patient and/or affirm the patients treatment preference	Exercise was regarded as the 'default' approach to care. There was little evidence of the clinicians acknowledging the importance of checking that the benefits of exercise accorded with the patients' own values or treatment preferences
Review of patient's ability to implement plan	The clinician provides opportunities for patients to develop a sense of control and enhance their self-efficacy to implement management plan	Evidence suggests a tendency to provide perceived beneficial treatments over informed patient choices based on a process of implied consent, or subjective judgements of a patient's likelihood to adhere to the clinician's suggestions
Check for clarity and understanding	The clinician ensures the patient understands the management options, and by asking questions ensures that the information underlying their treatment preferences are based on fact and not misconception	Clinicians frequently questioned the adequacy of their explanations. For the patients a perceived lack of information, knowledge and possibly confidence to contribute to the treatment decision making, meant that many talked about deferring to the professional to make the final decision
Make a decision or defer until later	The clinician makes or negotiates a decision with the patient including the possibility of doing nothing. Through mutual acceptance both parties share responsibility for the final decision	Clinicians talked about the 'pressure' to give patients something, such as a 'simple' exercise programme. The decision making was seemingly driven by the physiotherapist's goals or values rather than the patients. The option 'to do nothing' does not seem to sit comfortably with some physiotherapists. Patients demonstrated a degree of heterogeneity in their preferences for participation in treatment decision making. Patients' desire for information and understanding relating to their LBP appeared stronger than their desire to be involved in the decision making

6.1.1 Reliance on exercise

This study reinforced the value physiotherapists place on exercise based interventions in the management of patients with NSCLBP. This resonated with my own experiences and could have been anticipated in advance of the analysis on the basis that previous surveys of clinical practice have reported the frequent use of exercise by physiotherapists in the management of patients with chronic low back pain. For example, a survey by Liddle, Baxter and Gracey (2009) reported that 98% of their respondents commonly used exercise as a management strategy, accounting for the greatest amount of total treatment time.

Physiotherapists' reliance on exercise based interventions was matched by patients' expectations to receive a management plan involving exercise, although it was clear from patient interviews that for many this did not necessarily concord with their wishes, needs and preferences. When considering the principles that underpin an 'ideal' decision support consultation, based on the doctrine of motivational interviewing (Rollnick and Miller, 1995), patients should be invited to set their agenda before clinicians set theirs. The ability to voice and explore their agenda is dependent on the style of communication adopted by the clinician (Barry *et al.*, 2000). In phase one of this study, physiotherapists were noted from the observations to question patients about their expectations of physiotherapy. In phase two it became apparent that potential exists for the misinterpretation of questions aiming to elicit patients' expectations of care. From a clinical practice perspective physiotherapists may need to reflect on the wording of questions aiming to elicit patient perspectives to focus on what issues are of importance to the patients. An alternative wording of questions could be:

- 'What do you want to talk about in our time together today?'
- 'What would be important to you as an outcome from our consultation today?'

Effective communication skills are essential for support in decision making (Cooper, Smith and Hancock, 2008; Slade, Molloy and Keating, 2009a; Kidd, Bond and Bell, 2011). However the key to skilled communication is

establishing effective working relationships with patients, remembering that a management decision agreed by both parties may include, in some instances, the option to do nothing. This is only likely to be successfully achieved by skilled and appropriate questioning, to determine what is of importance to the patient at the outset.

Although exercise is a frequently used management option, provision of an effective exercise prescription for a long term condition such as NSCLBP is perhaps not such an easy option as it may seem. It requires the therapist to employ two types of support, namely decision support and behaviour change support to motivate a sustainable behaviour change such as undertaking regular exercise (Elwyn, Frosch and Rollnick, 2009). Some physiotherapists felt that exercise prescription was almost regarded as an assumed skill which had been poorly dealt with in their undergraduate training. As a consequence they talked about concerns over their competency to deliver it effectively, particularly issues relating to behaviour change support, for example physiotherapist T7 remarked how:

“People might have the knowledge of exercises, but not the skills to enable them to get the patient to engage in the exercise.” (T7.97).

These views are supported by O’Donoghue, Doody and Cusack (2011) who scoped the current picture of physical activity and exercise promotion and prescription content within physiotherapy training institutions in Ireland. Acknowledging the study is limited by the small number of institutions surveyed, none of the courses featured guidelines for physical activity and exercise prescription such as those issued by the ACSM (2000), and no curriculum placed any emphasis on outcome measurement or goal setting. Clearly, if these findings are replicable across a broader range of training institutions, and the perspectives of the physiotherapists from this study are representative of the wider population, this highlights important issues related to physiotherapy education and the subsequent effects on clinical practice. This could result in the need for re-evaluation of physical activity and exercise promotion and prescription in physiotherapy curricula.

6.1.2 Treatment decision making

In shared decision making, preference-sensitive decisions are defined by equipoise, defined as a situation where options need to be deliberated, as there are very few clinical situations where there is just one course of action that should be followed in all cases (Elwyn, Frosch and Rollnick, 2009). In circumstances where there are a number of options leading to different outcomes, and the 'right' decision depends on a patient's own particular set of needs and outcome goals, the condition is said to be preference-sensitive (Wennberg, 2010). Where both healthcare professionals and patients agree that equipoise exists, situations may be regarded as having 'dual equipoise', which is an ideal situation for shared decision making (Elwyn, Frosch and Rollnick, 2009). However, in situations where health professionals hold strong views regarding the scientific evidence for certain treatment approaches equipoise is unlikely to exist, and this may have been the case for most of the physiotherapists in this study. Perhaps the only way physiotherapists can work effectively with people with NSCLBP is to frame the situation in such a way that it restricts interventions down to those that they feel comfortable with and/or believe to have moderately good evidence such as exercise therapy, or specific approaches to exercise therapy, and not offer other options. The failure to offer patients management options may equally represent a conflict between guideline-driven care and patient-centred care, or signify a conscious choice on behalf of the clinician to prevent a situation of decisional conflict arising. This may occur if it is perceived that a patient has a preference for a more 'passive' or hands on approach to their care, or indeed any approach other than exercise.

Physiotherapy clinical decision making involves a complex set of processes or ways of thinking that are specific to individual practitioners and are relevant to the field of practice and to the task being undertaken (Edwards *et al.*, 2004). This study found that the majority of the physiotherapists used a process of decision making consistent with a practitioner centred process. Based on empirico-analytical reasoning the emphasis was on a didactic delivery of exercise aligned with a traditional biomedical model of care.

Patients had little voice or interaction in decision making. This contrasts with the different forms of reasoning termed 'interpretive' and 'critical' proposed by Edwards *et al.* (2004). Interpretive reasoning places a high value on patients' insights and interpretations of their problem. In contrast with critical reasoning, transformation of existing perspectives may occur through critical reflection in which clinicians and patients abandon their traditional roles and relationships and learn from each other, so that expertise is shared and both parties benefit from this transfer of knowledge and power.

Daykin and Richardson (2004) found that physiotherapists dislike treating patients perceived as difficult, particularly patients with chronic pain, resulting in them feeling disheartened and low. These responses may lead to feelings of anxiety when engaging in situations involving management of patients with chronic pain when it is felt that the outcomes are uncertain. Intolerance of uncertainty is a dispositional characteristic not fully explored in the context of healthcare (Dugas *et al.*, 2005; Carleton, Sharpe and Asmundson, 2007). It has been defined as:

"The tendency to react negatively on an emotional, cognitive and behavioural level to uncertain situations and events" (Simmonds, Derghazarian and Vlaeyen, 2012 p.468).

This uncertainty may affect clinical judgements especially when pain is chronic and non-specific as with most LBP. Tait, Chibnall and Kalauokalani (2009) indicated that clinicians aim to minimise uncertainty and seek symptom certainty in order to simplify decisions which may explain the reliance on an empirico-analytical reasoning model. Physiotherapists in this study possibly had a high intolerance of uncertainty which resulted in them favouring a biomedical approach, providing a more simplistic mechanical or structural based explanation with a high degree of emphasis placed on physical impairments and pain that is more likely to fit with both their and the patients' belief systems. These relatively simple models of cause and effect are likely to have helped some therapists explain why a patient should exercise involving a specific exercise regime.

Roskell (2009) suggested that through the culture of physiotherapy education, physiotherapists possess a common identity where care, centred primarily on the physical body, is framed within a 'doing' approach. Clearly this notion of 'doing' can be interpreted in many ways. One interpretation might be an expectation for physiotherapists to want to prioritise a 'hands on' approach to care, as often it is the public perception of physiotherapy that feeds the need to 'get treated'. 'Doing' could also be interpreted more broadly as the physiotherapist playing the dominant role in structuring interactions.

From this study the physiotherapists' emphasis lay in prescribing exercise interventions with the framing of the main benefits of exercise based on a biomechanical and structural model of LBP. This appeared to be the case in spite of the increasing evidence that a postural-structural-biomechanical model is not suitable for understanding the causes of LBP (Lederman, 2010), and acknowledgment in the interviews by many of the physiotherapists themselves that most LBP has a non-specific cause. These findings are consistent with evidence from previous research (for example: Daykin and Richardson, 2004; Frost *et al.*, 2004) which found that physiotherapists have strong biomedical worldviews which influence their clinical reasoning and attributions regarding their patients' LBP. In this context, consideration of the patient's perspective is largely missing because a 'technical fix' for a somatic disorder is being sought. The lack of association between biomechanical and structural factors and back pain has important implications for the choice of therapeutic approach (Lederman, 2010). This should prompt physiotherapists to critically examine what the main goals are when using exercise as a therapeutic strategy for patients presenting with NSCLBP. Remembering that the way clinicians and patients think about exercise may well differ, consideration needs to be given as to whether they are targeting the symptoms, correcting the cause, managing the consequences or addressing patient-centred goals.

From this study the focus of the decision making that underpinned the use of exercise was not always apparent although for many the decision to use exercise was seemingly driven by the physiotherapists' goals or values. The clinicians may have unintentionally presumed that their personal values and decisions were equally shared by patients, based on their interpretation of patients' treatment expectations. Actually this may have been disadvantageous to some patient's physical and emotional state (Trede, 2006) as evidenced by some observed practice referred to in sub-theme 4.2.3: 'I try and get people to think about it from my point of view'.

Physiotherapists talked about their frustrations of working with patients with NSCLBP where they perceived that patients were not engaged or enthusiastic about the idea of undertaking an exercise programme (sub-theme 4.2.5: 'Checking patient's ability to implement the plan'). An individual's power needs are met when they perceive that they can adequately cope with events, situations, and/or the people they meet. In contrast they feel powerless when their power needs are frustrated (Conger and Kanungo, 1988). In this instance physiotherapists may have felt powerless to help patients who would not accept their treatment recommendations, which in turn left them feeling frustrated and almost dismissive of the patient. In these instances, if patients do not appear to be 'activated' to comply with the therapist's instructions, there seems little point in continuing to tell them what to do. The root of this problem probably lies in disconnected understandings between the therapist and the patient - each talks but neither readily understands the other's perspective.

Overall this study supports the suggestion that physiotherapists experience difficulty in accommodating the patient-centred agenda in which patients are viewed as active participants in therapy and as partners in the decision making process. This shift towards collaboration is particularly relevant in situations where people need to manage a long-term condition such as NSCLBP or might want to consider making changes to their lifestyles in order to reduce the impact of the condition on their quality of life (Elwyn, Frosch and Rollnick, 2009).

There appeared to be a degree of power asymmetry in that the responsibility for making decisions lay largely with the physiotherapists, with the exception of one participant. It is particularly notable that the exception (T7) was the most novice practitioner in terms of the length of time qualified. This challenges the basic assumption that extensive experience is necessary for development of clinical expertise. Resnik and Jensen (2003) characterised clinical expertise as a therapist viewing patients as active participants, putting their patients first and treating them individually, with a primary goal being to empower them through a collaborative patient/therapist relationship (Rodwell, 1996).

Another component of expert practice identified by Resnik and Jensen (2003) and Edwards *et al.* (2004) was the process of reflecting on practice to refine and improve clinical approaches, and according to Edwards *et al.* (2004), to move between different forms of knowledge and associated action in clinical practice and decision making. A process that was evident in the interview with physiotherapist T7:

“For most back pains for the first 4 months I’d qualified I’d give them the same exercise sheet with the same 3, 4, 5 exercises, and a bit of advice and it didn’t work. So you know I started to think why isn’t this working, why aren’t they coming back, why are they not getting better, and then through those questions led to me to further discussions with people who manage patients slightly differently and that’s where I started to adjust my practice somewhat.” (T7.12-14).

However, for a majority of therapists in this study, as Dall’Alba (2009) has noted, the way in which physiotherapists act is often constrained by the situation, with ready-made routines. Physiotherapists have limited time available to complete the numerous and diverse range of tasks and activities required of them in everyday practice. As a consequence many possibly do not take the time to reflect on or think about their practice but operate according to a normal routine or customary practice. This may have been the case for many of the participant physiotherapists in this study. Their decision to use exercise, perhaps even a typical ‘recipe’ of exercises was based on a belief that LBP is as a result of structural, biomechanical and motor control

deficits, which resulted in a specific home exercise programme often being prescribed as part of their normal routine.

6.1.3 Interpretation of the term 'exercise prescription'

One factor that may have influenced clinicians' practice and the responses of the interviewees (both patients and physiotherapists) to questions posed in the interviews relates to how the term 'exercise prescription' was interpreted. It was not my intention through use of the term 'prescription' in the participant information sheets or interview questions to mislead or unduly influence the participants in anyway. However, whether intended or not it is possible that use of the term 'exercise prescription' was perceived by many to be cognisant with that of a traditional medication prescription with thoughts of compliance and adherence to healthcare professionals recommendations coming to the fore.

Much of the physiotherapy literature has focused on the issues of patient compliance or adherence (Middleton, 2004; Jack *et al.*, 2010). Both of these reflect different perspectives of the same phenomenon, determined by how a patient's behaviour matches the therapist's advice. The WHO (2003 p.17) defined compliance as: *"the extent to which the patient's behaviour matches the healthcare provider's recommendations"* which implies a lack of patient involvement, and adherence as: *"the extent to which a person's behaviour...corresponds with agreed recommendations from a healthcare provider"*. This develops the definition of compliance by emphasising the need for agreement. However, what is common to both is the implication that patients are passive, acquiescent recipients of expert advice as opposed to active collaborators in the care process.

Concordance represents a relatively recent term, predominantly used in the UK in relation to medication-taking and the involvement of patients in decision making, in which the health professional and the patient have an equal partnership. They share their knowledge and experiences with each other so that an understanding can be reached and a decision about the management of a condition can be made. It has three essential elements:

- Patient has knowledge to participate as a partner
- Consultations involve patients as partners
- Patients are supported during their treatment (Moffatt, 2004)

Throughout the study use of the term 'prescription' was open to interpretation by all participants. Clinicians were free to decide whether their approach would fit with the notion of patient compliance to their advice and directions, or a more collaborative (concordant) approach in which goals and strategies for therapy were planned and negotiated. For this group of therapists, as Cruz, Moore and Cross (2012) found, a compliance-orientated approach to exercise predominated (theme 4.4: 'Compliance-orientated more than concordance based'). Participants talked about different strategies they would adopt to foster patient engagement with the main one being to keep the exercises 'simple' so that the patient would do 'something'. It is possible that although exercise prescription is a term commonly used in the literature (Slade, Molloy and Keating, 2009a; Freburger *et al.*, 2009), its adoption has led to a general misunderstanding of how a 'prescription' is interpreted. For many it suggests a passive role in which the patient is expected to do something that will require time, may be foreign to them, may result in some increase in pain, and may require some financial expenditure. It is perhaps not surprising therefore that for many patients this approach to exercise prescription is unlikely to work (ACSM, 2000).

This group of therapists' desire to maintain control over the therapeutic process was interestingly countered by their concerns of increasing pain by using an exercise based intervention, which resulted in their decision to keep the exercises 'simple'. These findings support the studies by Linton, Vlaeyen and Ostelo (2002) and Houben *et al.* (2005) who found that therapists with a biomedical treatment orientation were more likely to view daily activities as harmful, and were concerned by a patient reporting exercise as being painful, with the belief that patients should avoid movements that are painful for the back. My initial interpretation of this practice was based on the increasing emphasis in improving patient satisfaction, and to avoid negative patient feedback or complaints. Although none of the therapists offered any

specific comments relating to complaints or medico-legal issues to support this opinion, one did vocalise the view that patients experiencing increased pain with exercise would have a bad impression of physiotherapy with an increased likelihood that they would fail to return for future appointments.

Simmonds, Derghazarian and Vlaeyen (2012) commented that physiotherapists who are intolerant of uncertainty may have a stronger belief that patients could experience an adverse reaction in terms of increased pain to exercise and activity. The lack of symptom certainty can lead to worry and an exaggerated belief in an adverse outcome which is likely to contribute to cautiousness with regard to exercise interventions. This may have been the case for some of the physiotherapists in this study, underpinning their decision to keep the exercises 'simple'.

6.1.4 Barriers and facilitators to implementation of shared decision making

A wide range of factors may act as either facilitators or barriers to shared decision making based on the attitudes, characteristics, assumptions and biases of healthcare professionals or patients. A systematic review of 38 studies of barriers and facilitators to implementing shared decision making provides some insights into why shared decision making has not yet been implemented widely in clinical practice (Légaré *et al.*, 2008). The three most often reported barriers were time constraints, inapplicability due to patient characteristics, and inapplicability due to the clinical situation.

Several authors (Holmes-Rovner *et al.*, 2000; Billings, 2004; The Health Foundation, 2012) have identified a range of factors acting as barriers to implementation of shared decision making, for example, tensions between clinician's desire to respect patient preferences whilst simultaneously adhering to clinical guidelines or delivering high quality evidence based care; threats to the power relationship between clinician and patient; emotional, cognitive and skill barriers related to sharing and involving patients; type of care or treatment being considered; culture and infrastructure of healthcare

systems; and the motivation and attitudes of patients and professionals to change. From this present study a number of potential factors limiting or restricting implementation, were identified as set out in Table 6.2.

Assessment of barriers is considered an important step in some of the theories of implementation. For example, in the Theory of Planned Behaviour (Ajzen, 1988), and in the Integrative Model (Fishbein and Yzer, 2003) one of the main constructs is behavioural control, defined as the amount of control an individual perceives they have over a specific behaviour, and the individual's perception of the barriers and facilitators likely to influence adoption of the behaviour. Therefore clinicians' decision making behaviour may be explained by rational considerations, in particular their personal attitudes, which are determined by their beliefs about the consequences of their behaviour.

These theories provide an account of the way in which attitudes, social norms and perceived behavioural control combine to predict a specific behavioural intention, which will only successfully occur if these determinants change. Applying this theoretical view to shared decision making implementation, identifying and monitoring the barriers and facilitators to knowledge use, can inform the nature and content of interventions targeting a change in behaviour or practice. Some of these possible barriers and potential solutions to these barriers will now be considered in more detail.

Table 6.2 Potential barriers to sharing decisions identified from this study.

Patients	Clinicians
Lack of good quality information concerning health condition or treatment options	Tension between clinicians' desire to respect patient preferences, balanced against applying best practice
Not being offered a choice of treatment options, or aware that a choice exists	Failure to establish the patients' needs, goals and preferences
Patient demographics, characteristics, attitudes and opinions e.g. age, experiences in own work environment	Failure to provide patients with adequate and trusted information relating to their health condition, benefits and risks associated with treatment options
Having trust in the healthcare professional to be doing the right thing	Prioritising clinician's goals or values over patient's
Patient's own perceived lack of knowledge (information) and self-efficacy to contribute	Belief that patients lack the necessary knowledge to contribute to the decision making process or do not want to be offered choice
The clinical situation and perceived level of risk involved in the decision. Physiotherapy exercise based interventions are considered low risk, possibly influencing patients' desire for involvement in decision making	Failure to attend to issues relating to self-efficacy of patients to initiate and maintain an active self-management approach.

6.1.5 Importance of information sharing

This study underlines the importance patients place on provision of information about their condition and the options for managing it as part of a patient-centred care approach which is integral to supporting shared decision making (Cooper, Smith and Hancock, 2008). Patients need evidence-based information just as much as clinicians do, which might help to avoid the problem of poor quality care. It could also help to counter misplaced perceptions about management options and outcomes, promoting better care and more rational resource allocation.

Providers need to ensure that patients are given reliable information about their treatment or management options and that all staff are trained to anticipate patients' information and support needs. As Slade, Molloy and Keating (2009a) found, the desire for information particularly relating to the cause of their problem was often inadequately addressed. For the patients in the present study there was little evidence of being offered a choice of different management or treatment options, and this was combined with a lack of understanding of their problem, why they were doing the exercises and what to expect in terms of benefits (theme 5.2: 'Information is necessary but often not sufficient'). These factors have been shown to be important to patients. Some of the key dimensions of patient-centredness from the perspective of CLBP patients is that patients commonly want information relevant to their diagnosis, and exercises that were well explained and made sense to them (Cooper, Smith and Hancock, 2008).

Many of these information needs fit with the Common-Sense Model of Self-Regulation proposed by Leventhal (1985). The key construct within the Common-Sense Model is the idea of illness representations or 'lay' beliefs about illness. Leventhal found that different types of information were needed to influence both attitudes and actions to a perceived threat to health and well-being, and described five components of these illness representations:

1. *Identity*: the label or name given to the condition and the symptoms that 'appear' to go with it. People like to have a diagnostic label for their symptoms (for legitimisation) although,

conversely, once it is given, people are likely to interpret diverse symptoms as evidence of the label.

2. *Cause*: the individualistic ideas about the perceived cause of the condition, which may not be completely biomedically accurate. These representations will be based on information gathered from personal experience as well as the opinions and discourses of significant others, health professionals and media sources.
3. *Time-line*: the predictive belief about how long the condition might last, i.e. is it acute or is it going to be chronic? These beliefs will be re-evaluated as time progresses, and it has been suggested that 'Inside every chronic patient is an acute patient wondering what happened'.
4. *Consequences*: the individual beliefs about the consequences of the condition and how this will impact on them physically and socially. These representations may only develop into more realistic beliefs over time.
5. *Curability/controllability*: the beliefs about whether the condition can be cured or kept under control and the degree to which the individual plays a part in achieving this.

It is critical for physiotherapists to be aware of the importance of information and understanding to patients and how this might guide patients' preferences for treatment and the behaviours in which they engage over time. As Kravitz and Melnikow (2001) pointed out:

"Most patients want to see the road map, including alternative routes even if they don't want to take over the wheel" (Kravitz and Melnikow, 2001 p.584).

Physiotherapists need to be open and honest in explaining what information they can, and, in the case of NSCLBP cannot confidently provide relating to diagnosis of LBP, causation, time-scales (respecting the natural history of

LBP), and an honest appraisal of the advantages and limitations of different management options, tailored to patients' individual needs and understanding.

Patients with NSCLBP often seek legitimisation of their pain through accurate diagnosis and reductionist interpretations of their symptoms. However there is often a difference between objective clinical and radiographic evidence of musculoskeletal disease activity or severity and the experience of pain, other symptoms and functional ability reported by the patient (Boos and Lander, 1996; Beattie and Meyers, 1998). Lederman (2010) has noted the postural-structural-biomechanical model cannot provide reliable patho-anatomical correlates for understanding the causes of LBP. Clinicians need to reflect on how they handle this diagnostic uncertainty, and how this in turn will influence management decision making, communication and patient confidence in the clinician-patient relationship.

Traditionally most forms of patient information provided in a variety of formats such as leaflets, websites, and to individuals and groups, have been written in such a way that focuses on a setting out of facts based on a paternalistic model of care highlighting information that tells the patient what they should do. They may increase patient knowledge but do not necessarily enhance the patients' abilities to feel in control of their health (Burton *et al.*, 1999; Holmström and Röing, 2010). Shared decision making involves collaboration where information about proposed management should be accompanied by patient preferences, with both the patient and physiotherapist coming to a shared agreement on management options. However as this study has found, and Fenety *et al.* (2009) have highlighted, the fast pace of physiotherapy practice and the tendency of the physiotherapists to assume control and provide perceived beneficial treatments over informed patient choices, means that the framework they used has not kept up with the recent drive towards a shared decision making model of practice. The overall goal in physiotherapy interventions should be to make patient participation possible. Patients' needs for support, information and treatment and the opportunity to satisfy these needs without withdrawing the patient's own responsibility, competence and resources

remains a challenge for everyday clinical practice (Larsson, Liljedahl and Gard, 2010).

One method through which patients may be helped to learn more about their condition, issues and treatment options, and therapists may be encouraged to provide a more collaborative model of decision making, is through the use of decision support interventions (DESIs). Also known as patient decision aids or option grids, they are interventions designed to help people make specific and deliberate choices among options relevant to their health and their individual situation, including, where reasonable, the option of taking no action.

Making a decision about treatment is a complex and difficult task. It requires a certain emotional readiness, information about options and uncertain outcomes, and a sense of confidence about the decision itself and its implementation. An increasing number of decision aids have been developed to assist clinicians and patients in making good decisions together. According to the Cochrane Systematic Review of Decision Aids:

“Decision aids differ from usual health education materials because of their detailed, specific, and personalised focus on options and outcomes for the purpose of preparing people for decision making” (O'Connor et al., 2009 p.3).

They usually contain:

- a description of the condition and symptoms
- the likely prognosis with and without treatment
- the treatment and self-management support options and outcome probabilities
- what's known from the evidence and not known (uncertainties)
- illustrations to help people understand what it would be like to experience some of the most frequent side-effects or complications of the treatment options (often using patient interviews)
- a means of helping people clarify their preferences
- references and sources of further information

- the authors' credentials, funding source and declarations of conflict of interest (Coulter and Collins, 2011)

Passive informed consent materials, educational information that is not geared to a specific decision, or suggested interventions designed to promote compliance with an option rather than a choice based on personal values are excluded from decision aids. There are now a large number of patient decision aids available and many of them are listed on three websites, www.decisionaid.ohri.ca; www.tvhiec.org.uk/shared-decision-making/decision-aid-tools/pdas/ and www.thedecisionaidcollection.nl. They have been evaluated in randomised controlled trials and a Cochrane review has summarised the findings from this body of evidence (O'Connor *et al.*, 2009). However their use has yet to be explored within physiotherapy practice and a decision aid for exercise prescription is not available. Further research which explores the development of a validated decision support tool for NSCLBP may create a platform for setting mutually agreed management options within physiotherapy practice and help to assess whether gaps in information and mismatches between what patients value and the treatment they receive can be reduced.

6.1.6 Improving communication skills and developing 'activated' patients

In order for patients and health care professionals to have a more equal role in sharing decisions about care, clinicians need a variety of skills, ranging from technical communication and interpersonal skills to more fundamental changes to the relative roles and expertise of patients and professionals (Légaré *et al.*, 2010).

There is evidence from this study that the physiotherapists often elicited information regarding patients' perspectives, preferences and understanding of their problem and its treatment, but then failed to acknowledge or pay selective attention to this information when management decisions were being made. This raises the issue of which types of knowledge and

professional skills physiotherapists need in order to learn and then consistently engage in collaborative decision making with patients. The distinguishing factor in expert physiotherapy practice may be the use of active listening skills, as in the spirit of motivational interviewing proposed by Rollnick and Miller (1995), to elicit patient perspectives and derive knowledge from patients on their condition and treatment priority concerns (Jensen *et al.*, 2000; Resnik and Jensen, 2003; Pinto *et al.*, 2012). Then, perhaps more importantly, physiotherapists should act on this information with a genuine respect for the patient's values and unique circumstances when options for care are deliberated.

Effective physiotherapy practice is predicated on skilled and appropriate verbal and non-verbal communication, a skill which is seen as a key professional competence (CSP, 2005). Physiotherapy back pain studies have consistently reported that patients particularly value health professionals that listen to them (Trede, 2000; May, 2001b; Cooper, Smith and Hancock, 2008; Cooper, Smith and Hancock, 2009; Slade, Molloy and Keating, 2009a; Kidd, Bond and Bell, 2011). Within physiotherapy clinical practice a number of obstacles to effective communication may exist such as personal attitudes and beliefs of therapists, lack of knowledge and skill regarding effective communication styles, lack of awareness of personal barriers to effective communication, lack of confidence in dealing with psychosocial issues, lack of time and the pressures of waiting lists (Sanders *et al.*, 2013).

Although the CSP (2005) recognises communication as one of the core standards of physiotherapy practice, unlike other health professional groups, physiotherapists spend comparatively little time learning communication skills during their undergraduate training. Klaber Moffett, Green and Jackson (2006 p.105) commented that physiotherapists are generally regarded as good communicators, and therefore training is focused more on the learning of physical tests and techniques. A survey of communication training in physiotherapy undergraduate training programmes (Parry and Brown, 2009) found that a majority of programmes offered a stand alone communication-specific module mainly delivered before students have had much clinical

experience, and predominantly presented through lectures, with outcomes assessed by written or oral reports rather than by actual communication practice in a clinical setting.

As healthcare professionals, we will have a view of healthcare that is based on our personal expectations and that of our professional philosophy (Kerry, Maddocks, and Mumford, 2008). To establish an effective therapeutic relationship we need to understand the client's worldview and also to acknowledge our own. Physiotherapists spend long periods of the working day listening to patients. Given that therapeutic interventions occur through the medium of communication, which is dependent on expectations, knowledge and power positions, it would seem logical that more time needs to be spent in defining the processes and key skills which structure these interactions. Maybe less time should be spent on learning, practicing and consolidating technical physiotherapy skills, and more time is needed to understand the experience of health and disease in context and through the eyes of the patient if practice is to accurately reflect policy initiatives (Klaber Moffett, Green and Jackson, 2006).

Communication skills training should be the main mechanism by which physiotherapists learn about and gain competencies in the principles and practice of shared decision making. An increasing awareness of the importance of improving communication skills alone may not, however, be sufficient to increase the implementation of shared decision making. Simply giving physiotherapists a recipe of communicative actions to follow may not be sufficient to improve the way shared decision making is carried out. Obtaining commitment from physiotherapists and convincing them of the potential advantages that adoption of shared decision making will bring for them, their patients and the health care system remains a key challenge. Physiotherapy education is a process through which individuals adopt professional traits, ways of thinking and clinical practices. Physiotherapists are likely to struggle and possibly feel threatened by the perception of having less control of the clinical situation, control that their training has often taught them to maintain (Harrison and Williams, 2000; Thornquist, 2001).

Legislative and health care policy has called for a strengthening of patient and public engagement in health care decision making. Whilst there may be work to do in educating clinicians about the value and scope of shared decision making, it is equally important to recognise that shared decision making may not be what some patients want (Stewart, Anthony and Chesson, 2010). The findings from this study suggest that patients want more information about their problem and treatment options, care to be individualised to their needs and to form a patient/healthcare provider relationship, while fewer prefer participating in decisions about their care.

Individuals tend to express different preferences depending on their circumstances, so clinicians need to establish the part patients want to play in the decision making process instead of making assumptions based on observable characteristics. This does raise some interesting considerations in terms of how preferences are affected by situational factors or learnt behaviours (Elwyn, Edwards and Kinnersley, 1999). What is evident from this study is that some patients experienced uncertainty over their role based on a perceived lack of knowledge, having trust in the healthcare professional to be doing what is right for them, and the level and type of decision being made. Patients have been found to be less likely to want to participate in decisions on treatments that will not cure them, or have a low risk value (O'Neill, 2003; The Health Foundation, 2012). This may have been the case in this study regarding decisions about exercise based interventions.

To implement shared decision making an integrated approach that supports professionals and patients to embrace a relationship characterised by flexibility in responsiveness, collaboration, information sharing and goal sharing, together with an understanding that each have a role to play, is important. Various strategies such as improving the communication skills of clinicians and the use of decision aids have already been discussed. Pre-consultation interventions attempting to empower patients to take a more active role in the consultation by considering concerns or questions to discuss with the clinician are another tool that could be adapted for use in physiotherapy.

An example of this is the 'Ask 3 questions' campaign which is part of a wider programme of work called MAGIC – Making Good Decisions In Collaboration, funded by The Health Foundation. Based on research by Shepherd *et al.* (2011), it has been developed to give patients more say in their own healthcare. The campaign includes information leaflets which can be included in appointment letters to encourage patients to ask three key questions when they are invited to make a choice about treatment.

The Ask 3 Questions are:

1. What are my options?
2. What are the pros and cons of each option for me?
3. How do I get support to help me make a decision that is right for me?

Its aim is to inform patients that they have a key role in deciding the best management options and the clinician has a role in supporting this choice. For the clinician they act as a reminder in an often busy clinic of the importance of sharing decisions.

Despite fairly strong evidence of benefit within medicine (O'Connor *et al.*, 2009), widespread implementation of innovations designed to improve shared decision making and promote greater patient involvement has yet to occur within physiotherapy. For implementation to be successful, a strategy needs to be developed to take account of change management principles derived from research on translating evidence into practice (Ajzen, 1988; Fishbein and Yzer, 2003) and to find ways of addressing the structural and attitudinal barriers that potentially inhibit the adoption of best practice (Parsons *et al.*, 2012).

6.1.7 Making care personal

Personalised care planning is another form of shared decision making. It is characterised by a delivery mechanism to support people with a long-term condition, such as NSCLBP, to manage their own health and to share in decisions about their health care (Coulter and Collins, 2011). It aims to support people to work with clinicians to slow the progress of their condition or symptoms and to manage the challenges of living with their condition on a daily basis (Coulter and Collins, 2011).

The findings from the present study suggest that patients experiencing NSCLBP are keen to develop a longer-term therapeutic relationship with physiotherapists to support them in the joint management of their condition, provide feedback, maintain motivation and build confidence and self-efficacy (Bandura, 1977). Although development of a therapeutic relationship was seen as an important factor, many patients felt they were not given the opportunity to do so (theme 5.5: 'Ongoing support is important'). From phase one considerable variation was noted as to how physiotherapists assessed a patient's ability to initiate and maintain an exercise programme. Defining the importance to the patient of undertaking exercise and ultimately their confidence and ability to instigate and maintain the exercise programme as part of a shared agreement was rarely observed or discussed (sub-theme 4.2.5: 'Checking patient's ability to implement plan').

Lorig and Holman (2003) suggest that managing the day-to-day impact of a chronic condition is a lifelong task which involves 5 key elements: problem-solving, decision making, resource utilisation, taking action and forming a patient/healthcare provider relationship. The Chronic Care Model proposed by Wagner (1998) supports the development of a productive interaction between informed and activated patients and prepared and proactive clinicians working in partnership, as equals and bringing complementary skills and knowledge to the patient/clinician relationship to share decision making. It also aims to identify the support mechanisms needed to do this, for example the offer of a scheduled appointment to discuss treatment and to review progress. This was a feature of the 'organisation' element valued by

patients in the patient-centred model proposed by Cooper, Smith and Hancock (2008), further supported by Alegretti *et al.* (2010) who suggested that improving the relationship between patients and health professionals may be the key to the improvement of chronic musculoskeletal pain management.

Consistent with previous research findings (Rogers *et al.*, 2005), physiotherapists within this study were more likely to take a 'compliance orientated' approach to self-management, which may have been based on how they interpret the concept of self-management.

“Self-management refers to the individual’s ability to manage the symptoms, treatment, physical and psychosocial consequences and lifestyle changes inherent in living with a chronic condition. Efficacious self-management encompasses ability to monitor one’s condition and to affect the cognitive, behavioural, and emotional responses necessary to maintain a satisfactory quality of life” (Barlow *et al.*, 2002 p.178).

Focusing on the above definition a traditional approach, with its origins in health education, has been to provide patients with information about the condition and what to do, on the assumption that knowledge will lead to changes in health behaviours which will, in turn, improve health and other outcomes. Whilst knowledge may be necessary, the provision of information alone may not be sufficient to change behaviour. Knowledge in this area is constantly developing, and the term that is now more commonly applied is 'self-management support', which has been defined as:

“The assistance caregivers give patients with chronic disease in order to encourage daily decisions that improve health related behaviours and clinical outcomes. Self-management support can be viewed in two ways: as a portfolio of techniques and tools that help patients choose healthy behaviours, and a fundamental transformation of the patient–caregiver relationship into a collaborative partnership” (The Health Foundation, 2011 p.vi).

This updated definition also calls for a fundamental shift in power dynamics and the way both patients and professionals view their roles to create more

of a partnership approach. If patients do commit to a lifestyle change they may well need a period of intensive support and follow-up in order to sustain the change (or to attempt other lifestyle changes). In the context of ongoing support for people to self-manage, patients are supported to make decisions about managing their health on a daily basis outside the healthcare setting and are coached to become autonomous decision makers within the context of their daily lives (The Health Foundation, 2011). This is of particular importance for people who live with long-term conditions such as NSCLBP where default care is self-management (Cooper, Smith and Hancock, 2009).

Taking into account physiotherapists' future role in the management of NSCLBP, they could continue to regard themselves as the professionals with the clinical authority to provide treatment such as an exercise prescription based on those exercises they judge to be in the patients' best interest, with encouragement to the patient to comply. Alternatively they could reconsider their role as more of a health coach, health counsellor or health care navigator, supporting people to develop the knowledge, skills and confidence to make episodic decisions about managing their own health care. A perspective that interestingly was highlighted in one of the interviews by physiotherapist T7:

“Perhaps more on a philosophical level if you like, not think of ourselves as therapists but more taking on a role of a health counsellor, so you are trying to counsel someone in to changing their beliefs or behaviour in the long term, and not sitting with your therapist hat on ‘I am going to give you therapy, because I am a physiotherapist’.” (T7.94)

One of the products of a personalised care planning encounter is a care plan or action plan. Action plans may include both goal setting and planning how to achieve these goals (Parry, 2004). Although action plans are not always regarded as a tool to support shared decision making they have sometimes been used as tools to actively engage people in decisions. If constructed appropriately, action plans involve patients and professionals discussing and agreeing on a course of action. Thus they can be key tools for facilitating shared decision making.

Effective counselling for regular exercise has some special characteristics which involve partnership, interactive rather than didactic communication, information exchange and empowerment of patients to take control of the process. Approaches which empower and activate patients so they feel more confident (improved self-efficacy) about managing their conditions, means they are more likely to alter their behaviours (Hibbard and Mahoney, 2010). The ACSM (2000) stated that the single most important undertaking in developing a successful programme of regular exercise is goal setting, with regular goal evaluation/reassessment if motivation to continue exercise is to be maintained. Physiotherapy professional standards (CSP, 2005) also emphasise that patients should be actively involved in the setting of goals. Despite these recommendations the findings from both the observation and interview aspects of this study suggests that goal setting with patients occurs infrequently and this is consistent with research findings from other areas of physiotherapy practice (Jensen and Lorish, 1994; Baker *et al.*, 2001; Parry, 2004).

Shared power and control of goal setting that involves patients and incorporates their needs and preferences is a demanding and time consuming task. There are likely to be constraints from both the clinicians in terms of a willingness to ask patients about their goals, and involvement in goal setting may not be what every patient wants. A better understanding of these constraints and of patients' interpretations and perspectives which emphasises knowledge which is context dependent, socially constructed and related to individual rather than universal realities is needed (Edwards *et al.*, 2004). This epistemological understanding adds an important dimension to goal setting and shared decision making related to exercise prescription if it is to become more successfully delivered in clinical practice.

6.2 Strengths and limitations of this study

Part of the responsibility of adopting a philosophical hermeneutic approach is the continual recording of the way in which my horizon as the researcher was operating and of how my pre-understandings may have affected the research. As part of my methods chapter I have attempted to enhance the credibility of this study by describing and interpreting my experience as the researcher as the research evolved. As a consequence my Methods and Methodology chapter already acknowledges my emerging thoughts on the strengths and limitations of this study and these will now be further explored.

6.2.1 Strengths of the research

One of the main strengths of this research relates to the topic chosen and its ability to contribute to the developing research base in physiotherapy. Since I made the decision to research this area of practice, the potential importance of it has been highlighted in a study by Rankin *et al.* (2012) who undertook a survey using the Delphi method to define the research priorities to strategically direct and maximise the evidence base for physiotherapy. In terms of identifying areas for further research within musculoskeletal physiotherapy the top two ranking priorities were:

1. Exploration of interventions and strategies to increase patients' adherence to/concordance with exercise programmes (adherence to exercise programmes).
2. Exercise as medicine: prescription of exercise (i.e. type, dosage, and environment) for patients with chronic, long-term musculoskeletal conditions (exercise prescription).

Based on the above findings this study fits well with the areas of musculoskeletal physiotherapy practice most requiring evidence.

Primary data generation involved a combination of observation and individual informal field and semi-structured interviews. This had a number of strengths: some derive from the participants themselves, some from the

methods used, and some from the experience of the research team. The purposive sampling strategy adopted for phase one aimed to recruit participant physiotherapists engaged in practice that was typical of contemporary musculoskeletal physiotherapy practice (Murphy *et al.*, 1998; Carter and Henderson, 2005). It was successful in recruiting participants with extensive experience of managing patients with NSCLBP. The physiotherapists' recollections of, and reflections upon, their use of exercise based interventions drew upon repeated experiences of seeing patients with NSCLBP and adopting exercise based management strategies this adds to the credibility of their accounts.

One of the primary strengths of this study design is that it included direct observation of physiotherapists. On this basis there is good reason to believe that the clinical practices and values that were expressed during the interviews were an accurate reflection of their normal practice, and by using this approach, potential biases such as socially desirable responses were minimised. Gadamer emphasised the essence of asking the right questions for elaboration of the hermeneutic situation and opening up the possibilities for understanding (Fleming, Gaidys and Robb, 2003). The use of direct observations also helped to develop prompts for questions to be asked in the interviews to achieve a deeper understanding of the phenomenon of exercise prescription and decision making processes. However, the sampling process used for phase one, and the nature of the research methods adopted, means that readers will need to determine if the results are relevant and transferable to their own clinical practice rather than generalising these findings to all musculoskeletal physiotherapy practice.

The main strength of the semi-structured interview method was the depth and complexity of the qualitative data generated, facilitating the identification of relevant contextual factors which influenced decision making and the use of exercise based interventions. On the whole, similar issues were raised in the interviews from both phases one and two which gave me confidence I was exploring the majority of the key issues within this area thus adding to the trustworthiness of the findings.

Patient interviews drew upon their recollections of their physiotherapy experience. They may have remembered some of the particularly positive or negative experiences and not others. The consequences of selective memory for this study have been managed by the comparison of their perceptions with other patients. A more detailed interview schedule leading to prompting about specific events that they may or may not have experienced during the interviews may have minimised this recall problem, but it would have restricted the ability of participants to speak freely about their experiences, and this open communication was a particular strength of the research.

In selecting interviews as my method of choice for phase two I had some concerns about asking patients about their involvement in the decision making about their care on the basis that the interviewees may not have had any direct experience of being involved in decisions about their care. In an effort to address this, rather than using a more detailed interview schedule, I chose to use vignettes. Finch (1987) has defined vignettes as:

“Short stories about hypothetical characters in specified circumstances, to whose situations the interviewee is invited to respond” (Finch, 1987 p.105).

Although Poulou (2001) has stated that vignettes should describe a fictitious situation, other researchers have argued they are most productive when the scenarios depicted appear real and conceivable to the participants. In this study, the vignettes were based on ‘real’ situations from phase one of my observations of how exercise was prescribed and they highlighted different levels of patient involvement in decision making. It is acknowledged that there are some theoretical and methodological limitations to using vignettes in terms of the relationship between vignette and ‘social reality’ – between belief (what they say they are likely to feel or do) and action (what they actually would feel or do). Following Finch (1987) the main aim of using vignettes in this study was not to arrive at an accurate prediction of an interviewee’s responses and behaviours, but instead to achieve insight into

the social components of the participant's interpretative framework and perceptual processes. The decision to use them was an attempt to illuminate and tap into the complex process of meanings and interpretations by emphasising varying aspects of a clinical situation.

A further methodological strength was the iterative process of analysis of each observation and interview. This helped me to develop areas for exploration in subsequent observations and interviews and facilitated the process of understanding by being true to Gadamer's description of the hermeneutic circle. Discussion of key points identified in the observations or from the informal field interviews, allowed for the hermeneutic circle to be experienced, and through such feedback and subsequent dialogue shared understandings were reached between the researcher and participants.

A further strength was the use of a practitioner as researcher model (Fagerberg and Norberg, 2009). Data collection and analysis was conducted by the researcher, a Consultant Physiotherapist with 30 years of experience in supporting patients with NSCLBP, and over 15 years of experience of biopsychosocial clinical interviewing. Therefore by acting as the research instrument a deeper understanding of the phenomenon was achieved (Fleming, Gaidys and Robb, 2003).

I acknowledge that my previous experiences unquestionably influenced my interpretive perspectives and ways of constructing meaning. Gadamer believed that our understandings in the present constantly draw upon and fuse with the past. He argued there can be no neutral position from which understanding takes place as interpretation is itself the effect of the past upon the present. Therefore it is unlikely that I could be certain that another researcher would have arrived at the same conclusions as me. However my PhD supervision team brought significant experience to this analysis, facilitating the refinement of the thematic analysis through peer review and auditing (Seale, 1999).

Methodological strengths also include the text interpretation summaries (Mays and Pope, 2000) which allowed interviewees to comment on the

accuracy and critically reflect on the extent to which the interpretations made by me reflected the experience of the phenomenon as it was understood by them. This approach further fits with Gadamer's description of the hermeneutic circle, and also allows for Gadamer's notion of the 'fusion of horizons' as returning data interpretation to the participants offered the opportunity to stimulate the shared understandings.

The decision to use philosophical hermeneutics as the philosophical underpinning is a significant strength of this study. I believe that Gadamer's primacy of application to the understanding of texts can also be successfully applied to the understanding of various health situations. In this study I have used interpretations from a variety of data sources in an attempt to develop a further understanding and emerging construction of a specific and commonly encountered health situation within physiotherapy. I have attempted to be open and reveal how the personal and professional prejudices that I have brought to the study may have influenced my participation in making and interpreting the data. No attempt has been made to hide or disguise these and I hope I have made my concerns and position clear. I also acknowledge that my construction is never complete, as there are always other constructions that will compete with mine. However, participants' perspectives derived from this research correspond with the research literature, in that the problems associated with a clinician-centred approach identified many years ago are still evident in clinical practice.

6.2.2 Limitations of the research

No universally agreed definition of shared decision making exists, and different conceptualisations are likely to exist amongst patients and healthcare professionals. This had implications for deciding on the appropriate research methods to use to capture the extent to which shared decision making was occurring. For the purposes of this research I considered shared decision making as a process in which a healthcare choice is made jointly by the practitioner and the patient, and which requires that healthcare professionals adopt specific behaviours, such as actively

involving patients in the decision making process. However, in making this decision, I was conscious that implementation of shared decision making involves a set of reciprocal role expectations for both the healthcare professional and the patient. So in phase one by focusing on the professional role it is acknowledged that this study had limitations in that in a patient/clinician encounter the interactions are interdependent and are therefore likely to influence each other. Nevertheless power relationships in most healthcare consultations are asymmetric, such that the health care professional's approach typically dominates the interactional process, as patients rarely ask to be involved in decision making.

Despite observations being considered as one of the strengths of primary data generation, it is acknowledged that these have limitations. Models of shared decision making generally focus on ideally what should occur, however measurement of actually what does occur in clinical encounters is still a challenge. As part of the observations, consideration was given to using instruments designed to measure shared decision making in clinical practice from an observer point of view such as the Braddock scale (Braddock *et al.*, 1997) or the observer OPTION scale (Elwyn *et al.*, 2003) to count the number of times certain actions or behaviours occurred. However I decided against this approach on the basis that it would not adequately capture the subtleties of communication, nonverbal behaviour, clinical reasoning and the qualitative essence of sharing decisions. Although I had no structured observation schedule, I was aware from my reading that I was undoubtedly going to be selecting what I chose to observe as there is no such thing as an unstructured observation. Eisner (1993) noted, that the facts never speak for themselves, and are dependent on the questions we ask. In other words we observe what we think is worth observing. Pirsig (1989) argues that this creates narrow selection criteria when we are observing, leading to the potential for bias, in that the facts are there but you do not see them. Kemmis (1980 p.43) noted that the 'observed', simply do not exist independently of the observer. Direct observation of clinical behaviour without influencing that clinical behaviour therefore remains a challenge. I also had some concerns that one off observations of interactions

would not enable the potential longitudinal aspects of some decision making to be observed. However this did not prove to be a problem as a decision point was reached in all observed encounters with most patients being offered an exercise based intervention. The liberal use of exercise that I witnessed did at first cause me some concern about whether my presence in the observations was influencing the physiotherapists' behaviour. In other words was the frequent use of exercise driven by the physiotherapists' anticipation of what I was there to observe? However, as the observations progressed, and further supported by the interviews, it became clear that frequent use of exercise was more likely to be representative of the default approach to management in this patient group.

The self-selection of participants for phase two is a possible limitation of this study as the views of particular groups may not have been recorded. This is difficult to overcome since self-selection is an unavoidable part of ethical research (Murphy *et al.*, 1998). In this study all the patients that came forward to be interviewed were white, middle class either working or retired. The interview participants were to some extent "typical" of NSCLBP patients and reported a combined experience of living with LBP of 168 years. However, it should be recognised that all patients have histories, presentations and experiences which are individual, so participants cannot be considered to be simply representative of a notional, homogenous 'wider population' of NSCLBP patients. Whilst recognising this heterogeneity, the eight interviews together showed clear evidence of a consensus feeling that the role their experience played in the therapeutic interaction was a marginal one, with the therapist playing the dominant role in structuring interactions and making decisions.

A further limitation of this study was that patients were only interviewed on one occasion. Some authors such as Fleming, Gaidys and Robb (2003) have argued that the participants' and researchers' understanding will develop over time and recommended that researchers go back to participants for a second or third interview, with the aim of focusing on new aspects of the

phenomenon. It became clear early on in the interviews, however, that patients found it hard to talk freely about a subject and phenomenon that many of them had not experienced or had limited experience of and so a decision was made not to pursue further interviews. For future studies a useful approach may be to recruit a prospective cohort to explore whether experiences and perspectives change over time. It would also have been useful to have interviewed individual patients and a sample of the clinicians whom they consulted, to discuss and compare the care delivery experiences and decision making perspectives of the patients and clinicians involved in the interaction. This would have added another dimension to the data, therefore this should be considered for future studies so that patient and clinician perspectives can be matched and compared.

6.3 Self-understanding and changes to the researcher's pre-understandings

Following the principles of Gadamerian hermeneutics a researcher's pre-understandings are likely to change through data interpretation, further reading and keeping of a research journal. Reflecting on one's pre-understandings is an ongoing process of personal insight achieved by getting to know one's self better from and through analysis of the texts. This section focuses on how my pre-understandings were challenged, confirmed or evolved as the project developed. This process was further facilitated through discussions with colleagues.

Both the clinicians' and patients' perspectives derived from my research correspond largely with the research literature. Therefore it was discouraging to find that for patients with NSCLBP the culture of a 'focus on the disease' aligned to the positivistic perspective of the biomedical model rather than a 'focus on the individual' is still evident in clinical practice.

This was particularly highlighted by physiotherapists' in phase one, theme 4.3: 'Which exercise? - the tension between evidence and everyday practice', when the physiotherapists were considering the type of exercise. The physiotherapists, perhaps more than I had anticipated, had a good

appreciation of the evidence base for the effect of exercise therapy in the management of NSCLBP and voiced an awareness that patient preference should be considered as an intrinsic motive to initiate and maintain an exercise programme. Despite this, many talked about constructing an intervention based on specific postural, structural or biomechanical problems identified at assessment, seemingly reflecting a need to exert some measure of professional control over the therapeutic process.

I was frustrated that I did not gain a deeper understanding of why this privileging of clinician authority continues. It raises the question as to what drivers are required to influence practice culture, especially when therapists possess an appreciation of the research evidence base. In some ways it is disappointing to reflect that this power differential may be depriving clinicians of a valuable source of clinical expertise, but at the same time I acknowledge that each patient and each clinical situation is unique in which shared decision making may be more or less important according to the patient's individual needs and goals.

Engaging in a shared decision making approach I believe would help clinicians to develop their professional confidence and reduce some of the concerns that were voiced, such as the fear of increasing pain by prescribing a specific exercise programme. Involving the patient in the process of deciding on an alternative treatment option or an exercise approach that they have indicated a preference for, means the clinician does not have to shoulder the sole responsibility. However unless clinicians become more open to the notion of collaboration, the burden of always making the decision will remain, and physiotherapy interventions will ultimately continue as a form of professional coercion which was exemplified by the findings from phase one, sub-theme 4.2.3: 'I try and get people to think about it, from my point of view', and theme 4.4: 'Compliance-orientated more than concordance based'.

It became apparent from the observational element of this study that if shared decision making is to become successfully implemented it will require both patients and clinicians to interact in new and challenging ways. Prior to

this study I had a sense that patients were likely to welcome the idea of greater involvement in the process of decision making regarding their care, however, it is evident that the idea of being involved in treatment decision making was for many patients an alien concept, such that considerable variation in their preferences for participation were reported (sub-theme 5.3.1: 'Patient differences over preferred decision making role').

What I perhaps had not considered was that for patients with NSCLBP, the nature of physiotherapy with the perceived low risk value of interventions, together with the difficulty of offering detailed information about the outcome probabilities with different treatment options means that it may ultimately prove harder for physiotherapists to embed a culture of shared decision making. This viewpoint is further supported by sub-theme 5.3.2: 'There has to be an element of trust', in which patients talked about having trust in the professional to be providing the authoritative knowledge and treatment. Therefore even if the physiotherapists were keen to promote a collaborative approach, a clinical 'relationship' in which the clinician is seen as the expert, is likely to encourage continuation of the traditional paternalistic decision making model. Certainly there is no evidence that patients prefer one type of decision making model, so it could be argued that there is nothing wrong with this if both patient and clinician agree and are comfortable with such an approach.

I had anticipated in my pre-understandings that virtually all NSCLBP patients were given exercise in one form or another, and this was very evident in the research findings from sub-themes 4.1.1: 'It's just part and parcel of the package', 4.2.1: 'Defining the options available', and 5.2.2: 'Review of management options'. Whether driven by clinical guidelines, ease of delivery or desire to promote a self-management approach, there is a very real sense that prescription of exercise has become a conditioned response. The reliance on exercise and specific exercise regimes means physiotherapists are likely to struggle with the 'equipoise' argument when working with people with NSCLBP. Consequently ethical dilemmas may appear for the clinicians if they have clear treatment preferences that conflict with the patient's expectations which they conceptualise as 'wrong'.

Throughout the research I was very mindful of how much other, often unspoken, pressures may be playing a part in this decision making. For example perceived pressure to move away from 'passive treatments' – by using the default of exercise prescription. Physiotherapists often argue that by this approach they are promoting self-management, but are they also trying to avoid discussions about passive treatments for fear of not being able to deliver due to skill, time or other service pressures an approach the patient may value or prefer? This in turn may be influenced by financial and target based pressures to lower waiting lists, to reduce follow up appointments and discharge patients in a timely fashion.

This made me reflect on whether shared decision making is truly achievable, as it relies on available time and a situation of equal partnership built on trust. Clinicians are challenged to provide all relevant information in a clear and unbiased way, however in reality even when the patient is presented with options for treatment, clinicians are likely to suggest one way is superior, and even the most well informed patient will still use the clinician as an agent to check their decision making by asking 'what would you do?' Shared decision making is therefore a complex issue that undoubtedly for some practitioners will prove a challenge to implement, but in an era of choice and profusion of information it may prove to be one of the best approaches to individualising care, as evidenced by theme 5.4: 'Wanting to be treated as an individual'; patients want to be treated as a person and not a number.

From my early observations I felt that the subjective component of the assessments carried out by the physiotherapists often had a veneer of 'patient-centred care'. By this I mean that they appeared to be actively listening to the patient's story, but perhaps were not always accurately listening to the patient's words or interpreting or reflecting on the patient's cues. The physiotherapists were noted to routinely ask patients about their expectations of physiotherapy but I think it would be fair to say that clinicians rarely reflected on the replies or what might influence the responses patients gave. My perceptions were further supported by the information gained from asking patients in the second phase about what they were hoping to gain

from seeing a physiotherapist, theme 5.1: 'Patients' expectations and patients' needs are not synonymous'.

It is clear that a greater awareness of the skills necessary to establish a therapeutic relationship that encourages disclosure about what is 'important' to patients may be the key to overcoming this dilemma. Based on the findings from this study, and reflecting on patients' actual focus for attending physiotherapy, it supported my own personal perspectives in that for most patients with NSCLBP, whatever else they want, they primarily want to understand.

Other findings were less challenging but served to reinforce my pre-understandings and made me reflect on the logistics of clinical practice. In particular, it was clear that conducting a subjective and objective assessment was given greater emphasis and available time than the second part of the consultation involving information sharing and decision making. I was perhaps surprised in my interviews with the physiotherapists that they did not raise the issue of lack of time caused by filling in lengthy prescriptive assessment forms. No matter how much the therapists intended to have a meaningful dialogue with patients about the nature of the problem and possible therapeutic options, the exhaustive documentation requirements, much of which appeared to be redundant in terms of influencing clinical decision making, is a potential contributory factor limiting the available time in consultations. Although more time could be regarded as necessary but not sufficient for development of the skills needed to share decisions with patients, physiotherapy services should critically reflect on the need for more concise documentation so that information sharing and decision making components of the consultation are facilitated and not overlooked.

The case for 'no decision about me, without me' is clear in ethics and in policy and is supported by a growing evidence base. Based on the evidence of this study, for this philosophy to become an everyday experience for patients attending for physiotherapy a significant change in the culture and roles of patients and professionals is required. The main element to change is attitudes of primarily healthcare professionals. Physiotherapy training

establishments should be encouraged to adopt a stronger leadership role by promoting shared decision making as a key ingredient of good clinical practice, ensuring that students have relevant skills in shared decision making by including relevant assessments in exams and in their assessment of training sites and supervision arrangements.

For the patient, involvement will bring new responsibilities. Patient organisations have a powerful role in encouraging their members to expect to be informed and involved in their own care, to ask questions about treatment / management options and self-management, to be aware of their right to be involved, and to challenge clinicians if they feel decisions are being taken without their involvement. Clinicians in turn should expect and welcome patients who adopt such behaviours (The Health Foundation, 2012).

Using the interpretive paradigm has enabled understanding of the research phenomenon in the context of the experiences of the participants. In addition to adding to the body of knowledge concerned with exercise prescription and patients' involvement in the process, this research strategy, through its reflexive nature and review of pre-understandings has enabled me to enter the hermeneutic circle and remain orientated to the phenomenon. It has also provided a chance to engage in my own learning journey towards a deeper understanding of the phenomenon being researched, the strategies adopted, and myself as a researcher.

6.4 Conclusion

The original aims of this thesis as outlined on page 29 were to:

Aim 1: explore the characteristics and processes of physiotherapy exercise prescription for patients with NSCLBP, and how shared decision making and patient partnership are addressed by physiotherapists in this process.

Aim 2: understand the experiences, information and decision support needs of patients with NSCLBP who have been offered exercise as part of their management plan.

Reflecting on the original aims it is clear that the perspectives of the physiotherapists from phase one and the experiences of the patients from phase two cannot be discussed in isolation as this thesis was aiming to contribute to a broader understanding and interpretation of the degree to which exercise prescription was a collaborative process. On this basis I have effectively combined these aims for the purposes of discussion. I believe that the research findings have made an aspect of tacit professional clinical practice more explicit and have advanced an understanding that suggests a potential mismatch between the rhetoric of health care policy and clinical practice.

Although talk about patient-centred care is ubiquitous in modern healthcare, one of the greatest challenges of turning rhetoric into reality continues to be routinely engaging patients in decision making. Despite caution from some authors on the extent of the benefits of shared decision making on patient based outcomes (Joosten *et al.*, 2008) most would agree that it seems reasonable to continue to promote shared decision making. Through this approach clinicians can help patients understand the importance of their values and preferences in making the decisions that are best for them, as the potential benefits reported in individuals who have participated in shared decision making studies are significant (Hibbard *et al.*, 2007; Picker Institute Europe, 2010; The Health Foundation, 2012).

Despite the idea that collaboration is a desirable component of clinical practice, implementing shared decision making into practice is unlikely to be achieved through policy statements alone. There continues to be considerable debate about when, and to what extent, patients should be encouraged to participate in decision making. Based on the evidence of the findings of this study shared decision making, does not appear to happen in physiotherapy clinical practice, but equally may not be what every patient wants. If people are to be more involved in decisions about their care and more active in keeping themselves well, clinicians need to be able to communicate information effectively and to consider what level of involvement is appropriate for individual people. The true skill in adopting a patient-centred approach to communication may lie in being aware of and

recognising the preferred style and role in decision making that the patient wants to adopt and to respond accordingly (The Health Foundation, 2012).

The attitudes, skills and behaviours of healthcare providers can have a significant impact on the extent to which people feel engaged and supported to manage the social, emotional and physical impacts of their condition. The implications of the findings of this study should form the basis for a discussion in which physiotherapists reflect on their practice and critically appraise their approaches to the prescription of exercise therapy in the management of patients with NSCLBP to ensure that the needs of the patient come first.

In summary the findings from this original research contributes the following new knowledge and depth of understanding to the physiotherapy research evidence base:

- I. Despite an increasing awareness of the importance of collaboration, physiotherapists are struggling to adapt to the shared decision making model when prescribing exercise for patients with NSCLBP. Inability of the physiotherapists to respond to patient cues, information needs and main concerns is likely to lead to decisions to use exercise driven by the physiotherapists' goals or values, with an unintentional assumption that these personal values and decisions are equally shared by patients.
- II. Clinicians are likely to practice according to their own 'world view', and may experience difficulty adapting to the 'equipoise' principle when working with people with NSCLBP. Resulting interventions may, as a consequence, be restricted to those that physiotherapists feel comfortable with or believe have moderately good evidence, for example exercise therapy, and specific approaches to exercise therapy.

- III. Physiotherapists do not appear to feel at ease with the option '*to do nothing*'. They seem to be compelled to offer patients some form of intervention or treatment which frequently involves exercise. The reasoning behind this is unclear, but it may serve as a way to reinforce their professional identity and remain in control. Developing collaborative goals and strategies with patients in a shared decision making consultation would help physiotherapists to identify patients who may make an informed choice not to undergo treatment.
- IV. Physiotherapists struggling to make a true philosophical shift to a patient-centred care approach may experience concerns about how to integrate the evidence base on exercise for NSCLBP into practice. Training in decision support processes and behaviour change strategies may help clinicians to acquire the knowledge and skills to deliver effective exercise based interventions for this patient group.
- V. Trust in the clinician as a respected healthcare professional means that patients are often likely to accept what they are given. However, physiotherapists need to be aware that for some patients this may not necessarily accord with what is most important to them.
- VI. An understanding of their problem, individualisation of the intervention, to be treated as an individual and not a number, and development of a supportive therapeutic relationship may be more important to some patients with NSCLBP than involvement in the decision making process. However, flexibility in responding to each patient as a unique individual is likely to be the key success factor concerning the use of shared decision making principles. Adoption of such an approach is likely to lessen clinician fears of, and frustration with, patient non-engagement and enhance their own job satisfaction.
- VII. NSCLBP patients may express some uncertainty about their preferences for involvement in treatment decision making particularly regarding exercise. Lack of information and knowledge, trust in the healthcare professional and the type and level of decision, can all impact on patients' desired role in decision making.

Evidence-based clinical guidelines whilst of great value tend to promote a one-size-fits all approach, leaving unaddressed the mechanisms to incorporate people's different values and informed preferences into management decisions (Coulter and Collins, 2011).

Training may be required for both healthcare professionals and patients to fully embrace a shared decision making approach and appreciate the benefits. Recognition of the benefits of such an approach would not only assist physiotherapists in valuing the diverse skills they have developed in their practice, but would also help them to uncover and challenge the assumptions that both they and their patients bring to a consultation. This would enlarge possibilities for the ways in which physiotherapists can help patients with NSCLBP to become more activated and engaged in their treatment. For the NSCLBP patient, being a more active participant in decisions regarding their care, means that they are more likely to be successful in managing their health and health care, and have better outcomes than patients who are passive recipients of care.

Shared decision making supports the development of a population more informed about treatments and in the context of NSCLBP, development of a learning strategy to support the delivery of shared decision making will deliver on the aim of a population more informed and confident in managing its own healthcare. But however compelling the argument is for shared decision making, it may not be sufficient to deliver on the aim of a population more informed and confident to manage its own daily health. In May 2011 The Health Foundation published a review of the evidence on supporting self-management, 'Helping people help themselves' (The Health Foundation, 2011), which indicated that significant overlap exists between the strategies necessary to increase self-management and those needed to implement shared decision making. For many patients with NSCLBP the main objective of clinical encounters is to support self-management and patients should therefore be supported and empowered to become independent daily decision makers.

An extension of the *'no decision about me, without me'* strap line is therefore required in order to fully embed a culture of self-management support into clinical practice. The policy agenda should then, perhaps not be focusing on the delivery of shared decision making, it should perhaps more appropriately be focusing on how we support people to become active participants in managing their own health and healthcare. To successfully achieve this, developing a workforce skilled in the principles of shared decision making could be a good starting place. Ultimately it is down to clinicians to deliver a vision of shared decision making – it is only they who can choose whether or not to share decisions with patients.

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Somerset Community Health

Date:

Participant Information Sheet (Therapist)

Title of Project: Exercise prescription for patients with chronic low back pain.

Invitation to participate in research:

You are invited to take part in a research study which is being undertaken as part of a programme of study towards a PhD. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. You can talk to others about the study if you wish.

Please ask questions if anything is unclear, or if you would like further information. It is important for you to take the time to decide whether or not you wish to take part.

What is the purpose of the study?

Providing an effective exercise prescription process for a patient with chronic low back pain (CLBP) within the limits of time that a busy clinician faces is a challenging task. The main purpose of this study is to explore the experiences, attitudes and behaviours of physiotherapists towards the prescription of exercise therapy in the treatment of patients with CLBP. This is an important area of research as studies have recommended that exercise should be considered as a key strategy in the current clinical management of patient's with CLBP, although a number of questions regarding its exact prescription and method of application still remain to be answered.

Why have I been invited?

You have been invited to participate in this research because you meet the following participant inclusion criteria:

- Health Professions Council registered physiotherapist
- Currently involved in the treatment of patients with CLBP
- Experience of using exercise therapy in the management of patients with CLBP

Taking part?

Your involvement in this research is entirely voluntary; you are under no obligation to participate. If you decide to take part in this research, you will be required to sign a consent form to show you have agreed to take part, and allow the researcher to observe patient assessments and treatment sessions

and to complete an interview at a venue and time that is convenient for you. You are free to withdraw at any time without giving a reason, any data relating to your participation will be destroyed, and any support needs can be discussed if necessary.

What will happen during the research?

The observation sessions will take place at your primary place of work; in addition you will be invited to attend an interview with the researcher, which will last a maximum of 1½ hours. During your interview you will be asked a list of questions relating to your use of exercise therapy in the management of patients with chronic low back pain, and you will have an opportunity to look at the list of questions before the start of the interview. The researcher may need to ask additional prompt questions that are not on the list; however you can skip questions if you do not feel comfortable answering them. The interview will be taped using a digital recorder, to enable transcription of the information later.

After the interview, the researcher will have a debriefing discussion with you. This is to ensure that you know how to access support should you need to, and to remind you of your right to withdraw your participation even after the interview. Following the interview a summary of findings will be sent to you, and you will be invited to comment on the researcher's interpretation of the data. Your involvement in the research will usually end at this point,

In summary, as a research participant you will be required to:

- Provide written consent to participating in this study (includes consent to be observed, a tape recorded interview and the possible use of verbatim quotes)
- Negotiate appropriate times and venues with the researcher
- Be interviewed by the researcher for approximately 1 hour
- Answer questions as honestly as possible
- Contact the researcher if you wish to rearrange or cancel your interview
- Inform the researcher if you do not want to answer some of the questions
- Ask questions if you require further information on any aspect of the research
- Inform the researcher if you wish to withdraw your participation during the research

Expenses and payments

Financial reimbursement is available for transport costs incurred as a result of your participation in this research. If you need to make a claim, please ensure that you keep details of fuel use, public transport receipts and car parking costs.

What happens after the interview?

After the researcher has finished the observation sessions and interview (and has made transcriptions of the recording), the information gathered will be analysed. This is done by reading through the observation and interview transcripts to identify themes.

Each interview and transcript will be numbered so that your name never appears on any transcripts or in any reports. Any mention of any names or personal details made during the interviews will not be transcribed to ensure the interviews remain completely anonymous. Only members of the research team will have access to recordings of the interviews which will be saved onto the researchers password protected computer, and will contain no identifiable data. Copies of all observational field notes and interview transcripts and any personal information you provide in writing (e.g. signed consent forms, contact details), will be kept securely for a period of ten years in accordance with the relevant research guidelines, after this time they will be destroyed. Only the researcher and up to two members of the academic supervisory staff will have access to up to two transcripts, in order to verify the researchers' data analyses. This is a standard procedure for qualitative studies, and anyone viewing the transcripts will also have a duty of confidentiality to the research participants.

What are the possible disadvantages and risks of taking part?

Participation in this study is considered to be a very low risk activity, and it is hoped there will be minimal inconvenience. Participating in this research may cause therapists to consider or reflect on their clinical practice, but it is anticipated that minimal or no distress should be experienced by those who take part.

What are the possible benefits of taking part?

Exercise therapy is the modality of treatment most commonly offered to patients with CLBP, but providing an effective exercise prescription process within the limits of time that a busy clinician faces is a challenging task. The researcher plans to use observations (with the researcher acting as a 'non-participant observer' of the clinician-patient encounter) and semi-structured interviews to explore the physiotherapist's experiences, viewpoints and practices relating to exercise prescription for patients with CLBP. It is hoped that this research will identify the main practical issues relating to exercise prescription; to provide the background for recommendations about potential effective and feasible strategies to facilitate exercise prescription, and improve the outcomes for patient's receiving this treatment.

What if there is a problem?

If you require further information or identify a problem regarding your participation in the research, please contact the researcher in the first instance (see further information section). The researcher will discuss any issues with you and attempt to help or find solutions in the first instance. They will also provide guidance on who to contact next if you feel that they are unable to resolve your problem (see further information section). If however it is the researcher that you have the problem with, or if you feel unable to approach them about your problem, please contact the Academic Supervisor (see further information section).

Complaints

If you have a concern about any aspect of this study, you should ask to

speak to the researcher in the first instance who will do their best to answer your questions. However, if you remain unhappy and wish to make a formal complaint, you can do this through the appropriate NHS complaints procedure or through the Faculty of Health and Life Sciences, University of the West of England (see further information section).

What will happen to the research findings?

After the analysis, the researcher will use the information to write a research report. This will be submitted to tutors at the University of the West of England (and also external examiners), and will potentially be submitted to a relevant health journal and presented at conferences.

Who is organising and funding the research?

This research is organised by the Faculty of Health and Life Sciences, University of the West of England. The University of the West of England is also the sponsor for the study. This research is not a fully funded project; however funds are available to cover participants' transport costs, and reasonable project expenses only.

Who has reviewed the study?

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee to protect your interests and rights. This study has been reviewed and given favourable opinion by the South West 3 Research Ethics Committee.

Further Information and contact details**Researcher:**

Mr Rob Stenner MSc MCSP (Tel 01278 436751)

Academic Supervisor:

Dr Shea Palmer PhD MCSP FHEA
Principal Lecturer in Physiotherapy
Faculty of Health and Life Sciences
University of the West of England
Blackberry Hill
Bristol
BS16 1DD
Tel. +44 (0)117 3288919

Independent Advisor:

Ms Carolyn Nation
Head of Musculoskeletal Interface Service
Somerset Community Health
Bridgwater Hospital, Salmon Parade
Bridgwater, TA6 5AH
Tel 01278 436649



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THERAPIST CONSENT FORM

Participant Identification Number:

Date:

Title of Project: Exercise prescription for patients with chronic low back pain.

Name of Researcher: Rob Stenner

Before you take part in the observation sessions and interview we need to ask you formally for your consent.

This means asking you to sign to confirm that you are willing to take part and have understood why you have been asked to participate.

Please initial each of the following statements and then sign at the bottom of the page. Thank you

1. I understand that the information collected in this study will be kept confidential and I agree to the researcher recording and processing information about me, with personal details removed for research purposes.
2. I have read and understand the Participant Information Sheet dated 11th April 2011 (version 2, April 2011).
3. I am satisfied with the explanations about the study and I am willing to take part in the observational study and an interview.
4. I agree to the interview being audio-taped digitally.
5. I agree to my interview responses potentially being used for verbatim quotes (which will remain anonymous).
6. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my legal rights being affected.
7. I understand that relevant sections of my medical notes and data collected during the study may be looked at by individuals from the University of the West of England, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my medical records.

Please sign here

Please print your name here

Researcher sign here

Researcher print name here



University of the
West of England



Somerset Community Health

Date:

Participant Information Sheet (Patient)

Title of Project: Exercise prescription for patients with chronic low back pain.

Invitation to participate in research:

You are invited to take part in a research study which is being undertaken as part of a programme of study towards a PhD. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully.

Please ask questions if anything is unclear, or if you would like further information. It is important for you to take the time to decide whether or not you wish to take part.

What is the purpose of the study?

Providing an effective exercise prescription process for a patient with chronic low back pain (CLBP) within the limits of time that a busy clinician faces is a challenging task. The main purpose of this study is to examine the prescription of exercise therapy in the treatment of patients with CLBP. This is an important area of research, as studies have recommended that exercise should be considered as a key strategy in the current clinical management of patient's with CLBP, although a number of questions regarding its exact prescription and method of application still remain to be answered.

Why have I been invited?

You have been invited to participate in this research because you meet the following participant inclusion criteria:

- You are a patient with CLBP
- You are currently attending for physiotherapy
- Exercise therapy has been or maybe prescribed as part of your management plan

Taking part?

Your involvement in this research is entirely voluntary; you are under no obligation to participate. If you decide to take part in this research, you will be required to sign a consent form to show you have agreed to take part. You are free to withdraw at any time without giving a reason, any data relating to your participation will be destroyed, and any support needs can be discussed if necessary.

What will happen during the research?

Your involvement in the research will simply be agreement for the researcher to observe your physiotherapy appointment in which they will make notes regarding what they see and hear. Your involvement in the research will usually end at this point, unless you have any questions regarding your participation, or if you wish to receive a research summary.

In summary, as a research participant you will be required to:

- Provide written consent to participating in this study (includes consent for your physiotherapy assessment and treatment to be observed by the researcher, and the possible use of verbatim quotes)
- Ask questions if you require further information on any aspect of the research
- Inform the researcher if you wish to withdraw your participation during the research

What happens after?

After the researcher has finished the observation (and has made notes), the information gathered will be analysed. This is done by reading through the observational notes to identify themes.

Each recorded observation will be numbered so that your name never appears on any reports.

Any mention of any names or personal details made during the observation will not be recorded to ensure all information remains completely anonymous.

Copies of all observational transcripts and any personal information you provide in writing (e.g. signed consent forms, contact details), will be kept securely for a period of ten years in accordance with the relevant research guidelines, after this time they will be destroyed.

Only the researcher and up to two members of the academic supervisory staff will have access to up to two transcripts, in order to verify the researchers' data analyses. This is a standard procedure for qualitative studies, and anyone viewing the transcripts will also have a duty of confidentiality to the research participants.

What are the possible disadvantages and risks of taking part?

Participation in this study is considered to be a very low risk activity, and it is hoped there will be minimal inconvenience and no distress caused to those who take part.

What are the possible benefits of taking part?

Exercise therapy is the modality of treatment most commonly offered to patients with CLBP, but providing an effective exercise prescription process within the limits of time that a busy clinician faces is a challenging task.

The researcher plans to use observations of the clinician-patient encounter and semi-structured interviews of the physiotherapist's to explore the physiotherapist's experiences, viewpoints and practices relating to exercise prescription for patients with CLBP.

It is hoped that this research will add understanding to decision making

processes employed by physiotherapists when utilising exercise therapy in the management of patients with CLBP; and improve the outcomes for patient's receiving this treatment.

What if there is a problem?

If you require further information or identify a problem regarding your participation in the research, please contact the researcher in the first instance (see further information section). The researcher will discuss any issues with you and attempt to help or find solutions in the first instance. They will also provide guidance on who to contact next if you feel that they are unable to resolve your problem (see further information section). If however it is the researcher that you have the problem with, or if you feel unable to approach them about your problem, please contact the Academic Supervisor (see further information section).

Complaints

If you have a concern about any aspect of this study, you should ask to speak to the researcher in the first instance who will do their best to answer your questions. However, if you remain unhappy and wish to make a formal complaint, you can do this through the appropriate NHS complaints procedure or through the Faculty of Health and Life Sciences, University of the West of England (see further information section).

What will happen to the research findings?

After the analysis, the researcher will use the information to write a research report. This will be submitted to tutors at the University of the West of England (and also external examiners), and will potentially be submitted to a relevant health journal and presented at conferences.

Who is organising and funding the research?

This research is organised by the Faculty of Health and Life Sciences, University of the West of England. The University of the West of England is also the sponsor for the study. This research is not a fully funded project; however funds are available to cover participants' transport costs, and reasonable project expenses only.

Who has reviewed the study?

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee to protect your interests and rights. This study has been reviewed and given favourable opinion by the South West 3 Research Ethics Committee.

Further Information and contact details**Researcher:**

Mr Rob Stenner MSc MCSP (Tel. 01278 436751)

Academic Supervisor:

Dr Shea Palmer PhD MCSP FHEA
Principal Lecturer in Physiotherapy
University of the West of England
Blackberry Hill
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BS16 1DD
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Independent Advisor:

Ms Carolyn Nation
Head of Musculoskeletal Interface Service
Somerset Community Health
Bridgwater Hospital, Salmon Parade, Bridgwater, TA6 5AH
Tel 01278 436649



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Somerset Community Health

OBSERVATION CONSENT FORM (Patient)

Participant Identification Number:

Date:

Title of Project: Exercise prescription for patients with chronic low back pain.

Name of Researcher: Rob Stenner

Before you take part we need to ask you formally for your consent.

This means asking you to sign to confirm that you are willing to take part and have understood why you have been asked to participate.

Please initial each of the following statements and then sign at the bottom of the page. Thank you

1. I understand that the information collected in this study will be kept confidential and I agree to the researchers recording and processing information about me, with personal details removed for research purposes.
2. I have read and understand the Participant Information Sheet dated 11th April 2011 (version 2, April 2011).
3. I am satisfied with the explanations about the study and I am willing to take part.
4. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my medical care or legal rights being affected.
5. I agree to my recorded verbal responses potentially being used for verbatim quotes in the research report (any quotes used will be anonymous).
6. I understand that relevant sections of my medical notes and data collected during the study may be looked at by individuals from the University of the West of England, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my medical records.

Please sign here

Please print your name here

Researcher sign here

Researcher print name here



University of the
West of England



Somerset Partnership 
NHS Foundation Trust

Low Back Pain Research Project

- **Are you a patient who has suffered with longstanding low back pain?**
- **Have you attended for physiotherapy and been given an exercise programme?**
- **Would you be happy to talk about your experience of attending physiotherapy and using exercise for the management of your low back pain?**

Exercise is the most common self-management strategy adopted by patients with low back pain, and is the most widely used modality of treatment by physiotherapists for patients with chronic low back pain.

This research project aims to explore the current practices and challenges to the prescription of exercise for patients with chronic low back pain.

If you would like to be involved in a research project on this subject, please contact:

Rob Stenner on: (01278) 436649/436751 or
robert.stenner@sompar.nhs.uk



Date: 28/12/12

Interview: Patient Participant Information Sheet

Title of Project: Exercise prescription for patients with chronic low back pain.

Invitation to participate in research:

You are invited to take part in a research study which is being undertaken as part of a programme of study towards a PhD. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Please ask questions if anything is unclear, or if you would like further information. It is important for you to take the time to decide whether or not you wish to take part.

What is the purpose of the study?

Providing an effective exercise prescription process for a patient with chronic low back pain (CLBP) is a challenging task. The main purpose of this study is to examine the prescription of exercise therapy in the treatment of patients with CLBP, and I am very interested in the views of patients who have attended for physiotherapy and been prescribed exercises as part of their management plan. This is an important area of research, as studies have recommended that exercise should be considered as a key strategy in the current clinical management of patient's with CLBP, although a number of questions regarding its exact prescription and method of application still remain to be answered.

Why have I been invited?

You have been invited to participate in this research because you meet the following participant inclusion criteria:

- You are a patient who has CLBP
- You have previously attended for physiotherapy
- Exercise therapy has been part of your management plan

Taking part?

Your involvement in this research is entirely voluntary; you are under no obligation to participate. If you decide to take part in this research, you will be required to sign a consent form to show you have agreed to take part. You are free to withdraw at any time without giving a reason, any data relating to your participation will be destroyed, and any support needs can be discussed if necessary.

What will happen during the research?

You will be invited to attend an interview with the researcher, which will last a maximum of 1½ hours. During the interview you will be asked a number of questions relating to your experiences and opinions as a patient having received exercise therapy for your low back pain, and invited to consider and comment on some brief patient vignettes relating to exercise prescription for low back pain.

In summary, as a research participant you will be required to:

- Provide written consent to participating in this study (includes consent to a tape recorded interview and the possible use of verbatim quotes).
- Negotiate appropriate times and venues with the researcher.
- Be interviewed by the researcher for approximately 1½ hours.
- Answer questions as honestly as possible.
- Contact the researcher if you wish to rearrange or cancel your interview.
- Inform the researcher if you do not want to answer some of the questions.
- Ask questions if you require further information on any aspect of the research.
- Inform the researcher if you wish to withdraw your participation during the research.

What happens after the interview?

After the researcher has finished the interview (and has made transcriptions of the recording), the information gathered will be analysed. This is done by reading through the interview transcripts to identify themes.

Each interview and transcript will be numbered so that your name never appears on any transcripts or in any reports.

Any mention of any names or personal details made during the interviews will not be transcribed to ensure the interviews remain completely anonymous. Only members of the research team will have access to recordings of the interviews which will be saved onto the researchers password protected computer, and will contain no identifiable data.

Copies of all interview transcripts and any personal information you provide in writing (e.g. signed consent forms, contact details), will be kept securely for a period of ten years in accordance with the relevant research guidelines, after this time they will be destroyed.

Only the researcher and up to two members of the academic supervisory staff will have access to up to two transcripts, in order to verify the researchers' data analyses. This is a standard procedure for qualitative studies, and anyone viewing the transcripts will also have a duty of confidentiality to the research participants.

What are the possible disadvantages and risks of taking part?

Participation in this study is considered to be a very low risk activity, and it is hoped there will be minimal inconvenience and no distress caused to those who take part.

What are the possible benefits of taking part?

Exercise therapy is the modality of treatment most commonly offered to patients with CLBP. It is hoped that this research will identify the main practical issues relating to exercise prescription; to provide the background for recommendations about potential effective and feasible strategies to facilitate exercise prescription, and improve the outcomes for patient's receiving this treatment.

Expenses and payments

Financial reimbursement is available for transport costs incurred as a result of your participation in this research. If you need to make a claim, please ensure that you keep details of fuel use, public transport receipts and car parking costs.

What if there is a problem?

If you require further information or identify a problem regarding your participation in the research, please contact the researcher in the first instance (see further information section). The researcher will discuss any issues with you and attempt to help or find solutions in the first instance. They will also provide guidance on who to contact next if you feel that they are unable to resolve your problem.

If however it is the researcher that you have the problem with, or if you feel unable to approach them about your problem, please contact the Academic Supervisor or Independent Advisor (see further information section).

Complaints

If you have a concern about any aspect of this study, you should ask to speak to the researcher in the first instance who will do their best to answer your questions. However, if you remain unhappy and wish to make a formal complaint, you can do this through the appropriate NHS complaints procedure or through the Department of Allied Health Professions, University of the West of England (see further information section).

What will happen to the research findings?

After the analysis, the researcher will use the information to write a research report. This will be submitted to tutors at the University of the West of England (and also external examiners), and will potentially be submitted to a relevant health journal and presented at conferences.

Who is organising and funding the research?

This research is organised by the Faculty of Health and Life Sciences, University of the West of England. The University of the West of England is also the sponsor for the study. This research is not a fully funded project; however funds are available to cover participants' transport costs, and reasonable project expenses only.

Who has reviewed the study?

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee to protect your interests and rights. This study has been reviewed and given favourable opinion by the South West 3 Research Ethics Committee.

Further Information and contact details

Researcher:

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Independent Advisor:

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PATIENT INTERVIEW CONSENT FORM

Participant Identification Number:

Date:

Title of Project: Exercise prescription for patients with chronic low back pain.

Name of Researcher: Rob Stenner

Before you take part in the interview we need to ask you formally for your consent.

This means asking you to sign to confirm that you are willing to take part and have understood why you have been asked to participate.

Please initial each of the following statements and then sign at the bottom of the page. Thank you

1. I understand that the information collected in this study will be kept confidential and I agree to the researcher recording and processing information about me, with personal details removed for research purposes.
2. I have read and understand the Patient Participant Information Sheet dated 11th August 2012 (version 3, August 2012).
3. I am satisfied with the explanations about the study and I am willing to take part in the interview.
4. I agree to the interview being audio-taped.
5. I agree to my interview responses potentially being used for verbatim quotes (which will remain anonymous).
6. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my legal rights being affected.
7. I understand that relevant sections of my medical notes and data collected during the study may be looked at by individuals from the University of the West of England, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my medical records.

Please sign here

Please print your name here

Researcher sign here

Researcher print name here



Vignette 1

Mary is a 45 year old lady who has had problems with back pain over the past 5 years. She has a sedentary job, she tries to keep fit and enjoys going to an aquarobics group twice a week. Her back pain has got a bit worse over the past 6 months and she has started to use some paracetamol occasionally to help, she wants to carry on with her aquarobics but is worried it may be causing more damage.

The physiotherapist assesses Mary and reassures her that her back pain is not due to anything serious and advises her about the importance of continuing normal activities and with her aquarobics as it is not going to damage her back. Mary and the physiotherapist together discuss a management plan to help Mary with her back pain based on Mary continuing with her aquarobics, plus some advice on appropriate use of pain medication. Mary is reassured and is happy with this plan and no further treatment or follow up is recommended.

Vignette 2

Mike is a 55 year old gentleman who has had back pain for 20 years; he is not working because of his back pain. He has had a lot of different treatment over the years including physiotherapy and seeing a chiropractor which he had found the most helpful. The physiotherapist examined Mike and explained that they had found nothing major from the assessment apart from stiff joints and tightness of some muscle groups which could be improved by some stretching exercises. Mike explained to the physiotherapist *'I've tried exercise religiously in the past it made no difference it was ridiculous'*.

The physiotherapist explained the reason for the exercises was to stretch the spine and the muscles, and gave him a sheet of exercises to do and told him to do them once a day for a maximum of four times per week.

Mike was given the option of coming back to see the physiotherapist again in 3 weeks time if he wanted.



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Vignette 3

John is a 40 year old gentleman who has had back pain on and off for 10 years he enjoys swimming. Recently has noticed some increasing pain and stiffness in his back. He has carried on with all his usual activities including swimming which he really enjoys and wants to continue with as his back feels a lot better after he has swum, but he attends physiotherapy looking for some further help and advice.

The physiotherapist explains that the pain John is getting is not a sign of harm or damage, and that the assessment had identified some joint stiffness and muscle weakness. They advise John that as his main stroke is breaststroke he should stop swimming as this may be aggravating his pain. They give him a sheet of exercises to do which are designed to: *'open up the joints to give him some pain relief and strengthen his core'*, and he is asked to do whichever of the exercises on the sheet he finds most helpful, with advice: *'Not to go into the pain, go into the stiffness but not the pain'*. The physiotherapist gives John another appointment for 3 weeks time to make sure the exercises aren't worsening the pain and see if his core strength has improved enough to allow him to return to his swimming.

Vignette 4

Joan is a 67 year old lady who has had back pain for as long as she can remember. She's recently had an MRI scan which showed her discs were 'horrendous'. She knows there is not a cure or an operation that will help, and is keen to help herself as much as possible.

From the assessment the physiotherapist finds out from Joan that the main thing she is concerned about is not her back pain as she's had it for years, but her main goal is she wants to ensure that the back pain doesn't stop her from walking her dog. The physiotherapist discusses options of treatment with Joan, who feels that some exercises may be helpful. The physiotherapist assesses Joan's confidence to exercise and she is a little uncertain about doing exercises. Together they discuss different ways of exercising and work out an exercise plan for Joan including a walking programme with set targets in terms of distance or time walked, and a programme of specific strengthening exercises which Joan would begin doing under the guidance of the physiotherapist assistant in the physiotherapy department to build up her confidence.

Exercise prescription for NSCLBP - Contact Summary Sheet

Contact type ..Observation.....

Participant (coded) ..P2....(T8).....

Site ...W.....

Contact date ...5/7/11.....

Today's date ...6/7/11.....

Salient Points	Code/Themes
5. Describe the situation and people involved Female physiotherapist, 3 years qualified. 45 year old male chartered surveyor	
6. What were the main issues or themes that emerged from this contact? a. Patient an active copier, understanding of 1 st line management of LBP b. Aware of need to increase exercise but limited by time – not discussed re how this may be overcome c. Patient mentioned strategies for prevention in expectations of physio – not readily discussed in management plan d. Exercise programme was therapist suggested e. Assumed patient understood role of exercise based on past experience and previous advice received f. Assumption patient will do the exercises (a better understanding leads to increased adherence)	
7. What new features emerged as salient, interesting or illuminating a. Self limiting episode of LBP recurrent history, this episode more acute and slower to settle than in past, therapist failed to acknowledge these possible concerns in the management plan/discussion b. Pacing mentioned but not discussed c. Patient an active copier was advised re passive treatment approaches for possible further recurrences (acupuncture) d. Patient advised re exercises possibly increasing symptoms, but no further information offered on how to deal with this e. General exercise strategies mentioned such as cycling or swimming but not pursued as to whether this may be a preferred approach for	

<p>patient</p> <p>f. Possible admission by therapist that exercise programmes were recipe driven</p> <p>g. Exercise choice based on simplicity of exercise and therapist past experience using them</p> <p>h. Therapist aware some patients find stability exercises difficult to master and they need to be followed up</p>	
<p>8. What information, variables or hunches were not acquired during this contact and need to be focused on in next contact</p>	

Reflective comments:

Relaxed consultation

Patient was an active copier, with a resolving episode of recent exacerbation of LBP, long history of recurrence, most recent episode slower to settle – I felt patient just needed to be given a good explanation, reassurance and advice on managing further episodes NOT treatment

What did the therapists learn from undertaking an objective assessment and how did this affect the outcome in terms of management plan?

Are exercises prescribed based on personal therapist choice, recipe driven, simplicity, or related to objective findings?

Too much information given in too little time and in too little depth
Time management – is the appointment system prohibitive to effective consultation/patient engagement?

Do the therapists really understand CLBP and the role of self-management?
Do they feel confident dealing with patients with CLBP?

Further evidence that therapist assumes the patient understands and will do the exercise, as well as therapist fears of exercise exacerbating pain

What can we realistically expect as a minimum standard of management for this condition?



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Interview Schedule – Physiotherapist (Interviewer Copy)

Interviewee (PIN) _____ Location _____

Date _____ Time _____

Introduction

Thank you for agreeing to take part in this project.
I am hoping to learn about physiotherapists' views and experiences of exercise therapy prescription for patients with NSCLBP, and would **like you to give me your views as openly and honestly as you can.**
Any personal details remain confidential, and your name will be changed when I write up the interview and reports on it.
Please remember you are free to withdraw, and can ask for the interview to be stopped at any time.

- *Check interviewee has seen and read copy of Participant Information Sheet
- *Check interviewee consents to interview being recorded.
- *Complete consent form.
- *Check demographic details correct
- *Ask if interviewee has any questions before commence interview.

Questions

1. Management of chronic back pain is a very challenging area of physiotherapy practice and there are many different approaches to helping people with this problem. Exercise is one of these. To start us off, can you please tell me a little about your experiences of using exercise therapy for patients with CLBP?

*Has their approach changed over time and with experience?
Any training that has influenced their approach to using exercise therapy for CLBP
Understanding of the evidence base underpinning exercise for CLBP*

2. Can you tell me about how you typically explain chronic non-specific low back pain to patients?
3. Can you tell me about how you would explain to a CLBP patient, what the role of exercise is in their management?

Benefits of exercise

Evidence base

4. Could you now tell me something about those factors which you think might influence your decisions to include exercise in the management of your chronic low back pain patients?

*Patient treatment expectations / what's important to patient**Findings from assessment/diagnosis**Back pain guidelines/best practice*

5. Please tell me about the factors which influence your prescription of exercise for your chronic low back pain patients, for example, the type of exercise, exercise frequency etc?

*Verbal cues from patient re want/like to do (Patients exercise history/normal activities/advice to stay active)**Patient expectations – prescribed/individualised exercise programme**Findings from assessment (i.e. pain/weakness/stiffness)*

6. Please can you tell me about some of the factors that you recognize as affecting a patients engagement with the exercise programme?
7. Please can you tell me about any strategies or actions that you take to try and overcome any barriers and optimize patient's engagement with their exercise programme?

*Involving patients in the choice of exercise approach?**Checking peoples understanding re role of exercise**Demonstration and practicing the exercises / involving other family members**Written instruction*

8. Is there anything we haven't talked about that you feel might have an influence on your prescription of exercise for your patients with chronic low back pain?
9. Are there any other aspects of patient engagement with exercise that you feel we haven't covered?
10. If you could name one thing in your current practice that you feel you would improve the prescription of exercise for patients with CLBP – what would it be and why?

Summing up

Thank you for taking part. I am very grateful for the time you have given up and the information you have given, which will be very useful and interesting. If you think of anything else that might be relevant, you can contact me (make sure have contact details). *Check if happy to be contacted at analysis stage (make sure have contact number).



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Interview Schedule – Patient (Interviewer Copy)

Interviewee (PIN) _____ Location _____

Date _____ Time _____

Introduction

Thank you for agreeing to take part in this project.
I am hoping to learn about patients' views and experiences of receiving exercise therapy as part of the management of their LBP, and would like you to give me your views as openly and honestly as you can.
Any personal details remain confidential, and your name will be changed when I write up the interview and reports on it.
Please remember you are free to withdraw, and can ask for the interview to be stopped at any time.

- *Check interviewee has seen and read copy of Participant Information Sheet
- *Check interviewee consents to interview being recorded.
- *Complete consent form.
- *Check demographic details correct
- *Ask if interviewee has any questions before commence interview.

Questions

1. Effective management of chronic back pain can be very challenging and there are many different approaches to helping people with this problem. Exercise is one of these. To start us off, can you please tell me a little about your history of LBP and experiences of physiotherapy and receiving exercise therapy as part of the management for your CLBP?

2. Can you recall any key facts that you were given with regards to your CLBP, in terms of –

An explanation for the pain.

Advice and reassurance messages (i.e. pain does not equal damage).

Self help measures.

3. Do you feel being given exercise as part of the management plan for your CLBP was helpful and why? (And if not why not?)

4. How well informed do you think you were regarding the exercise programme chosen in terms of the anticipated benefits? And was it linked to any personal goals that you had discussed with the physiotherapist? (If no, why not?)
5. I would now like you to consider these vignettes which are different examples of how exercise may be prescribed by physiotherapists for patients with CLBP. Taking each in turn can you tell me:

What are your first thoughts about how this case has been handled by the physiotherapist? and what you see as particularly positive or negative about each one.

6. Returning to your own experiences can you recall whether you were offered choices re management of your CLBP? Did an exercise programme match with your treatment preferences, in terms of what you were hoping for from seeing a physiotherapist?
(If no why not i.e. were you given enough information to help you decide on your preferences?)
7. Were different approaches to exercise discussed with you, and were you involved in the decisions regarding the proposed exercise programme? (If yes can you explain in what way you found this helped? If no why not?)
8. If we are thinking about exercise for CLBP, to what degree do you think patients should be involved in the decision making?

Contrast to decision regarding surgery

9. What information or support could you have been given that would have helped you to feel more involved in the decision making?
10. Do you have any further questions you would like answered or comments you would like to make regarding this study?

Summing up

Thank you for taking part. I am very grateful for the time you have given up and the information you have given, which will be very useful and interesting.

*Check if happy to be contacted at analysis stage (make sure have contact number).

Coded for	Interpretation	Illustrative data extracts
Exercise is the 1 st line of treatment	Places great value on the role of exercise in this patient group. Exercise is regarded as almost the default approach to treatment	<p><i>For patients with CLBP I suppose it forms the basis of the majority of my treatment actually as opposed to other modalities, manual therapy in particular which I would pretty much almost exclusively use in more acute patients.(T6.1)</i></p> <p><i>To be honest I would include it in almost all treatment of CLBP in some shape, manner or form. (T6.30)</i></p>
Variable outcomes – HEP less effective	Questioned the outcomes in patients for whom an individualised home exercise programme (HEP) had been prescribed	<p><i>I think a HEP of what are often particularly boring exercises, a patient is likely to do them in the short term I suspect, but only if they see some improvement in their pain.(T6.56)</i></p>
Experience and training	<p>Voiced opinions about how well training had prepared them to effectively deliver exercise based strategies.</p> <p>Participant was reflective on the level and depth of training received, their main learning being on the job.</p> <p>Participant felt that they needed a bigger armoury of exercises to choose from, feeling that their approach to exercise therapy was somewhat narrow.</p>	<p><i>I think I received anyway very little training as an undergraduate student and almost exclusively learnt on the job, a little bit of inservice training I think, but very little formal or structured training on what I think is very and probably the most important treatment area for CLBP' (T6.10-6.11).</i></p> <p><i>I've never thought about it before but in thinking about what I was going to say in this interview I was trying to think of what training that backs up what I do on twice daily thrice daily basis and I don't think I have (T6.92).</i></p> <p><i>I think the range of specific exercises as I as a physiotherapist and my colleagues as well as I hear and see treating patients I think we've got fairly limited ideas actually, whether were constrained by the evidence base I doubt, I just think we have got fairly limited ideas if that makes sense (T6.85).</i></p> <p><i>I have meant to go off and get pilates trained I'm also going to mention the Alexander technique. I know very little of it, people say it's fantastic and say can you tell me about it. No, you just have to do it to understand it, so I'm going to do some. (T6.88).</i></p>

Defining the options	Although therapist rarely referred to the evidence base for exercise as a way of informing patients, they would use it as a way of convincing the patient (proof), or legitimising the merits of an exercise based approach	<i>I suppose in contrasting manual therapy for example to exercise therapy I might say there is a small and variable evidence base for the use of manual therapy but there is a mounting and growing body of evidence for the use of exercise and exercise therapy in the treatment of LBP. (T6.26)</i>
Establishing initial rapport	<p>Therapist was very professional in their approach and developed a rapport with the patients early in the assessment process</p> <p>They listened attentively to the patient's stories, and this was reinforced by use of appropriate body language such as head nods, eye contact, and positive affirmations when patients described their own attempts to self-manage.</p> <p>By this behaviour one may discern a degree a patient-centred behaviour was being exhibited</p>	<i>Make yourself comfortable my name is.....OT6(7).1</i>
Collecting data to establish source of the patients complaint	Therapist took control of the assessment in terms of directing patients towards offering information the therapists felt a responsibility to collect during the subjective assessment.	<p><i>What does that feel like? OT6(7).13</i></p> <p><i>What about that is it sore up the muscle?</i></p> <p><i>How does it feel? OT6(7).14</i></p>

	<p>A large percentage of available appointment time was taken up establishing the extent of and source of the patient's complaints through subjective questioning and objective examination.</p> <p>Therapist appeared very sensitive if sometimes oversensitive to the patient's reactions to assessment, this resulted in the therapists repeatedly asking the patients how they felt (although their questions were always related to the patient's pain).</p>	
Forming assumptions	<p>Therapist formulated subjective judgements of the patients both during and following assessment resulting in assumptions regarding patients current levels of exercise, and cause and effect re patients LBP</p>	<p><i>I suppose in summary I tailor it around their working lives, any evidence that they might exercise already, which they would tell me and you can tell to a certain extent from the person sat in front of you, how much exercise someone does (T6.34).</i></p> <p><i>Um, largely the fact the patient doesn't seem to do any exercise and that she was very deconditioned and that um, the nature of the pain was very mechanical I suspect her back was very poorly supported by um,... her existing musculature OT6(8).20.</i></p> <p><i>Um, largely as I didn't think she was doing any, and therefore I didn't think she was moving her back significantly or at much at all. OT6(7).19</i></p>
Determining the type of exercise		
Interpretation of the evidence base for exercise	<p>Participant demonstrated some awareness of the evidence or lack of evidence for the effects of specific</p>	<p><i>In so far that the evidence that shows that going for a 2 mile walk every day is as good as might be considered very specific core stability or transversus abdominis exercises, um, only as specific as that to be honest. (T6.28-6.29)</i></p>

	exercise approaches.	
Based on objective findings Exercise to meet therapist > patient needs	It depends on what I find. A mechanical cause demands a mechanical solution.	<i>Often on the objective findings as I mentioned previously, so muscle weakness, muscle tightness, I suppose I could bring into play postural, um, poor posture, making them aware of what a good posture might be that sort of thing.(T6.49)</i> <i>The type of exercise, yes they do actually, um weakness and tightness in various muscle groups which I think is one of the quickest, tightness in muscle, um, muscle groups often addressing those properly often brings the quickest results I think. Um, similarly weakness gluts weakness in particular, strengthening and stretching in those sorts of areas, as I said I think I get quite good and quite quick results with some patients. (T6.40)</i>
Need to be seen to be doing something	Do therapists feel they haven't done their job properly unless they have given the patient a specific regime of exercises to do	<i>I think the pressure comes from lots of different angles, it probably comes from myself, in that I want to give them something to take away from the session, if only it's an exercise or two to take away I feel I should give the patient something. (T6.69)</i> <i>I think there are some patients one which you observed me assessing probably aren't going to come back and I probably recognised that at the outset, so I tried to with that sort of patient; I do try to give them at least something to take away from. If I've got a strong feeling they're not going to return I do try to give them something to take away, so that at least there's a seed being planted should they return in the future.(T6.83)</i>
Recipe driven approaches	Therapists having a 'go to' set of exercises	<i>I think people have got a set formula of exercises the 'go to' exercises if you like, and they're trotted out. (T6.86)</i>
The importance of patients enjoying the exercise programme and finding it fun	Demonstrated an awareness of the influence of patients needing to enjoy the exercise to continue with it, which contrasts with their typical practice and belief that patients often find a prescribed HEP	<i>I think if you can get a patient doing something else, something fun like going for a walk, going to an exercise class, or whether there is a social element i.e. a pilates class, or yoga class or even something like badminton or tennis, some regular aerobic exercise. Um, I suspect they'll enjoy it more I certainly would therefore they are more likely to do it which is important and they are more likely to continue doing it which is more important. (T6.59)</i>

	boring (although this was often first line approach).	<i>It normally starts with a prescriptive exercise programme to suit that person with the suggestion that they find some form of fun exercise they are most likely to continue (T6.62).</i>
Expectancy effects of exercise		
Reducing pain as the main goal of treatment	Therapist reported that the main aim of treatment in this patient group was to reduce the pain, rather than pain related disability, improving function or addressing patient centred goals.	<i>I would always aim to use exercise as a means to improve someone's back pain in this instance over a period of time. I try to explain it to patients that their pain might not go away, um but that it's more likely to, if they do the right sort of exercise. (T6.78)</i>
Seeking compliance more than collaboration	Participant reported on a range of factors that may be likely to affect a patient's ability to implement the suggested exercise programme	
Therapists concerns of increasing pain	<p>Need to try and avoid exacerbating the patients pain, exercises were seemingly prescribed often in a pain contingent more than goal contingent manner</p> <p>Talked about needing to be pain free ideally to do certain exercises. Is this based on the concerns that certain exercises may exacerbate symptoms</p> <p>Participant talked in terms of giving patients the message that 'pain doesn't always equal</p>	<p><i>I think it's quite important to follow these people up to make sure first of all whatever we suggested in terms of exercise isn't worsening their pain, because that's a bad thing, they'd also then have a bad impression of physiotherapy and might not see another physiotherapist on the back of that. (T6.79-80)</i></p> <p><i>You need less pain to move better in the short term. In the medium to long term your muscles are deconditioned. If they were stronger they would support your back better. You need to be more pain free to strengthen your back, not now as you are in too much pain. Do the exercises I showed you and let it settle (OT6 (7).17).</i></p> <p><i>I always try to use the – pain doesn't necessarily equal damage line, which I think most people get anyway. (T6.17)</i></p>

	<p><i>damage',</i></p> <p>Use of 'simple' exercises in an effort to avoid exacerbating symptoms, and saw exercise increasing pain as a negative in terms of outcomes and giving a bad impression of physiotherapy.</p>	<p><i>So by giving her a couple of very simple ideally painfree exercises. Um their simplicity, ok. Um which I hope I tailored to the patient's ability. Um, their ease and the fact that they are adaptable and she can do them without too much pain (OT6 (7).21-22).</i></p> <p><i>T -If they're doing some form of exercise which I think is aggravating or irritating their back, then I'm much more likely to tell that I 'think you are going to have to cut that out', tell it to them straight if you like, if I've got a good rapport with that patient, and that's a very difficult think to define I think.(T6.74-75)</i></p> <p><i>I – So if I could summarise that, are you saying that for some patients with NSCLBP, that some exercises you would advise them to avoid doing? I noticed that in our observations where you advised one patient in particular who was running, and one who was doing breaststroke swimming not to do those exercises. Can you tell me a little more about that?</i></p> <p><i>T – If I remember the examples rightly it was not to do them in the short term until they got stronger. Yeh, actually thinking about that I don't know what evidence that is based on. (T6.76)</i></p>
<p>Influence of social factors, current exercise history and finding time to exercise</p>	<p>Therapist recognised the importance of social factors influencing a patient's ability to undertake an exercise programme, but were more likely to make subjective judgements of a patient's likelihood to undertake the exercise programme rather than through a negotiated discussion</p>	<p><i>In terms of their lifestyle, hugely important I think, if someone's busy, be it work, family, keeping a roof over their head, their less likely, they've got less time therefore less leisure time, their less likely to do the exercise. If someone has more time and more motivation they're going to do more.'(T6.72)</i></p> <p><i>I suppose in summary I tailor it around their working lives, any evidence that they might exercise already, which they would tell me and you can tell to a certain extent from the person sat in front of you, how much exercise someone does.(T6.34)</i></p> <p><i>I asked her in written format and verbally to do the exercises at least 2 or 3 times a day and throughout the day in one specific case. Ugh, because she is off work and therefore would be able to do them' (OT6(7).23)</i></p>

		<p><i>Ok, um, she was single mother with a 9 month old baby, so exercises she could do at home, um,... with um... fairly simple exercise she could do while the baby was asleep. Ok, well as I said the fact she's a single mother and would find it difficult to um, exercise for long or stick to set times for exercise, so I tried to give her fairly simple advice to do them throughout the day as and when and given the opportunity. (OT6(8).22)</i></p>
Assessing a patients readiness to engage in exercise	<p>Participant was inclined to rely on subjective judgements or 'gut feeling' of the patient's likelihood to engage</p> <p>Participant was mindful that a lack of engagement and enthusiasm from the patient was on occasions mirrored by their own lack of enthusiasm</p>	<p><i>Um, I think I make a judgement, a subjective judgement on whether I think that person would be adherent to a certain type of exercise programme and I advise them to carry on in that manner' (T6.35).</i></p> <p><i>I'd like to think I make it throughout the course of the subjective and objective assessment. If I'm honest I probably make it on first sighting often (rightly or wrongly), but yeh you build a picture from the moment you bring the patient in from the waiting room until you're ready to start treating (T6.72).</i></p> <p><i>A consultation is obviously a two way process, and um, as therapists we're human, we can't be on 100% form, tip top form every time we assess and treat someone, and if a patient has come to an assessment and gives me the impression they're not 100% engaged or enthused or optimistic I'm much less likely to be enthused, engaged and optimistic, I think (T6.84).</i></p>
Keeping the exercises simple	<p>Saw a simple exercise programme as a way of engaging people in exercise who in their opinion were less likely to engage, due to either limited time or potential fears surrounding role of exercise.</p>	<p><i>The most important thing I think is that the patient is going to do them, that's my view, but if from what they are telling me during the subjective or assessment they're likely to show low adherence, then I'd meet that low adherence I just want to make sure that they do something that's simple and not particularly difficult or challenging and get them on board that way, and then up the intensity (T6.46).</i></p> <p><i>I think there's no point in giving someone who's never done any exercise a sheet of 10 or 12 exercises that are very difficult and likely to provoke a little bit of pain even in the short term, I think that's not how to win a patient over and get them exercising (T6.48).</i></p> <p><i>Ok, um, she was single mother with a 9 month old baby, so exercises she could do at home, um,... with um... fairly simple exercise she could do while the baby was asleep. Ok, well as I said the fact she's a single mother and would find it difficult to um,</i></p>

		<i>exercise for long or stick to set times for exercise, so I tried to give her fairly simple advice to do them throughout the day as and when and given the opportunity. (OT6(8).22)</i>
Benefits of follow up appointments – ensure problem isn't worse	Follow up appointments were regarded as valuable to check the exercise technique, assess the effect of the exercises on the pain	<i>I think it's quite important to follow these people up to make sure first of all whatever we suggested in terms of exercise isn't worsening their pain, because that's a bad thing, they'd also then have a bad impression of physiotherapy and might not see another physiotherapist on the back of that' (T6.79-80).</i>
Explanation, understanding and reassurance (normalising LBP)	<p>Described non-specific chronic LBP to patients using terminology and statements that attempted to normalise more than medicalise LBP</p> <p>Therapist felt it important to explain to the patients why and how they felt exercise was going to be beneficial, in the belief that increased understanding would lead to increased engagement.</p> <p>Therapist was often uncertain as to whether the patients had a full understanding of why they had been asked to exercise and what the exercise programme was planning to achieve. Therapist rarely checked the patient's clarity and understanding</p>	<p><i>I say that it's very difficult to be specific, that it's very very common and that reassurance to be honest is more important than the explanation itself (T6.14).</i></p> <p><i>I always explain why I think each exercise is going to be beneficial. I think if a patient understands that they are more likely to do them. Um, and I would give them appropriate tools to remember those exercises, 'physio tools' for example (T6.51).</i></p> <p><i>I'd like to think she has taken on board everything I've said, um and that therefore she had a fairly good understanding. I have misgivings however, I wonder whether she fully appreciated what I was saying, or the way I said it. Um, I'd be interested to find out whether she has done any of it or in fact comes back (OT6 (7).22).</i></p> <p><i>On reflection I should have probably explained a little more to her what benefit the exercises would bring. But I think, she probably has a reasonable understanding that the... I hope she has a reasonable understanding that the muscles her core uh will support her back (OT6 (8).23).</i></p>
Attention to patient cues	Patient cues regarding treatment expectations,	<p><i>T – Other than work do you do any exercise?</i></p> <p><i>P – I run with my partner x 2 /week 1.5 miles</i></p>

	<p>previous experiences or what self help strategies patients were adopting such as current exercise or those patients would like to consider implementing were not picked up or explored by the participants.</p>	<p>(OT6(7).7)</p> <p>In the brief post observation interview regarding this patient the following emerged:</p> <p><i>I – What influenced your decision to prescribe exercise for this patient?</i></p> <p><i>T - Um, largely as I didn't think she was doing any, and therefore I didn't think she was moving her back significantly or at much at all (OT6(7).19)</i></p>
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Coded for	Interpretation	Illustrative data extracts
Lack of clarity re purpose/role of exercises	<p>Uncertain about role of exercise – thinks it was to increase ROM</p> <p>Lack of information re diagnosis and how exercise was going to help</p>	<p><i>Yes I was given 3 exercises to do after my first physio visit and they were exercises that were explained to me at the appointment and I was given a sheet that illustrated how to do the exercises. The 3 exercises I think were aimed at stretching my muscles in my lower back. (P1.3)</i></p> <p><i>I think it was explained to me that it would help with my mobility, and I can't remember much more than that really. (P1.25)</i></p> <p><i>There was a slight vagueness in terms of the diagnosis of what might back problem might be and then onto the exercise prescribed for the problem it seemed to be a bit vague really, there don't seem to be any precise information offered to me that illustrated exactly how the exercise was going to help the problem. (P1.79)</i></p> <p><i>It was perhaps a case of me not really knowing what the problem was and whether the course of action was the right one because of the vagueness. (P1.83)</i></p>
Lack of understanding re problem/diagnosis	Lack of condition specific information re diagnosis	<p><i>I think I came away not really having an understanding of what the cause was. (P1.4)</i></p> <p><i>I had a vague analysis of the problem from my GP and I didn't receive for whatever reason from the physio an explanation either, so I did feel through the process up to that point that I hadn't had it explained to me what the actual problem was. (P1.7)</i></p> <p><i>Perhaps a clearer diagnosis of what the problem was and how the exercise relates to the problem, but at that point I hadn't really been given a clear explanation. (P1.78)</i></p> <p><i>I didn't know what the problem was I didn't feel it had been explained to me properly. (P1.80)</i></p> <p><i>It was perhaps a case of me not really knowing what the problem was and</i></p>

		<i>whether the course of action was the right one because of the vagueness. (P1.83)</i>
Uncertainty about physiotherapists role and boundaries of role	<p>Belief it's not the physio's role to diagnose or explain cause of problem</p> <p>Belief it's the physio's role to provide treatment or management > explanation of cause</p>	<p><i>Maybe it was my expectation that it wasn't the physio's job to explain it (P1.5)</i></p> <p><i>Maybe it was the physio's job to explain what to do about it rather than explain what the cause of the pain was. (P1.6)</i></p>
Lack of diagnostic information made patient question whether the treatment suggested was appropriate	<p>Unanswered questions re diagnosis reduced patients confidence re treatment suggestions</p> <p>Compared feeling to being prescribed painkillers re diagnostic uncertainty</p>	<p><i>I felt that there was a fairly vague explanation of what might be wrong with my back. I wasn't sure whether what was being suggested was targeted enough because it wasn't made clear what the problem was, so I wasn't quite sure how people knew how to remedy the problem if they didn't know or that information wasn't passed onto me. (P1.8)</i></p> <p><i>I think I felt the same as when I was prescribed painkillers because I felt that there was a fairly vague explanation of what might be wrong with my back. (P1.9)</i></p>
Lifestyle factors discussed and patient encouraged to continue with 'normal/regular' exercise	<p>Patient encouraged to continue with normal/typical exercise</p> <p>Patient had worked out that exercise and cycling in particular helped > worsened symptoms</p>	<p><i>I was asked about my lifestyle and I was asked about how active I was, and I have been fairly active the last 5 years through cycling, but that has suffered a little bit in the last 12 months, but I explained how much cycling I usually do, and there was an encouragement to continue with cycling if that felt comfortable. (P1.10)</i></p> <p><i>From my own experience I did find that cycling did help and so I went into the first appointment kind of aware of that anyway because I tried to continue with my cycling and even though it did inhibit it a little bit in terms of how far I could go I did find that after about ½ hour of discomfort it did start to feel a bit better, so that was something I worked out for myself but that was backed up by the physio who said it was good to continue. (P1.14)</i></p>
Treatment options	Was not offered a choice of management options. Advised to continue with own exercise and	<i>The two options or the two things that were suggested to me were to continue with my level of exercise that I was doing already and complement it by doing the</i>

	<p>supplement with physio suggested HEP</p> <p>Since discharge has done his own research and is aware of different treatment options which he might have considered had they been offered.</p>	<p><i>three exercises I was given on the printed sheet. So no other treatment options were discussed. (P1.15 1.16)</i></p> <p><i>I have actually looked recently at the clinical pathway and suggestions of how treatment might progress, and see if there are some options in terms of slightly more alternative approaches such as acupuncture, and there is probably even though I don't particularly lean that way in my beliefs. I've heard anecdotally who it's worked for and if that had been offered I probably would have been interested to at least try it. (P1.17-1.18)</i></p> <p><i>Subsequently when I have looked into other options that might have been available it may have been good to have been made aware of other options other than just physio exercises. (1.68)</i></p>
<p>Involvement in treatment decision making</p>	<p>Was involved in discussions about continuing own exercise / cycling.</p> <p>Not involved in discussions around physio suggested HEP</p> <p>Patient felt he possibly lacked necessary knowledge to contribute to discussions about physio suggested HEP.</p>	<p><i>I think we had a discussion about cycling and perhaps some discussion about when I didn't have my back problem how long I was going out on my bike and the suggestion was I reduce that and build it up to see if I could get back to where I was before I had the accident on my bike. So I think there was some discussion around the cycling side. (P1.60-61)</i></p> <p><i>I think there was some discussion around the cycling side, but not so much on the other exercises that were prescribed, there were three exercises given to me and there wasn't much of an option or any option given to me on that really. (P1.62)</i></p> <p><i>With the physio exercises no it was very much a one way conversation. (P1.65) But how much of a contribution I could have made to that side of things was probably minimal as I don't have any experience of physio exercises. (P1.63)</i></p> <p><i>I accepted what I was given on the physio side of things as I have no knowledge of them and I expected to be given the right information. (P1.66)</i></p>

	Felt more confident about discussing his cycling as had some experience with this exercise.	<i>I was able to contribute to the cycling side of things somewhat because I know what my thresholds are and what feels good and what doesn't. (P1.64)</i>
Desire for involvement determined by perceived risk of intervention > benefits	Perceived level of risk would determine desire for more involvement in treatment decision making Patient reflecting on need to be involved whatever the level of intervention involved	<i>I think the operation is a much more serious option that needs to be considered more and I would hope to be offered more information on an operation option than I would on just the exercise because with a procedure such as that you need to be given as much information as possible about that. (P1.75)</i> <i>I suppose it's the level of intervention I suppose, because the lower level of intervention which would be the exercises, the implications of those going wrong are not quite as bad as the implications of surgery going wrong so you would want to be consulted a bit more and be more involved in the surgical decision making. (P1.76)</i> <i>But I suppose in theory you should be equally involved in both but you are naturally lean towards wanting to be consulted about the surgical option because it's a more scary option. (P1.77)</i>
Deciding on the type of exercise	Incorporating patients preferred form of exercise into management plans is important, and possibly just as effective. Imposing exercises on someone is unlikely to be sustained	<i>I think if they can find a form of exercise that the patient is doing already and incorporate that into it. (P1.69)</i> <i>If some other form of exercise such as walking, cycling or swimming can do the same thing (I don't know whether they can) but if they can that might be a better suggestion(P1.72)</i> <i>I think having exercise imposed on people in my experience and when I have spoken to other people about it as well I don't think it really works because people aren't realistically going to keep up the programme (P1.71)</i>

<p>Patient didn't give physio appt too much thought in terms of what to expect.</p> <p>Expected physiotherapist to suggest exercises</p>	<p>Didn't think too much about physio appt, other than expecting to be given exercises, so just accepted this.</p> <p>Being given exercises is what patient expected (fitted with expectations but ? not preferences)</p> <p>Expectation also based on talking to others</p>	<p><i>I didn't do any research in advance of seeing the physio into what I might expect or what options might be offered to me. I did have this idea I would be given exercises and when I was given exercises to do I sort of accepted it because I was expecting it. (P1.55 – 56)</i></p> <p><i>I didn't really do much research as to what to expect. (P1.81)</i></p> <p><i>I expected to be given exercises because it's sort of what I expect a physio to do is suggest repetitive exercises to help with the back problem. (P1.20)</i></p> <p><i>To be honest I wasn't quite sure what to expect from the physio appointment other than this vague idea that I would be given exercises only because other people who I have spoken to, that are what their experience has been a set of exercises that they have to complete regularly. (P1.52, 53 and 54)</i></p>
<p>Negative reaction to the suggestion of exercise (lack of motivation)</p>	<p>Had negative reaction when exercises were suggested as knew he would be unlikely to do them.</p> <p>Didn't fit with patient preferences or needs</p>	<p><i>I sort of when I was given the exercises to be honest I kind of had that sinking feeling knowing that I would probably keep it up for 2 weeks and then it would start to slip and I think there was a certain inevitability about that really. (P1.21)</i></p> <p><i>Even though they only take 15 mins a day maximum, it's still quite difficult to find the time, well not find the time but to allocate the time and remember to do them, I found that difficult. So I find being given regular exercises to do every day I pretty much know from the outset I'm not going to keep them up. (P1.22)</i></p> <p><i>I find it unrealistic for most people to maintain that level of repetition for weeks and months ahead. (P1.24)</i></p>
<p>Has faith and trust in the professional to be doing the right thing</p>	<p>Feels exercises might have helped, as trusts the professional judgement to know what is best.</p>	<p><i>I'm assuming it's helpful because the person who prescribed the exercises knows what they are talking about and the exercises are going to benefit the back problem as described to them so I always assume people know what they are talking about and I accept that advice as it's given. (P1.23)</i></p>

	Physio should advise on the appropriateness of patients preferred/general exercise programme	<p><i>I accepted what I was given on the physio side of things as I have no knowledge of them and I expected to be given the right information (P1.66)</i></p> <p><i>Maybe it's a bit of deference I don't know I go into appointments like that and sometimes accept what I'm told. (P1.82)</i></p> <p><i>I think if they can find a form of exercise that the patient is doing already and incorporate that into it, but whether that form of exercise is good for that particular problem that is for the physio to know really rather than the patient. (P1.70)</i></p>
Lack of goal setting	<p>No goals discussed or set</p> <p>Emphasis on symptom/condition management > goals</p>	<i>We didn't set any goals it was just an attempt to manage the problem and specifically the pain, so there were no goals set. But I didn't raise any goals of my own really, and I wasn't asked by the physiotherapist. (P1.26)</i>
Expectation was to be seen regularly / series of appointments	Wanted to be seen more than once	<i>I think I expected to be booked in for a more regular series of appointments. So it was one appointment with an assessment and exercises given and then see how I got on with it and then to come back again if I felt I needed to. Maybe I did expect to be booked in for a course of physio appointments. (P1.57-58)</i>
Not involved or expecting to be involved in treatment/management discussions	<p>Resigned to being told what to do or given exercises.</p> <p>Almost blaming self for lack of research or pre appointment preparation</p>	<p><i>Because of my lack of forethought and research really I didn't have huge expectations of what was coming I just kind of accepted what was given. (P1.59)</i></p> <p><i>I tend to accept the diagnosis given but maybe it's a bit of deference I don't know I go into appointments like that and sometimes accept what I'm told. (P1.82)</i></p> <p><i>It was perhaps a case of me not really knowing what the problem was and whether the course of action was the right one because of the vagueness. (P1.83)</i></p>
VIGNETTE 1		
Feels approach taken by the physiotherapist is a positive one	Positive – advice to continue with own exercise and use medication to support	<i>I quite like the way this was dealt with by the physiotherapist and it is not that dissimilar to my experience with the physiotherapist either, it's encouragement</i>

	exercise programme. Encouraging patient to continue with exercise they enjoy is positive	<i>to keep up with your regular exercise and to combine it with medication to control the pain. (P1.27 and 1.28)</i> <i>I think the fact that she has been encouraged to continue with something she enjoys is good. (P1.29)</i>
Use of follow up appointments is a good thing	Feels more supported if offered a follow up appointment	<i>I'm not sure about the no follow up recommended, I think in that woman's position I would have been happier with a follow up appointment at some point. (P1.31)</i>
VIGNETTE 2		
Patient not really been listened to.	Patient not really being listened to. Offered a standard menu or recipe based approach, with care not personalised to the patient's needs.	<i>He's been given what the physiotherapist has suggested which is probably what the first physiotherapist suggested 20 years ago when he first went in with back pain, so, I don't think the patient has been listened to really. (P1.32)</i> <i>I think he has been continually offered an 'off the peg' solution to the problem and nothing that is personalised. (P1.33 – 1.34)</i>
VIGNETTE 3		
Patient has developed own exercise regime	Patient has clearly worked out what exercises are best for him	<i>John has already discovered for himself the exercise that makes his back feel better or improves his back which is swimming. (P1.35)</i>
Inflexible approach from physio – not listening to patient	Physio prioritising own beliefs and values over patients	<i>I think it's not a very flexible approach from the physiotherapist to tell him to stop swimming. As they say he may be aggravating his pain, but John has said actually that the pain is better after swimming. (P1.36)</i>
Patient stopped from doing exercise he enjoys	a/a	<i>I think he has been stopped from doing an exercise he enjoys doing and does relieve the pain. (P1.37)</i>
No guarantees physio exercises will help, may actually worsen problem.		<i>He has been given some other exercises to do which, without any real reassurance that it is going to help. (P1.38)</i> <i>I don't know obviously the swimming was working for him in terms of exercising his back and this was working, and maybe if these exercises are going to take him into the pain threshold perhaps they are not a</i>

		<i>good idea. (P1.43)</i>
Advice re pain and stiffness is very vague		<i>It's very vague, because sometimes how can you distinguish between pain and stiffness. (P1.41)</i>
VIGNETTE 4		
Use of investigations to provide diagnostic certainty	Investigations have offered some diagnostic certainty, therefore treatment more likely to be effective?	<i>Because the patient has been scanned and there is some certainty about what the problem is, maybe they can target their response better than the previous ones. (P1.44)</i>
Patient listened to and patient goals established	Patient listened to and what is of importance to patient has been established	<i>I think it's quite good they have clearly listened to her and discovered that walking her dog is an important thing for her that she wants to continue. (P1.45)</i> <i>I think the patient has been listened to more. (P1.48)</i>
Exercise programme related to patient goals	Exercise programme designed in collaboration with patient to help her achieve her goals.	<i>Walking her dog is an important thing for her that she wants to continue and have taken that into consideration when planning her exercises, so they have incorporated walking as part of the exercise plan. (P1.46)</i> <i>They've made an effort to incorporate what she wants to achieve into the exercise plan. (P1.49)</i>
Exercise programme has set goals	Exercise and goals are SMART	<i>There have been targets set as well in terms of distance or time walked so it does seem to be more structured. (P1.50)</i>
Exercise under supervision	Supervision of exercise important to help overcome worry or fear with exercise.	<i>I quite like the idea that the kind of exercises that have been suggested for strengthening are going to be done under supervision, particularly if someone is slightly older or nervous about putting stress on an area that is painful, and so being done under supervision is good. (P1.47)</i>
Not just offered an 'off the peg' solution	Not simply dismissed with a home exercise programme	<i>It's not the case of being given some exercises and being told to go away and get on with it. (P1.51)</i>

Example Text Interpretation Summary – Phase One

The table below sets out a selection of data extracts taken from the field notes and transcripts of the observations and interviews (both semi-structured and informal) in which you were involved as part of this research study, and the themes or sub-themes that these extracts have been assigned to:

Theme description	Illustrative data extracts
<p>Exercise as the mainstay of treatment - this theme maps the value participants placed on the role of exercise as a management strategy for patients presenting with NSCLBP, considering it to form part of normal management, or the mainstay of treatment.</p>	<p><i>For patients with CLBP I suppose it forms the basis of the majority of my treatment actually as opposed to other modalities, manual therapy in particular which I would pretty much almost exclusively use in more acute patients.</i></p> <p><i>To be honest I would include it in almost all treatment of CLBP in some shape, manner or form.</i></p>
<p>Therapists interpretation of the evidence base for exercise – maps a common thread that appeared with all participants related to how they considered the evidence base with regards to exercise, with all of them interpreting the evidence to reflect the opinion that engaging patients in some form of exercise in general terms, or in a manner and form acceptable to the patient and not particular types of exercise may be the key component for successful management of patients with NSCLBP.</p>	<p><i>In so far that the evidence that shows that going for a 2 mile walk every day is as good as might be considered very specific core stability or transversus abdominis exercises, um, only as specific as that to be honest.</i></p> <p><i>I think a HEP of what are often particularly boring exercises, a patient is likely to do them in the short term I suspect, but only if they see some improvement in their pain.</i></p>
<p>The importance of the exercise being ‘fun’ - focuses on the importance the participants reported in terms of the need for the patient to ‘enjoy’ the exercise to want to continue doing it. In doing so participants were reflecting on factors that could enhance a patients engagement in a regular exercise programme in terms of empowering the patients to take control by generating their own ideas on exercise or undertaking an exercise programme that is familiar to them.</p>	<p><i>I think if you can get a patient doing something else, something fun like going for a walk, going to an exercise class, or whether there is a social element i.e. a pilates class, or yoga class or even something like badminton or tennis, some regular aerobic exercise. Um, i suspect they’ll enjoy it more I certainly would therefore they are more likely to do it which is important and they are more likely to continue doing it which is more important.</i></p>
<p>Which exercise – the tension between evidence and everyday practice – this sub-theme maps how</p>	<p><i>It normally starts with a prescriptive exercise programme to suit that person with the suggestion that they find some</i></p>

<p>the therapists described their typical practice. Although many were conscious that patients were more likely to comply with an exercise programme based on their exercise preferences or that they perceived as enjoyable, a number of the participants stated they would also frequently base their decisions regarding the type of exercises on their assessment findings both objective and subjective, but generally the objective assessment in terms of finding positive and negative evidence towards specific structures and pain mechanisms involved in the patients pain predominated in determining the exercise prescribed. Participants reported that this would result in patients being given an individually 'tailored' home exercise programme (HEP).</p>	<p><i>form of fun exercise they are most likely to continue.</i></p> <p><i>Often on the objective findings as I mentioned previously, so muscle weakness, muscle tightness, I suppose I could bring into play postural, um, poor posture, making them aware of what a good posture might be that sort of thing.</i></p> <p><i>Weakness and tightness in various muscle groups which I think is one of the quickest, tightness in muscle, um, muscle groups often addressing those properly often brings the quickest results I think. Um, similarly weakness gluts weakness in particular, strengthening and stretching in those sorts of areas, as I said I think I get quite good and quite quick results with some patients.</i></p>
<p>Giving therapy for the therapists needs - this sub-theme outlines the way some of the participants reflected on the tendency for therapists to be 'wanting to give the patient something', and were conscious of the potential for therapists to be prescribing exercises possibly in a recipe driven format.</p>	<p><i>I think the pressure comes from lots of different angles, it probably comes from myself, in that I want to give them something to take away from the session, if only it's an exercise or two to take away I feel I should give the patient something.</i></p> <p><i>I think people have got a set formula of exercises the 'go to' exercises if you like, and they're trotted out.</i></p>
<p>Seeking compliance more than collaboration - this theme maps the range of factors the participants reported on that may be likely to affect a patient's ability to implement the suggested exercise programme such as: patients current activity levels, lack of time due to family and/or work commitments, risk of increasing pain with exercise.</p> <p>Patients current or previous levels of activity - this sub-theme focuses on the degree to which participants considered the data relating to a patients current and past exercise history, and how this in turn would influence their approach to the delivery of exercise for the active and inactive patient.</p>	<p><i>I suppose in summary I tailor it around their working lives, any evidence that they might exercise already, which they would tell me and you can tell to a certain extent from the person sat in front of you, how much exercise someone does.</i></p>

<p>Lack of time - this sub-theme considers how the sense of lack of time meant participants were faced with the conflict of wanting their patients to engage in an exercise programme, but knowing that patients often have limited time they talked about ways to minimize the interruption caused by exercising in the hope of fostering engagement.</p> <p>Keep it simple - this sub-theme summarises how participants would use what they described as 'simple exercises' as the solution to the perceived compliance problems. Participants saw a simple exercise programme as a way of engaging people in exercise who in their opinion were less likely to engage, due to either limited time or potential fears surrounding role of exercise.</p>	<p><i>In terms of their lifestyle, if someone's busy, be it work, family, keeping a roof over their head, their less likely, they've got less time therefore less leisure time, their less likely to do the exercise. If someone has more time and more motivation they're going to do more.</i></p> <p><i>The most important thing I think is that the patient is going to do them, that's my view, but if from what they are telling me during the subjective or assessment they're likely to show low adherence, then I'd meet that low adherence I just want to make sure that they do something that's simple and not particularly difficult or challenging and get them on board that way, and then up the intensity.</i></p>
<p>Checking patients understanding of the role of exercise - this sub-theme is based on data identifying participant's views on the importance of patient understanding about the key things they should know before embarking on an exercise programme, and is supplemented by some reflections as to how well this was delivered in practice.</p>	<p><i>I always explain why I think each exercise is going to be beneficial. I think if a patient understands that they are more likely to do them. Um, and I would give them appropriate tools to remember those exercises, 'physio tools' for example.</i></p> <p><i>I think if I'm, I'd like to think she has taken on board everything I've said, um and that therefore she had a fairly good understanding. I have misgivings however, I wonder whether she fully appreciated what I was saying, or the way I said it. Um, I'd be interested to find out whether she has done any of it or in fact comes back. (Quote from post observation interview)</i></p>
<p>Defining the options available – this sub-theme is constructed from data relating to how therapists articulated their views, perspectives and recommendations with regard to treatment options.</p>	<p><i>I suppose in contrasting manual therapy for example to exercise therapy I might say there is a small and variable evidence base for the use of manual therapy but there is a mounting and growing body of evidence for the use of exercise and exercise therapy in the treatment of LBP.</i></p>

Comments ...

Example Text Interpretation Summary – Phase Two

The table below sets out a selection of data extracts taken from the interview in which you were involved as part of this research study, and the themes or sub-themes that these extracts have been assigned to:

Theme description	Illustrative data extracts
<p>Patients' expectations and patients' needs are not synonymous.</p> <p>This theme highlights the potential differences between patients' expectations of physiotherapy and ultimately what was of importance to them.</p>	<p><i>To be honest I wasn't quite sure what to expect from the physio appointment other than this vague idea that I would be given exercises only because other people who I have spoken to, that is what their experience has been, a set of exercises that they have to complete regularly.</i></p> <p><i>Perhaps a clearer diagnosis of what the problem was and how the exercise relates to the problem, but at that point I hadn't really been given a clear explanation.</i></p>
<p>I felt there was a fairly vague explanation of what might be wrong.</p> <p>This sub-theme focuses on how participants talked about how their desire for information related to their diagnosis and what it meant for them was often not adequately addressed.</p>	<p><i>I think I came away not really having an understanding of what the cause was. Whether that was because I didn't ask I can't remember, but maybe I didn't ask, or maybe it was my expectation that it wasn't the physio's job to explain it, maybe it was the physio's job to explain what to do about it rather than explain what the cause of the pain was. I had a vague analysis of the problem from my GP and I didn't receive for whatever reason from the physio an explanation either, so I did feel through the process up to that point that I hadn't had it explained to me what the actual problem was.</i></p>
<p>Review of management options.</p> <p>This sub-theme presents evidence that participants felt they weren't being offered a choice of different management or treatment options, although it is something that some of them would have valued</p>	<p><i>The two options or the two things that were suggested to me were to continue with my level of exercise that I was doing already and complement it by doing the three exercises I was given on the printed sheet. I wasn't aware, but I have actually looked recently at the clinical pathway and suggestions of how treatment might progress, and see if there are some options in terms of slightly more alternative approaches such as acupuncture, and that is probably even though I don't particularly lean that way in my beliefs, I've heard anecdotally who it's worked for and if that had been offered I probably would have</i></p>

	<p><i>been interested to at least try it. So no other treatment options were discussed, I think what may have been talked about was painkillers and continue with anything that was prescribed by the GP in terms of pain management.</i></p>
<p>Benefits of exercise. This sub theme presents evidence from the participants' suggesting a lack of understanding as to why they were doing the exercises and what to expect in terms of benefits</p>	<p><i>The 3 exercises I think were aimed at stretching the muscles in my lower back.</i></p>
<p>There has to be an element of trust. In this sub-theme the participants talked about the need to have trust in the healthcare professional to be doing the right thing, on the basis of being the ones with the necessary knowledge to know what's best</p>	<p><i>With the physio exercises no it very much a one way conversation. But how much of a contribution I could have made to that side of things was probably minimal as I don't have any experience of physio exercises. I accepted what I was given on the physio side of things as I have no knowledge of them and I expected to be given the right information.</i></p>
<p>Wanting to be treated as a person. This theme considers the participants reflections on their experience of receiving an exercise based intervention as part of their care, in which a number talked about their frustrations of feeling that the care they received was not particularly personalised</p>	<p><i>He's been given what the physiotherapist has suggested which is probably what the first physiotherapist suggested 20 years ago when he first went in with back pain, so, I don't think the patient has been listened to really and I think he has been continually offered an 'off the peg' solution to the problem and nothing that is personalised.</i></p>

Comments ...