Slater, Nigel G. (2015) The language of acute pain assessment: a corpus-based critical discourse analysis. DHSci thesis, University of Nottingham.

THE LANGUAGE OF ACUTE PAIN ASSESSMENT: A CORPUS-BASED CRITICAL DISCOURSE ANALYSIS

NIGEL GEORGE SLATER
MSc, PGDip HE & HP, RN

Thesis submitted to the University of Nottingham for the degree of Doctor of Health Science

December 2015

Abstract

Title: The language of acute pain assessment: a corpus-based Critical Discourse Analysis approach

Aim: Through use of real time interactions between healthcare workers and patients in an acute hospital setting this study sets out to investigate how health care workers help or hinder patients to express their pain during the pain assessment process.

Background: Pain has long been an issue for investigation and there are a multitude of assessment options available. However, despite using an assessment framework, the ability of patients to use language to express pain has been shown to be more problematic than might be first considered. This study sets out to investigate how both patients and healthcare workers use language in this assessment process.

Method: Real time data was recorded in an acute hospital in-patient setting. The use of corpus based critical discourse analysis enabled specific instances of word use and phrases related to pain experience to be identified and analysed.

Findings: Two key areas were identified in the analysis of these interactions. The first area related to the traditional aspects of pain assessment relating to terminology used, location and function of pain. The second more important area related to how healthcare professionals presented a certain 'mentality' about the assessment process in how they appeared to be patient centred but through the use of brevity of interaction and trivialisation of the issues actually presented an opposite view.

Conclusion: The primary conclusion is that although healthcare workers apply pain assessment processes, their use of language can show that they are both patient-centred and have their own motivations and agendas.

Key words: Critical Discourse Analysis (CDA), Corpus Linguistics (CL), pain assessment, pain language

Acknowledgements

Thanks primarily go my supervisors over this period of research. Overall to Professor Paul Crawford who has stuck by me and applied the right amount of motivation and direction throughout the whole time period of this thesis. My second supervisors have come and gone as their own circumstances have changed and I am grateful to them all for their timely advice. Initially to Dr Jacqueline Randle for helping to tease out the initial research ideas; to Dr Nick Allcock for his invaluable experience of pain management and finally to Dr Stuart Nairn for his attention to detail, especially during the final periods of writing up.

Thanks also go to the matron and staff of the clinical area who allowed me to gather data without which this research would not have been possible. I would also like to acknowledge the part played by my former colleague, Consultant Thoracic Surgeon Mr John Duffy, for questioning the way in which pain was being assessed and sparked the initial ideas for this work.

Finally to my wife Karen, who has endured many years of me working on this thesis, and without the love and support from her I would never have reached this end point.

Contents

List of Tables and Transcript Samples

1 Introduction and background

"Do you have any pain?" may be seen as a good question to ask when assessing pain. However, it is not necessarily an easy question to answer. Whether in a post-surgery context in an acute hospital or in other healthcare settings, what that pain *is*, how it manifests itself, and what any patient has to say about *their* pain could be very different. This complexity in the pain assessment process and some of the difficulties this may present for clinical staff and patients warrants detailed examination. In this study, the focus will be on the complexity of language used in pain assessment. This focus was conceived after a discussion with a consultant surgeon colleague who was concerned about how staff were assessing pain and what might be done to advance the quality of communication in this key part of patient care.

This study is, then, a response to a call for more detailed understanding of pain assessment, in particular by examining the language used in naturally occurring interactions between patients and healthcare staff during pain assessments. This approach is something that has not been done before in an acute hospital ward setting.

The National Patient Surveys carried out regularly over the past years by the Care Quality Commission (CQC) and previously by the Healthcare Commission (HC) consistently highlight that 60 to 70% of patients experience pain whilst an inpatient in an acute hospital (Care Quality Commission, 2013). Pain assessment protocols and tools have been used now for many years and analgesia is continuing to be improved (Ferrell, Virani, Grant, Vallerand & McCaffery, 2000; Breivik, Borchgrevink, Allen, Rosseland, Romundstad, Breivik Hals, Kvarstein & Stubhaug, 2008). The question arises then as to why the rate of patients experiencing pain is staying relatively constant. Pain assessment is more than asking the question, it is about the response and it is about the decisions that staff make about the response that will determine how the pain is managed (Breivik et al., 2008). An integral part to all of this is the language that is used in the assessment process. This research project sets out to discover what language healthcare professionals use in the pain assessment process and how this might influence the patient.

Chapter 2 provides a literature review and background on language, with particular attention to health language, along with the language of pain and pain assessment. Definitions for pain are offered along with a historical perspective on pain and

discussion of some of the current approaches taken to pain management and assessment in particular.

Chapter 3 examines the methodological and philosophical considerations and basis of the thesis. Initial discussion identifies the rationale for using a critical realist approach. The discussion continues by identifying and critiquing the corpus linguistic and critical discourse analytic approaches used and how these were combined to give a corpus-based critical discourse analysis. The chapter concludes with a review of the conduct of the research, including ethical permissions for the project and selection of participants.

The data analysis is presented in Chapter 4 with a discussion of how the themes for the analysis where derived followed by an overview of the corpus linguistic enquiry. Two further sections within the chapter consider the themes of the analysis. These being: terminology, location and function of pain and the 'mentality' of pain assessment

The thesis ends with the final chapter of conclusions drawn from the analysis and recommendations both for further investigation and clinical practice.

2 Literature Review

2.1 Introduction

The purpose of this chapter is to set out the context of the research study in relation to what pain is and how it is talked about. It is imperative to review the history of the understanding of pain and relate this to the current understanding of the physiological aspects of pain. I will start though by outlining the search protocol used for the literature review, then commence the review of the literature by exploring language in terms of what it is and how it can influence and be influenced by the social world. This will be followed by a review of the emerging area of healthcare language investigation and its importance for this study. The chapter will continue with a discussion of pain; its definition and a brief overview of the history of the physiology of pain including current thinking and practice. The chapter will then discuss the importance and the specifics of pain language especially linked to the assessment process. The chapter will conclude by identifying the research question for the study.

2.2 Literature Search protocol

The search process is a methodical approach to uncover literature related to the subject of the research project (Hart, 1998). Three main topic areas were explored: that of pain,

language and healthcare language. Search terms incorporating pain as the keyword returned a large number of results. Further refinement was made with limiters of 'acute', 'chronic', 'management', 'assessment', 'language' and originally specifics of the type of pain being 'thoracic pain' and later revised to 'back' and 'spinal pain'. Additional searches were made using 'healthcare language', 'professional language', 'language of professions', 'medical jargon', 'medical language', 'nursing language', 'pain language' and 'nursing assessment'. See Appendix 1 for an example of the search process and results.

The search terms were entered into a number of searchable databases, including CINAHL, MEDLINE and SCOPUS as well as the University of Nottingham's on-line e-databases. The reference lists and bibliographies of papers were also reviewed for further examples related to the search terms. General Internet search engines (Google and Google scholar) were also used to gain any further examples related to the search terms; this revealed little new material. Exclusion criteria included non-English papers, as there was no opportunity for translation of papers for this project. There were no exclusion criteria applied concerning dates of papers as a historical development of the issues was also to be considered. Each

paper was read and annotated following a framework for critique enabling key points and research approaches to be identified (Hart, 1998; Silverman, 2010). The literature review will now consider the first area of influence to the research project: language.

2.3 Language

2.3.1 What is language? – A brief introduction

Fairclough (1993) argues that language has always had social importance and at the same time forms a common objective reality for life (Berger & Luckmann, 1991; Waddie, 1996). Language is the very thing that allows us to make commentary on the world around us:

> "… we must look at language as that which gives expressive form to our abilities to constitute and make manifest who we and others are, and to perform acts, in and through speech, that establish, maintain and transform the character of our social relations and interpersonal (public) knowledge..."
>
> (Walsh, Morton & O'Keeffe, 2011) p509

Language though is not something that is static; it is constantly changing in the types of words it uses and at the same time language reflects changes in social and cultural patterns (Carter, 1997). Indeed it is proposed that language is considered to be the most important instrument of socialisation (Berger & Luckmann, 1991). Fairclough (2005) further asserts that language is a complex element of the

interactions that take place within life. Therefore when a person communicates they make decisions not only about 'what' language they will use but also 'how' that language will be used. In making this decision about the 'how' and 'what' of language use, Carter (1997) makes a further point that this cannot be separated from the inherent power of language, either in the way people use language to exert power over others, to limit the actual use of language or force others to use a particular form of language. This view echoes that of Wittgenstein who advocated that language consists of a number of parts that people choose to use in a particular way as you would use tools from a toolbox for a particular job (Wittgenstein, 1967). He goes on to discuss a number of different roles that language takes on, for example, giving orders or reporting an event each having their own set of rules and aims. This would suggest that people make choices about the language they use and how they use it.

2.3.2 Influences on the language we use

When an individual speaks they do so with a knowledge of the structure of their language and the associated principles and rules that control it (Barber, 2003). These 'rules' of language enable us to 'know' the correct words and the meanings that we assign to them (Benton & Craib, 2001). These rules, Benton & Craib (2001) argue, can be related to our social

world and can give meaning to what we do. This further supports the idea that language is part of our social world.

From birth and through childhood into adulthood humans are constantly taught the patterns and behaviour expected within the language which allows that person to become a member of that society (Waddie, 1996). Language does not only form the basis for learning about the particular culture a person is part of but it also serves to allow that culture to be passed on to future generations (Giddens, 1993). It is the way in which language and culture are so intrinsically bound that gives life to its reality (Berger & Luckmann, 1991). The sharing of life and therefore culture is through everyday language (Waddie, 1996). This form of language as social practice is termed discourse by Fairclough (2002), the implication being that firstly language is an integral part of society, secondly it is a social practice and thirdly that it is influenced by and also exerts influence on social conditioning. Fairclough (2002) emphasises that there is no separation of language from society in that any language activity goes on within social practice and at the same time reflects social practice, namely people will use language according to social conventions. The social conditions then that affect discourse involve the production and interpretation of the interaction. To turn for a

moment to the issue of pain this argument suggests that the ability of a person to describe their pain relies on not only the ability to communicate but to do this within the constraints and influences of the society they have grown up in (Waddie, 1996).

2.3.3 Investigation of Language Use

Analysis of language up to the mid-twentieth century isolated language from its social context (Jaspers, 2010). In this approach language was seen as a set of units consisting of morphemes, words and short phrases that were combined to form larger and larger language units so that more complex phrases and clauses could be built up and investigated through the same processes as the natural sciences (Carter, 1997; Biber, Conrad & Reppen, 1998). The rise of sociolinguistics in the late 1960s and early 1970s focused on language 'in-use' and the influence of social differentiation (Kress, 2001; Jaspers, 2010). Biber et al (1998) developed an emphasis on the use of naturally occurring language that reflects the social components of language. This thesis will investigate the aspect of language use in naturally occurring interactions and how the various participants utilise and react to language.

Language is a social practice, and therefore language changes as the societies which speak them also change. Amongst

other things, words change their meaning over time. This may attempt to give some explanation to the way in which words acquire different meanings or that there are different words for the same thing (Brown, Crawford & Hicks, 2003). Benton & Craib (2001) take an example of the word 'course' in English and show a wide number of different 'uses' the word has (three course meal, a university course, race course, course of events, etc.); what is important then is understanding the context in which the word is used.

The problem with written and spoken language is that the meaning of the words used is far from concrete. Words do convey meaning but to define this meaning needs yet more words, which again needs yet more words (Brown et al., 2003). There is also a contention that whichever words are used there is some form of inclusion and exclusion of certain viewpoints that ultimately could lead to being unable to determine an actual meaning for a particular text (Brown et al., 2003). Yet, despite the clear limitations of words defining the meaning of words, they are fundamental to sharing our own experience and interpretation of the world (Crowe, 1998). If we adopt a particular language then we also adopt a particular set of values that goes with using that language within that part of the community (Crowe, 1998). Indeed

social order within these groups is partly maintained by the use of specific vocabularies (Hammersley, 2002).

The identification of groups or sections that may use different language is an area of growing interest for researchers (Sarangi, 2004). In recent years the area of language of healthcare has been one of these groups. The next part of this review will examine this rising interest in healthcare language and its importance to this thesis.

2.4 Healthcare Language

Over the last three decades the volume of research in professional settings has increased alongside a growing interest in the language of healthcare and healthcare language (Roberts & Sarangi, 2003; Adolphs, Brown, Carter, Crawford & Opinder, 2004; Harvey & Koteyko, 2013). First though it is pertinent to consider what is meant by 'language of healthcare' and 'healthcare language'. The first of these, language of healthcare, is understood here to relate to the commentary that healthcare provides for its role, whereas healthcare language is seen to represent the everyday language of interactions between healthcare workers and patients. It is the latter area that is considered within this thesis. Over the last half of the twentieth century there has been increasing literature concerning the language that

healthcare workers use, especially in their interactions with patients (Brown, Crawford & Carter, 2006; Harvey & Koteyko, 2013). Talk is the main proponent of medical encounters and is a basic necessity for the relationship between doctor and patients as well as being the medium through which goals of healthcare are achieved (Hyden & Mishler, 1999; Harvey & Koteyko, 2013).

The initial areas for study of healthcare language in the mid-1960s were patient-physician interactions. The focus of this work was the way in which physicians could be more effective in their clinical assessment of a patient through the use of improved communication (Hyden & Mishler, 1999). However, this tended to focus more on the physicians than patients and led Hyden & Mishler (1999) to refer to this as 'speaking TO patients' (p174). Three areas relating to the purpose of the patient-physician interaction were identified in this way of speaking to patients (Ong, de Haes, Hoos & Lammes, 1995; Hyden & Mishler, 1999). The first purpose was that the interaction aimed to create a positive interpersonal relationship, and was seen as being a prerequisite for best possible medical care. The second purpose identified was a need to exchange information that was reported in terms of information giving (by the patient) and information seeking

(by the physician). The third purpose was seen as allowing medical decisions to be made, within this a mainly paternalistic stance was seen with the physician directing and making the decision, the patient being a passive recipient of these decisions (Ong et al., 1995). The focus for these investigations appears to concentrate on improving the practice of the physician but there are very few recommendations made about how patients themselves may improve their communication skills within this interaction process (Hyden & Mishler, 1999). Another aspect of these approaches was the influence of social background, that is, perceived differences between the patient and the physician and how this affected the communication process (Hyden & Mishler, 1999). One aspect highlighted was that female physicians tended to spend more time with patients than male physicians, another that more questions were asked by patients with higher incomes and at the same time they expected more detailed answers. This approach though was constrained by the dependence on the medical concept of care and isolated the interviews from their social context (Hyden & Mishler, 1999).

In the 1980s an alternative approach emerged in which sociolinguistics was used to determine the interactions in

terms of how the interaction was constructed (Hyden & Mishler, 1999; Harvey & Koteyko, 2013). The central focus of this approach was how patients and physicians talk 'with' each other. Through this areas such as sequencing of the interaction could be studied, with different types of structure being identified (ten Have, 1989). These could be seen as: opening questions, the patient's response, the physicians decision or a need to ask further questions (Mishler, 1984). Despite the intention to talk 'with' patients it was reported that the interview was still very much controlled by the physician in their attempt to follow their biomedical task of diagnosis and treatment. The types of questions asked in these interviews would appear to the patient to have no relation to previous questions and there was generally a lack of acknowledgment of the patient's response. In spite of this patients seemed to be attentive for the next question (Mishler, 1984; Hyden & Mishler, 1999). However, there were instances where it was established that in some structures the physicians were able to relax this control and allow patients to ask questions or make statements about their case but these opportunities were not always taken up by patients (Hyden & Mishler, 1999). The physician though maintained their dominance and control of the interview through the manner and order in which they

asked questions (Frankel, 1984; Hyden & Mishler, 1999; Frankel, 2001).

The language that healthcare professionals use reflects the underlying influence of the biomedical model that supports their practice. The model represents a knowledge base for the healthcare professional, which reflects medical, technical and scientific assumptions (Sarangi, 2004). However, the knowledge base that patients use is very different to that of the healthcare professional in that it represents their personal context of experience (Harvey & Koteyko, 2013). These two opposing knowledge bases have been referred to by Mishler (1984) as being different voices, which he terms 'the voice of medicine' and 'the voice of the life world'. This difference in both the language and knowledge base is considered to give rise to the inequality in the relationship between doctors and patients (Mishler, 1984). Ong et al (1995) develop this saying that physicians speak two languages, their everyday language and their medical language. Patients on the other hand usually only speak the one everyday language (Ong et al., 1995). These different voices are aspects to consider and take into account when investigating healthcare language. However, these voices are actually presented in a more complex way than just being attributed to one party or the

other and both voices can be utilised strategically by both parties (Sarangi, 2004).

The earlier works of the 1980s spawned further investigation out of which came a whole host of particularities of the interaction talk between patients and healthcare professionals (Hamilton, 2004). These particularities include areas such as training and professional culture (Cicourel, 1992; Ferrara, 1994), cultural and native language differences between the patient and physician (Erickson & Rittenberg, 1987) and the gender (sex) of the professional (Ainsworth- Vaughn, 1998). Further areas of investigation have also included specific types of interaction, such as history taking (Heritage & Sorjonen, 1994) treatment option discussions (Roberts, 1999) delivering news of diagnosis (Maynard, 1991) or reaching a diagnosis (Ainsworth- Vaughn, 1998).

There is an on-going debate about what makes up communication expertise, and if determined, whether this could actually be measured (Candlin & Candlin, 2003). Sarangi (2004) proposes the following dichotomy: do *good doctors = good communicators* or do *good communicators = good doctors*? The earlier investigations of healthcare language discussed above set out to improve the

communication skills of doctors and so try to ensure that good doctors were also good communicators. More recent reports from healthcare language studies suggest though that focussing on one of these arguments will not actually resolve or influence the other (Sarangi, 2006). Indeed what is required is knowledgeable 'doers' who are also effective communicators in that communication is more than just skills it requires some understanding and reflection on the attitudes that underpin the communication process (Skelton, 2005). The part healthcare language research should play in this is to enable investigation of what is said in healthcare interactions, taking into account the prevailing situation and influences on it, thereby taking the whole context of the interaction into consideration not just what was said (Skelton, 2005).

2.4.1 Patient-centredness and Professional Language

The current focus of healthcare being patient-centred has renewed interest in the importance of communication skills, but this is also fuelled by the influence of patients becoming more able to access information. Patients are becoming more knowledgeable and literate in keeping with such concepts as the 'expert' patient (Sarangi, 2004). Person-centred healthcare is intuitively about recognising the individual needs of people and making appropriate changes to practice to accommodate this, in effect this means treating everyone

differently (Kelly, 2013). There is an echo here of Mishler's work in that this is seen as empowerment of patient's life stories (Mishler, 1984; Mishler, 1986; Riessman, 1993; Kelly, 2013). Patients are increasingly being asked not just to state their symptoms but recount how these affect their daily life (Sarangi, 2007). Therefore patients are becoming more involved in their care through this approach, however, if through this patients are asserting their rights then this may not fully align with the agenda held by professionals (Sarangi, 2007). Professionals have been able to exert their position through use of authority, power and elitism supported by specialist knowledge which is both tacit and explicit (Skelton & Hobbs, 1999a; Sarangi, 2007). This influence implies a certain degree of trust in the doctor and compliance with treatment. Taking a patient-centred approach can end this so called paternalistic practice (Sarangi, 2007). However, doctors report that patients still seem keen to rely on medical staff for solutions to their problems seemingly opting out of a patient-centred approach (Skelton, 2005). There are three views as to why patients take on such a trusting role (Berwick, 2009). The first is that of altruism where patients consider that professionals will work in the best interests of the patients, second that the knowledge professionals command is not traditionally readily available and finally the role played by

professional self-regulation to ensure that quality is safeguarded (Friedson, 1970). However, there is growing consumerism within healthcare that is also eroding the professional focus of care to one where the consumer is right (Berwick, 2009; Kelly, 2013). Patient-centredness then possibly becomes a means to avoid litigation by making sure patients are involved in the decisions they make (Sarangi, 2007). There have been a number of strategies that have focussed on increasing efficiencies within the health service such as 'LEAN' where services are realigned to ensure that the patient has any unnecessary delays removed for their treatment pathway, yet at the same time it is expected that these changes will be implemented without any further funding (Kelly, 2013). Additional streamlining of services resorts to standardisation which reduces the ability of a service to respond to meeting patient's explicit needs, and relies on policies to drive the care process (Berwick, 2009; Kelly, 2013). The implication is that the service will be safer for patients but arguably may also present as being less flexible to meet needs, it may even result in less opportunities to actually communicate with patients (Kelly, 2013). There is then a tension between being able to provide a service that meets the needs of a patient and adequately resource such a

service with the ultimate result of devaluing the patient component of patient-centredness (Kitwood, 1997).

Healthcare language has been described above as something that represents a manifestation of biomedical knowledge and is different to the language that patients commonly use (Sarangi, 2004). It is proposed that through investigation of aspects of this language use there can be an improvement brought about in the quality of both the interaction and the care provided. However, there has been inadequate attention paid to the research evidence base in this area. It has even been proposed that in addition to the less than robust evidence base, pertinent research findings are generally discounted (Roberts & Sarangi, 2003). However, it is inferred that the reports of studies into language or communication issues have been largely invisible to the healthcare profession due to the wide variety of journals where such research is published (Sarangi, 2004). One additional suggestion for this may also lie in who is actually doing the research. The majority of projects tend to be carried out by non-healthcare staff presenting difficulties of accessing healthcare areas and of analytical interpretation (Roberts & Sarangi, 2003; Sarangi, 2004; Sarangi, 2006).

It has been suggested that patients may provide different accounts to different healthcare professionals (Crawford & Brown, 2010). Within the sphere of healthcare language research studies of doctor-patient interaction have tended to dominate despite the much larger number of allied health professionals (Crawford, Brown & Nolan, 1998; Adolphs et al., 2004). However, there has been an increasing number of projects relating to patients and nurses (Crawford et al., 1998), pharmacists (Pilnick, 1999), occupational therapists (Mattingly, 1994) or physiotherapists (Ballinger, Ashburn, Low & Roderick, 1999) and there are calls for further studies of healthcare language use amongst these groups (Candlin & Candlin, 2003; Adolphs et al., 2004; Sarangi, 2004). The use of language in all fields of healthcare is clearly important, not least in nursing.

Communication across the nursing profession is a key component in providing quality care and, as with medical practitioners, it is important that there is common interpretation by both nurses and patients about what is transmitted (said) and received (heard) (Allen, Chapman, O'Connor & Francis, 2007). However, nurse-patient communication can be poor and even superficial and brief (Florin, Ehrenberg & Ehnfors, 2005). In addition, nurses use

slightly different language depending on the clinical area and this becomes potentially more of a problem if information is to be shared with other hospitals or nurses (Allen et al., 2007). Importantly, Allen et al (2007) suggest that there is a common level of language that nurses are exposed to during their training and subsequent practice experiences; this language may differ to that of other professionals and be at odds with patients who may frame their care needs in rather different ways by using different words and phrases (Florin et al., 2005). If we take the proliferation of healthcare language studies related to doctors emphasised above and relate this to the importance of healthcare communication highlighted in the example from nursing then it can be seen that investigation of aspects of language for all those involved in healthcare will enable a clearer picture to be gathered of how healthcare professionals use language in their everyday working life (Sarangi, 2010; Britten, 2011).

This overview of healthcare language has been able to show that there are many aspects of the healthcare interaction process that have been investigated and reported upon. However, the complexity of the doctor-patient relationship remains an issue (Ong et al., 1995; Skelton, 2005). The key issue for this thesis is to take account of these previous works and build on the findings so that the results can be more

visible and therefore more able to be used to influence practice. The next section will review the diverse context of pain before returning to the specific issue of pain language.

2.5 Pain

In this section I will consider a number of aspects relating to pain. Initially a number of definitions of pain will be presented and discussed followed by a brief overview of the history of pain physiology and an exploration of some of the common terms associated with pain. The review will conclude by looking at current pain assessment and management strategies before returning to discuss the relationship between language and pain.

2.5.1 Definition of Pain

When people talk about pain it usually relates to an unpleasant experience commonly associated with some form of injury. Either they know they have done something or feel they must have done something to create such a 'pain'. The International Association for the Study of Pain (IASP) reflects this idea in their definition of pain which is constantly reviewed and updated and currently states that pain is:

> "An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage."
>
> (IASP, 2012)

In this definition the common traits of how pain is considered can be seen in terms of being 'unpleasant', relating to 'experience' and involving 'damage'. However, this definition is not as comprehensive as it could be and there are a number of additional explanatory notes provided by the IASP to help further clarify the definition of what pain may be, how it may be manifest in other people and what other experiences could be called pain. A major contention to this definition was put forward by Wright (2011) who proposed a better alternative definition would be:

> "Pain is the unpleasant sensation that has evolved to motivate behavior which avoids or minimises tissue damage, or promotes recovery."
>
> (Wright, 2011) p.19

An earlier definition, often quoted by nurses, and offered by McCaffery is that 'pain is what the patient says it is, existing where they say it does' (McCaffery, 1972). This rather simpler offering, when compared to the definitions above, gives some initial ideas of how different the concepts about pain actually are and mask the true complexity of pain. In order to be able to understand what the definitions of pain actually mean it is necessary to look at the historical background to pain and how theories of pain have been developed over the centuries.

2.5.2 History of Pain

The approach considered to what pain is has taken many different forms throughout history. Aristotle believed that pain was a feeling derived from the excess of stimuli on the skin which was interpreted by the heart after being transported there by the blood (Bray, 1986). This idea about pain can be seen in the way that the word pain is derived, coming as it does from the Greek *poine* and the Latin *poene* meaning punishment or penalty, so giving pain a negative connotation (Bray, 1986). A change and indeed a major challenge to this way of thinking about pain was influenced with the rise of Christianity where pain was considered to be part of a divine gift and to 'suffer' pain was a way of drawing nearer to Christ. The more pain a person had meant that they were seen as being more pious in nature. This view of pain pervaded all areas of life and was ultimately controlled by the powerful monastic institutions of the middle ages (Bray, 1986). Not until the Reformation was there a change in the way pain was viewed. However, the concept of 'suffering' as a major component of pain still pervades through to current times.

At the start of the twentieth century the concept of pain still followed the specificity theory proposed three hundred years earlier by Descartes (Wall, 1999; Melzack & Katz, 2006) in

which it was considered that an injury activated specific pathways which eventually transmitted messages to the brain:

> "If for example fire comes near the foot, minute particles of this fire, which you know move at great velocity, have the power to set in motion the spot of skin on the foot which they touch, and by this means pulling on the thread which is attached to the spot of the skin, they open up at the same instant the pore against which the delicate thread ends, just as by pulling on one end of a rope one makes to strike at the same instant a bell which hangs at the end."
> (Descartes (1640) in Wall, 1999) p.20

Further elaborations proposed that a number of specific nerves, sensors and receptors were responsible for the transmission of different sensations such as pain, warmth or touch (Gatchel, 2005). The drawback of this theory was that it could not explain pain that was not due to direct injury. Patients who complained of pain in the absence of any presenting signs were seen as psychologically disturbed and usually sent to be seen by psychiatrists rather than physicians. At the end of the nineteenth century another theory, the pattern theory of pain, was developing (Gatchel, 2005). This theory suggested that differences in the patterns of nerve impulses gave rise to the differences in the quality of the pain experienced (Gatchel, 2005). These attempts at trying to explain pain pathways did not involve the role played by the brain. Additionally it led to comments that there was a fatal flaw in the biomedical model that had pervaded thinking about

pain, in that it did not take any account of events outside of the body as having an influence either generally or specifically on pain (Melzack & Katz, 2006).

The 'Gate Control' theory introduced by Melzack & Wall in the 1960s was the first to incorporate cerebral control mechanisms (Melzack & Katz, 2006) and as such drew an emphasis on the interaction between physiological and psychosocial process (Gatchel, 2005). This theory identifies a complex physiological nerve process involving large fibres, which inhibit transmission, and small fibres that facilitate transmission of the pain stimulus by controlling a 'gate' in the dorsal horn of the spinal cord. Later development of this theory included an influence from the brain via other nerve pathways to act upon the 'gate'. Through this theory the wide variety of factors involved in pain perception could be accounted for (Gatchel, 2005). This influence gave rise to devices such as the development of transcutaneous electrical nerve stimulation (TENS) for the treatment for some forms of pain. This theory also partly explains the way that it is possible to use diversionary thinking via the 'other' nerve pathway to prevent a known stimulus from causing pain (Wall, 1999).

In the late 1960s and early 1970s there were a number of reported cases of patients who presented with 'congenital analgesia' (Melzack & Wall, 1988) a condition that means people have the inability to 'feel' pain. This condition results in many different sorts of injury from burns and scalds to biting off body parts, for example, parts of the tongue. The inability to 'feel' pain in one of the reported cases resulted in joint deformation, as the normal protective mechanisms were not present to prevent on-going trauma to the joints. This resulted in major destruction of the joint areas and massive joint infection that eventually led to the death of the patient (Melzack & Wall, 1988). Although this case does seem extreme it does draw out some of the uses that pain can be put to in terms of attempting to protect body systems. Melzack and Wall (1988) consider then that pain serves not only as a protective measure but suggest that pain is necessary for actual survival. Pain therefore becomes something that is required and informs the person experiencing it that there is a need to take action, echoing some of the sentiment seen in the earlier definition of pain (IASP, 2012).

The ability to experience pain though is not always something that is present all or even part of the time. Whereas cases of 'congenital analgesia' are very rare, 'episodic analgesia' is

more common. Episodic analgesia refers to a temporary inability to feel pain (Melzack & Wall, 1988). This has been closely related to the number of conflicts around the world in the later part of the twentieth century where injured soldiers have presented with major injuries (lost limbs etc.) but present with no associated pain (Melzack & Wall, 1988; Wall 1999). One suggestion offered is that being in a place of safety means that further injury is not possible as compared to being on the battlefield or that the soldiers would be sent home (Melzack & Wall, 1988; Wall, 1999). Indeed the same effects can be seen day-in day-out in many casualty departments (Wall, 1999). At some point in time after the injury these people will start to 'feel' and 'experience' pain in the affected area. Attempts to explain this phenomenon have been difficult, as they do not meet with common beliefs about the nature of pain transmission. What is apparent from these cases is that there is a variable link between actual injury and pain (Melzack & Wall, 1988; Wall, 1999).

There are also reported instances of a complete opposite experience where patients have reported pain but there is no actual injury, these may present as headaches and are put down to 'muscle tension' and other such causes (Wall, 1999). This aspect of pain could be taken a little further if

consideration is given to those people who have experienced the loss of a limb or major injury to the nerve pathways but still experience pain in that limb, so called 'phantom pains' (Melzack & Wall, 1988). One point to note here is that phantom pains are 'worse' if there was some experience of pain in the limb before the loss (Melzack & Wall, 2006). Here again the normal understanding of pain is challenged by these presenting factors, giving rise to the consideration that pain is indeed a many faceted concept.

In his research into phantom limb pain Melzack draws a number of conclusions about pain (Melzack & Katz, 2006). First is the idea that because phantom limbs feel real, there are therefore neural processes that do not require inputs from the body to work. Second, that because qualities such as pain can be experienced this gives rise to the conclusion that the quality of pain lies within the neural pathways which may be triggered by stimuli. Third, that people have an experience of self and this arises from the central neural processes and finally that this gives rise to a 'genetic built-in specification' that has its influence in everyday experience. From this perceived involvement of the central neural network a new theory and concept of pain was developed (Melzack & Katz, 2006).

2.5.3 A New Physiology of Pain?

In an attempt to explain the complex role that all the body plays in pain Melzack & Katz (2006) offer what they term the 'neuromatrix theory' of pain. In this Melzack & Katz (2006) suggest that genetic and sensory influences produce the pain experience through a neuromatrix of loops of neurons following the already identified synaptic architecture. Cyclical processing in this system of loops provides a characteristic pattern, which they termed 'neurosignature' (Melzack & Katz, 2006). Working alongside this process is the stress regulation system to modulate sensory and cognitive input to the neuromatrix. Pain is experienced when there is a failure of the balance between these two systems. This theory is a divergence from the commonly held Cartesian concept that pain experience is a result of injury and makes a move to see pain as a multidimensional experience. The early works of Melzack can be seen coming through in the output influences of the neuromatrix theory as pain experience and behaviour through sensory, affective and cognitive dimensions. The neuromatrix theory also includes a number of input factors from sensory, visual, emotional, inhibitory brain function and the stress regulation system. Melzack & Katz (2006) suggest that the traditional sensory inputs work alongside the stress regulatory system and the cognitive functions of the brain to

modulate a pain system specific to each person's genetically determined pattern (neurosignature).

Having outlined the pathways for determining and controlling pain it is pertinent to look at the actual mechanism of what triggers the nerve to conduct in the first place. Tissue damage is detected by 'nociceptors' which are specialised transducers attached to the nerve fibres (Loeser & Melzack, 1999). The actual perception of pain can either be from a noxious stimulus or can be as a result of lesions or damage within the nervous system and, as the previous definitions suggest, tissue damage is not required for pain to occur. Pain response caused by nerve injury is different to pain caused by tissue damage. Therefore this gives rise to the problems that can be encountered when there is an attempt to try to treat the pain, as each requires a different treatment (Loeser & Melzack, 1999). Melzack & Katz (2006) discuss how the effect of the injury or stimulus must be kept separate from the quality of the sensation that is interpreted by the neuromatrix, they give the example that temperature change may be the stimulus but the quality is recorded as either warm or cold depending on our experience.

The numerous factors that influence pain are combined into the biopsychosocial perspective of pain (Gatchel, 2005). Within this model pain and nociception are seen as the sensory messages to the central nervous system and suffering and pain behaviour are the reaction to these stimuli. These reactions are either influenced by past events or can be affected by anticipation of the effect (Gatchel, 2005). However, all pain is not the same and can be classed in a number of ways. This will now be explored.

2.5.4 Types of Pain

There have been a number of ways that pain has been classified with the temporal profile of transient, acute and chronic being the most common. Other classifications include: relating to the actual disease process by causing a symptom for example, pain associated with a cancer or by the mechanism that relates to how the pain is thought of as a symptom of a particular condition for example, neuropathic pain (Gatchel, 2005; Melzack & Katz, 2006).

2.5.5 Transient Pain

This type of pain is related to function and what this means to the individual. It usually has a quick onset and quick resolution meaning that the offending stimulus no longer presents a 'threat' to the body. It is the type of pain that would be experienced during an injection. Loeser & Melzack

(1999) note that this type of pain was the subject of most experimentation during the first three quarters of the 20th century, despite it not being considered to be a major problem within clinical medicine.

2.5.6 Acute Pain

Substantial injury to an area (which is often sudden) and the resultant activation of nociceptors at the site of the injury gives rise to what is termed 'acute pain' (Loeser & Melzack, 1999). Acute pain is in part a protective mechanism, warning of impending damage and as such the response to acute pain is adaptive in that behaviours required for recovery are initiated. This can simply be a case of removing the harmful stimuli or can be just resting the affected area which prevents further incidence of the 'pain' (Gatchel, 2005). This mirrors the earlier suggestions by Descartes of pain mechanisms (Wall, 1999).

2.5.7 Chronic Pain

Whereas acute pain as described above relates to an 'event' chronic pain is seen to be more of a situation (Sofaer, 1984). Pain that persists beyond healing is commonly referred to as chronic pain (Loeser & Melzack, 1999; Von Korff & Miglioretti, 2005). Chronic pain can follow on from unresolved acute pain but the actual interface between the two is not clearly defined (Gatchel, 2005). It is suggested that the impeding of post-

operative recovery or unresolved post-operative pain may lead to chronic post-operative pain (Neilsen, Rudbin & Werner, 2007). However, this type of pain can be more than just persistent, as it could be due to damage of the actual nerve conduction pathway either due to the extent of the original injury or the inability of the nervous system to restore itself (Loeser & Melzack, 1999). The nature of a continuous pain state within chronic pain has a significant effect on activities of normal daily living and can become the focal point of a person's daily life (Wall, 1999; Gatchel, 2005; Melzack & Katz, 2006). Further investigation of chronic pain has seen it as being an inability of the body to restore homeostasis rather than rely on duration, which is characteristic of acute pain (Loeser & Melzack, 1999). There is also a suggestion that there is a difference in the feeling of pain due to the cause and type of pain, suggesting that chronic back pain might be referred to as 'overwhelming', 'awful' or 'horrible', whereas 'deep aching' and 'burning stiffness' might relate to a whiplash injury which may initially be a more acute type of pain but become chronic in nature as time progresses (Closs & Briggs, 2002).

2.6 Current Pain Issues

2.6.1 History of pain management

It is suggested that patients tend to reserve the use of 'pain' to describe something that is intolerable or excruciating, retaining the occurrence of mild and moderate pain to be represented by 'ache' and 'hurt' respectively (Ang, Knight, Matadial, Pagan, Curty, Nieves, Acevedo & Dalisay, 2004). The skill of the healthcare worker then is to determine what level of pain is being experienced and what this actually means to the patient. Quality of care is consequently reliant on the competence of the practitioner (Parsley & Corrigan, 1999). The relationship between the healthcare professional and the patient in terms of quality relies on the skill, ability and knowledge of the practitioner, as well as the psychological and physical response from the patient (de Rond, de Wit, van Dam & Muller, 2000b). Therefore in looking for an improvement in pain management the practitioner, as a professional, must accept a number of responsibilities such as maintaining knowledge and proficiency and complying with standards for the profession (Parsley & Corrigan, 1999). Additionally there is an increased amount of material relating to pain readily available via the Internet, this means that patients also have access to the same information thereby raising expectations on the part of the patient as to the

appropriateness of their pain management (Parsley & Corrigan, 1999).

2.6.2 Current assessment of pain

In 2004 a survey of adult inpatients asked questions about the experiences of being in hospital (Healthcare Commission, 2004). One of the areas asked about was pain experience whilst in hospital. The results of this survey showed that nationally 67% of patients reported experiencing pain whilst in hospital and of these patients 27% felt that staff did not do enough to help control their pain. Results were also broken down to show scores for each hospital trust with the local trusts involved in this research having results similar to the national average. Over the following years the results from these surveys has shown that there is little change in this figure, which fluctuates from 60 to 70% (Care Quality Commission, 2010; Care Quality Commission, 2013). These findings though are very limited in their application as pain is a very subjective phenomenon and a simple question of 'did you have pain?' does not really explore this complex subject. However, contrary to what these recent results suggest the numbers of patients experiencing pain is not a new problem in that nearly two-thirds of patients undergoing surgery experience significant pain afterwards showing there is still a great necessity to improve post-operative pain management

(Coulling, 2005; Karlsten, Strom & Gunningberg, 2005; Strassels, McNicol & Suleman, 2005). The issue then is why is this experience of pain such a problem? To answer this I will first look at the issues concerning the nature of pain, then look at the problems that can arise with assessing pain and finally consider the aspects of trying to implement change in this area.

Pain assessment as part of pain management is one of the most important roles of the healthcare professional especially in patients undergoing surgery (Karlsten et al., 2005; Strassels et al., 2005). With acute pain there are a number of approaches taken in this assessment process that reflect the many aspects of pain; these include sensory, emotional or cognitive aspects. The most common type of assessment tool is in the form of a rating scale, either as a Verbal Descriptor Scale (VDS), a Visual Analogue Scale (VAS) or a Numerical Rating Scale (NRS) in which patients are asked to relate their pain to the scale being used (Coll, Ameen & Mead, 2004). The ability of these scores to accurately predict pain intensity has been shown to be highly valid and reliable (Jensen, Chen & Brugger, 2003). Yet despite the availability of these tools patients are still experiencing pain in hospital and even reporting management of their pain as 'sub-optimal' (Strassels

et al., 2005). A major component affecting patient satisfaction with pain relief was seen to be effective communication, both on a general level with the patient and at a specific level about pain (Sherwood, McNeill, Starck & Disnard, 2003). In the long term management of pain the importance of addressing this issue of satisfaction and ensuring patients are content with the pain relief through improvement of pain management practice is critical as well as the short term benefits for patients in terms of clinical, economic or personal suffering (Strassels et al., 2005). One of the ways to improve practice is through the honesty and accuracy of pain assessment which in turn is facilitated by effective communication and expert assessment (Sherwood et al., 2003). The following example shows little detail and concern about getting honesty and the accuracy of pain assessment right and instead shows how someone is expected to react to pain:

> "Nurse: 'Do you have any pain?'
> Patient: 'No'
> Nurse: 'That's good, I like tough men … big strong men don't feel pain!!!'"
>
> (Ang et al., 2004) p.328

However, simply saying that accuracy and honesty need to be improved is not as easy as it first appears. It has been shown that patients will wait until their pain is severe before asking for relief or simply they do not report pain at all (McNeill, Sherwood, Starck & Thompson, 1998). Additionally, to

compound the issue, after the first 48 hours post-surgery pain is often ignored by clinicians (Sherwood et al., 2003). Appropriate use of a pain assessment tool will help to ensure that accurate and timely information is gathered. With the tools used it is suggested that in assessing pain both satisfaction and intensity are required to be measured as neither measure alone is sufficiently accurate (Sherwood et al., 2003). The variety of assessment tools available to staff consider a number of different aspects of pain. Some look at pain intensity asking for a numerical or pictorial account of this, others ask about pain relief, which is considered to be some form of reduction in pain intensity from a previous level other scales look at actual satisfaction with pain relief (Jensen, Chen & Brugger, 2002).

It is no wonder that given the wide variation in assessment tools that the knowledge of pain and the pain assessment process by doctors and nurses is reported overall as being poor with the more specific knowledge of pain after surgery being demonstrated as 'sub-optimal' (de Rond, de Wit, de Dam, van Campen, van Hartog, den Klievink, Nieweg, Noos, Wagenaar & van Campen, 1999; Sjöström, Dahlgren & Haljamäe, 1999; de Rond et al., 2000b; Coulling, 2005). Harmer & Davies (1998) introduced a set of simple measures

to improve pain management including: education of all staff and patients, the use of an algorithm for analgesia prescribing and regular assessment and recording of pain. There was a significant reduction in the number of patients experiencing severe pain and an overall improvement in pain scores (Harmer & Davies, 1998). The introduction of an education package and a pain management tool resulted in improved knowledge, skills and attitudes among nurses (de Rond, de Wit, de Dam, van Campen, van Hartog & den Klievink, 2000a). Furthermore earlier findings indicated that by instructing nurses to assess pain daily and record the results of the assessment the pain management of patients actually improved (de Rond et al., 1999). This at first makes logical sense but when related to the excuses that practitioners give for not carrying out such an assessment it shows that a simple change does have huge benefits and improves the service; nurses did actually acknowledge that the process did not take up that much extra time and could easily be incorporated into their daily routines (de Rond et al., 1999). Subsequently the use of case studies as part of a research process into pain management has enabled investigation of nurses' choice of analgesia (including dose) and the pain assessment process (Ang et al., 2004).

A number of indicators such as facial or audible expression of distress, distorted posture or avoidance of patient activity have been shown to be part of the assessment process that nurses and doctors have relied upon (Coulling, 2005; Kunz, Chatelle, Lautenbacher & Rainville, 2008). Although nurses and doctors may use some of these indicators there was a tendency for nurses to underestimate severe pain and overestimate mild pain especially when they introduced their assessment based on their previous experience. In their research Sjöström et al (1999) concluded that the effect of experience was actually a negative factor in assessing pain and was an area suggested where practice could be improved. A further suggestion as to a reason for poor pain management is attributed to the wide range of variables (demographic, socio-cultural, psychological and biological) that affect pain perception (Neilsen et al., 2007). This issue of pain assessment is additionally complicated by what is seen as the subjective measurement of pain and this coupled with the wide variation in pain response perception by patients is seen to make the process difficult for clinicians (Rasmusen, 2007). There is also a suggestion that patients expect to have pain after surgery and in many cases clinicians fulfil this expectation through how they deal with pain (Svensson, Sjöström & Haljamäe, 2001; Rasmusen, 2007).

Consistency of pain assessment then becomes an important issue however, there are a number of 'excuses' that have been documented as being given by practitioners for poor pain management, these include; limited knowledge, misconceptions, tradition and insufficient time or staff (Coulling, 2005). Cultural norms also exist within ward areas that affect clinical practice and although staff may hold to McCaffery's definition of 'pain being what the patient says it is, existing where they say it does' (McCaffery, 1972) they may actually revert to their own clinical judgement when dealing with a patient in pain.

There are a number of myths and misunderstandings that have grown up around pain management (Coulling, 2005). These show that nurses hold incorrect beliefs relating to areas such as addiction, respiratory depression and actual risk. These myths may have developed as a result of wrong information or relate to attitudes held by the nurses (Hamilton & Edgar, 1992). Carr (2001) additionally highlights his disillusionment at the failure of publication and dissemination of pain guidelines to have any influence on their uptake to improve practice. In his research he explores some of the reasons for this failure in the uptake of these guidelines. Some of the reasons given are the reliance of clinical staff on

their own clinical practice and that of colleagues around them, opinion leaders and the varied amount of incentives or disincentives to change. Carr (2001) highlights a dominance of cultural aspects and myths that have influenced pain management in his review of social attitudes associated with pain assessment, these he discovered actually create barriers to effective pain management and include issues such as:

- good patients don't complain
- pain benefits, and is necessary for, diagnostic efforts
- undertreated pain is of no consequence
- pain is unavoidable
- opioid dosage escalation is inevitable during chronic therapy
- opioid analgesia, even when medically supervised, create addicts
- chronic opioid analgesia impairs quality of life

(Carr, 2001) p.94

Carr (2001) suggests that even though it is easy to refute all of these myths nothing is actually effective until positive incentives for compliance and negative incentives for non-compliance are implemented. What is more worrying is that myths even though they are not based on evidence actually spread and embed themselves in practice with little organisational effort or expense, relying instead on their cultural context and influence. Carr (2001) then concludes that for guidelines to be effective new constructive myths need to replace the destructive ones. Additionally patient-centred care and the realisation that pain relief is actually a human

right have resulted in patients and practitioners working together in management of pain (Carr, 2001).

There are a number of factors that have been associated with improvement in pain management including administrative support or improved support among the team (Dahl, Gordon, Ward, Skemp, Wochos & Schurr, 2003). One issue that a number of authors have discussed which also helped with the introduction of guidelines to improve practice, is the use of standards and audit within continuing quality improvement frameworks linked with the growth of evidence based practice (de Rond et al., 2000b; Carr, 2001; Coulling, 2005). Improving pain management through the practice development of nurses has highlighted that they become more aware of their role concerning pain management and were therefore able to dispel many of the myths concerning opioid use (Coulling, 2005). Additionally the use of pre-printed analgesia prescriptions (so that correct doses could be given), the setting of targets and the development of clinical learning strategies very like that suggested by Dahl et al (2003) also improved the overall quality of pain management (Coulling, 2005).

2.6.3 Specific pain language

The IASP's definition of pain (IASP, 2012) and McCaffery's offering (McCaffery, 1972) although laudable both are limited by the ability of the person to express themselves and their pain (Clarke, French, Bilodeau, Capasso, Edwards & Empoliti, 1996). Verbal accounts of the intensity of a pain have historically been seen as the most reliable measure available, hence, the reliance on such scales in pain assessment (Dalton, Brown, Carlson, McNutt & Greer, 1999). Some of the problems though that are presented by trying to define pain, and therefore at some stage assess pain, are that if pain cannot be verbalised either because the person has limited verbal skills or the acute nature of the situation renders the patient unable to speak, for example, if intubated (Dalton et al., 1999), then it is taken that one can only surmise that the person in question has pain (Derbyshire, 1996; Wright, 2011). Importantly though a word of caution is needed in that this inability to communicate should not be seen as meaning the individual is not experiencing pain.

Central to the definitions of pain is the notion of experience. The experience of pain is subjective, namely that pain is a learned response to injury in early life (Smith, 1998). As pain could be considered a culturally learned expression until these

factors were 'learned' it is suggested that pain would not be experienced (Derbyshire, 1996; Wright, 2011). This 'experience' is also reportedly seen to manifest itself in the way that nurses and medics refer to pain with the medical view of pain as something that relates to physical signs whereas the view from nursing is it relates to what the patient says it is (Harvey & Koteyko, 2013). There are other influences on the way pain can be experienced, for example, a pinch or a tweak when caused by a lover can be seen as pleasurable yet a similar action can be seen as painful when caused by a stranger unexpectedly (Arntz & Claassens, 2004). Along with this cultural learning of pain there is also a private experience of pain; this in turn affects the way in which people can express these feelings (Fernandez & Towery, 1996; Closs & Briggs, 2002). The way that this experience is conveyed within a social group or community, as already suggested, is through the use of language. This 'cultural' understanding of pain means that tissue damage does not actually have to occur for pain to be experienced. It is further suggested that there is a conditioning process that only accepts a person to be in pain if they show facial expressions of pain or show some behaviour to indicate pain (Ang et al., 2004).

There are a number of ways that people have been shown to express pain experience. Verbal description is the most common form followed by description of intensity then analogy and finally attempting to pinpoint the cause (Closs & Briggs, 2002; Bergh, Jakobsson, Sjöström & Steen, 2005). In their study Bergh et al (2005) interviewed sixty patients about their pain, using prompts from the sensory, affective and emotional components of the McGill Pain Questionnaire (Melzack, 1975). Four main questions were used and then further prompts given to elicit as comprehensive description of their pain as possible. From these interviews four themes were identified (objectification, compensation, explanation and existentialism. Within the first theme of objectification patients referred to the pain as 'it'. The patients described aspects of 'the pain' in terms of where it was (localisation) its intensity on a variety of verbal scales, characteristics of the pain using direct and indirect references to the pain and finally the pattern and timing of pain. The compensating theme identified descriptions related to the 'elusive' character of pain and substituted, by contrast, what the pain was not (e.g. 'not unbearable') this was also supported by giving a verbal picture of what the pain was caused by. The theme of explanation was linked to the functional operations of pain, mainly in terms of what restrictions or effects the pain had on things

such as movement. This also included some degree of acceptance of pain especially after surgery. The final theme of existentialism related to how the pain was currently being endured or the possibility for enduring future pain (Bergh et al., 2005). This study highlights the complex nature of how to describe pain and describes some of the difficulties that patients had in finding 'the right words' to relate their pain to the interviewer. This study asked questions based on the McGill Pain Questionnaire (Melzack, 1975), and relies on the patients interviewed to recall their pain at the time and then make appropriate decisions about that pain in relation to the questions asked. The next part of the review will build on these difficulties to look at the issue of language use within the pain assessment process itself.

2.6.4 Language of pain assessment

The ability of language to describe pain is confounded by the cultural understanding that the patient brings to the experience (Closs & Briggs, 2002). There are instances where words used can convey the multidimensional properties of pain (Fernandez & Towery, 1996). However, it is also necessary to actually look at the words that are being used as some of these words have several meanings (Fernandez & Towery, 1996; Smith, 1998). There is then a reliance on shared 'meanings' of words which are generally developed during

everyday exchanges (Smith, 1998). Additionally the nature of pain itself makes it very difficult for language to actually be able to describe the pain (Smith, 1998). However, in the case of pain language the same opportunities do not arise to be able to establish shared meanings and therefore this adds to the inability of the patient to actually find the right words to describe their pain (Smith, 1998).

The use of words by another person can influence the response someone gives about their pain. Such an individual can be affected by the types of words that are used by 'professionals' in influencing their reaction to certain stimuli. Two studies have highlighted this and show how patients can be influenced during their interaction with 'professionals'. The first of these studies informed individuals that a metal bar was hot or cold (Arntz & Claassens, 2004) in the second negatively biased questions and statements were given by clinicians prior to invasive procedures (Lang, Hatsiopoulou, Koch, Berbaum, Lutgendorf, Kettenmann, Logan & Kaptchuk, 2005). In both of these studies it was found that the reaction by individuals responded to the types of words that were being used even though there was no difference in the actual procedures.

In the 1970s the 'McGill Pain Questionnaire' (MPQ) was derived using words from the clinical literature and grouped by graduates into three main aspects of pain, (sensory, affective & evaluative) (Melzack, 1975; Melzack, 1983). Within each of these main aspects of pain the words are split further into a number of sub-groups for each section. Further refinement and use of the MPQ has resulted in some words being removed and new ones added (Closs & Briggs, 2002). The source of the words used within the MPQ may reflect a different or more extensive vocabulary than that used by the people actually being subjected to the questionnaire, in that it was devised at a certain point in time and within a certain social group. The words used in the MPQ originate in North America and were actually derived from many textbooks written on the whole by people from within the medical profession and collated by medical students. Therefore there may also be some influence and difference in the words used to those words that may be used in the UK. However, the MPQ in both its full form and a shorter form has been translated and used in many countries and languages with a reported consistent assessment of pain (van Buren & Kleinknecht, 1979; Norvell, Gaston-Johansson & Zimmerman, 1990; Clark, Kuhl, Keohan, Knotkova, Winer & Griswold, 2003; Crawford, 2009). In a study of orthopaedic patients there were some words used by them that were

reflected in the MPQ but there were other words that were specific to the patient group being studied (Closs & Briggs, 2002). Closs & Briggs (2002) also discuss the fact that pain feels different depending on the cause and as such the quality of the pain, what it actually feels like in particular disease processes may be indicative of the disease. This has classically been seen in acute myocardial chest pain, which is described as central crushing pain, but as many clinicians anecdotally note patients do not always present with this 'classical' sign.

Referring to the body as a machine and using terms such as 'your heart isn't pumping well' or 'the current isn't flowing' is a common reference used by the healthcare professional when talking about pain (Smith, 1998). This reference to the body as a machine and referring to signals of what the pain might be through the use of the metaphors above only serves to detach the body and pain reference from its social context (Illich, 1977; Smith, 1998). Significantly though despite having some form of neurological information it is still the cultural influence that plays a large part in shaping how the pain is expressed (Smith, 1998). This is seen widely across the many cultures with there being a wide range of pain behaviours expressed. For example, Smith (1998) suggests

that Italians tended to be very emotional about their pain whereas North Americans tended not to be too emotional about their pain. There will obviously be examples of the reverse of this as well but Smith (1998) contends that this cultural influence is a chief part of how pain is expressed. This then adds to the assumption that cultures and communities have an influence on how pain is expressed. The lack of understanding of the cultures and the barriers that language presents can mean that safe and effective care may be inhibited.

A number of authors have tried to determine if the diagnosis of conditions could be influenced by the type of words used to describe pain (Dubuisson & Melzack, 1976; Veilleux & Melzack, 1976; Leavitt & Garron, 1979). The investigations were inconclusive in terms of getting definitive words to meet specific disease groups; however, what did come out of these investigations was the nature of the words used. The work of Kremer, Atkinson & Kremer (1983) built on these studies and identified cluster patterns of those words used by people with low back pain through principal component factor analysis and modelling. The primary findings were that the use of affective descriptor words were a reliable predictor of psychological distress and so could be used without alienating the patient by

using an obvious psychological test (Kremer, Atkinson & Kremer, 1983). In terms of chronic pain this is important as patients may be sensitive to suggestions of a psychological aspect to their pain (Kremer et al., 1983).

When the MPQ is used in the pain assessment process the patient is asked to choose a single word from an appropriate category. Not all categories need to be used, patients are asked to choose the word that best applies to their current pain experience. The corresponding score is then recorded (Melzack, 1975). The words that relate to the affective domain are given in Table 1 below.

Table 1 Affective Domain Words

	Affective Domain Category				
Score	Tension	Autonomic	Fear	Punishment	Affective Misc.
1	tiring	sickening	fearful	punishing	wretched
2	exhausting	suffocating	frightful	gruelling	blinding
3			terrifying	cruel	
4				vicious	
5				killing	

Overall there is a very large literature on pain with numerous studies that have evaluated the effectiveness of the MPQ and some have linked these to specific disease(s). The MPQ is not the only assessment tool but is the one that relies heavily on scoring the use of words to describe pain experience. For this reason it provides a starting point for analysis of the language of the assessment process in this work. Additionally this

verbal reporting component of how much pain a person is experiencing is seen as the single most reliable indicator in the basic requirements of effective pain management (Bergh et al., 2005).

This review of the literature has highlighted the complex interaction between what language is, how it is influenced by the social world and the relationship to culture and experience of using language. The dimensions presented through healthcare language research show that there are many influences on the interaction process between healthcare workers and patients. A brief outline of the historical aspects of the understanding of pain physiology along with definitions of pain have provided the platform for the discussion of the complexities of pain language especially highlighting the issues for pain assessment. The literature review has highlighted that there are a number of complex constituents to the process of pain assessment in terms of the language used and how the various parties interact with each other and so identifies a need to explore components of this assessment process.

2.7 The research question

The research question arises then from the ability of a person to express their pain as being the fundamental requirement in

the assessment process. It has been shown above that this ability to express pain is seen as difficult. The question that this research sets out to investigate is "Do healthcare workers help or hinder patients to express their pain during their assessment process?"

3 Methodological and Philosophical Considerations

3.1 Introduction

Within this section, I shall consider and discuss the approach taken in thesis, that of corpus-based critical discourse analysis. The rationale for choosing this approach will be discussed along with the philosophical consideration to undertaking the research in this way. Additionally I will highlight some of the areas that have presented as barriers to the approach taken and how these issues were addressed in order to gain the necessary ethical and NHS R&D approval to be able to undertake the research within a clinical area.

3.2 Methodological perspective

I have previously established the social aspect of language and that the structure of language, and the way an individual produces such structure, has traditionally been the focus for study of language (Chambers, 2003). Traditionally two major approaches to the philosophy of language were exercised which it is argued offered either no actual theory or irrelevant theory (Katz, 1971). Logical Empiricism (logical positivism) says Katz (1971) focussed on artificial language construction, which bore no similarity to natural language, and ordinary language philosophy, which focused on facts and parts of 'normal' English. The reason for focussing on artificial

languages is that natural languages were seen as too vague and irregular to give clear philosophical answers (Katz, 1971). Clearly then, the social aspects of language are key to any fuller enquiry of language use and therefore a need to investigate the actual language used within the context of its use is required. The language choices of individuals owe a great deal to the groups and cultures they are in and whether or not they adhere to particular social rules and conventions for being in these with Crowe (1998) suggesting that words are simply expressions of the conventions to the group. In the literature review in the previous chapter it was determined that understanding the use of language and exploring what language means in specific social contexts was key to investigating the language of pain assessment.

Initially, however, I will consider the underlying epistemological stance taken in this thesis. The definition of epistemology used here is:

> "… the philosophical enquiry into the nature and scope of human knowledge, concerned with distinguishing knowledge from belief, prejudice and so on. It is characteristically concerned with developing criteria by which to distinguish genuine knowledge from mere belief, prejudice or faith."
>
> (Benton & Craib, 2001) p.181

This quote details that epistemology is how we understand the world around us, what influences it and what the conditions

are for this. Epistemology additionally allows for justification of this knowledge depending on the stance taken in terms of how we know what we know (Brown et al., 2003). The approach taken in this thesis draws on a critical realist perspective and this will now be discussed.

3.3 Critical Realism

> "Critical realism posits that the various objects, structures and practices that make up reality exist independently of whether their existence, nature or effects are observable, known or understood by humans."
>
> (Clark, MacIntyre & Cruickshank, 2007) p.523

The independence of the knowledge of the world from our thoughts is the basic tenet of critical realism meaning that despite our thinking changing the world does not necessarily change, seen as the 'transitive' and, 'intransitive' dimensions of knowledge respectively (Bhaskar, 1975). For example, there was no change in the shape of the world (intransitive) just because it was no longer thought of as flat (transitive) (Sayer, 2000). Critical realism not only differentiates between the world and our experience of it but also takes account of the 'real', the 'actual' and the 'empirical' (Bhaskar, 1975; Groff, 2000). The real is seen as whatever exists regardless of our experience of it and has a capacity to influence the world around us in terms of structures and powers of objects.

The actual refers to the influences that happen once these real structures or powers are activated. The empirical relates to experience of the real or actual, this may be directly observable or through observable effects of products of the actions (Sayer, 2000). This is more easily seen in the natural sciences as highlighted in the example above. When it comes to the social sciences, even though it could be said there is a factual basis for the doctor – patient relationship, the nature of this relationship and interactions within it are liable to change and evolve depending on a number of external factors, for example, consumerism (Sayer, 2000).

Critical realism ultimately attempts to develop understanding and explanations at a deeper level rather than provide either generalisable facts (positivism) or lived experiences (interpretivism). Critical realism contends that positivism fails through its focus on observable events to acknowledge the part played by previous theories and frameworks and in doing this isolates elements to effectively cut them off from any external influences and so negate the context within which they operate. Critical realists acknowledge the value of interpretivist methodologies that focus on human reasons serving as causal explanations, for example, perception or discourse and are equally critical when interpretivists fail to

take note of the social influences in which the interactions take place. Critical realism therefore sees the world as a multidimensional system (McEvoy & Richards, 2006).

Critical realism can be seen as a dynamic approach to evaluation of phenomena in that it goes beyond observing and lived experience to investigate the underlying mechanisms and structures that cause or influence the phenomena. Causation is seen as a response to the conditions and context of the structures and powers that are activated (Sayer, 2000). For critical realism then it is not important to look for repeated occurrences or regularities to explain causation; rather these are areas where causal mechanisms may be found (Sayer, 2000). The cause of something is therefore not reliant on how many times it occurs but on discovering how these have been activated and what the conditions were for these activations (Sayer, 2000).

Critical realism asserts that there is both a pre-constructed nature to the world as well as a socially constructed nature to the world. And so as part of a critical realist approach there is an intrinsic fallibility concerning the nature of reality (Clark et al., 2007). The knowledge of understanding of this reality must not be confused, in that, it acknowledges there is a limit

to our understanding of reality and that this is different to just saying there is no reality. Deep understanding is influenced by the number of constantly changing factors and therefore presents a plausible explanation of causal factors at work (Elder-Vass, 2014). However, these factors are not necessarily directly available to researchers and can only be known through the processes and experiences that they create (Sayer, 2000; Sims-Schouten, Riley & Willig, 2007). These structured relationships and the phenomena they generate have a dynamic interaction with each other in more ways than can be first envisaged leading to the suggestion that understanding of deep structures will be merely attempts at this (Sims-Schouten et al., 2007).

Critical realism concerns itself with what exists in the world (ontology) however, it proposes this through a 'stratified ontology' in that it sees different layers of structures, events and properties of 'social reality' (Benton & Craib, 2001; Fairclough, 2005):

> "…the extent to which and ways in which the particular causal powers are activated to affect actual events is contingent on the complex interaction of different structures and causal powers in the causing of events."
>
> (Fairclough, 2005) p.922

Critical realism therefore draws on the interaction of these structures as well as social influences to produce some form of deep understanding that can be constantly reviewed in light of further findings and does not need to produce a specific cause and effect outcome as would be familiar in positivist analysis.

3.3.1 Critical Realism and the Qualitative/Quantitative debate

There has been an on-going debate over many years as to the advantages and disadvantages of taking either a quantitative or qualitative approach to understand the world in which we live (McEvoy & Richards, 2006). The quantitative approach tends towards identifying the generalisable through statistical relationships between the variables identified in the process under review (a so-called positivist methodology) whereas qualitative approaches tend to be associated with the social construction of the world and tend to be less generalisable (an interpretivist methodology). From a quantitative stance these methods may elicit reliable descriptions or comparisons whereas qualitative approaches will allow emergence of themes and clarification of complex relationships (McEvoy & Richards, 2006).

Although attempts have been made to incorporate these two approaches the fundamental differences between them have

led to approaches that take either a pragmatic approach, in that neither a qualitative or quantitative approach alone is sufficient to provide a complete picture, or an anti-conflationist approach where there is an understanding that neither approach is seen as any more extreme than the other and adopts a more principled combination of methods. Critical realism uses the terms 'extensive' and 'intensive' research where both qualitative and quantitative techniques are used to evaluate situations (Sayer, 2000). Extensive research is seen as the 'norm' for social research in that significant relations can be determined through the use of large numbers and repeated observation (Sayer, 2000). Intensive research on the other hand concerns itself with what happens in a particular situation, and takes the approach starting with individuals or individual situations and tracing causal relationships through their qualitative and quantitative nature (Sayer, 2000). Intensive research is seen to be effective in explaining causal meanings and meanings in context and deals effectively with a small number of cases (Sayer, 2000). The validity of such cases is entirely separate from the representativeness of large numbers seen in extensive research which will tell the extent of properties or relations but not the extent of the causal relationship (Sayer, 2000). Critical realism allows for consideration of why certain discourses are

used, the impact of these discourses and can map the context in which discourses are used to reflect particular constructs of reality (Sims-Schouten et al., 2007).

I have already discussed that for critical realism the social context of where and when something happens and not how often something happens is important. Therefore it is not necessarily important to have a large data sample from a critical realist stance (Sayer, 2000). The use of a small sample and intensive research will provide an understanding of the complex nature of language used in the assessment of pain. What is important is to relate this to the social context of the sample. The data to be collected is a small sample of all available language the choice of a corpus linguistics approach to this data enables exploration of this. The underlying explicit social context of the data is explored through a critical discourse approach. A discussion of each of the methodologies chosen follows in the next sections.

The combination of these approaches from the quantitative / qualitative extensive / intensive and a real / empirical perspective can therefore be realised through the critical realist approach taken which reflects how social practices can mediate the relationship between structure and events

(Fairclough, 2005). A critical realist approach presents additional benefits for analysis. First there can be a consideration of why people use or draw on a particular discourse; secondly the impact of the discourse on practice can be analysed and finally the position of the discourse use can be mapped and positioned within their particular reality, in taking into account the ethical stance taken, for example, within pain assessment and management there is a need to consider the history of the patient's pain as well as the current presentation of pain (Sims-Schouten et al., 2007).

Sims-Schouten et al (2007) suggest that a systematic approach needs to be implemented for a critical realist analysis to be effective. In this approach they advocate a multi-level analysis drawing on discourse analysis including Foucauldian discourse analysis as well as factors relating to embodiment, institutions and materiality as identified in the theoretical underpinnings of critical realism (Groff, 2000). In this thesis embodiment would relate to how education and knowledge are key aspects of the pain assessment process. Materiality is seen in relating pain assessment to effectively managing pain, which results in increased patient satisfaction with both levels of pain and the experience of the healthcare service. And finally from an institutional perspective this

would relate to issues concerning power and knowledge embodied in professional talk.

I have outlined the rationale for taking a critical realist stance and have touched on the methodological approaches adopted. The next sections will discuss each of these starting with a corpus linguistics based approach before moving on to critical discourse analysis and concluding with a discussion of the benefits of combining these approaches.

3.4 Corpus Linguistics

Linguistic enquiry through a Corpus Linguistics (CL) approach has been described as relatively new (Mautner, 2009b), although it is noted that as early as the nineteenth century corpus based studies were carried out, but it was not until the wide availability of the computer that corpus linguistics became increasingly popular and seen as a sophisticated method of exploring language (Baker, 2006; Hunston, 2006). The use of corpus linguistics as an analytic approach affords a huge leap in the ability to analyse large amounts of language data, allowing for the 'externalised' aspect of language to be investigated and become more 'evidence-based' in its findings (Adolphs et al., 2004). However, CL studies are still very much in their infancy and is an emergent area of interest for health communication research (Crawford & Brown, 2010;

Harvey, 2012). Corpus Linguistics though is seen as not just one methodological approach, indeed it has been observed as using a number of different methods that can all be applied to an electronic collection of data (Baker, Gabrielatos, Krzyzanowski, McEnery & Wodak, 2008; Taylor, 2008). The next sections will review the use of a corpus linguistics based approach in assisting critical discourse analysis with key aspects of corpus size and corpus speciality being discussed.

3.4.1 What is a corpus?

This thesis draws on a corpus linguistics based approach to assist in the analysis of the spoken language obtained from a very specialised area of acute in-hospital healthcare interactions. In recent years corpus linguistic approaches have increasingly been used by researchers to assist with the analysis of ever larger data sets allowing for generalisations to be made about linguistic patterns and variation in the language under review (Harvey & Koteyko, 2013).

A corpus is seen as a collection of naturally occurring language text (Sinclair, 1991) in electronic format that can be used for the purpose of linguistic analysis (Adolphs et al., 2004; Baker et al., 2008; Taylor, 2008; Flowerdew, 2013; Harvey & Koteyko, 2013). A corpus (plural: *corpora*) can be made up of a variety of different modes or sources of language, indeed

many of the larger corpora include, for example, newspaper articles, radio broadcasts and even fiction (Harvey & Koteyko, 2013). A corpus of this type would be considered a 'general' corpus with many such corpora comprising many million words as for example, the British National Corpus (BNC) (O'Keeffe, Clancy & Adolphs, 2011).

When compiling a corpus there are a number of suggested factors that need to be observed. The first of these is the authenticity of the texts to be included (Murphy, 2010). The corpus compiled for this thesis uses authentic real language of interaction in the hospital setting. The second factor is the representativeness of the language used (Murphy, 2010). The corpus comprises entirely of language from the interaction process so can be seen to be representative, though this will be discussed further in the next part when the size of the corpus is discussed. The third consideration is the sampling criteria used to select texts (Murphy, 2010). The samples all come from the recorded data, further details of how these were selected is discussed later in sections 3.6.2 and 3.6.3.

3.4.2 What size should a corpus be?

The corpus used in this thesis relates to what O'Keeffe et al (2011) and Flowerdew (2013) refer to as a 'specialised' corpus

that is usually smaller in size than a 'general' corpus. The size of the corpus used reflects the difficulties of obtaining what is a unique collection of naturally occurring interactions between patients and healthcare professionals (Harvey & Koteyko, 2013). Indeed this difficulty is similarly reflected in the BNC which comprises approximately 10% of its content from spoken language (Kennedy, 1998). As a corpus could be argued to be purely a collection of texts then the number of these texts that make up the corpus will be reflected in the way the corpus is to be utilised (Fox, 1988; Murphy, 2010). This corpus exposes an episodic collection of interactions that provides a specialist focus on healthcare language in use. This is the first time that such language has been obtained and analysed with a corpus-based approach.

Many authors discuss what size a corpus should be and their conclusions relate to what is to be the focus of the analysis (Biber et al., 1998; Kennedy, 1998; McEnery, Xiao & Tono, 2006; Murphy, 2010) with O'Keeffe et al. (2007) suggesting that no one particular corpus is able to fit all purposes therefore the corpus should be representative. However, this does present an additional perspective that many people in their daily lives will experience far more language than many of the large corpora contain. Furthermore in 'real' life

experiences many of the ‘texts’ or instances of language may occur more than once unlike the singular occurrence within a corpus (Biber et al., 1998; Kennedy, 1998; O'Keeffe, McCarthy & Carter, 2007; Adolphs, 2008; Flowerdew, 2013). This gives further support that no single corpus can be analysed for all aspects of language use. Indeed, it is suggested that however big the corpus may be, it is only a representative part of all speech and writing acts that occur within a language in any one day (Murphy, 2010). Although large corpora may be seen as important for investigating the generality of language use, they do not necessarily represent language any better than a small corpus might (Kennedy, 1998). Small corpora can equally provide reliable results and have the additional advantage of being more manageable in terms of data (Murphy, 2010; Flowerdew, 2013). Murphy (2010) concludes her discussion of using of a small corpus by claiming how in-depth investigation can be gained into issues such as gender or age. Overall the size of her corpus is 90000 words with this being broken down into further sub-corpora according to age and gender, with each of these consisting of around 15000 words. The major focus of her work though is concentrated on half of the main corpus relating to female language (45000 words) (Murphy, 2010). In an investigation of pain language in Greek speakers three corpora one of 42149 words from

musculoskeletal-related medical discourse, a smaller one consisting of 10975 words from a pain management clinic and one consisting of 16872 words from conversations with patients are constructed (Lascaratou, 2007). Lascaratou's (2007) corpora are similar in size to the one used for this thesis and were obtained in a variety of specialist clinics but are not exclusively naturally occurring language. The focus for this thesis differs in that it investigates the language used in a single ward environment with a multitude of healthcare professionals being involved. The final point to be made about size is that it is implied that large corpora are not necessarily able to offer any better generalisations than smaller corpora might but what is actually more important is the quality of the corpus used (Kennedy, 1998; McEnery et al., 2006).

In examining the quality of a corpus and especially detailing its applicability, consideration is given during development to whether the corpus is to be a static (snapshot) or dynamic (continuously developing) picture of language (Kennedy, 1998). In this thesis a static 'snapshot' of language is used representing some of the available interactions in an acute ward area over a number of days and as such can be seen to freeze those interactions at a certain point in time (Kennedy, 1998). The corpus used is representative of interactions

between patients and healthcare workers as has already been highlighted and is therefore highly representative of this form of language. It does not claim to encompass all forms of interaction across the whole of healthcare but as discussed above provides a snapshot insight into one area of healthcare language use but is linked to the nature of the language 'captured' (Kennedy, 1998). Thus, the corpus being utilised in this thesis in a corpus-based approach (McEnery et al., 2006) to the social interaction which is then interpreted through the use of Critical Discourse Analysis (CDA). The thesis is not claiming to provide a solely corpus linguistics analysis totalising the language used but uses corpus linguistic based tools to assist in identifying key themes and patterns of language used in pain assessment in order to inform and extend interpretation in a CDA tradition. Flowerdew (2013) describes CDA as starting from a particular social issue or problem rather than being entirely language focussed but then goes onto outline how CDA attempts to uncover hidden assumptions in language used and as such a corpus of this type of language can be used as a starting point to investigate these associations. Further limitations of a corpus approach are highlighted in that corpora rarely provide explanations of language but they can provide findings about the language used (McEnery et al., 2006; Murphy, 2010).

A corpus based analysis should go beyond counting linguistic features:

> "Many early studies in corpus linguistics simply counted the occurrence of linguistic items"
>
> (Biber et al., 1998) p.5

CL then appears to be seen as a primarily quantitative approach whereas, as I shall discuss later, CDA is seen as qualitative. However, even this is disputed in that considerable qualitative analysis is required when examining concordance lines for example (a further discussion of concordance lines follows in the analysis chapter) (Baker et al., 2008). Koester (2006) asserts that complementary viewpoints can be achieved through combination of quantitative and qualitative analysis. How CL is used is just as important as what it discovers. CL has been used in a number of ways in linguistic enquiry as: a basis for dictionary creation, aiding literary interpretation, language variation studies and forensic linguistics to name but a few (Baker et al., 2008). However, there is a growing acknowledgement that CL can be used on an equal basis to help inform and make sense of CDA approaches. The next part of this chapter will discuss a Critical Discourse Analysis approach followed by how CL and CDA can be used in a combined approach.

3.5 Critical Discourse Analysis (CDA)

Critical Discourse Analysis (CDA) like Corpus Linguistics (CL) is also considered to be a relatively new approach to linguistic enquiry emerging as it did in the 1990s through a network of scholars meeting in Amsterdam (Mautner, 2009b; Wodak & Meyer, 2009). However, Mautner (2009b) asserts that the foundations for CDA were laid back in the 1930s through the work of J.R.Firth whose writings reference the potential of taking contextual and sociologically symptomatic approaches to the investigation of phenomena. CDA has 'evolved' from a number of other disciplines such as Socio-linguistics, Applied Linguistics, Rhetoric and Pragmatics (Weiss & Wodak, 2007). In CDA language is seen as social practice and especially takes an interest in power and its relationship with language. The following quote has been cited as a 'popular' definition of CDA:

> CDA sees discourse – language use in speech and writing – as a form of 'social practice'. Describing discourse as social practice implies a dialectical relationship between a particular discursive event and the situation(s), institution(s) and social structure(s), which frame it: the discursive event is shaped by them, but it also shapes them. That is, discourse is socially constitutive as well as socially conditioned – it constitutes situations, objects of knowledge, and the social identities of and relationships between people and groups of people. It is constitutive both in the sense that it helps to sustain and reproduce the social status quo, and in the sense that it contributes to transforming it. Since discourse is so socially consequential, it

> gives rise to important issues of power. Discursive practices may have major ideological effects – that is, they can help produce and reproduce unequal power relations between (for instance) social classes, women and men, and ethnic/cultural majorities and minorities through the ways in which they represent things and position people.
>
> (Fairclough and Wodak, 1997 p.258)

The reference to discourse in this definition is taken within the bounds of this thesis to include both written and oral 'texts' and subsumes an English speaking world view of discourse (Weiss & Wodak, 2007; Wodak & Meyer, 2009).

It is pertinent to say at this point that although I have referred to CDA in this section on methodological approach, it asserts itself as not providing or being one specific theory or methodology. CDA is a multifarious approach deriving as it does from a very diverse theoretical background, methodologies and data (Weiss & Wodak, 2007). There are a number of common dimensions from these diverse backgrounds that have come to be a core part of what CDA concerns itself with. These dimensions are:

- an interest in the properties of *'naturally occurring' language use* by real language users (instead of a study of abstract language systems and invented examples)
- a focus on *larger units than isolated words and sentences* and, hence, new basic units of analysis: texts, discourses, conversations, speech acts, or communicative events
- the extension of linguistics *beyond sentence grammar* towards a study of action and interaction

- the extension to *non-verbal (semiotic, multimodal, visual) aspects* of interaction and communication: gestures images, film, the internet, and multimedia
- a focus on dynamic (socio)-cognitive or interactional moves and strategies
- the study of the functions of (social, cultural, situative and cognitive) *contexts of language use*
- an analysis of a vast number of *phenomena of text grammar and language use*: coherence, anaphora, topics, macrostructures, speech acts, interactions, turn-taking, signs, politeness, argumentation, rhetoric, mental models and many other aspects of text and discourse.

(Wodak & Meyer, 2009) p.2

At the outset of the research it was always planned to obtain some form of naturally occurring language and CDA becomes the most appropriate approach to use to study the data. CDA uses the social and historical construction of language to frame a person's experience leading to the context in which the discourse takes place to be the central part of the enquiry (Crowe, 2005). In taking a focus on 'larger units' CDA can be used to investigate the way in which words and phrases are put together to give specific meanings within a specific context; it is not explicitly interested in how long the pause was or what the actual word is but more in how that word was used and by whom in this particular context. This research approach therefore takes into account both the data and the actual context, whereas other approaches may only look at the data without its specific context. Using CDA will illustrate the way in which the relationship between the patient and the various healthcare professionals is built up and what factors

are influencing their interaction along with what language is used and how it is used (Crowe, 2005).

Earlier methodologies investigating discourse either looked at and concentrated on the actual conversation without specific context (Conversational Analysis) or looked at the conversation within a specific context (Discourse Analysis), whereas Critical Discourse Analysis advocates that a macro view of the discourse is taken and so includes the whole societal influence on the discourse (Hammersley, 2002). For this research it is necessary to look at how all the various parties are involved in the discourse, what they actually say, when they say it and who to.

The stance that critical discourse analysis takes is that it is a way of understanding the context of power and dominance within the social world. The nature of power can be either pure dominance or exerted control or could be manifest in persuasion and manipulation (Van Dijk, 2001). The way in which the health professional deals with what the patient is saying as well as what the patient is allowed to say is all part of the investigation that I will attempt to unravel by using this approach.

Language has been discussed in terms of the link between social groups and the reality they perceive. This reality is maintained by the use of group specific language and is passed from generation to generation along with the rules of how this language is to be used. Language though is something that we use every day without much thought (usually) as to how we actually use it. However, language is a powerful tool that can be used to maintain cultural stability and repression by certain groups. If we are to truly understand and treat patients holistically then we need to be aware of how they speak and how it is that we as professionals speak to them and influence what they may actually want to say. It is through analysing the whole social context of how this language is used and its effect on those we are caring for that we can actually start making improvements in the quality of care we give. The understanding of the social interaction that comes from these discourses will help in the training of healthcare professionals by allowing them to become aware of the influence that they may exert within this interaction. The control of pain is more than giving a few tablets; it is also more than just understanding the interaction of the patient and healthcare professional but by starting to understand this we can then be more aware of the language we use in the rest of the pain relieving process. This thesis is

the first, as far as can be determined, to look at interaction in the acute hospital setting and so presents a unique and pioneering view of healthcare language.

3.5.1 Critique of CDA

Critics of CDA point to it being 'random' and developed on the 'whim' of analysts rather than grounded scholarly principle (Breeze, 2011). The main issue is the choice of text for use within CDA which has been questioned in that some researchers have used small samples of texts for their analysis (Fowler, 1996; Widdowson, 1998; Widdowson, 2005). Additionally the way in which these texts have been selected has not always been clearly defined or systematically analysed especially when considering the context of the text (Schegloff, 1997). A further contention is that the tools of analysis should be used more critically paying attention to analytical bias, particularly due again to the way in which texts are selected (Toolan, 1997). This leads to the suggestion that CDA picks particular parts of texts that meet with the chosen theoretical viewpoint rather than embarking on an all-round multi-dimensional study focused on a particular setting (Breeze, 2011). One way of counteracting these critiques is the suggested use of a corpus and corpus linguistics as part of the text selection process (Stubbs, 1997; Widdowson, 1998). One problem still currently being highlighted by a number of

authors (Fairclough & Wodak, 1997; Fairclough, 2001; Baker et al., 2008; Wodak & Meyer, 2009) is that due to the nature of the variety of dimensions informing CDA it is difficult for novice users to ascertain what using a CDA approach looks like and the use of a toolkit is put forward by Fairclough (2003) and Gee (2011) to help with this process.

3.5.2 Critical Discourse Analysis – A Toolkit

In his earlier work it is proposed by Fairclough (2003) that critical discourse analysis includes a number of analytical dimensions to three inter-related factors, these are first the object of analysis, second the process of production and reception of the discourse and thirdly the socio-historical conditions affecting these processes. Additionally each dimension requires a different kind of analysis in terms of description, interpretation and explanation. To aid this Fairclough highlights his 'manifesto' for critical discourse analysis. In this manifesto he highlights aspects of the discourse that require review rather like picking specific tools from a toolbox to do particular jobs. Although as Fairclough asserts this is not to be seen as a tick list but factors that will aid analysis (Fairclough, 2003). A similar 'list' of tools to aid investigation is offered by Gee (2011) however, the point is made that these tools may elicit varying degrees of illumination of the discourse but all should be applied (Gee,

2011). For the purposes of this research project many of the tools will be used as the basis for a thematic analysis of the data informed by CDA rather than the strict application of tools as just suggested by Gee (2011). A selection of the tools that are seen as pertinent to the analysis process are outlined and briefly discussed below with respect to how they are applied to the data.

The first tool to be discussed is the situation and context of where and how the interaction/discourse is taking place. The suggestion from a critical realist viewpoint is that the relationship between the situation and context, i.e. structure and events, is complex and these are mediated by 'social practices' (Fairclough, 2003; Gee, 2011). Through social practices there is seen to be a control of selection and exclusion of possible structures such as in healthcare the unquestioning of professional advice giving.

The events that are referred to in the whole data are those interactions between a number of different healthcare workers and patients. Each is taken as a separate series of an event chain coming as they do from different healthcare workers. The main event chains are those of physiotherapist – patient, nurse – patient, specialist nurse (pain team) – patient and

doctor – patient. There are additional event chains relating to those interactions between housekeeping and domestic staff in the clinical area with the patient. Each person within the series of events has their own particular role to play in the recovery of the patient from their recent surgery. However, these reveal little about the main focus of the research in terms of pain assessment but do reveal some aspects of how questions are asked. On a more general frame the events all take place within the very specific area of an acute surgery hospital ward. For patients this is not a 'normal' area for them and they could be influenced by the role of the healthcare worker on their recovery. This uncertainty about how they should react is seen in one event where the patient is unsure of what they should do about having a wash.

The next tool to be considered is 'Genre'. This is seen as a difficult term to define and be specific about (Koester, 2010). Genre can be seen as the particular format that a text is created within, however, these can sometimes be seen as less formalised in their nature and can give rise to very fluid boundaries (Fairclough, 2003; Koester, 2010). The use of the term genre has also been discussed in the context of speech acts; in the case of this research this is reflective of the content of the data in that it is a collection of spoken

interactions (Maybin, 2001). One way of collecting these interactions could be to look at different workplace environments with a focus on a specific profession. An alternative, taken in this research, is to look at a specific workplace and examine the particular professions within it (Koester, 2010). The more focused approach taken by looking at a specific workplace allows examination of how genres are situated within the social context and how these interact between the various parties (Koester, 2010). A further way of viewing genre is as a variety of communication events that hold both a common goal and are particular to a group. In the case of this project these can relate to particular professional groups. In terms of speech genres these reflect the use of language with its associated context and perspectives and can be seen as more flexible than written texts (Maybin, 2001). Within the collected data the genre present is one of assessment being carried out by the healthcare worker. Further exploration of these assessment interactions will show whether there are any differences in this genre presented by the specific professional groups. Communication with other people entails taking on particular socially acceptable ways of talking and it is suggested that these genres of spoken language are learnt as the language itself is learnt (Maybin, 2001). It is this form and function of the speech that is of

interest here and how the identities of the particular speakers are constructed. The genre identified is of professional language with the patients having to conform to the genre presented.

When a discourse involves two people there is likely to be some difference in the two parties. One aspect of difference that Fairclough (2003) applies is the aspect of 'social difference' where identities of particular groups can be seen. There is a definite professional-lay difference by the nature of where the interaction takes place. A further theme in reviewing difference is that of the 'universal' and 'particular' which can be framed by asking about the hegemony occurring within the data. In this case the professional groups exert their dominance in the situations given that they are driving the interactions (Fairclough, 2003).

The use of knowledge and previous experience allows speakers to understand what is being said within any particular situation (Gee, 2011) and although there may be some difference there may also be some shared meaning or understanding of a common ground which reduces this difference, this is termed assumption (Fairclough, 2003; Gee, 2011). Therefore, if one speaker has not had this sort of previous experience then the

meaning of the assumption is lost. This is especially true if a particular speaker is coming from their personal unshared experience of the world (Gee, 2011). Gee (2011) suggests that one question that can be asked in the analysis is 'What must this speaker assume of the world to say these things?'

Where there is a sequence of at least two conversational 'turns' between speakers where what is said by the first speaker is then replied to by the second in some expected way this is identified as an exchange (Gee, 2011). This can be initiated by either party (Fairclough, 2003). Within these exchanges there may be a number of different 'speech functions' such as questions, statements or demands. The key part this plays in the analysis process is that it allows for identification of how discourses are being used or controlled by the various parties.

As has already been highlighted social events play an important part of the CDA process. The data provides a very clear account of the social events taking place in the hospital ward setting. At another level the type of event is controlled by the HCW. Usually this is presented as the HCW approaching the patient by greeting, introducing themselves and then stating their business. This could therefore be seen as a

'service' type event but one in which the event, rather than serving the patient directly as you would in an encounter in say a shop, serves to maintain the control of the event by the professional. A further consideration about the social events is the part played by the subject of the pain assessments, namely pain. Through investigating how pain is talked about in the data it can be seen that 'pain' becomes what Fairclough describes as its own social actor (Fairclough, 2003).

Fairclough (2003) asserts there is a link between the exchange types and the functions of speech and refers to this as modality. This can be identified as knowledge exchange (epistemic) or activity exchange (deontic) (Fairclough, 2003). Fairclough (2003) asserts that there are various ways of making a statement, a demand, an offer or asking a question. The stance taken commits the speaker to a particular modality of working, or expression of himself or herself. The underlying position taken by Fairclough (2003) is that there are three major meanings to texts in their action, representation and identification and how these are identified is how modality can be seen in the presentation of the texts. Modality then is an expression of how the speaker positions themselves in the world, their identity and how and to whom they interact and this results in emergent topics relating to areas such as

commitment, attitude, judgements and stances (Fairclough, 2003). Modality typically can be found by identifying 'modal verbs' such as 'can, will, may, must, would, or should etc.'. The use of tense can help identify whether a text is factual, for instance 'Can you…' or hypothetical, as suggested by 'Could you…'.

The thematic areas highlighted above are by no means the complete range of tools that are available for analysis. Using thematic analysis as part of a Critical Discourse Analysis approach can therefore highlight how language is used within context and can, as has been suggested, identify themes such as power and control and it will be these ideas that will be taken through to the analysis phase.

3.5.3 Taking a corpus-based approach to Critical Discourse Analysis

The approach taken through using CDA can highlight the numerous influences and ideologies present in language use, although this may not be at first evident to those using the language themselves (Fairclough, 1993; Harvey & Koteyko, 2013). To facilitate the exploration of this complex language of pain assessment, a corpus-based enquiry affords a valuable first step in identifying frequently used words and phrases and

helps in the unfolding and determining of the complex nature of the language used (Lee, 1987).

There is some contention between the quantitative and qualitative methods employed by CDA and CL despite both using naturally occurring language as their basis for analysis (Orpin, 2005; Baker et al., 2008). However, a number of authors have successfully combined the use of CL and CDA (Orpin, 2005; Baker, 2006; Baker et al., 2008; Mautner, 2009b). Much of the application of CL has been in the domain of analysing linguistic structure whereas CDA tends to analyse the linguistic form of real instances of social interaction (Mautner, 2009b). A further difference is reported in the way in which each treats the texts of analysis. CL can have a huge data resource whereas CDA might only rely on a small sample of text such as a newspaper article (Baker, 2006; Taylor, 2008). There are though some key benefits of using both approaches together despite these differences.

The contribution that CL can make to CDA is seen in a number of areas (Mautner, 2009a). First of these is that CL by virtue of the corpus size allows CDA access to larger data volumes which can be successfully viewed through computer assistance. The second contribution is that through a larger

data volume bias can be reduced although it has to be acknowledged that there is always some form of bias but CL and CDA combined can identify and account for this (Baker, 2006). A further consideration concerning the size of the data set through using a large corpus is that the results obtained are more likely to be representative than if a small data set, for example, from a focus interview, was used in the analysis (Harvey, Brown, Crawford, Macfarlane & McPherson, 2007), however, as previously discussed this would not be as important if an intensive critical realist approach is taken. The third consideration is that through applying some statistical perspective to the data CDA can be seen as more generalisable in its findings. This can be achieved through the use of CL tools that identify word collocations and concordances that form the basis of the CDA approach in question (Orpin, 2005; Baker, 2006; Baker et al., 2008; Mautner, 2009a; Mautner, 2009b). Orpin (2005) continues this theme in identifying that texts often used in CDA are fragmentary and not always representative as the selection of texts usually depends on the motive of the analyst. A combining of CL and CDA approaches allows questions arising from social issues to be investigated permitting both quantitative and qualitative findings to have both statistical and social significance (Mautner, 2009a).

The data collected for this thesis was assembled to form a corpus and interrogation and analysis of this corpus was made through the use of the AntConc software package (Anthony, 2011). AntConc can be used to determine frequency and the order of words within the corpus, allowing further qualitative analysis to be made at a later stage (Koester, 2006). The software allows key words to be searched or identified in the corpus that Hunston (2006) suggests can be used to investigate and even 'answer' linguistic questions. The use made of the software though for this thesis is to display searches in forms that are not usually seen when reviewing datasets, this commonly presents as patterns or word associations (Hunston, 2006). Analysis of these patterns and associations allows corpus linguistics to move beyond a purely quantitative account of language to explore some of the preconceptions of language itself (Hunston, 2006). With this CL approach being combined with CDA it will be possible to investigate detailed aspects of the language of pain assessment that this thesis aims to achieve (Lee, 1987) .

Before moving on to the data analysis and discussion of the findings in the next chapter, I will conclude with an exploration of the background to the study, how the research was

conducted from the initial identification of a problem through the processes of gaining ethical and R&D approval to data recording and building of the corpus.

3.6 Conduct of the Research

3.6.1 Background to the research study

Building on the suggestion from a Consultant Surgeon colleague that nurses on his ward should be able to assess pain effectively, it was determined that analysis of language in naturally occurring pain assessments would offer a valuable approach to developing knowledge in this field. There are robust mechanisms in place to gain both ethical and NHS R&D approval and both of these were given very careful consideration and attention to ensure that all issues were addressed and possible concerns could be addressed. The main problem presenting itself in research of this kind was the confidentiality of material. Commonly research involving patients identifies a particular group to be investigated and then this group is sampled according to some protocol and individuals or smaller groups are then interviewed. Consent forms are signed prior to any interviews taking place so that full consent is given. Consent in the case of this project is no different, what was more of an issue was how the data would be collected.

The aim of the thesis was to look at the actual language used by healthcare workers when assessing patients in practice, not to get them to tell the researcher what they did or how they felt about doing something or more probably telling the researcher what they think they needed to know! A similar dichotomy was presented if questionnaires or tests were undertaken. It was decided from the start that the best way to get the required data was to actually record interactions as they happened. Here again it could be argued that the actual presentation of something recording an interaction would have an effect on the interaction itself, this will be discussed later.

After a brief observation in a clinical area to ascertain the 'amount' of talk that occurred around the subject of pain it was noted that the interactions were short and the quality and number of these varied greatly over time. Based on this the decision was made to use a digital recording device in an area and use instances where pain was mentioned as the data for the project. At this stage the subject was broadened to include all aspects of assessment and questions. This then formed the basis of the NHS Ethics and NHS R&D applications. At the Ethics Committee stage there was a long discussion about the practicalities of undertaking the recording and suggestions for maintaining confidentiality of material were

made. The main one being the use of a single side room with notices to show that recording was taking place. This provision of the ethics committee although strictly upheld presented many problems in the availability and suitability of patients to record.

The initial project was to involve patients undergoing Thoracic procedures, however, due to concerns raised by the clinical area and despite assurances by the researcher and clinical managers, the area decided not to take part in the study as data collection was about to start. Initial contact was made with similar clinical areas across the local and neighbouring regions with no result in finding a new site. Eventually, with enhanced reassurances about confidentiality, an area was identified and appropriate Ethical and R&D amendments were made and granted. The surgery in this area was very different to that originally selected and posed different issues for the data recording process. Many of the patients in this new clinical area were only in hospital for a short period of time, many less than 48 hours and there was an ever present issue of surgery being cancelled with patients being re-scheduled to another date and finally, but more importantly, the provision of a single side room was not always available for patients on their return to the ward area. Patients were always seen prior

to their surgery so that the introductory letter (Appendix 2) and information sheet (Appendix 3) could be given to them and time allowed for reading and discussion. Once patients felt fully informed they were invited to sign the consent form (Appendix 4). All staff on the area were given an introductory letter (Appendix 2), an information sheet (Appendix 3) and consent form (Appendix 4), once the consent was signed this was collected in a box situated in the ward managers office. On the day of recording consent of staff was again checked. Notices were displayed on the door of the room, inside the room and on the corridor near to the room. The data-recording period ran for a maximum of five hours in the morning following the patient's surgery. The patient was asked to re-confirm consent and asked if there were any issues that had arisen that they wished not to be included in the data at the end of the recording period. In all cases there were no issues or requests for material to be withheld.

3.6.2 Data Recording

The recordings were made with an Olympus Digital Voice Recorder (Model VN7800PC). The data file was downloaded to a password-protected computer for further editing. The original recording was then erased from the digital recorder. Over the nine months that data was collected regular meetings were held with the ward manager and potential suitable

patients were identified. The provision of a side room and surgery actually going ahead at the planned time meant that many of the potential participants remained as 'potential' as they either had their surgery cancelled, were returned to another ward or were not able to have a 'side-room' due to other operational requirements (such as infection) and so recording could not be completed. In total twenty-six patients were identified as 'potential' participants. There were a total of eight patients that were suitable for the study and who gave consent to participate. Two further patients declined to take part in the study.

3.6.3 Data Preparation

Each of the complete digital files was listened to from start to finish and markings made using audio digital editing software to identify specific assessment issues. Each instance was then added to the database as a unique digital sound file to be used for transcription. The NVivo software package allowed for audio files to be included alongside the transcript. This allowed referral back to the actual audio recording should any clarifications be required to be made. Each time a new part of the interaction started a new line was used. This transcribed data was then coded in NVivo and assigned to either a Patient node (P) or a Healthcare worker node (HCW). All data was saved on a password secured computer and use made of

secure backup processes to ensure data was not lost or corrupted.

The text of the transcripts was then exported in two ways. First the whole transcription was exported to an Excel data file so that line numbers and identifiers could be attached to each line of data. The whole data was also exported as a plain text (.txt) file for use in corpus analysis software. Two further text files were produced: one for the data attributed to the patients and the other attributed to the healthcare workers through the use of filtering according to the NVivo node assigned. The rationale for approaching the data in two separate forms allowed details of the general interaction between the two groups and specifics of each group to be identified as suggested in an approach to analysis by Adolphs et al (2004).

The researcher transcribed all of the data to allow for 'immersion' to become familiar with the content of interactions and the language used (O'Keeffe et al., 2007). Transcription carries with it a variety of degrees of detail and it is suggested that these can range from 'broad', reflecting a broader research question, or can be 'narrow' providing more detail, such as a Conversation Analysis approach would take (O'Keeffe et al., 2007; Murphy, 2010; O'Keeffe et al., 2011).

It was decided to take a broad approach to the transcription as at this stage it was felt that a narrow approach would provide much superfluous material that would add very little to the interpretation of the data (Murphy, 2010). It has also been suggested that transcription is not entirely a neutral bias process in that there is some degree of interpretation put on the transcript by the transcriber (Fairclough, 1993; Adolphs, Atkins & Harvey, 2007; Harvey & Koteyko, 2013). The final issue was to ensure that there was consistency of transcribing, such as using *Okay* or *OK.* This was also rechecked in the analysis stage as lists of words were produced and any variations in spelling could be highlighted and corrected (Kennedy, 1998).

In this chapter the principles of taking a Corpus Linguistics based approach to inform Critical Discourse Analysis have been explored and a case made for their combined use in analysing the data obtained. This kind of move is supported by commentators who have viewed CDA not as a single identifiable method but rather a collection of tools and approaches of analysing how the social world is constructed (Potter, 1996; Malson, Finn, Treasure, Clarke & Anderson, 2004). Combining CL and CDA allows for a number of

'language-orientated' approaches to be used (Malson et al., 2004).

The healthcare interactions that have been collected as data constitute 'discourse' as they are instances of 'naturally occurring' language used in situ, namely a clinical ward area within a busy NHS Acute Hospital Trust. As such this discourse can be approached in terms of the contextual (ward), socio-cultural or socio-interactional (patient-healthcare worker) components of the interaction (Sarangi, 2010) as the data collected is a unique corpus of naturally occurring health language. The apparent differences in the approaches of CL and CDA coming as they do from a qualitative or quantitative background have been shown to be of importance in allowing a detailed investigation of social language to be made taking into account the sympathy for power that CDA assumes. I have referred to the combining of these two approaches as Corpus-based Critical Discourse Analysis although there is some contention that both are actually equal partners in the process and both equally assist each other (Baker et al., 2008; Mautner, 2009b). It is worth stressing that the unique nature of the data obtained is ideally placed as a small corpus to investigate the aspects of spoken language in this difficult to access group in an intensive research approach afforded by

critical realism. The next chapter will present the main findings from the analysis along with discussion of the importance of these findings to the practice of pain assessment.

4 Data Analysis – Findings and Discussions

4.1 Introduction

In this section the findings of the study comprise a Corpus Linguistic overview and quantification of the data, highlighting key features of pain assessment language, and the identification of four key themes using a corpus-based critical discourse analytic approach. The four key themes identified are Terminology, Location, Function and Mentality. The first three of these themes present a more 'traditional' account of pain assessment language and will therefore be discussed together in one section with a second section being devoted to the aspects of 'mentality'. Examples from the data will be provided as transcript samples along with corpus detail to illustrate the important issues and key points associated with each theme. These findings will be discussed with reference to the literature. The chapter will conclude with a summary of the key findings before the next chapter discusses conclusions and recommendations.

First, the findings of the corpus linguistics overview and foundational quantification of the data will be presented. A number of conventions are presented within the discussion to highlight use of data. Words used directly from the data are

shown as italicised, for example, *you*. Transcribed data is reproduced giving line numbers along with the person whose speech it is as either HCW for Health Care Worker or P for Patient. Where reference is made to a line number this is given in square brackets, for example line [1501] or [line 1501]; this is to avoid confusion with dates and other comments.

4.2 Corpus Linguistics interrogation of the data

As detailed earlier the prepared transcriptions as texts files were first read from end to end and notes were made of any words that appeared to be associated with the pain assessment process. The text files were then loaded into the AntConc software programme which allowed for a number of automated searches to be made (Anthony, 2011). Using notes from the reading of the data and use of words from the MPQ a number of searches were carried out (Murphy, 2010). Additional searches were then made using words that arose from these initial searches. Further discussion of the words used in these searches is presented in the following sections. Reference was continually made with all search results to the context of the words and language being used to aid analysis. It was from this process that the themes of the analysis were developed. The use of corpus linguistics in this way is a source of describing both the use of and structure of language

as a base for further analysis from a CDA approach (Murphy, 2010). The next section will give an overview of the data from this corpus linguistics enquiry.

4.3 Corpus Linguistics overview of the data.

Taking an overview of the whole data the following observations can be made. The corpus contains a total of 30591 words; these are further distinguished in Table 2 below as word tokens (the actual number words) and word types (the number of individual words in the dataset). As previously highlighted a corpus of this size is seen as small compared to other contemporary corpora (e.g. CANCODE) (Adolphs et al., 2004), however, the corpus size reflects the nature of the data obtained and that there is no optimum size for a corpus (de Haan, 1992). This is the first time that this type of language has been recorded within an acute hospital practice setting and so provides a unique and specialised corpus of healthcare language coming as it does from a natural setting and as such reflects the difficulties of gaining such spoken data (Murphy, 2010). The corpus offers a unique footing for the investigation of interactions between healthcare workers and patients with important key themes related to the pain assessment process being identified. The data, coded as Health Care Worker (HCW) data (this included nurses, physiotherapists, doctors, ward domestic staff etc.) and the other as Patient data,

allowed for further commentary and analysis between the two groups. For example, there are key differences noted in the use of technical language by one group as opposed to the other as will be discussed later. A number of investigational processes were used to explore and highlight components and structures within the data; these are described and discussed later.

Table 2 Initial Quantitative Data

	HCW	Patient
Word Tokens	20271	10320
Word Types	1784	1277

From the figures in Table 2 above a number of initial comments can be made. Overall the number of word tokens spoken by Patients (10320) is less than that of HCWs (20271) and reflects previous reports of patient healthcare interactions (Skelton & Hobbs, 1999b). However, looking at the actual number of specific word types that are spoken these are relatively similar at 1784 (HCW) and 1277 (Patients) with a number of word types appearing in both lists as one would expect. The initial conclusion then is that overall HCWs have more to say when they are talking than patients do; a further discussion will be given when the content of these interactions is analysed. It can also be said that as the HCWs are the ones mainly initiating the interactions along with the role of the HCW as someone who is directing and providing care that

there would naturally be more spoken words by this group. This correlates with previous findings where there is control by doctors (although not all HCW are doctors in this data) and short responses made by patients (Fairclough, 1993; Harvey & Koteyko, 2013).

Further quantifiable analysis of the corpus can elicit word lists. This produces a frequency count of words that appear in the corpus. For the analysis of this dataset those words attributed to HCW and to patients were identified so that some basic comparisons could be made between the two (Hunston, 2006). AntConc identifies each word token as a collection of letters with additional criteria markers available within the software to allow, for example, identification of apostrophes within words. So *'s* does not become a separate word token but is counted as the word ending, for example *it's* instead of *it* and *'s*. There is also an ability within AntConc to classify all the data as 'lower case', which enables *You* and *you* to be counted as the same word in the word token and word type list. When these words are then further investigated it is necessary and important to refer back to the context of these words to gain further information as to their use and also the circumstance of this use. The software allows for direct hyperlinking to the location within the data, which helps to clarify this context.

The table below (Table 3) shows the top twenty-five words along with their frequency count.

Table 3 Word List

1784	HCW	Word Types	Patients	1277
20271		Word Tokens		10320
1190	you	1	I	541
590	to	2	you	268
550	the	3	the	256
478	your	4	yeh	253
454	a	5	to	225
398	it	6	and	222
392	and	7	it	206
300	that	8	a	199
285	just	9	that	152
253	yeh	10	no	150
236	have	11	err	126
232	so	12	in	124
223	of	13	me	122
221	OK	14	I've	118
217	I	15	my	111
212	we	16	yes	109
210	is	17	of	102
207	in	18	but	93
202	do	19	just	93
201	on	20	know	93
198	if	21	got	92
180	for	22	I'm	92
171	can	23	have	88
167	are	24	it's	86
160	then	25	erm	84

As can be seen in Table 3 the most frequent word appearing in the HCW data is *you* with *I* being the most frequently occurring in the Patient data. This initial observation shows that the HCWs are directing their interactions to the patients (*you*) with responses coming from the patients (*I*). Further down the list similar uses can be seen with the words *your* and *my* respectively.

The above list gives an indication of the common words used in the exchanges between the parties concerned. However,

this raw frequency of words proves little from an analysis point in terms of the importance of these frequencies unless the corpora being investigated are identical (Hunston, 2006). In the following table (Table 4) the frequency of the words are shown along with their occurrence per 1000 words, this makes comparing the results more helpful (Hunston, 2006). The words chosen reflect some of the instances that occur in aspects of the interaction that will be discussed later.

Table 4 Word List - Count per 1000 words for comparison

HCW				Patient			
Word	Frequency	Position	Count per 1000 words	Frequency	Position	Count per 1000 words	Word
you	1190	1	**58.70**	541	1	**52.42**	**I**
your	478	4	23.58	268	2	25.97	you
just	285	9	14.06	150	10	14.53	no
I	217	15	10.70	93	19	9.01	just
get	131	29	6.46	93	20	9.01	now
no	128	31	6.31	92	21	8.91	got
alright	112	35	5.53	65	34	6.30	not
not	111	37	5.48	62	38	6.01	thank
bit	104	42	5.13	44	54	4.26	get
got	97	49	4.79	44	55	4.26	think
pain	**84**	**56**	**4.14**	43	57	4.17	bit
know	80	58	3.95	39	63	3.78	alright
some	57	76	2.81	37	68	3.59	please
little	45	87	2.22	**34**	**69**	**3.29**	**pain**
think	44	89	2.17	33	70	3.20	some
done	26	124	1.28	20	92	1.94	done
thank	20	158	0.99	17	112	1.65	your
comfortable	14	211	0.69	13	127	1.26	little
please	4	534	0.20	3	364	0.29	comfortable
discomfort	3	608	0.15	2	500	0.19	discomfort

If we again look at the use of *you* and *I* it can be seen that the count for *you* per 1000 words is 58.70 for the HCW (as opposed to 25.97 for patients), this figure though is almost mirrored by the patient's use of *I* (52.42) suggesting that the response to a *you* statement from the HCW is answered by *I*. The use of *you* and *your* in the way indicated by this list could imply that the interaction is centred on the patient (Adolphs et al., 2004) or at least has elements of patient-centredness. Pain as the main subject of this investigation can be seen to appear at position 56 (HCW) and 69 (Patient), but the actual count per 1000 words is very similar (4.14 and 3.29 respectively).

Concordance lines can be generated using the AntConc software by searching for a given word or words, such as *pain*, and identifying a range of words (or characters) that appear before and after the word(s). This allows for identification of the repetition of words or phrases that are not immediately obvious in the whole raw data (Hunston, 2006). Through this 'keyword(s) in context' can be shown (Hunston, 2006). An additional benefit of the way that these concordance lines are presented is that they can then be sorted into alphabetical order in terms of words appearing before or after the keyword. AntConc itself allows for sorting to be carried out on up to

three words positioned within the concordance line. The sort criteria are identified as either L(eft) or R(ight) of the searched term and a number identified as a position within the line (1st 2nd 3rd etc.). However, as concordance produces a keyword in context then sorting on words near to or next to the search term allows valuable contextual information to be seen. In the example below (Table 5) *have you* is taken as the keyword and the sort is done in alphabetical order by the words following this phrase, so it is possible to be more specific about the use of words connected with *have you* which can be seen is then followed by a number of uses such as *done*, *got* or *had*.

Table 5 Concordance – *have you*

1	my groin for a bit now	Have you	Be worth mentioning to the doctors
5	eeze your buttocks together	Have you	done an exercise before where you
6	round or does it reach What	have you	done before I've not had breakfast
7	t want you doing that one	Have you	done the exercise where you're lay
8	Erm there we are exercises	Have you	done these exercises before I have
14	u Yes OK no problems Hiya	have you	got a cup for me No No OK No I did
15	rry three drains that's all	Have you	got a dressing gown No Do you want
16	ow high your bed is at home	Have you	got a low bed or a high bed have y
17	got a low bed or a high bed	have you	got a double divan or have you got
18	ings on Yes Thank you Pat	Have you	got any needles on you any needles
19	ash to sort it out for you	Have you	got any bed slippers Have I got Be
20	since I came in Yeh Right	have you	got any pain at all Mostly minor p
21	with diclofenac in OK	Have you	got Gillian's drug card Sorry Have
22	e you got a double divan or	have you	got like a I think it's a low bed
23	your slippers No I haven't	Have you	got slippers to put on No Your fee
24	h Tuck them into my pyjamas	Have you	got some slippers Oh we've got one
25	th regards to your mobility	Have you	got stairs at home Yes Yes so we'r
26	t Gillian's drug card Sorry	Have you	got the drug card Ah they have sta
27	ll change your sheets Erm	have you	got your own nightie or do you wan
28	'll get that sorted as well	Have you	got your drug card in here Okey Do
29	I had a little walk and it	Have you	had a drink Tea I've had my tea ye
30	nd walk around and lay down	Have you	had a walk around yet today You ha
31	than I thought it would be	Have you	had painkillers today Oh yes Oh ye
32	e taking the top layer off	Have you	had that tape on anywhere else bef
33	food really till Yeh	Have you	had What kind of painkillers were
34	e in special to have a look	Have you	had your blood pressure done again

In these concordance examples above there can be seen to be a number of different uses of *have you*. The main use is as an opening question, for example, *have you done...?* In another

use *have you* is a response to acknowledge what has been said. For example in line [1] the location of the pain (*groin*) is acknowledged by the HCW, this is then followed by detail about what action to carry out (*Be worth mentioning to the doctors*). This attention to the context in the data allows further exploration of these concordance lines in relation to the key themes of terminology, location, function and mentality.

A further investigation that can be carried out on the corpus is through the use of collocation. Collocation is where some words will more frequently occur with an identified word than others (Hunston, 2006). With this investigation words that are situated within the text at a given position can be identified. Again looking at *pain* and taking any words within 4 locations to either side of *pain* occurring in the data a list can be produced to show the common words that are associated with *pain* in the corpus (Table 6) below. A span of this nature (4 before and four after) is often used but the software can specify any size of span (Hunston, 2006). From these results it can be seen that *you* and *your* along with *the* are frequently associated with *pain* within the data.

Table 6 Collocate - *pain*

Total No. of Collocate Types: 273
Total No. of Collocate Tokens: 1062

Rank	Freq	Freq(L)	Freq (R)	Stat	Collocate
1	126	4	4	4.13553	pain
2	49	**35**	**14**	3.97825	the
3	39	**30**	**9**	4.35229	your
4	26	11	15	4.66333	is
5	25	13	12	2.99138	to
6	24	**10**	**14**	2.09336	you
7	21	5	16	4.03981	in
8	20	13	7	2.98917	a
9	18	4	14	2.92601	and
10	17	6	11	3.28546	that

Further interpretation can be made when the actual position of the words are considered, the words *your* and *the* appear more frequently before *pain* (Freq (L) column 30 for *your* and 35 for *the*) than after (Freq (R) column 9 for *your* and 14 for *the*). One explanation for this is the traditions of language as a 'social event' (Fairclough, 2003) in the way language can be used so *your pain* or *the pain* is an acceptable language form whereas *pain your* or *pain the* is not a conventional form of speaking. Where the software has highlighted these patterns it is necessary to go back to the context to investigate the speech surrounding these words, this context can be seen below (Transcript Sample 1). In this transcript there is reference to the type of pain (*nerve pain*) and then the HCW goes onto give further explanation of this in how it has affected the patient (*the nerves were…*). Contextualisation of *pain the* in this way shows therefore acceptable use of this word grouping.

Transcript Sample 1 Pain the – context

1643	HCW	:	We We sometimes use some drugs for nerve pain and it sounds that's what you're getting some nerve **pain the** nerves were irritated in your back caused by due to your surgery but probably prior to that as well and so we can use some drugs to help reduce that pain they do take a few days to work OK So it's important that we get you back on your normal dose of amitriptyline When was the baclofen started Sometime Were you getting sort of a spasm pain

One final way that AntConc was used on the corpus was to investigate clusters. A cluster is a group of words that contain the search word. The resulting length of cluster can be set by parameters in the AntConc software. This not only allows common words linked to the target word to be listed, similar to collocate, but also allows for phrases or common orders of words to be identified as the size of the cluster is increased. In Table 7 below the cluster has been limited to a length of two and identifies the words linked directly with *pain*.

Table 7 Clusters - *pain* - 2 words

Total No. of Cluster Types: 82		
Total No. of Cluster Tokens: 217		
1	23	your pain
2	21	the pain
3	9	pain at
4	8	pain in
5	8	pain relief
6	7	any pain
7	7	pain is
8	6	a pain
9	6	back pain
10	6	referred pain

As with the collocate data there is a prominence in the frequency of the word *the* clustered with *pain* suggesting that there is no ownership of pain. As the frequency count in the list goes down then the specifics of where pain is, such as *back pain* and what sort of pain it is, for example, *referred pain*

becomes identifiable. Additionally the results of this cluster show there is more of a general reference to pain than a specific one. Until *back pain* appears in the list there is no particular sort of pain identified. If the cluster length is increased to four then a different cluster pattern is obtained as shown below (Table 8).

Table 8 Clusters - *pain* - 4 words

```
Total No. of Cluster Types: 353
Total No. of Cluster Tokens: 373
1     4     any pain at all
2     2     a lot of pain
3     2     because of the pain
4     2     from the pain team
5     2     how much pain you
6     2     is there any pain
7     2     it's not a pain
8     2     much pain you feel
9     2     nurses from the pain
10    2     of your pain relief
```

There is an increase in the number of cluster types from 82 to 353, indicating that there are more combinations of the words with *pain* and therefore more variation. However, this does allow for any commonly used combinations of words to be easily identified. In Table 8 above the phrase *any pain at all* occurs four times and might be considered to be an aspect of pain assessment. The context reference of these occurrences is shown below (Table 9).

Table 9 Concordance - contexts taken for '*any pain at all*' cluster

```
1 me in Yeh  Right have you got any pain at all Mostly minor pain at the back
2 of ten out of four I'm not in any pain at all as I'm lying here Thank you
3  Just checking your  Is there any pain at all to them Sorry  Is there any p
4 t all to them Sorry  Is there any pain at all to any of them That one No Th
```

The context given in Table 9 identifies that in three of the lines *any pain at all* refers to a question being asked [lines 1,3 & 4], whereas one occurrence is a response to a question about pain [line 2].

Through use of these various tools to search the data it is possible to identify areas of healthcare language use and commonalities within this. By applying these tools to the data and repeated sorting and new searches the four key themes could be explored. An overview of the two main analysis sections will now be given.

4.4 Overview of the analysis sections

The first section of analysis (4.5) details the themes of Terminology, Location and Function. The first theme of terminology discusses the use of pain terms both in relation to recognised terminology outlined in the MPQ but also terms linked to what could be referred to as 'lay' expressions of pain. Use of terminology though is not restricted to the actual use of pain but is also implicated in the discussion of medication used to treat pain. There are differences in the use of language by the HCW and the Patients, which also forms part of the analysis. The second theme of location has close links to terminology used and is a natural progression for the analysis. The ability of pain to be articulated is further compounded by

being able to accurately identify where the pain is. The HCWs in their assessment process identify areas that pain is likely to manifest itself and then use this as a basis for their treatment options. The third theme continues the issue of pain assessment but this time in terms of the function of the pain in either limiting patient movement or the indication of certain types of pain relating to the ability to function generally. Although symptoms are identified by patients and HCWs there is variation in how these are interpreted. The theme for the second section (4.6) of the analysis relates to mentality. Within this theme the approach, modelling and importance of pain will be investigated both in respect of what the patient experiences and how the HCW reacts to this along with a consideration of the implications for patient-centred care.

4.5 Terminology, Location & Function

In this first section of the findings of the corpus-based critical discourse analysis the issues of terminology, location and function related to the use of language and how these factors are expressed by both patients and HCWs is investigated.

4.5.1 Terminology

The starting point for this theme draws on the definition of pain offered as 'pain is what the patient says it is' (McCaffery, 1972). However, it might be suggested that the patient can only give this information if they know what to say and what

words to use. As the literature suggests this ability to use a word to say exactly what pain is closely related to factors such as culture, previous experience and context to highlight a few (Smith, 1998). The ability of the AntConc software to search and give results for words becomes an important tool when words such as those associated with pain are investigated.

I will use 'pain' as a general term as something that is the subject of the assessment or interaction between the patient and the HCW and is presenting as something that echoes McCaffery's definition given above. In the data there are examples of different uses of terminology for pain. These include how the pain is talked about as either *pain* or other terms used to indicate pain. The use of these terms then allows identification of where the pain is and what its function is; these uses will be discussed in the following theme sections. The many different uses of words to describe pain allow for identification of what sort of pain is being assessed. There are additional issues related to terminology when medication is considered, again how terms for medication are identified and used by HCWs and patients differ in some cases. The first part of this section will now look at words associated with pain.

The starting part for investigating the words used in the data was to refer to the main word components of the McGill Pain Questionnaire (MPQ). These were taken and used as search terms for concordance, and key word lists. The following results are revealed from the initial search of words that are used in the MPQ. In the following table (Table 10) where words do appear in the data these are given a count in parenthesis, similar words or derivations of the words also found in the data are identified in a separate column:

Table 10 McGill Pain Questionnaire word groups

Numbers in brackets indicate frequency of occurrence in the data. Section highlighted in red refers to the affective domain of the MPQ.

Group	MPQ Words	Similar or equivalent words present in data
1	Flickering, Pulsing, Quivering, Throbbing, Beating, Pounding	Throb (2)
2	Jumping, Flashing, Shooting	Shoot (1)
3	Pricking, Boring, Drilling, Stabbing	
4	Sharp, Cutting, Lacerating	
5	Pinching, Pressing, Gnawing, Cramping, Crushing	
6	Tugging, Pulling, Wrenching	
7	Hot, Burning (1), Scalding, Searing	
8	Tingling, Itchy, Smarting, Stinging	
9	Dull, Sore (8), Hurting, Aching (1), Heavy	Hurt (6) Hurts (4) Ache (2)
10	Tender (4), Taut, Rasping, Splitting	Tight (taut) (1)
11	Tiring, Exhausting	
12	Sickening, Suffocating	
13	Fearful, Frightful, Terrifying	
14	Punishing, Grueling, Cruel, Vicious, Killing	
15	Wretched, Blinding	
16	Annoying, Troublesome, Miserable, Intense, Unbearable	
17	Spreading, Radiating, Penetrating, Piercing	
18	Tight (1), Numb (5), Squeezing, Drawing, Tearing	
19	Cool, Cold, Freezing	
20	Nagging, Nauseating, Agonizing, Dreadful, Torturing	

It becomes evident from the small frequency counts that words that have already been identified as being appropriate words to use in the MPQ are not being used in the instances recorded within this data. There are a couple of exceptions to this with words such as *numb* and *sore* being used. The words *hurt (and hurts)* may also be considered in a similar way with a derivative link to 'hurting'. However, this lack of words from the MPQ could also importantly reflect the fact that the MPQ is not actually used as the assessment framework for pain in this clinical area. Whilst this at first might seem a negative point for the research it does provide a starting position to see what has been used in the place of these words. Additionally there are examples of use of some of these words above from the MPQ that do not relate to pain specifically, for example, *cold* is used when discussing one person's feet where they have no slippers on. These other uses of the words have been removed from the following concordance lines, which identify the use of these MPQ associated words in context (Table 11). The words used below all show some degree of description of the pain in terms of what it might feel like.

Table 11 Concordance - MPQ pain words

11	my arse cheeks are pretty	numb	OK Erm now you want to see me wal
12	eeling today A***** Still	numb	Still numb no better Well the I me
13	y A***** Still numb Still	numb	no better Well the I mean the the
15	Err err not until it went	numb	below below the waist You've alway
2	't feel at all Completely	numb	is it And how Does it go all the w
4	Just me backs just that tight just like a		Just bin out and
1	of said that it's like a burning	pain	but if I said if zero was no
1	age it's just going to be	sore	So all we've finally get you use t
2	got a bit of cramp Is it	sore	No No its alright OK nice and stro
3	dinner time That little	sore	hurts more than me back Arr Believ
4	re the tape went It looks	sore	as well That's what I mean What ta
5	bruising or swelling Not	sore	for me to touch No cos it's It's
6	ink you did have a bit of	sore	there anyway so I don't think your
7	fter your operation Still	sore	but otherwise OK Good good so at t
8	own I just thought it was	sore	but its seeping You know Yeh You m
1	g or getting a little bit	aching	it is time to change your position
1	t in is it Yes it will be	tender	Err what I'd like to do before I h
2	cause it's so te but it's	tender	but at least if it's working now Y
3	thing touches my back its	tender	so I presume that's where the need
4	is Right And that's	tender	when I touched it gently there Yes

Also identified in Table 10 above are similar words or derivations of the words in the MPQ. This gives a total of 36 occurrences of words linked to the MPQ. There are also a number of words not represented in the MPQ that were used within this data to describe pain. Further investigation of the data reveals words related to some of the feelings of pain such as: *comfort*, *discomfort*, *uncomfortable*, *soreness*, *excruciating* and *awful*. It has been highlighted that some words are used in different contexts other than relating to pain expression, this being a limitation of purely looking at the word list, and as mentioned earlier, other forms of the word such as plurals or tense differences are also not immediately identified by AntConc searches. A further issue to consider is the context of the word used within surrounding words as this forms part of the interaction itself. These words are shown in context in the following concordance lines (Table 12).

Table 12 Concordance - Other pain descriptors

```
1 the minute No No Well I got soreness in my thighs and and around my wai

1 k check of the strength and sensation of your legs just to make sure you
2 re      Cos I did have some sensation loss in my left leg Yes yes we've
3  is just have a look at the sensation and strength of your legs so is it
4 o we'd like to look at your sensation first what I'm going to do is brus
5 d if I have a sweep of your sensation down your legs  OK So I am going t

1   Yeh He said But it will be painful probably Yes yeh it is a bit painf
2  robably Yes yeh it is a bit painful But a different painful to what it
3  bit painful But a different painful to what it was Yes yes err just as
4  the dose  Oh yeh      Is it painful this venfoln Yeh It is      Right
5  How do you feel I know it's painful but How do you feel you are on you
6  ck feel Err it feels OK its painful but he said Yeh He said But it wil
7  ast stressful and the least painful way for you to move on your back O
8  is is going to be the least painful way for you to move err because yo
9  h Yeh My back is a lot more painful than I thought it would be Have yo
10  other side      That one's painful is it in the in the hip or in your
11  on your right side Is that painful to straighten as well Don't let me

1  p Inside your legs almost a throb Like a throb Yeh Does it shoot or
2   legs almost a throb Like a throb Yeh Does it shoot or No It's just

1  ob Like a throb Yeh Does it shoot or No It's just there Just there A

3  I mean this one's still got numbness to it but it's pretty much fine it
6  ore the accident you had no numbness  pins and needles or weakness in y
7  here no pins and needles no numbness at all in your legs No No so if I
8  ere Oh That was ticklish No numbness OK wiggle your big toes up and dow
9  el the same Yeh No areas of numbness or pins and needles No OK so just
```

Previous studies have also shown that there is some variation in the words used by patients compared to those in the MPQ. These studies though have relied on patient reporting after the event and not on the actual language used at the time (Closs & Briggs, 2002; Closs, 2005).

4.5.1.1 Terminology - use of the word *pain*

To return to the main subject of the thesis, that of pain assessment, it can be seen that in the concordance lists for *pain* (Table 13 below) there are 118 occurrences of the word *pain* in the whole of the recorded data. This figure represents a count per thousand of 3.86 for the whole data, which is slightly lower than the HCW occurrence of 4.14 and slightly higher than the patient occurrence of 3.29 (Table 4- page

107).The concordance lines below are sorted alphabetically with preceding words for ease of viewing (Table 13).

Table 13 Concordance - *pain*

1	not a pain that I class as a	pain	it's a discomfort OK Um I've alway
2	sure you are alright from a	pain	point of view It'll be to make sur
3	getting out Right I've had a	pain	in my groin for a bit now Have yo
4	ors know then Did you have a	pain	there before Yes but it had been g
5	oment Trevor It's it's not a	pain	Wha I It's not a pain that I class
6	not a pain Wha I It's not a	pain	that I class as a pain it's a disc
7	to be very dependent on and	pain	and achy we we recommend about a t
8	l there Are you due for any	pain	relief Yeh Do you want me to go an
9	eh it is Yes alright got any	pain	in your legs No I haven't my legs
10	tting here I haven't got any	pain	but my back's when when something
11	Yeh Right have you got any	pain	at all Mostly minor pain at the ba
12	n out of four I'm not in any	pain	at all as I'm lying here Thank you
13	checking your Is there any	pain	at all to them Sorry Is there any
14	to them Sorry Is there any	pain	at all to any of them That one No
15	erm long standing back back	pain	problem and that is to go onto you
16	he two Yeh I've got the back	pain	which is and then got from there
17	t was your tummy or the back	pain	Err well I've been up a fair bit t
18	golden rules with with back	pain	at at any level and especially wit
19	ur back pain How's your back	pain	Is it mostly it's the pain that is
20	sick at all And is your back	pain	How's your back pain Is it mostly
21	be you know Yeh To be To be	pain	free but I've gone through hell Bl
22	egular basis which is better	pain	relief is always better when you a
23	aid that it's like a burning	pain	but if I said if zero was no pain
24	at's it Ah Ah Oh Sh Fuck Daa	Pain	in your back It just went nooow up
25	g three days of excruciating	pain	Yeh well you're you're very lucky
26	r use your stick because for	pain	or because your leg was giving way
27	onto my right which is for	pain	Yeh Just because your attachments
28	pain I'd be I'd yell out for	pain	OK Yeh OK so if we just go for par
29	g way or It was for pain For	pain	And for balance For balance So do
30	was giving way or It was for	pain	For pain And for balance For balan
31	OK Um I've always had a good	pain	barrier Yeh But be honest with you
32	ight Erm If you've still got	pain	in a little bit you can have some
33	r this operation You do have	pain	because it had Yeh You know Yeh B
34	shaky Is it usual to be in	pain	after this operation You do have p
35	as well Don't let me bend it	Pain	in the leg In the thigh In the thi
36	at when you've irritated leg	pain	sometimes you don't know about it
37	have that So it's left leg	pain	that's referred pain that is worse
38	any pain at all Mostly minor	pain	at the back OK Right-i-o Do you th
39	lthough it is I've got more	pain	in my back now than for sometime I
40	give me some more What more	pain	hopefully not no my job is the opp
41	ll so it depends on how much	pain	you feel you're in right now Well
42	It it depends upon how much	pain	you feel you're in Its I I'm feeli
43	now I've been in s s so much	pain	err that And you still will be in
44	ain is What would you say My	pain	Uh uh It's good Good Any sickness
45	mes use some drugs for nerve	pain	and it sounds that's what you're g
46	at you're getting some nerve	pain	the nerves were irritated in your
47	I've got no I've I've got no	pain	I hadn't when I was sitting down t
48	when you're stood on them No	pain	Err not in mi not in mi right one
49	but if I said if zero was no	pain	and ten was the worse pain how wou
50	an there were there were no	pain	walking up and down stairs actuall
51	ou still will be in a bit of	pain	Oh I appreciate that This is surgi
52	thought today I'd be free of	pain	in my back Yes Its bound to be unc
53	cle Well if you had a lot of	pain	you've probably been hobbling alon
54	you feel Are you in a lot of	pain	at the moment then No I've just ta
55	also to do with your post op	pain	as well so it depends on how much
56	t to the point of stretch or	pain	because you can irritate your leg
57	I'm in excruciating referred	pain	which But it's being requested as
58	ration Awful lot of referred	pain	in the left leg and for some stran
59	eft leg pain that's referred	pain	that is worse than it was but we t
60	tell OK I know the referred	pain	is worse Is worse That's the only
61	you feeling Oh the referred	pain	was agony And where abouts is that
62	ure whether to The referred	pain	is what the amitriptyline helps S
63	ust I expected to have some	pain	after the surgery Yeh But not feel
64	ng after you to get you some	pain	relief Please You've not had your
65	you getting sort of a spasm	pain	Yeh High up in my back Right right
66	n you've got now is surgical	pain	err that we're going to stabilise
67	eciate that This is surgical	pain	I I don't expect to be you know Ye
68	we're up He's a bugger that	pain	Ah It will get easier Yeh And once

69 n it for one hour Build that pain relief up In the meantime we need
70 me drugs to help reduce that pain they do take a few days to work OK
71 n is going to get better the pain you've got now is surgical pain er
72 go Can Can you describe the pain particularly in your legs Deep Ins
73 sier At the moment Did the pain team come and see you Yeh No erm p
74 checking your How does the pain you've got now compare to the pain
75 needs doing Yes and err the pain I've got is quite normal You'll al
76 ill expecting Expecting the pain The pain to come Yes so now Now I
77 and he said to wait for the pain team to to see you first and see w
78 y one of the nurses from the pain team Oh Good Am I alright to come
79 y one of the nurses from the pain team erm the doctors asked us just
80 's the one that I've had the pain with it So as not as generally as
81 as it settled Pardon Has the pain settled No It's still there Are y
82 saying You'd still have the pain I've got away I would still have h
83 k pain Is it mostly it's the pain that is probably mostly in your le
84 it was but we think it's the pain Obviously there's a reason I supp
85 l off balance because of the pain or because of problems with your l
86 xious on them because of the pain Yes OK But physically you you're O
87 ting Expecting the pain The pain to come Yes so now Now I shuffle t
88 worse and worse and the the pain was getting phew I was on painkill
89 ock can over balance the the pain That That might have done cos my w
90 ou've got now compare to the pain you had before your operation It's
91 cos we are battling with the pain and It's hard to tell Hard to tell
92 are alright oh I've got this pain here just below my groin I'm alrig
93 h hell Bloody hell Well this pain is going to get better the pain yo
94 omfort OK Because if it were pain I'd be I'd yell out for pain OK Ye
95 o pain and ten was the worse pain how would you score your pain Erm
96 n things that aggravate your pain and that going to be the same as y
97 t's sort of met allowed your pain to escalate unfortunately Do you
98 ng down to help control your pain with regards to your walking there
99 ake the suggestions for your pain relief in your notes and then the
100 stopped using this for your pain it became the itch had gone Yeh I
101 yeh You've done How's your pain at the moment Trevor It's it's not
102r symptoms or increases your pain you stop doing them OK so the exer
103 toilet today No How is your pain out of ten out of four I'm not in
104s the opposite What is your pain like Just me backs just that tight
105ou have to put your Is your pain better now There you go It's getti
106 regularly to help keep your pain at bay and stop you from seizing u
107in your system the more your pain should be It didn't beep There ar
108tly that's good we need your pain to be controlled for us to erm to
109ld like another shot of your pain relief you err we can have some no
110e need to get on top of your pain relief and make it specific to you
111ast night seems at rest your pain is one we've got we've got some op
112 Yeh How would you say your pain is a the minute Is it Are you fee
113ain how would you score your pain Erm think eight or nine Eight or n
114h right It can flare up your pain Just do hour spells no more than t
115 I need to ask you what your pain is What would you say My pain Uh
116 actual fact An what's your pain Would you say I know you sort of s
117 on tablet to help with your pain on a regular basis which is better
118incide it err with with your pain relief a bit better I mean I just

These 118 occurrences of *pain* allow a number of investigations and comparisons to be made on how the word *pain* is used and what it is used with and who uses it. The main areas seen in the concordance lines above are related to terminology that relates to a quantity description (*a pain, any pain*), a type of pain (*surgical pain*) or ownership (*your pain*) as well as the location and function which will be discussed in more detail in the next parts.

Earlier in this part of the analysis of the data I discussed the use of words linked to the MPQ. The table below (Table 14) shows the distribution within the data of these words attributed to each of the groups (HCW or Patients).

Table 14 MPQ pain words attributed to HCW or patient

	HCW	Patient
Throb (2)	1	1
Shoot (1)	1	
Hurt (6)	2	4
Hurts (4)		4
Ache (2)	1	1
Tight (1)		1
Burning (1)	1	
Sore (8)	5	3
Aching (1)	1	
Tender (4)	3	1
Tight (taut)(1)		1
Numb (5)	2	3
Total	17	19

Looking at the words in this way shows that there is almost an equal use of the words between the two groups with 17 being attributed to the HCW and 19 to the patients. This may be related to the type of exchanges that are involved. Closer examination in context of the use of *sore* (as this is used the most and almost equally by the groups) reveals that in all cases *sore* is a unique occurrence and not linked to any prompting or use of the word by the other party as such no difference is seen between the groups in how this word is used. However, looking at the use of *tender* it can be seen in the transcript sample below (Transcript Sample 2) that the

same term is repeated by the HCW [line 3107] in response to what the patient says earlier about their pain [line 3104].

Transcript Sample 2 Use of terminology

3104	P	:	As I'm sitting here I haven't got any pain but my back's when when something touches my back its tender so I presume that's where the needle
3105	HCW	:	Yes
3106	P	:	Went in is it
3107	HCW	:	Yes it will be tender Err what I'd like to do before I help you out of bed is just have a quick check of the strength and sensation of your legs just to make sure you're not (HCW is then interrupted by another person entering the room to see about ordering food for a meal later in the day)

The same sort of pattern can be seen with other words such as *throb*, *hurt* and *numb*. This would suggest both a more patient-centred response from the HCW in mirroring the patients' terminology in these cases as well as showing an assumed understanding of pain linked to McCaffery's definition as they are using the same terminology as the patient.

To recap the findings about pain as a term, it has been shown that *pain* itself is used relatively little in the data and that other terms for pain other than those used in the MPQ are identified. The final point is that some of the uses of pain terms by HCW mirror what the patient has said indicating a patient-centred approach to the interaction.

4.5.1.2 **Terminology - language of medications**

One of the main reasons for making an assessment of the pain a patient may be in is to give them analgesia to help relieve

that pain. In the data there are specific references made to a number of medications, these are either analgesia such as paracetamol, tramadol or morphine or relate to other medications, which would help the pain management process, for example, amitriptyline. Again concordance lines are selected to show the variation of medicines referred to (Table 15).

Table 15 Concordance - Medications

1	K so if we just go for	paracetamol	then We'll just go for parace
2	then We'll just go for	paracetamol	which I would take at home an
3	lright And a couple of	paracetamol	Hello again Hiya Right What
4	fore you yeh you're on	paracetamol	So since last night that's al
5	you're on the regular	paracetamol	certainly suggest you continu
6	ally have twenty Right	Paracetamol	Yes I wish somebody would sor
7	say I could have some	paracetamol	I've got a headache OK I'll g
8	f hour Has he had some	paracetamol	mmm Seems to be working alrig
9	right Do you want some	Paracetamol	now Want some paracetamol Wan
10	acetamol now Want some	paracetamol	Want some paracetamol Yeh I t
11	paracetamol Want some	paracetamol	Yeh I think I do And your sod
12	Yeh Can't give you the	paracetamol	cos you only had some at lunc
13	Should we just for the	Paracetamol	them or The I think we can ce
14	shouldn't I mmm Two	paracetamol	for you my dear I'm so shaky
15	yes I've just had two	paracetamol	Right What would you like me
16	lenty Yeh You had your	paracetamol	didn't you at dinner time Th
17	You need You need your	paracetamol	that helps with the morphine
18	t Yeh always have your	paracetamol	Yeh And we'll ask the doctors
19	ant one or two of your	codeine	darling Pardon Your stronger
20	egularly a drug called	tramadol	err are you epileptic or no e
21	worth you having some	tramadol	regularly a smaller dose see
22	make you very dry The	tramadol	that I am going to suggest ca
23	nymore Is it just the	diclofenac	that you have problems with
24	No just anything with	diclofenac	in OK Have you got Gilli
25	ve they given you your	OxyNorm	My oxycontin they've given me
26	en you your OxyNorm My	oxycontin	they've given me that morning
27	think a little bit of	oramorph	might help Wh What's that It'
28	's that It's a liquid	morphine	If we give you a small dose s
29	t you a little bit of	morphine	What's your date of birth So
30	rl that helps with the	morphine	it helps to that the morphine
31	m it helps to that the	morphine	should work effectively The P
32	st has took me off hav	amitriptyline	Right Which the wonderful phy
33	ame in you were having	amitriptyline	Yeh But for some reason that'
34	gabalin No I just know	Amitriptyline	was the one thing that that e
35	on your normal dose of	amitriptyline	When was the baclofen started
36	They've put you on	amitriptyline	but He's prescribed it at nig
37	nd for some reason the	amitriptyline	's been stopped by the anaesthet
38	erred pain is what the	amitriptyline	helps So at the moment e
39	antibiotic up The The	amitriptyline	they have now prescribed chan
40	t tonight and have the	amitriptyline	tonight which of course if yo
41	ablet the erm Yeh the	amitriptyline	yeh cos I was asking him abou
42	gabalin as well as the	amitriptyline	You need You need your parac
43	would sort me out this	amitriptyline	substitute Just checking your
44	the ones that all want	amitriptyline	now which you can have it a b

45 get on top of why your amitriptyline and get that sorted for tonig
46 't have that with your amitriptyline and that's usually one tablet
47 K and you'll have your amitriptyline ordered As I say it took
48 much as you have your amitriptyline prescribed now baclofen is ju

49 So you've never had a pregabalin before that's That's what I w
50 ey have started you on pregabalin They seemed to be changes The
51 ugs like Gabapentin or pregabalin No I just know Amitriptyline
52 bout you starting some pregabalin today OK and you'll have your
53 ing to suggest is that pregabalin as well as on the other side
54 other side the is the pregabalin as well as the amitriptyline
55 having the gab erm the pregabalin as well and if they agree the
56 to re to prescribe the pregabalin cos there's no reason why you
57 t you have some of the pregabalin which should start tonight an
58 about the dose of this pregabalin I'm just going to see if I c

59 tyline prescribed now baclofen is just at ten milligrams thr
60 me ten milligrams of baclofen where as I normally have twen
61 riptyline When was the baclofen started Sometime Were you get

There are 61 references where specific medications are identified, the most frequent being paracetamol. This drug is a non-opioid analgesic and relates to level one on the World Health Organisation's pain ladder (McCaffery, 1992). The ways in which these medications are talked about again shows some interesting features. First considering the lines relating to paracetamol, references are made to the patient's paracetamol (*your paracetamol* [lines 16-18] Table 15) and like the pain references discussed above *the paracetamol* is also used [lines 12 & 13] referring to a thing that both parties seemingly understand. If other medications are looked at a similar use of language can be seen (tramadol [line 21] and diclofenac [line 23]) although again the incidence is not great due to the smaller frequencies. There are also 5 instances of *some* preceding paracetamol [lines 7-11], here the *some* is part of a question as to whether the patient would *want some paracetamol* or *had some paracetamol*. This might suggest that there is something about the way that the HCW is making

a judgement about the use of medication to treat or manage the pain or it may relate to *some* being a measure of quantity. This is part of the key issue relating to 'mentality' and will be discussed in the next section of this analysis.

4.5.1.3 **Terminology - painkillers**

When reference is made to a particular drug the actual drug name is used more by the HCW than the patient. For example, *paracetamol* is used 12 times by the HCW and 6 times by the patients. This would reflect a familiarity for the HCW with the name for the drug. This would be important for nurses, for example, as they need to administer drugs according to their proper name rather than their 'trade' name (NMC, 2008). One common alternative name for analgesia is painkiller, and this is a term used by both patients and HCW. The word itself suggests that this type of medication will 'get rid of' all pain and kill it. In Table 16 below the use of the term *painkillers* by both patients and HCWs is noted and suggests a 'common' term that both patient and HCW would understand.

Table 16 Concordance – *painkiller(s)*

1	about your the correct	painkillers	for you this will all we're h
2	would be Have you had	painkillers	today Oh yes Oh yes I've just
3	I've refused two of my	painkillers	this morning Oh Is that wise
4	had ever such a lot of	painkillers	this morning I wonder if it's
5	e you had What kind of	painkillers	were you on before you had yo
6	eration You weren't on	painkillers	seems you're not since you ha
7	getting phew I was on	painkillers	then and I said Well if you'v
8	o I've just taken some	painkillers	OK so just waiting for those
9	g Pardon Your stronger	painkiller	I don't need it to be honest
10	I think it's just the	painkillers	and since we A general sort

```
11  think it might be the painkillers Mmm You look better in yourse
12 Just going to get your painkillers for you err Physios have told
13 lly when you need your painkillers need to be working Do Does my
```

Painkillers is used 6 times by each group with the additional use of *painkiller* by a HCW [line 9]. In the data sample below the nurse in this case informs the patient of their intent to get the analgesia they need by using the term *painkillers*. The use here of this term reflects a term that the HCW assumes the patient will understand.

Transcript Sample 3 Painkillers HCW

```
2402    HCW  :  Just going to get your painkillers for you err Physios have
                told me just looking for a drug card it's not around here
```

The patients also use the term *painkillers*. In the example below (Transcript Sample 4) the patient is expressing that they no longer need *painkillers* and as such are suggesting they are getting better. There is use of *painkillers* by the HCW in line [2813] to again mirror what the patient has said, there could though be a missed opportunity here to explore what the patient means by *painkillers*.

Transcript Sample 4 Painkillers - refusal

```
2803      HCW  :  Good afternoon
2804        P  :  Good afternoon
2805      HCW  :  How are you feeling
2806        P  :  Fine
2807      HCW  :  Fine good
2808        P  :  I've refused two of my painkillers this morning
2809      HCW  :  Oh Is that wise or
```

2810 P : Well I yeh yeh erm as I lay nothing
2811 HCW : How about when you move though
2812 P : Ah yes yeh but
2813 HCW : Cos that's ideally when you need your painkillers need to be working

The problem with using a single term such as *painkillers* or *painkiller* is that it then becomes hard to distinguish what effects each type of tablet is having. In Transcript Sample 4 above there is no attempt made to clarify what medications are being referred to, it is possible that patients may be on a combination of analgesia medications depending on their pain. The World Health Organisation (WHO) in their analgesia ladder outline starting with level one analgesia and moving up to the next levels as the pain needs further control, these drugs may be given alongside drugs from the lower level of the ladder (McCaffery, 1992). Level one analgesia involves the use of non-opioid drugs, levels two and three involve opioid analgesia, with the strength being the determining factor between level 2 and level 3. It is mainly the drugs in levels 2 & 3 that give rise to many of the side effects that patients experience. In Transcript Sample 5 below the patient is obviously experiencing some side effects but it is not clear again what analgesia these refer to as the term *painkillers* is used again.

Transcript Sample 5 Painkillers - side effects

3346 P : I've had ever such a lot of painkillers this morning I wonder if it's that that's making me feel
3347 HCW : A bit drowsy
3348 P : Strange I feel shaky

The HCW in the example above is making an assumption about how the patient is feeling by saying *A bit drowsy*, however, the patient quantifies this by their reply of *Strange* and *I feel shaky* either of these could be side effects of the drugs taken earlier but there is no attempt made to explore this any further. WHO also advocate the use of adjuvant therapy either as drugs to relieve specific types of pain or those agents to help relieve symptoms caused by the analgesia drug, one such effect is constipation caused by opioid drugs (McCaffery, 1972; McCaffery & Ferrell, 1997; Buvanendran & Kroin, 2007).

One often-bypassed part of the analgesia assessment process is evaluation of the analgesia. This requires the HCW to actually assess how effective this dose of analgesia has been. In Transcript Sample 6 below there is acknowledgement that having just had some analgesia the HCW needs to give this some time to start being effective.

Transcript Sample 6 Painkillers - effect?

3682	HCW	:	OK Do you feel Are you in a lot of pain at the moment then
3683	P	:	No I've just taken some painkillers
3684	HCW	:	OK so just waiting for those to kick in then at the moment isn't it

The response from the HCW shows a common assumption of the term *painkiller* by how they acknowledge that they will wait for them (*painkillers*) to work. However, there is a use of the phrase *waiting for those to* ***kick*** *in* (emphasis added) suggesting that there is an immediate effect that will happen and so reinforces the use of the *painkillers* terminology. The use of *kick* in this phrase aligns with the earlier discussed example of the body being equated to a machine (Smith, 1998).

Through investigating the language of medication it has been seen that there is specific reference made to the names of the drugs in some instances and to generic terms in others (*painkillers*). There are two considerations to make about the use of this type of language use. The first is as an information process in that HCWs are using the correct terminology so that the patients are made aware of the drug they are receiving and possibly allow patients to make their own investigations about the drugs at a later stage. The second use of this technical language can be seen as a form of using power. Knowledge and power have been closely linked in the way in which discourse can be seen to be used, indeed this is a focus for Foucault's work where there is seen to be a simultaneous construction and definition of different foci of knowledge

dependent upon the discourse prevailing (Hayter, 2007). Within the transcript samples above there are a number of areas where HCW are using their specific 'medical' knowledge to explain situations and effects and so controlling the interaction.

In nurse-patient interactions Hayter (2007) highlights a number of methods used to present information to patients through different types of knowledge. This knowledge can be scientific or non-scientific and nurses used power in terms of these different knowledge forms to control information given to patients, either in terms of persuasion (scientific) or impact (non-scientific) (Hayter, 2007). The use of proper drug names in the exchanges seen above may suggest that the interaction is being controlled by the HCW.

4.5.1.4 **Analogy and Metaphor**

In the data there are a number of analogies presented: some though do not relate to pain (for example - peeing like a racehorse – although I am not sure what this is actually like! But I would guess it has to do with passing a large amount of urine!). The use of analogy is another instance of terminology use. This time the focus is not on the specifics of the pain description, location or function but an expression of the experience of the pain to them and what it appears like. In

Table 17 below there are a number of descriptions of what the patient's pain is like. It has been found that patients commonly use analogies to report their pain (McDonald, LaPorta & Meadows-Oliver, 2007). The use of metaphors is commonplace in normal language use (Lakoff & Johnson, 1980); however, the use of metaphor in this data is not seen in relation to pain assessment language.

Table 17 Concordance - Analogy

1	scles a bit stronger and it'll act	like a	corset around your tummy eventuall
2	before were you No I used to bend	like a	piece of willow in the wind to the
4	I know you sort of said that it's	like a	burning pain but if I said if zero
5	s for it and its Aw Bless you It's	like a	shining light I don't want it to g
6	Just me backs just that tight just	like a	Just bin out and just been up
8	nough More water OK Are you peeing	like a	racehorse I am drinking I believe
9	ep Inside your legs almost a throb	Like a	throb Yeh Does it shoot or No It's

In Table 17 above of the few analogies that are used when linked to *like a* only one directly relates to an experience of the pain in terms of *like a burning pain* giving a graphic description of the current pain. Unfortunately some of the analogy language is lost due to the quality of the recording made as can be seen in Transcript 7 below.

Transcript Sample 7 Loss of analogy description

1825	HCW	:	Morning
1826	P	:	How you doing
1827	HCW	:	Hello I'm K***** one of the nurses from the pain team erm the doctors asked us just to cast an eye over you and see how you are doing
1828	P	:	You mean you gonna give me some more
1829	HCW	:	What more pain hopefully not no my job is the opposite
1830	HCW	:	What is your pain like
1831	P	:	Just me backs just that tight just like a (*recording becomes inaudible*)
1832	P	:	Just bin out and just been up and down
1833	HCW	:	Have you Oh were you was it you I was who came down that way
1834	P	:	Yes
1835	HCW	:	Brilliant
1836	P	:	No problems

1837 HCW : That's good

When using the McGill Pain Questionnaire (MPQ) there is a reliance put on patients being able to describe what their pain is like, however, as has already been commented on, the use of words relating to the MPQ is limited in the data with descriptions of pain being given that do not remotely link to the words in the MPQ. The comment was made earlier that this issue might have more to do with the fact that the MPQ is not used as a pain assessment tool in this area, the suggestion being that if it were then more of the appropriate words would be found. A reminder here though is that the MPQ is based on words found within 'medical' texts and so there may be some assumption that HCWs are aware of these words but not actually using them to prompt patients about their pain.

In Transcript 7 above there is some loss of recording quality, which means that the analogy cannot be identified. However, as can be seen in line [1831] whatever the tightness was (*tight just like a*) it has not stopped the patient from doing some exercise and so an assumption has been made by the HCW not to continue with any further assessment of the pain. There is however an attempt at humour by the patient *You mean you gonna give me some more* [line 1828] in response

to the introduction from the HCW stating they are from the *pain team* [line 1827]. The response from the HCW picks up on this and says *hopefully not*; this then allows them to go straight into a question about how the patient's pain is. In terms of terminology, this exchange relates to the earlier definition of pain relating to suffering and the patient is making the implication that being from the *pain team* that they are going to potentially suffer!

The use of humour here does though make the HCW aware that the patient is already having issues with pain with the reference to *some more*. This is picked up on by the HCW in asking '*What is your pain like?'* instead of the more common question 'Have you any pain?' This attention to what the patient is saying by the HCW shows again that there is a focus on the HCW being patient-centred and listening to what the patient says in line with McCaffery's definition of pain.

The final observation to be made about terminology used is linked to vague language. In Table 18 below the term *or anything* is identified:

Table 18 Concordance - *or anything*

1	Do you feel a bit dizzy or anything a bit A bit Yeh Yeh Yeh Is p
3	lets for blood pressure or anything No No Oh I'm usually on erm a
4	on a fluid restriction or anything are you No Is that alright Y
5	don't have to stand up or anything I've just cleaned me teeth Ah

Vague language is a feature of healthcare language and the use of *or anything* in the examples above gives the patient opportunity to add any other descriptions or factors they may wish to (Adolphs et al., 2007). The use of *or anything* directs the patient to the type of subject or symptom being talked about, although in the examples above it is only line [1] that has any remote relationship to pain assessment. Adolphs et al. (2007) also point out that the use of this sort of vague language acts as a way of showing politeness in not over-burdening the patient with lists of possible symptoms. This reinforces the above suggestions that HCWs are being patient-centred showing politeness and therefore respect for them.

In this first part of the analysis I have highlighted some of the key uses of terminology from the specific use of the word 'pain' to other words that can be used to describe pain through the terminology of medications and the analogies used for pain. There is though, as has been seen, a limited range of words used in this terminology process, again reflecting possibly the difficulty with trying to verbalise what the pain is (Sullivan, 1998; Sullivan, 2001; Kugelmann, 2003). Having identified some of the ways in which both parties use words I will now go on to discuss how these words are used to identify both the locations and functions of pain.

4.5.2 Location

In this part I will discuss how both the HCW and the patient use words to discuss pain location. To be able to deal with pain the HCW needs to use their diagnostic experience to get appropriate treatment for the patient through identification of where the pain is (Kugelmann, 2003). Within the data there are some clear examples detailing specific locations and other examples where the location is not so clear. However, the first investigation looks at *in* which suggests a location. Concordance lines linking *in* with *my* and *your* are provided in Table 19 below as these combinations could suggest what location is being talked about by either patients (*my*) or HCWs (*your*).

Table 19 Concordance - *in my* & *in your*

1	h it is I've got more pain	in my back now than for sometime I don't
2	of a spasm pain Yeh High up	in my back Right right Are you experienc
3	t today I'd be free of pain	in my back Yes Its bound to be uncomfort
6	g out Right I've had a pain	in my groin for a bit now Have you
7	id have some sensation loss	in my left leg Yes yes we've seen that I
8	ony And whereabouts is that	In my legs It's in your legs Yeh And for
11	e No No Well I got soreness	in my thighs and and around my waist Yes

1	n the nerves were irritated	in your back caused by due to your surgery
2	is it in the in the hip or	in your back In the hip In your hip OK Can
3	t Ah Ah Oh Sh Fuck Daa Pain	in your back It just went nooow up there D
4	you feel a pull or a twinge	in your back it's to say it's a little bit
11	or in your back In the hip	In your hip OK Can you kick this leg forwa
12	ness pins and needles or weakness	in your legs Absolutely perfect Just your
13	you describe the pain particularly	in your legs Deep Inside your legs almost
14	s the pain that is probably mostly	in your legs I've got the two Yeh I've got
15	ins and needles no numbness at all	in your legs No No so if I just check your
16	Yeh it is Yes alright got any pain	in your legs No I haven't my legs are alri
17	Well confidence again Yes No pains	in your legs when you stand None what so e
18	hereabouts is that In my legs It's	in your legs Yeh And for some reason the a
19	e suggestions for your pain relief	in your notes and then the doctor will wri
22	your wound then Right in the right	in your sacrum OK I'll let the doctors kno
23	umulative effect the more you have	in your system the more your pain should b

The first thing to note is that there are more examples related to location spoken by the HCW than the patient, this again might suggest that the HCWs are focussing on being patient-

centred in how they address pain relating to the patient along with using their diagnostic experience to determine possible cause of the pain. Reviewing the concordance lines linked to *in my* it can be seen that in a number of cases the phrase is extended to include the word *pain* so through using this phrase *pain in my* ensures that the patient makes the person they are talking to aware that they have pain [lines 1, 3 & 6] (Table 19 above). The context of the remaining concordance lines above refers to other terms for pain as has already been discussed, for example, *soreness* [line 11]. Similar uses of location are seen in the concordance lines for *in your* attributed to HCWs. However, having identified the location of the pain there are different reasons for doing this. First it can be to pin point the location as in line [2] (*in your hip or in your back*) where the patient can then confirm which location they are being asked about. In line [3] *Pain in your back* is a question asked in response to a cry out by the patient again in an attempt to discover the location of the pain. The other use of location is as an instruction about where the patient might expect pain at some stage in the future as can be seen in line [4] above; *a pull or a twinge in your back*, possibly also indicating that pain anywhere else might be a significant issue. In this case the HCW is signalling to the patient what to expect and forms part of their role to educate patients (Ferrell &

Juarez, 2002; Innis, Bikaunieks, Petryshen, Zellermeyer & Ciccarelli, 2004).

The following table (Table 20) identifies where reference is made to the location of pain and is taken from the concordance of pain in Table 13 above.

Table 20 Concordance - pain location

15	a err erm long standing back back	pain	problem and that is to go onto you
16	got the two Yeh I've got the back	pain	which is and then got from there
17	ther it was your tummy or the back	pain	Err well I've been up a fair bit t
18	of the golden rules with with back	pain	at at any level and especially wit
19	is your back pain How's your back	pain	Is it mostly it's the pain that is
20	eling sick at all And is your back	pain	How's your back pain Is it mostly
36	are that when you've irritated leg	pain	sometimes you don't know about it
37	you do have that So it's left leg	pain	that's referred pain that is worse
45	sometimes use some drugs for nerve	pain	and it sounds that's what you're g
46	t's what you're getting some nerve	pain	the nerves were irritated in your
57	ht So I'm in excruciating referred	pain	which But it's being requested as
58	he operation Awful lot of referred	pain	in the left leg and for some stran
59	it's left leg pain that's referred	pain	that is worse than it was but we t
60	ard to tell OK I know the referred	pain	is worse Is worse That's the only
61	ow are you feeling Oh the referred	pain	was agony And where abouts is that
62	sn't sure whether to The referred	pain	is what the amitriptyline helps S
66	he pain you've got now is surgical	pain	err that we're going to stabilise
67	I appreciate that This is surgical	pain	I I don't expect to be you know Ye

The first thing to note about pain words used are those related to specific locations where areas of the body are identified, for example, back [lines 15-20] and leg [36 & 37] whereas others seem to provide a more general reference, for example, nerve [45 & 46]. There is reference to the assessment process, for example, lines [17 & 18] where specific questions are asked about the patient's back pain. Another area also mentioned is from the site of the surgery, *surgical pain* [lines 66 & 67]. This final use of *surgical pain* could be seen to have two meanings, the first being pain that is caused by and relates to a location associated with the surgery the patient has

undergone, the second being as a term for pain that is short lasting as discussed above in terms of acute pain. The use of *referred* when relating to pain is suggestive that both HCWs and patients make light of the fact that the pain does not relate to the area of specific injury. In spinal injury, damage to nerves may induce sensations away from the area affected such as the lower leg as seen in lines [58 & 59] (Seebach, Kirkhart, Lating, Wegener, Song, Riley III & Archer, 2012).

Although there are a number of specific references made to location there are also references that tend to be vague about both what the pain is and where it is. Again this reinforces the problems of trying to get the terminology for the pain right. In Transcript Sample 8 below a patient is describing his pain and how it progressed after he had an accident. There is an initial acknowledgement of where they now had pain [line 2557] *to me back*, but later there is just a general reference made to things getting worse and *more than being winded*.

Transcript Sample 8 Location – Vague

2557	P	:	Before I knew exactly what I'd I'd done to me back
2558	HCW	:	Yeh
2559	P	:	Erm because th the the initial you know the initial feeling was Oh I
2560	HCW	:	Yeh
2561	P	:	Honestly and I stood up and I walked into the ambulance
2562	HCW	:	Oh Right
2563	P	:	Err and this is and then carried on and as it got worse and worse and worse I thought this is more than being winded
2564	HCW	:	Yeh

In Transcript Sample 9 below the patient has a pain during their walk. The HCW suggests the location by asking the question *Pain in your back* [line 2333] and this is followed by the patient suggesting where the pain is by the path it took *It just went nooow up there* (with *nooow* being a verbal expression of the effect of the pain) [line 2334]

Transcript Sample 9 Location - Identification

2333	HCW	:	Pain in your back
2334	P	:	It just went nooow up there
2335	HCW	:	Do you want me to have a quick look
2336	P	:	Well I don't think you'll see owt but you can have a look if you like

There is then an attempt to identify the affected area by the HCW after asking *Do you want me to have a quick look*? [line 2335]. However, the exact location and nature of the pain is identified by the patient as difficult to determine in their response to the above question with *Well I don't think you'll see owt but you can have a look if you like* [line 2336]. The vagueness of where exactly the pain is located can be seen by the patient's reply that there would be nothing to see, suggesting that pain should be what the patient says it is (McCaffery, 1972). In this short interaction then there is some attempt by the HCW to revert to their medical or scientific background in wanting to observe the phenomenon. This approach mirrors again the sort of passive nature that HCWs might want patients to take in an interaction in that they

should just respond to their questions (Harvey & Koteyko, 2013).

4.5.2.1 **Location - experience**

Within this theme pain is seen as having some qualifier associated with it such as *a lot of*, *some* or *minor*. These denote some degree of explanation of the effect of the pain in quantifiable terms. There is also reference made to *any pain* again suggesting some quantity of pain but not asking a specific question or details of the severity of the pain. The experience of pain is one of the areas identified from the literature as part of the overall patient satisfaction survey (Healthcare Commission, 2004; Care Quality Commission, 2013). Additionally there is also reference to where the pain has come from with references to *referred pain* and *spasm pain*, suggesting that there is some other area that the pain is in that is not seen as the originating area, which in this case would be the back/spinal area.

4.5.2.2 **Location - ownership**

The ownership of pain is very firmly directed at the patient as the HCWs use *your* when talking about pain [lines 96–118] (Table 13 (page 121)). Patients on the other hand are less direct and tend to say *the pain* and occasionally *this pain* [lines 71-91 & 92-93]. There is also reference made to *a pain* which suggests that there is no ownership of this. In a small number

of cases *that pain* is used by the HCW in reply to the patient [lines 68-70]. By acknowledging this indication of ownership of the pain it can be seen that the HCWs are responding in some way to McCaffery's definition of pain that of 'being what the patient says it is' (McCaffery, 1972), and as such is an important finding from the data.

The above illustrations of the various areas of pain assessment are seen to echo what has been commonly described within the literature concerning the role of the HCW in pain assessment. However, it is more important to assess how movement affects a patient's pain than it is when the patient is at rest (Breivik et al., 2008); the next part of the analysis will discuss this.

4.5.3 Function

In this third part I will review and discuss how language is used to determine what activity the patient can carry out as well as what limits to activity pain presents. These two activities are sometimes exclusive of the assessment process in that questions may be asked in relation to being able to walk, for example, and at times form an integral part of the assessment process (Breivik et al., 2008).

The first part of the analysis here will look at the assessment process and highlight the part played by identifying what effect the pain has for the patient and what restrictions if any this places on the patient. Considering the data in this project there is some indication that a pain assessment protocol is being used as can be shown in this following sample of the data from the acute pain team specialist nurse (Transcript Sample 10).

Transcript Sample 10 Pain assessment using a number scale

1850	HCW	:	An what's your pain Would you say I know you sort of said that it's like a burning pain but if I said if zero was no pain and ten was the worse pain how would you score your pain
1851	P	:	Erm think eight or nine
1852	HCW	:	Eight or nine
1853	HCW	:	And is that when you are walking about
1854	P	:	It's just when I am getting off the bed
1855	HCW	:	Right so one at rest eight when you are moving
1856	HCW	:	Feeling sick at all
1857	P	:	I have been Yeh
1858	HCW	:	Yeh
1859	HCW	:	Are you sick at the moment
1860	P	:	No
1861	HCW	:	No
1862	P	:	I feel a bit when I first get out
1863	HCW	:	yeh that's that's quite usual with you you know sort of the quite flat for some time your your blood pressure needs to adjust so if you are getting out just stay on the side of the bed you might feel a bit sick might feel a bit heady just let that subside before you yeh
1864	HCW	:	you're on paracetamol So since last night that's all you've had they've written you up for some piriton Which is for the itch What's happening with your bowels
1865	P	:	I haven't been to the toilet as such I've got a lot of wind
1866	HCW	:	You passing wind
1867	P	:	I have been
1868	HCW	:	Yeh
1869	HCW	:	Right that's fine
1870	HCW	:	Passing wind indicates your bowel's moving and that's what we need to know really So that's good
1871	P	:	I mean I've had no food really till
1872	HCW	:	Yeh

1873 HCW : Have you had What kind of painkillers were you on before you had your operation

1874 HCW : You weren't on painkillers

This passage starts [1850] with the use of a numerical scale, which asks how much pain the patient is in on a scale of zero to ten and reflects best practice for using such a scale (Jensen et al., 2003; Karlsten et al., 2005; Sloman, Rosen, Rom & Shir, 2005; Breivik et al., 2008). The patient replies with a score of *eight or nine* but precedes this with *Erm think*, suggesting that they are not entirely sure, it is not clear from this response if the nurse is fully in agreement with this but does not ask for any clarification. There is then instead a question about what state or position the patient is in as to quantification of when the pain occurs [line 1853], this can be seen to be also associated with links to findings about amount of pain intensity (Bergh et al., 2005). Line [1854] sees the patient reply with *…just when I am getting off the bed*, which then leads the nurse to make an assumption about the patient's pain score, which the nurse gives a value of *one at rest* without any details being offered from the patient to suggest this is the case. It might however be the case that the use of *just* in the patient's reply may suggest to the nurse that there is no pain being experienced at any other time. A score for the pain is recorded in line [1855] as *eight when you are moving* even though the patient has said *eight or nine*.

There is no attempt to get the patient to clarify their score of *eight or nine*, the assumption may be that as the patient has suggested through the use of *just* earlier that nine is not a valid figure and that the pain is not therefore as high as the nurse would consider it to be to deserve a score of nine. What the nurse is doing here is asking the patient to give a functional value to pain, sometimes though it is difficult for patients to do this (Kugelmann, 2003).

In the following transcript (Transcript Sample 11) the HCW uses two values for the upper score for the pain assessment either *ten* or *four*. In either case there is no mention made of what these values relate to but it could be assumed that the patient has been asked the question before and so knows what these numbers mean. The response though from the patient is not to give a value but just to say they are *not in any pain at all as I'm lying here*, this end quantifier again suggests that once they change their position the pain experience maybe very different, this reflects previous research findings (Bergh et al., 2005).

Transcript Sample 11 Pain assessment 10 or 4

3233	HCW	:	How is your pain out of ten out of four
3234	P	:	I'm not in any pain at all as I'm lying here
3235	HCW	:	Thank you

A further assumption that could be drawn from the patient saying *as I'm lying here* is they are signalling they are 'comfortable' and do not wish to move (Bergh et al., 2005). This might then present a problem for the HCW if it was their intention to get the patient to move or exercise following their surgery.

The assessment process examined in Transcript Sample 10 is controlled and directed by the HCW and as discussed above there seems to be little in the way of gathering supplementary information for the assessment. Once the patient has answered a question it is onto the next question even though there may be further clarification that could be gained such as the issue about the actual score of the pain discussed above. This control for specific information is more evident in Transcript Sample 11 where the HCW asks a question, gets an answer and then ends with *Thank you*, suggesting that they have the answer to the question and that is all they want. The assessment though in Transcript Sample 10 then moves on to consider other aspects such as nausea and bowel action (additionally important in the total management of pain). In line [1873] above the HCW starts a sentence then restarts with a different question. The initial start is *Have you had* suggesting that the HCW is going to make some comment on

a particular drug to use. However, from the brevity of the previous assessment there is no establishment of what pain medication the patient was taking before this episode as this may be important as to what would be an appropriate drug to take this time. The renewed question asked by the HCW identifies this by asking *What kind of painkillers were you on before you had your operation?* so a further part of the assessment process is established and a reply of *none* allows the HCW to consider their options.

The next part of the interaction (Transcript Sample 12) consists of a number of suggested actions about the management of pain for this patient.

Transcript Sample 12 Pain assessment suggested treatment option

1875	HCW	:	seems you're not since you haven't used this since last night seems at rest your pain is one we've got we've got some options you're eating and drinking and we know know your bowel's moving so we could do with taking this down OK putting you on something some tablets you're on the regular paracetamol certainly suggest you continue with them cos they're very good as a back ground if taken regularly erm now we can either put you on tablet to help with your pain on a regular basis which is better pain relief is always better when you are having it regularly or given that you don't like taking many tablets you can have it as you require it but the trouble with having it just when you require it is its going to take a long while for it to work so I think you'll be better off on a small dose regularly a drug called tramadol err are you epileptic or no erm so it might be worth you having some tramadol regularly a smaller dose see how you get on you can then ask for a bigger dose or some additional ones throughout the day if you need it

The above continuation (Transcript Sample 12) from the assessment stage goes straight into providing a suggested 'treatment' option. Again there is some apparent hesitancy

about what will be said or the way that the process will be conveyed. The opening of this part of the encounter starts with *seems* and then in the second instance starts with *since* and then goes back to using *seems* suggesting that the information is based on the assessment as there is some reference to previous points raised such as pain score and the fact that the current analgesia regime (*this* – referring to Patient Controlled Analgesia system) had not been used for some time. All through the encounter though there are what appear to be false starts and then rewording (*putting you on something – some tablets*). The encounter then continues with information giving without very much verbal response from the patient. There is acknowledgement that the patient would prefer not to take tablets but then a reason for taking the tablets is given in that it would be more effective to take the tablets regularly. The function of the assessment process to enable effective treatment options to be determined is shown in this series of exchanges (Transcript Sample 12) but it also highlights the function of medication *to help with your pain*.

A further function of pain is the connection between the patient's condition, the type of analgesia and the issue of the pain experience for the patient and how this is manifest in

terms of action by the patient. This theme was also highlighted by Montali et al (2011) in what they determine as the subjectivity of pain. The consideration to be made here is that pain is used as a symptom of something that has to be treated. Symptoms present as cultural truths that contribute to a common understanding of what is wrong (Kleinman, 1988). The treatment option discussed in Transcript Sample 12 above is an example of this in that the HCW is offering a tablet that can *help with your pain on a regular basis which is better pain relief is always better when you are having it regularly* suggesting that any symptoms from the pain will be dealt with by taking the medication. A further consideration here is that this interaction attempts to show that the pain is being understood as something that needs to be treated (Kugelmann, 2003).

The following longer transcript sample (Transcript Sample 13) was identified and discussed linked to the vagueness of location of pain in the preceding part (Transcript Sample 8 - page 140). Here though I look at the longer context where the patient identifies that the pain they experienced after a motor cycle accident got worse and worse over time and led them to consider that there was something more than *I'm winded* as a result of the accident. This illustrates that the

function of pain always requires some form of interpretation (Kugelmann, 2003).

Transcript Sample 13 Pain as a symptom

2550	HCW	:	How are you on your feet getting into the chair
2551	P	:	Uh
2552	HCW	:	How are you on your feet getting into the chair alright or
2553	P	:	Yes it's it's the fear factor
2554	HCW	:	The fear factor right
2555	P	:	Yes a you know having what I've had and actually err walking on it
2556	HCW	:	Yeh
2557	P	:	Before I knew exactly what I'd I'd done to me back
2558	HCW	:	Yeh
2559	P	:	Erm because th the the initial you know the initial feeling was Oh I
2560	HCW	:	Yeh
2561	P	:	Honestly and I stood up and I walked into the ambulance
2562	HCW	:	Oh Right
2563	P	:	Err and this is and then carried on and as it got worse and worse and worse I thought this is more than being winded
2564	HCW	:	Yeh
2565	P	:	And that's when
2566	HCW	:	Yeh usually when you're winded it goes away don't it
2567	P	:	That's right I I could have saved mi myself four days of agony I think if I had of erm
2568	HCW	:	Yeh yeh

In this discussion of their pain the patient also alludes to an on-going consequence of not taking note of his *agony* in that he is now fearful of moving either because of the risk of potentially doing more damage or actually experiencing more pain (as he describes later on in the interaction). In line [2555] the patient is suggesting that they actually did not initially have any pain as they were *walking on it*, it was only later when the pain did not subside that they realised that something else must be happening as a result of their accident. The HCW in this case also offers the fact that it probably was something different to being *winded* as they say

it goes away don't it forcing the patient to confirm that they had made the wrong judgement and could have had relief from the pain earlier. There are different interpretations placed on the pain as time progresses and situations and conditions change (Kugelmann, 2003) the example above shows this change over time and shows the importance of interpretation in the assessment process. There is also reference to this aspect in Transcript Sample 10 above when the HCW clarifies when the pain occurs. The specific section from Transcript Sample 10 is shown below:

```
1853    HCW  :  And is that when you are walking about
1854      P  :  It's just when I am getting of the bed
```

The function of pain occurring within this interaction is trying to ascertain when pain actually happens and so the HCW can be aware of what activity level the patient has and what activity will denote that the patient experiences pain. In a way this could be seen as a tactic for the HCW to determine the maximum level of activity they can ask the patient to do. However, the response from the patient [line 1854] does not reply directly to the question but answers with what is seen as the point at which the pain occurs. This interaction in Transcript Sample 10 then moves to the HCW making the assessment of the patient's pain as:

```
1855    HCW  :  Right so one at rest eight when you are moving
```

The function of when pain occurs has been interpreted by the HCW as *eight when you are moving* although there have been no additional questions asked following the HCWs original question or indeed any clarification of what aspects of getting out of bed for the patient is painful. Function then can be used to determine safety aspects for both the patient and HCW. Through investigating what causes pain and the effect this has on the patient an accurate assessment can be made. In the following Transcript Sample 14 the assessment process can be seen from both the questions asked as well as in this case actual physical examination.

Transcript Sample 14 Pain function - cause

22332	P	:	Ah Ah Oh Sh Fuck Daa
2333	HCW	:	Pain in your back
22334	P	:	It just went nooow up there
2335	HCW	:	Do you want me to have a quick look
22336	P	:	Well I don't think you'll see owt but you can have a look if you like
2337	HCW	:	There's no bruising or swelling Not sore for me to touch
2338	P	:	No cos it's
2339	HCW	:	It's deep right into your buttock
2340	P	:	Right where you're pressing there
2341	HCW	:	Just there so it's quite quite below your wound then Right in the right in your sacrum OK
2342	HCW	:	I'll let the doctors know then
2343	HCW	:	Did you have a pain there before
2344	P	:	Yes but it had been going away

The first function of pain seen here is to alert the patient to something that is wrong with their shouting out and use of expletives. Sullivan (1998) proposes that pain can be considered as a 'bad pain' or a 'good pain' depending on how it

was interpreted by the person experiencing the pain. In this case because of the language they use, *Ah Ah Oh Sh Fuck Daa*, it could be considered a 'bad pain' as it has caused the patient to cry out at that particular moment (Sullivan, 1998). Lack of video recording of this interaction means that actions associated with this cannot be shown but there is some suggestion that the patient may be holding their back as the first response from the HCW is to ask *Pain in your back*. The response to this from the patient is not a simple yes but an attempt at description about where the pain is, with another cry out (*nooow*) as the pain returns. The HCW then uses the function of pain to attempt to diagnose where the pain is and what might be causing it. The site of the pain is identified by the HCW and confirmed by the patient [line 2334], within this examination the HCW is using the pain as a sign, something that HCWs use to determine their diagnosis (Kugelmann, 2003). Having ascertained where the pain is the HCW then says that they will have to *let the doctors know*, probably suggesting that they will come and know what to do.

There is though further function related to this pain in that the HCW asks *Did you have a pain there before* which is confirmed by the patient but again given a rider in that *Yes but it had been going away,* suggesting that either the patient had been

coping with the pain or that the pain was less of an issue than it had been. Again there is a degree of interpretation to this disclosure in line with Kugelmann's (2003) findings. The patient has made their interpretation of the pain but there is no attempt by the HCW to clarify the interpretation. As this appears to be a very sudden onset this reoccurrence of pain could suggest some further injury or it could be that the patient has reached the limit of movement and the pain is a function to indicate to the patient that they need to protect the area and stop doing what they are doing (in this case walking) (Melzack & Wall, 1988; Wall, 1999). In the next part of the interaction the HCW then uses the pain as a function to get the patient some analgesia (Transcript Sample 15).

Transcript Sample 15 Pain function - analgesia

2345	P	:	Mind if I sit down now
2346	HCW	:	No not at all Nice steady turn round
2347	P	:	Ah Ooh
2348	HCW	:	Has it settled
2349	P	:	Pardon
2350	HCW	:	Has the pain settled
2351	P	:	No
2352	HCW	:	It's still there
2353	HCW	:	Are you due for any pain relief
2354	P	:	Yeh
2355	HCW	:	Do you want me to go and ask the nurse that's looking after you to get you some pain relief
2356	P	:	Please
2357	HCW	:	You've not had your afternoon your dinner time meds yet then
2358	P	:	No
2359	HCW	:	OK
2360	HCW	:	I'll go and have a chat with the nursing staff to try and get some then

Prior to the HCW deciding to get some analgesia there is some on-going assessment using the presence of pain to see if the current action of sitting down is allowing the pain to *settle*. An assumption that is possibly being made by the HCW is that if the pain settles then there is no need for analgesia.

4.5.3.1 **Function - experience**

References to referred pain are associated with this part of the theme but there are also additional comments such as *minor pain* or *no pain* suggesting that there is a degree of how much pain is being experienced and how this affects the overall function/performance of the patient. The suggestion from the literature is that one function of pain can be seen as a protective measure (Melzack & Wall, 1988). This is clearly seen in Transcript Sample 13 above when the patient makes reference to the *fear factor* [line 2553] of not wanting to aggravate their injury or make the pain worse. This suggests that the pain gets worse as the patient moves and so by not moving the pain is reduced. A similar expression was given by the patient in Transcript Sample 11 as discussed above - *I'm not in any pain at all as I'm lying here.*

Additional to the function of pain as a protective measure is the function to characterise the pain to aid diagnosis and the

effect of treatment (Breivik et al., 2008). The following transcript is from a HCW and is a long explanation for the patient about what they need to be doing when they get home (Transcript Sample 16). In this transcript emphasis has been added to show the many different terminologies used as well as how these relate to function or activity the patient will be expected to carry out.

Transcript Sample 16 Pain function

1124	HCW	:	How long you sit for is going to be very dependent on and **pain** and **achy** we we recommend about a twenty to thirty minute baseline to see how you feel then you have a stand up have a walk around and then sit back down again as your back gets better the length of time that you can sit for without having to stand up and walk around will increase but you are going to have to be the judge of that OK as long as you're not staying sitting for too long at a time then that's often things that aggravate your **pain** and that going to be the same as your standing and your walking if you feel that you can only stand for a good half an hour before you feel you are **stooping** or getting a little bit **aching** it is time to change your position even though we don't need to be in bed all day with we implore you to take regular rest lying down to help control your **pain** with regards to your walking there is no restriction on your walking we encourage you to walk but how long before you walk are going to have to build up gradually So absolutely no excessive bending an of excessive bending is if you are sat in the chair now don't bend forwards to pick anything up off the floor same when standing OK so we don't want you you can be bending forwards a little bit but as long as you're not over reaching or over stretching and bending err too much in the middle same with your lifting you do not do any heavy lifting if you are going to pick up an object that you think is going to be OK but you feel a **pull** or a **twinge** in your back it's to say it's a little bit heavy for you at that point in time leave it and come back to it later OK
1125	HCW	:	Now the exercises that you've got in here I don't know erm some of them you might be familiar with OK but but the golden rule with all exercises is that you shouldn't be doing them too fast Do expect a little bit of **discomfort** but if it exaggerates your symptoms or increases your **pain** you stop doing them OK so the exercises that we've got to start off with In Just in sitting with your arms folded you can just be doing rotation exercises
1126	P	:	Yes
1127	HCW	:	So it is the lower part of your back that has had the operation on but we don't want the rest of you to get too stiff then you can just

There are a number of different functions that are identified in the transcript above. There are different terminologies used

for pain, such as: *achy, twinge, pull*. Within this advice given to the patient there are a number of times where pain, in its many terminologies, is referred to as being the limit for doing activity such as *things that aggravate your pain.* There are also assumptions again made by the HCW as to what the patient will understand, by using the different terminologies highlighted above the HCW is attempting to make the explanations 'simple'. The only input from the patient is *Yes* as a suggestion that they have taken all this information in. An assumption is then made by the HCW about understanding.

Outlining the function of pain in limiting the activity a patient may be able to do is shown above. However, there is some degree of ambiguity in the way in which these 'pain' words are used. This issue was highlighted by Coll et al (2004) when they reviewed the use of verbal descriptor score pain assessment tools. The words used to describe pain are not consistent as has been seen above neither is there any interpretation made as to what a *twinge* or a *pull* may be. Additionally, there are some quantitative descriptions associated with these words (a *bit of aching*, *a little bit of discomfort*). This failure to be able to accurately express pain also influences the interpretation that might then be made of what is said (Kugelmann, 2003). The ability to express pain

then becomes more of an issue when it is used to reflect what the patient can do, if they cannot accurately describe the pain and identify its location then the function of pain as either a sign or limiter becomes more important.

Within this part the functional aspects of what has been said about pain have been investigated. The assessment process relies heavily on these functions of pain yet as has been shown the ability to both express and interpret what has been said is problematic for both the patient and the HCW. This part along with the previous two parts has presented traditional aspects of the pain assessment process using language to determine this. The next section of the analysis will look at the mentality and the stance taken by the HCW in the assessment process and the use of language this presents.

4.6 Mentality

In this second section of the analysis I will look at and discuss some of the ways in which language is used to minimalise or trivialise the experience of pain. I have referred to this as 'mentality' because it seems to present a way that the pain is being thought about by both parties, but HCWs more specifically. It goes some way to answer the earlier findings in the literature about the nature of lay language of pain and that of medicine and nursing. Although this comes as the final

theme I consider this to be significant in relation to how the language of pain assessment is performed. In the previous section looking at terminology, location and function there have been examples of how the interaction has been controlled by the HCW (Transcript Sample 10). This has been either in terms of the questions asked, the order of these questions or the way that once answered the HCW goes on to select a new question or ends the interaction (Transcript Sample 12). There are a number of sub themes that have come out of using a corpus linguistics based approach to aid the analysis and these will now be discussed.

4.6.1 Language of the assessment process

The main way in which assessment is made in the data is through the use of questions. HCWs will also use non-verbal cues to assess patients and this presents one of the limitations of this particular study in that there is no video data associated with the verbal data (Dihle, Bjølseth & Helseth, 2006; Bell & Duffy, 2009). However, there is sufficient data of the verbal interactions to draw on the assessment questioning process. In the literature review it was identified that during the assessment process the use of open-ended questions allows the HCW to explore what the patient understands and reports their pain to be, with further clarification being gained by further open-ended or closed questions (Breivik et al.,

2008). In the assessment process these open-ended questions start with 'How?', 'what?', 'why?', 'when?', 'where?' & 'who?'. In the data the only identified questions relate to the use of 'how' as can be seen in the table below (Table 21).

The way in which the question is asked has been seen to affect the quality of the assessment process. Indeed, inadequate communication about pain can be seen in the way that HCWs construct their questions about pain in the fashion of social interaction such as 'how are you today?' (McDonald et al., 2007). This sort of question does not infer that the reason for asking is to elicit information about the patient's pain. 'How are you' is commonly a greeting that would be made and is not really requiring a full description of how the person actually is in normal everyday interactions, but in the case of healthcare it can also act as a cue for the patient to be given permission to say something about their health state (Sarangi, 2010).

Table 21 Assessment Questions

1	ou have brilliant I won't tell you How about if we go for a little bit of
2	ell I yeh yeh erm as I lay nothing How about when you move though Ah yes
3	sheet which they put blankets on How are you feeling this morning Bette
4	ago was the last time was OK And how are you feeling Oh the referred pa
5	t believe it No freedom for you No How are you feeling Well I've got a pr
6	Good afternoon Good afternoon How are you feeling Fine Fine good I'v
7	is table away Morning Sir Morning How are you feeling Not too bad thank
8	t doing very well at the minute No How are you getting on with this PCA W
9	ernoon A***** You alright I'm fine how are you Magic You look a lot bette
10	r what I have been through Yeh Yeh How are you on your feet getting into
11	our feet getting into the chair Uh How are you on your feet getting into
12	erever you Have it in place ready How are your feet feeling today A*******
13	olutely perfect Just your back And how are your legs feeling at the momen
14	ght You'll be lucky Right OK Erm how are your symptoms now in compariso
15	somewhere in the night Oh have you How did that happen halfway through th
16	eh Erm recognised the fact but erm How did you do it then How did you do

```
17 act but erm How did you do it then How did you do Slid off my motorbike D
18 e bed there for me Michael OK  How How did you get out of bed this mornin
19 n't it Yeh Not a great deal though How did you get into work this morning
20  morning and got out to your chair how did your legs feel did you feel sa
21 gle today but you didn't at all so How do you feel I know it's painful bu
22 o you feel I know it's painful but How do you feel you are on your feet T
25 itute Just checking your          How does the pain you've got now compa
33  you feeling Not too bad thank you How is the wound looking I don't think
34 No No  Been to the toilet today No How is your pain out of ten out of fou
65  Yes you can have a chat A look at how we are doing We we've been asked b
66  the low side earlier wan't it Yeh How we doing Do you stand at that door
69 g to hold on in front of you No No How would you normally stand up at hom
70 its doing taking the edge off Yeh  How would you say your pain is a the m
71 no pain and ten was the worse pain how would you score your pain Erm thin
77   Hi J*** How you doin you alright How you doin Alright You're mostly att
78 love Thanks Yeh Right OK Hi J***** How you doin you alright How you doin
79 try that OK thanks J***** Morning  How you doing alright You're still hoo
80  all together There we go  Morning How you doing Hello I'm Kathy one of t
81  I'll turn that light on for you   How you doing my dear Oh Hello You alr
94 hysios Right I've just come to see how you're feeling after your procedur
95 physios Hiya I've just come to see how you're feeling after your operatio
96 like me to come back later and see how you're feeling so you can try it t
97 bviously the doctors always ask me how you're getting on and I'll just ha
```

The use of *how* in Table 21 above is a good starting point to analyse the type of questions asked indeed it is suggested that the question is not 'have you got it'? but 'how much of it have you got'? (Croft, 2008). Through further use of cluster analysis the frequency of common word associations with *how* can be seen (Table 22).

Table 22 Clusters - *How*

```
Total No. of Cluster Types: 240
Total No. of Cluster Tokens: 267
1     5     how are you feeling
2     3     how you get on
3     3     let's see how you
4     3     see how you feel
5     3     see how you get
6     3     see how you're feeling
7     2     an idea of how
8     2     come to see how
9     2     how are you on
10    2     how did you do
11    2     how did you get
12    2     how do you feel
13    2     how long it is
14    2     how much pain you
15    2     how you're feeling after
16    2     it depends on how
17    2     see how you are
18    2     to see how you
19    2     to see how you're
```

The key way that *how* is used here is related to the assessment process. This is either in terms of feeling (*how are* you), amount (*how much, long*) or related to gaining more information (*how did you*). What can be seen from the cluster samples above is that this assessment process, as would be expected, is entirely HCW led. To illustrate this there is clear use of either *you* or *your* linked to the questions. However, there remains some elusiveness as to trying to locate the actual area affected by the pain, as already highlighted and discussed in the previous section, in that there are no questions to follow up the initial questions to be more specific about where the pain is or what it does. An additional feature of the use of *how* is seen in line [97] (Table 21 above) where there is some intertextuality in the statement *the doctors always ask me how you're getting on*, so here there is some reporting of what the medical staff are asking and this is reflected in the statement that the HCW needs to know the answer to so they can report back. There is also the use of *always* in this statement, indicating that the reason the enquiry is being made is not on part of the HCW but for someone else's information (the doctor).

A further use of *how* is linked to *it depends on/upon* as can be seen in Table 23 below. In lines [2 & 3] there is some

suggestion about time and the effect on the patient. These statements tend to reinforce some of the misconceptions about how acute surgical pain disappears in a few days after surgery and is soon forgotten (Breivik & Stubhaug, 2008). The suggestion is that soon there will be no pain expected.

Table 23 Concordance - *It depends*

1and out Well the thing is	it is is it depends on how high your bed is at home Ha
2ou want it's entirely up to you	It it depends upon how much pain you feel you're
3 with your post op pain as well so	it depends on how much pain you feel you're i

It is suggested in the literature that these misconceptions about pain affect the ability of patients to communicate their pain, resulting in underreporting, inadequate pain relief or severity of pain experience for the patient, additionally the inability to describe pain has also been acknowledged as an area of growing concern (Smith, DuHamel, Egert & Winkel, 2010). These initial findings about the way in which the assessment process is approached leads to further exploration concerning the shortness or briefness of both the encounter and more importantly the experience of pain. This will be further explored in the next part of this section.

4.6.2 Brief encounters – or brief experiences

The brevity of the assessment process has been highlighted above and one of the recurring issues found within the data that links with brevity is the immediacy of the situation. These can be found when the words used make reference to time as can be seen in Table 24 below.

Table 24 Concordance - time

1 o come and put another one up in a minute Oh Alright Drinking plenty aren't
2 Yeh OK Eric will be with you in a minute Alright Come in Hello Andre
3 I'll find some cream for you in a minute Little cuts are worse though somet
4 ht away alright OK OK see you in a minute OK Keep drinking Could you tell m
5 hold it out of your your way for a minute then So if you show me what you wo
6 if I just check your strength in a minute then So with regards to your stick
7 h OK Thank you very much Back in a minute J**** Yeh Can't give you the parace
8 ou going to be alright there for a minute then Yeh Would you like your table
9 erm Can I just borrow your hand a minute please You want what did you say y
10 *d it you understand there's a five minute lock out I didn't know how long it*
11 ful going down like this Right one minute I'll try and get somebody for you
12 hen I'm not doing very well at the minute No How are you getting on with thi
13 t Are you experiencing that at the minute No I'm just I really couldn't
14 w would you say your pain is a the minute Is it Are you feeling sick at
15 any problems with your leg at the minute No No Well I got soreness in my th
16 it on Not having much luck at the minute are we There was one when I was in
17 recommend about a twenty to thirty minute baseline to see how you feel then

70 now I haven't weighed myself for a bit but I think about ten and a half s
71 to the bed I'll just err sit for a bit I'm just thinking how long will it
72 I've had a pain in my groin for a bit now Have you Be worth mentioning
73 do then P******* is just go for a bit of a walk and erm I'd like to just
74 you want to go on your side for a bit Ok how's that How's that It's OK
75 can either sit in the chair for a bit or you can get back into bed I'm s

The first occurrences relate to *a minute* with *in* being a common precursor to this. *In a minute* suggests that there is something else to do and that what the patient requires will be the next task for the HCW, as can be seen in lines [1-4, 6 & 7], linking to shortness of time available. The brevity and immediacy of the situation are seen in lines [13–15] where reference is made to *at the minute*, suggesting that what is happening is only important for the current moment. The patient also uses this form in lines [12 & 16] again suggesting the here and now as being important. This use of these words seems to suggest that the assessment process is another 'task' to be carried out along with many other duties or parts of the work process. Time is also denoted with *for a bit*, this is a less specific time scale, but again suggests that the activity will not take long [line 74] or has not been occurring for a long

time [line 72]. The brevity of the interaction and reference to time reflects previous discussion which highlights the importance of completing interventions along with the limited resources available to do this as a feature of current 'fast healthcare' (Crawford & Brown, 2011). The brevity and immediacy of this interaction give a pointer to the next observation of the assessment process that of trivialisation which will be discussed in the following part of this analysis.

4.6.3 Trivialising Pain

At first thought it would seem inappropriate that HCWs and nurses in particular would trivialise a patient's pain. Nurses are usually seen as wanting to relieve pain and suffering (Harrison, 1991). Indeed it was seen and suggested from the initial analysis that nurses were responding according to McCaffery's definition of 'pain being what the patient says it is'. However, this topic of trivialisation of a patient's pain has been found in previous research with issues such as underestimation of the patient's pain and an unreal expectation for complete pain relief being held by nurses (Manias, Bucknall & Botti, 2005; Bell & Duffy, 2009). There are a number of words that give an impression of trivialisation. Taking underestimation of pain as the first area to investigate, words such as *bit* and *some* are found frequently in the data relating to the assessment process. It was seen in the word

lists shown in Table 3 above (page 106) that *bit* appeared nearly equally in both the HCW and Patient lists of words used, the count for HCWs being 5.13 per 1000 words and for Patients 4.17 per 1000 words. In the first section of transcript below (Transcript Sample 17) there is an admission from the patient about their fear of moving because of previous experience prior to coming into hospital. The patient does though say that they have been in *so much pain* although does not express that he is actually experiencing pain at the present moment. This statement is counteracted by the HCW in saying that *you still will be in a bit of pain,* as a reply this can be seen as a clear statement of trivialising what the patient will expect in the form of pain. The HCW could have just said *pain* but instead added the quantifier of *a bit of*. Interestingly though the patient responds that they *appreciate that* raising the fact that there is some expectation that they will have pain and actually goes on to declare that *I don't expect to be you know … To be pain free*. As the patient is expressing this sentiment about their pain the HCW is adding further detail about the type of pain in terms of *This is surgical pain* implying that it is short lasting in nature and that it will *get better*.

Transcript Sample 17 Bit 1

2873	HCW	:	Alright there not feeling too dizzy
2874	P	:	No No No err I've got the fear factor to get over you know This is this what it's been about the the fear factor now err that I can do things
2875	HCW	:	Yeh

2876	P	:	But but But my head's saying you know what happened last time yu you know I've been in s s so much pain err that
2877	HCW	:	And you still will be in a bit of pain
2878	P	:	Oh I appreciate that
2879	HCW	:	This is surgical pain
2880	P	:	I I don't expect to be you know
2881	HCW	:	Yeh
2882	P	:	To be To be pain free but I've gone through hell Bloody hell
2883	HCW	:	Well this pain is going to get better the pain you've got now is surgical pain err that we're going to stabilise now so it's not going to be causing any damage it's just going to be sore So all we've finally get you use to doing is a little bit of routine but you log rolling onto your side and pushing yourself up into sitting is the least stressful and the least painful way for you to move on your back OK What we don't want you do to is if you're lying on your back is come bolt upright into sitting OK you've got to go onto your side and then come up and as I said
2884	P	:	Aye Yeh That's fine

This exchange supports much of the research findings about the knowledge of the nature of surgical pain (Breivik & Stubhaug, 2008) but also adds to the misconceptions about acute pain that have been seen in the previous section. The concluding remark made by the HCW is that the pain will be stabilised and so will not be *going to be causing any damage*; this is in response to an earlier discussion about the patient's condition prior to undergoing the current surgery treatment, but they then again add to the trivial nature of what to expect by adding *it's just going to be sore.* This final quantifier again draws attention to the fact that the pain is expected to go away and should not be referred to as pain but 'soreness', something considered less than painful.

In the following transcript (Transcript Sample 18) the HCW is talking about exercises that need to be done in the recovery

phase following surgery. In highlighting the exercises the HCW makes reference to the probability that pain may increase and that this is due to the patient doing the exercises wrong *you shouldn't be doing them too fast* this is further implied by adding that the patient should *expect a little bit of discomfort* rather than saying that they may experience more pain. As in the previous transcript there is a reference to the short-lived nature of pain in the idea that what is to be expected once at home is *discomfort* rather than *pain*, the trivial nature of what the patient may expect to experience is highlighted.

Transcript Sample 18 Bit 2

1125	HCW	:	Now the exercises that you've got in here I don't know erm some of them you might be familiar with OK but but the golden rule with all exercises is that you shouldn't be doing them too fast Do expect a little bit of discomfort but if it exaggerates your symptoms or increases your pain you stop doing them OK so the exercises that we've got to start off with In Just in sitting with your arms folded you can just be doing rotation exercises

A further use of *a bit of discomfort* is seen in the next transcript (Transcript Sample 19) as the HCW acknowledges that the patient is restricted in what they can do at the moment by their *discomfort* and adds to the overall sense of this is to be expected. In fact in line [3708] the HCW is implying that the patient should not be doing anything because of the discomfort, other than attempting to keep their *chest nice and clear*, a reference here to preventing them developing a chest infection. Again the assumed nature of

acute pain and the trivialisation of what the patient is experiencing are highlighted in this exchange. The power that the HCW is wielding in the transcript examples discussed can be seen in the influence they are projecting through the types of words they are using; this is similar to the findings discussed in the literature review of how professionals influenced the experience of hot or cold depending on what was said to the patient (Arntz & Claassens, 2004).

Transcript Sample 19 Bit 3

3706	HCW	:	And coughing So as soon as you start to feel a bit better then you'll be walking around anyway and taking deep breaths and your chest will be keeping clear
3707	P	:	Yeh
3708	HCW	:	But at the moment as you're in a bit of discomfort you're not going to be doing anything so you just need to ensure you keep chest nice and clear
3709	P	:	OK

In the next transcript below (Transcript Sample 20) there is a further quantifier to *bit* with the addition of *a little* [line 4222]. Here again it can be seen that trivialisation is occurring in what is said by the HCW by referring to the analgesia in terms of needing *a little bit*. The suggestion is that the pain level requires only a small amount of analgesia and although the drug itself is considered a strong analgesic the implication is that this should not really be needed and so the amount suggested is given. What though is not apparent from this is the actual dose that is given to the patient, although from my personal experience prescribed amounts of analgesia in cases

such as these would equate to an amount of between 5 and 20 millilitres being given. This too is a small volume and could equally be described as 'a bit' but there is no reference made to *a little bit* in this case relating to volume as it is directly linked to *oramoph*, whereas the reference to dose is made later [line 4234].

Transcript Sample 20 *Little bit of* …

4230	HCW	:	Are you feeling alright
4231	P	:	I just get this here
4232	HCW	:	Umm Do you think a little bit of oramorph might help
4233	P	:	Wh What's that
4234	HCW	:	It's a liquid morphine If we give you a small dose so it doesn't knock you off
4235	P	:	Yeh
4236	HCW	:	Should do the trick
	(HCW goes to get morphine)		
4242	HCW	:	Right J*** I've got you a little bit of morphine What's your date of birth
4243	P	:	Sorry

The HCW has recognised that from the response the patient makes *I just get this here* [line 4231] that the pain appears in one area and makes an assumption again that a small amount of analgesia *might* help. Thus stating that they are giving a small amount of analgesia with the hope that it will work, as the patient does not seem to have that much pain anyway. There is reference to use of technical language in the terminology used for the analgesia *oramorph* [line 4232] but further clarification is given later [line 4234] when questioned by the patient again with an assumption that the patient knows what morphine is.

In line [4234] there is also evidence of a statement by the HCW about the nature of the analgesia being given. In this they imply that a small dose is necessary to avoid any side effects in this case using *being knocked off* as a metaphor for being drowsy. The effect that this small dose of analgesia will bring for the patient is further reinforced in line [4236] with the HCW saying *Should do the trick* implying they have a magic solution that will work, whether there is a suggestion that the HCW is working on the psychological nature of the patient's pain is hard to determine but this might suggest that the magical element of the *trick* will work if the patient believes it.

The way in which language is used to highlight the power relationship between the HCW as controlling and the patient as recipient can be seen in the extract above and is also evidenced in the following extract (Transcript Sample 21). In the earlier transcript sample (Transcript Sample 10 (page 144)) where the HCW is performing an assessment there is a further example in how the HCW starts their question by trivialising a previous statement the patient has made, the specific line [1850] is repeated below

1850 HCW : An what's your pain Would you say I know you sort of said that it's like a burning pain but if I said if zero was no pain and ten was the worse pain how would you score your pain

In this example above, the opening by the HCW looks as though they are starting with a question about how the patient's pain is, but there are a couple of false starts and then the HCW says *I know you sort of said* possibly implying that you may have said that, but I am not sure I believe you. This may be a pivotal point in this assessment interaction as the HCW may already have made assumptions about the patient's pain and tries to control the assessment in the way that I have discussed earlier by assigning a particular score with no further discussion or exploration. The decision making of nurses in situations such as pain assessment has been reported to be based largely on preconceived notions or bias about the patient (Brockopp, Ryan & Warden, 2003) with reports that the more experienced a nurse is the more the likelihood that they will underestimate the patient's pain (Shugarman, Goebel, Lanto, Asch, Sherbourne, Lee, Rubenstein, Wen, Meredith & Lorenz, 2010). However, there is some earlier contradictory evidence in the literature suggesting that experienced nurses are likely to provide a more accurate assessment of a patient's pain as they can take into account some of the contextual nature of pain in terms of medical conditions and picking up on pain cues and distress

(Harrison, 1991). The HCW is the above example seems to fit more in with the former of these than the latter.

The discussion between a patient and HCW below (Transcript Sample 21) is attributable to one patient and concerns the drug amitriptyline (an adjuvant agent, although normally used as an antidepressant, it has been found to be effective particularly in neuropathic pain (McCaffery, 1992)). In this excerpt the patient has experienced poor pain relief overnight and is complaining that they have been taken off the drug despite being told they would be on it, they believe it to help their situation. In the first section the patient is talking to a physiotherapist, and there is a comment by the patient about their drug and attempts to get the physiotherapist to do something about it by referring to the fact that the *wonderful physio* was the person who started the drug and so with them also being a physiotherapist they too would be able to be wonderful. Despite this the physiotherapist acknowledges what the patient has said and continues, the patient though continues trying to get an action by adding *but nobody knows when…* again without success and then adds that they are *in excruciating referred pain*. The rest of the reply unfortunately then becomes inaudible.

Transcript Sample 21

1341	HCW	:	Erm how are your symptoms now in comparison to before the operation
1342	P	:	Awful lot of referred pain in the left leg and for some strange reason the anaesthetist has took me off hav amitriptyline
1343	HCW	:	Right
1344	P	:	Which the wonderful physio put me onto
1345	P	:	She's going to put me on something different but nobody knows when its gonna arrive from pharmacy
1346	HCW	:	Right
1347	P	:	So I'm in excruciating referred pain which (recording becomes inaudible)

The HCW exercises control within the interaction in line [1343] with the word *right*, this acknowledges what the patient has said, does not argue or go against what the patient is saying but it ensures that the patient continues to speak and explain the issues. After the inaudible part from the patient the physiotherapist does finally acknowledge what the patient is saying and assures them that they will speak to the doctors to find out what is happening but also continues with trying to treat the patient as seen in Transcript Sample 22 below.

Transcript Sample 22

1348	HCW	:	But it's being requested as far as you are aware I can chase that and speak to the doctors directly that's good we need your pain to be controlled for us to erm to achieve to get you moving
1349	P	:	Cos know I can't lay without moving for long cos I start seizing up
1350	HCW	:	Well that's good that's one of the golden rules with with back pain at at any level and especially with arthritis as well you do have that
1351	HCW	:	So it's left leg pain that's referred pain that is worse than it was but we think it's the pain
1352	P	:	Obviously there's a reason I suppose it's to do with this and
1353	HCW	:	Yeh it'll be to do with that and to do with the general anaesthetic and err be in use before the operation This is K**** she is my colleague she's come to help us this morning

In line [1348] there is an example of the physio using a different style in talking with the patient in that they refer to

us in the way that the possible real reason for the patient to have analgesia is so they (the physio) can do their job *we need your pain to be controlled for us to erm to achieve to get you moving*. There does although seem to be some slight change in the physio's confidence by including a pause with *erm* then a change of focus to say that is for the patient's benefit in them being able to move around. This adjustment of focus shows a change in the approach by the HCW acknowledging that they need to be patient-centred by making reference to *get you moving* rather than the reason being so they can do their assessment and treatment. In this next extract (Transcript Sample 23) a nurse from the acute pain team sees the same patient and starts her assessment of the patient.

Transcript Sample 23

1555	HCW	:	OK And how are you feeling
1556	P	:	Oh the referred pain was agony
1557	HCW	:	And whereabouts is that
1558	P	:	In my legs
1559	HCW	:	It's in your legs
1560	P	:	Yeh
1561	P	:	And for some reason the amitriptyline's been stopped by the anaesthetist and I've got a new one that has been requested by the pharmacy but hasn't come
1562	HCW	:	Ah
1563	P	:	Um
1564	HCW	:	Ah I wonder if that is where your drug card is then
1565	P	:	I'm not doing very well at the minute
1566	HCW	:	No How are you getting on with this PCA
1567	P	:	Well Now its working
1568	HCW	:	Wasn't it working earlier
1569	P	:	No

1570	P	:	
1571	P	:	I didn't think it was doing that much until it stopped working
1572	HCW	:	And then you realised
1573	P	:	Yeh
1574	HCW	:	Have they given you your OxyNorm
1575	P	:	My oxycontin they've given me that morning and night
1576	HCW	:	Yes what
1577	P	:	They offered me ten milligrams of baclofen where as I normally have twenty
1578	HCW	:	Right
1579	P	:	Paracetamol
1580	HCW	:	Yes
1581	P	:	I wish somebody would sort me out this amitriptyline substitute
1582	HCW	:	Just checking your (recording becomes inaudible)
1583	P	:	(recording becomes inaudible)
1584	HCW	:	How does the pain you've got now compare to the pain you had before your operation
1585	P	:	It's a lot worse
1586	HCW	:	when you're using the PCA How much You know say for example Cos we know when you One of the unfortunate things about this machine is when you go to sleep you're not using it for hours so when you wake up you need to catch up with it a bit that gives us a bit of an idea of how well it is working in a sense So have you experienced that
1587	P	:	Yeh it helps to take the edge off
1588	HCW	:	Does it is that all its doing taking the edge off
1589	P	:	Yeh
1590	HCW	:	How would you say your pain is a the minute (Patient reply is inaubible)

Again referred pain is highlighted with the nurse asking whereabouts the referred pain is [line 1556 & 1557], but before any further questions are asked the patient repeats the previous statement similar to those made to the physiotherapist earlier, but this time with more certainty about who stopped the drug and where the next *one* is coming from. Note here that the patient does not know the name of this drug referring to it as *one* [line 1561]. The patient acknowledges that they *are not doing very well* to which the

nurse replies with *No* the interaction goes on with the nurse acknowledging that the patient understands that the PCA has been of some use in controlling her pain [lines 1571-1572] however, there is still some questioning of what the patient is saying *Well Now it's working* [line 1567] in the reply given by the HCW in line [1568] *wasn't it working earlier* may be suggesting that the patient was using it wrong, this could be another possible example of not fully believing what the patient is saying.

The way in which patients consider analgesia and their pain is highlighted in the literature as suggesting that patients are seen to be reluctant to request analgesia or even actually accept medication when it is offered along with also having a low expectation regarding pain relief per se (Edwards, Nash, Najman, Yates, Fentiman, Dewar, Walsh, McDowell & Skerman, 2001). This has been seen in the transcripts above in that whilst the focus of the discussion has been on the mentality on the part of the HCW the patient has also been exhibiting similar issues of trivialisation and brevity of explanation. An additional factor identified through reviewing the data concerning *painkillers* is the way that the use of *painkillers* can also be trivialised as in the example below where *painkillers* is associated with *just had two*. It is the use

of *just* in this context that implies that again they are getting better in terms of experiencing less pain.

Transcript Sample 24 Painkillers - just the two

3524	P	:	My back is a lot more painful than I thought it would be
3525	HCW	:	Have you had painkillers today
3526	P	:	Oh yes Oh yes I've just had two paracetamol
3527	HCW	:	Right What would you like me to do because you do you feel that you'd like me to come back later and see how you're feeling so you can try it then
3528	P	:	I think you're going to have to aren't you cos I'm supposed to be going home so I've got to do it
3529	HCW	:	Yeh
3530	P	:	Erm give me a couple of hours would you is that alright
3531	HCW	:	OK erm I'll come back and see you in a bit then and then if you're still feeling horrible then we'll have to leave it till tomorrow won't we

The use of the word *just* has been discussed in respect of the doctor-patient exchange in identifying it as making some kind of value statement or judgement (Lee, 1987). The most commonly identified use of *just* was in a depreciatory meaning with doctors either implicitly or explicitly suggesting that what they say next is relatively unimportant in a way of attempting to reassure the patient (Lee, 1987). Likewise patients may open a discussion with the doctor by minimising the significance of their own judgements about their condition (Lee, 1987). The next use of *just* is in a restrictive way relating to the contribution made by the event being described and only occurs at such times (Lee, 1987). The final use of *just* is in a specificatory meaning in that it relates to very specific time frame or area affected (Lee, 1987). The use of *just had two* above is an example of this use of *just*. However

in Table 15 where *just* is used when discussing paracetamol (lines [1 & 2]) this seems to imply that paracetamol will suffice to manage the pain and is an example of *just* being used in a depreciatory context. The use of *some* in Table 15 would possibly also suggest such a stance is being taken in that the HCW implies that this is a routine drug and should be taken.

The final example of this mentality of how HCWs approach patients and how they do not fully acknowledge what the patient is actually saying is graphically demonstrated in the following excerpt (Transcript Sample 25).

Transcript Sample 25 Believe me!

2357	HCW	:	You've not had your afternoon your dinner time meds yet then
2358	P	:	No
2359	HCW	:	OK
2360	HCW	:	I'll go and have a chat with the nursing staff to try and get some then
2361	HCW	:	Are you alright sat there a bit or do you want a hand
2362	P	:	I'm alright sat here thanks
2363	HCW	:	OK I'll go and have a chat with the nurse
2364	HCW	:	Are you going to be alright there for a minute then
2365	P	:	Yeh
2366	HCW	:	Would you like your table or a drink of water or anything like that
2367	P	:	Oh
2368	HCW	:	You alright
2369	P	:	I gonna be alright thanks
2370	P	:	Why can't people have the decency to believe you when you tell them

The patient ends this particular interaction once the HCW has left the room. The patient is aware of the recording taking place and voices the last line [2370] to vent his frustration. The patient is asked three times if they are *alright* [lines 2361,

2364 and 2368] and on each occasion the patient replies confirming that they are from an initial *I'm alright sat here thanks* to the last *I gonna be alright thanks*. This appears to be a clear case of not listening or possibly not recognising what the patient is saying. There is however, a rider to this communication that is not apparent from the interaction and was only gathered by the researcher making notes about the patient. This particular patient had been seen as particularly 'demanding' and so staff seemed to be 'going the extra distance' to ensure they did not get on the receiving end of the patient's anger. The following transcript sample extracts show details of this (Transcript Sample 26).

Transcript Sample 26 Demanding patient

2407	P	:	Hello
2408	P	:	Hiya
2409	HCW	:	Alright Is it alright to come in or are you washing or anything
2410	P	:	No what do you want
2411	HCW	:	I just want a quick sweep round that's all
2412	P	:	Ah cool Were you the one that I yelled at earlier
2413	HCW	:	Me no
2414	P	:	Ah
2417	HCW	:	I know she thought one of the other girls was in and she came in thinking she was in doing beds coming to help you she says he was shouting his head off
2418	P	:	No I was I was No I was washing
2419	HCW	:	Yeh saw the sign and that up so I err leave it anyway
2420	P	:	Yeh No I was I was naked and in a very very compromising position
2421	P	:	Door opens and I was going like Hey get out
2428	P	:	Hello
2429	HCW	:	Alright if I come in
2430	P	:	Yeh
2431	HCW	:	Can I just have a look at your catheter

In the above examples we see that HCWs are asking permission, which is a change in control from what we have

seen earlier in the exchanges between HCWs and patients. However, again this is not the full story concerning this patient and in the final transcript between the HCW who asked the patient three times if he was *alright* in Transcript Sample 25 above comes back to make an appointment for the following day. The patient is still showing signs of not being happy with the response they had from the HCW as he opens with *OK Was that good enough for you*, this is very much a change in style for the patient in that this is a demand made of the HCW. The exchange still centres on assessment with the HCW wanting to know how the patient is now compared to previously. Through this interaction and the way in which the HCW now listens and responds to the patient and allows the patient to talk about their concerns the HCW is able to regain elements of control and gets the patient to acknowledge how they have been acting [line 2386].

Transcript Sample 27 Reconciliation?

2374	P	:	OK Was that good enough for you
2375	HCW	:	That's perfect a err a big improvement on yesterday I thought you was going to struggle today but you didn't at all so How do you feel I know it's painful but How do you feel you are on your feet
2376	P	:	Terrible
2377	HCW	:	In comparison to what you were before the operation Is it any better
2378	P	:	No
2379	HCW	:	No it's the same
2380	P	:	It's the same At at the moment I mean give it a cup few more days and I could feel much better But at the moment you know I still can't stand properly I can't balance properly
2381	HCW	:	No
2382	P	:	And that's the problem if I can't stand and balance properly

2383 HCW : Yeh It it is going to take a bit of time for you to get back up on your The more you are up on your feet the better you'll know But either way you're gonna have to have a bit of physio after you've been discharged
2384 P : Yeh
2385 HCW : Whether you are happy to do it as an outpatient or we could get you to someone to come into your home that's something that we can discuss when its time
2386 P : Yeh I'm I'm cool to do that I'm sor I'm sorry I'm a bit ratty It's just that I've been like sort of like getting up and about all morning and and doing as much as I can I'd done about enough before you got here
2387 HCW : No No if if if you're happy with that that's good for me But if just for my assessment cos I need to have cos obviously the doctors always ask me how you're getting on and I'll just have to kind of feed back to them and then we give them an idea of how much more you're going to need and how many days in you're gonna need to stay in and what kind of rehab you're gonna need so that's the only reason why we have to I know it's a for what you're doing and it's not that I don't believe you I do believe you but we have to like to assess your actual mobility itself so
2388 HCW : But tomorrow what we can just do is coincide it err with with your pain relief a bit better I mean I just tend to do one o'clock cos that's the time I can call on A**********
2389 P : OK
2390 HCW : So if you're happy with one o'clock
2391 P : One o'clock is fine
2392 HCW : Yeh so we'll do one o'clock again tomorrow just that's the only time I can bob round
2393 P : So I mean what you have to understand is like I'm good to get up and you know show you what I can do and stuff like that But if I feel like I'm I'm pushing too much then I'm just going to bugger myself up worse and
2394 HCW : Err well you know roughly what your limit is so we'll just work within that Yeh
2395 P : Yeh
2396 HCW : OK
2397 HCW : E***** will be with you in a minute Alright

Having regained control of the situation the HCW then reverts back to trivialising what they will be doing [2388] *But tomorrow what we can **just** do is coincide it err with with your pain relief a **bit** better I mean I **just** tend to do one o'clock cos that's the time I can call on* (colleague) (emphasis added). Despite on first impression this being a patient-centred interaction there is still evidence of control being exerted by the HCW in this trivialisation of what they will be doing. The use of *bit* and *just* again are the key words in this exchange, implying that the HCW is trying to provide the best option for

the patient but the time is actually dependent on their colleague being available therefore controlling the situation to meet their own needs primarily.

The suggestion of control exerted by the HCW can be seen if the modality of the interactions is considered, as the stance taken by the speaker commits themselves to a particular way of working (Fairclough, 2003). One way that control can be exerted is through the use of indirect requests that are usually phrased as a question. The request element infers that the person being asked 'must do' something and there is no real option of an answer of 'no' or 'will not' (Adolphs, 2008). This is shown in the data if the opening *Can you…* is looked at. In Table 25 below some of the concordance lines for *can you* that provide evidence of this type of request are shown.

Table 25 Concordance - *Can you*

1	bend you at the knee Well done And	can you	bring your knee up towards your ch
2	g that one These exercise that you	can you	can do as soon as you go home howe
10	ve that before the operation No No	Can you	hold your foot cocked back like th
11	eaned me teeth Ah That's better OK	Can you	just give me your hand please and
12	ve two Ideally yeh IDs Ideally yeh	Can you	just hold on to that there for me
13	Do you want these blankets back on	Can you	just open it out just for modesty
14	e without me kind of resisting you	can you	just try and straighten your knee
15	our back In the hip In your hip OK	Can you	kick this leg forwards OK hold you
16	les No OK so just as you are there	can you	lift your thigh up of the bed for
18	e commonly While you're down there	can you	pull that thing up Course I can It
19	initely in the firing line as well	Can you	pull your big toes up towards you
20	just come with the territory	Can you	push your toes down Well done Good
24	OK relax two more This bottom leg	can you	straighten the leg out OK And hold
25	Yes Good feel the same Perfect So	can you	try and push your big toes up for
26	ing to bend your knee a little bit	Can you	try and draw your heel towards you

The use of *can you* above is seen as 'you will do this' or 'you need to do this' and is used by both parties although there is more use made by the HCWs than patients. In the examples

above there is no alternative for the patient not to do the requested action, it is not made explicit by the HCW that this is a 'demand' on the patient in that they have to do what is being requested as this is part of either the treatment option or assessment process as seen in the previous section. In terms of again trivialisation the HCW is in control and although directing requests there is no available option for the patient, so trivialising any form of objection the patient may have to doing the requested actions. Further trivialisation could be considered in how there is an assumption made by the HCW that the patient will do what they ask them to do.

The approach from a HCW point of view (and also the patients to some lesser extent) has identified that although there is some acknowledgement of being patient-centred in their approach there is a significant trivialisation of what the patient is saying, although the patients themselves may initiate this. The content of the exchanges in Transcript Sample 10 and Transcript Sample 12 above illustrates what Harvey & Koteyko (2013) refer to as some of the significant differences in the way nurses communicate compared to the way doctors communicate. There is very much an active participation by the patient in the early stages of the interaction as the nurse involves the patient in the exchange (Harvey & Koteyko,

2013). Whereas it is suggested that doctors are more likely to use specialist language and be more technical in their approach (Harvey & Koteyko, 2013). However, there is some use of technical language by the nurse and this may be representative in this case of their 'specialist' role. Overall though there is a patient-centred focus for the interaction with the very frequent use of *your* by the HCW ensuring that they are making reference to what the patient says about their pain, here there are clear links to McCaffery's definition of pain. From the analysis and discussion presented above the trivialisation is not just focused on aspects of pain but on other activities as well and suggests that HCWs are possibly making an unconscious decision in how they reply to patients in the way they exhibit this trivialisation aspect whilst at the same time appearing to be patient-centred. Here the tension between being professional and patient-centred can be seen (Berwick, 2009).

This section of the analysis has drawn on how HCWs respond to patients in terms of 'mentality'. Drawing on the brief critique of patient-centredness it could be seen that some reason for this mentality approach is the need to balance the need to be patient-centred while at the same time working within the very narrow restrictions placed on practice by

current policy and a need to ensure that all actions provide 'added value' to the patient's experience (Kelly, 2013).

The findings presented in this chapter have included a quantification of key features in the language of pain assessments and four more in-depth themes generated by corpus-based critical discourse analysis. Using AntConc software, the corpus linguistic overview afforded a useful diagnostic of core features of the data, through word lists, concordance, collocations and word clusters. The four key themes that have been discussed in the two sections have shown how language can be used to control as well as inform the assessment process. The last theme of mentality could not have been arrived at without the discussion of the three previous themes as these form the basis of how language is used and understood by each party. In the next chapter I will discuss conclusions arising from this analysis and offer some recommendations both for the use of the approach taken in this thesis and also implications for the assessment process in clinical practice.

5 Conclusions and Recommendations

5.1 Conclusions

This research set out to answer the question "Do healthcare workers help or hinder patients to express their pain during their assessment process?" In making conclusions to this work I will address a number of areas that I consider important aspects of the research and this will be done in posing further questions of the research and research findings. It is pertinent though to refer to the critical realist approach taken in this thesis to identify that an intensive approach to the data collected has been taken and that this can effectively explain causal meanings in context within a small data sample (Sayer, 2000) it does not seek to provide generalisable conclusions. The first part of this conclusion will consider the overall profile of pain language and pain talk in the data. The second will draw conclusions about the ability of this approach to identify and answer the research question. Finally conclusions will be made about how clinical practice can benefit from this investigation.

5.1.1 Why is the profile of pain language low?

The first conclusion to draw from the analysis is that the issue of pain language does appear to have a low profile in the general day-to-day interaction between HCWs and patients. It

is worth noting again that the data used in this corpus was recorded the morning following surgery. The specific data relating to assessment and pain in particular was extracted, transcribed and analysed as detailed in the previous section. The most notable point arising from the analysis is that overall there is a small proportion of the corpus that is attributable to 'pain language'. This is quite surprising for the researcher, as it would be expected that patients, selected as they were just after surgery, would require assessment of their pain or would require management of their pain on a more regular basis than that presented in the data. It is not the suggestion here that this is not being carried out but the assessment is not on a scale that might be expected so close to surgery occurring (within 24-48 hours). An additional consideration is that as part of the interactions that occur within the ward environment there are many other equally important interactions and assessments being made. The focus of the research being on the language of pain assessment means that there is an inherent bias on this and that pain assessment may occur as frequently as other interactions, it is that these have not been identified and quantified. I suggest that the level of pain language is reflective of both the research approach taken and the 'care' approach by HCWs. More detailed pain language may be gathered by following specific

professional groups, for example, members of the pain specialist team. Although this approach would elicit more 'pain language data' it may be suggested that this may introduce a greater degree of data collection bias than may already be present in this data.

5.1.2 Discovery of new material relating to pain assessment?

The apparent scantiness of pain language within the data seemed initially to mean that it would be difficult even talking about pain, never mind being able to discover key themes about the assessment process. However, through the use of a corpus-based critical discourse analysis approach key themes could be identified. The ability to compare the words used for pain in this data to those already identified in the MPQ was greatly influenced by the use of this corpus linguistics based approach to the analysis process, although as identified in the analysis section, the MPQ is not actually utilised to assess pain in this clinical area. Despite this there is some use of some of the MPQ terms and more importantly though there is use of terms in the area of affective words as has been suggested by previous studies (Kremer et al., 1983). The overall findings indicate then that when there is use of pain language this does reflect previous findings especially in relation to the analysis referring to terminology, location and function.

The setting in which the interactions occurred is an acute hospital ward area, and as declared earlier, this kind of corpus-based study of naturally occurring pain assessment language is the first of its kind. The interactions recorded form a social event between patients and HCWs, however, CDA would also suggest that these interactions are mediated by 'social practices' (Fairclough, 2003). These 'social practices' have been shown to focus very little on actual direct pain assessment along with poor acknowledgement of what the patient is actually saying. So it is proposed here that even though little has been said about pain, this is in fact a significant issue to address. It is assumed by the definitions of pain that it can be expressed, however, as previous authors have indicated this is not always easy to do (Smith, 1998; Closs & Briggs, 2002). Analysis of the data in this thesis has shown that there is still a distinct problem with understanding a person's pain both in terms of what the patient needs to say and the questions HCWs ask about pain. Furthermore and importantly, it has provided a corpus linguistic evidence base on this for the first time.

5.1.3 What can clinical practice learn from this?

In the first three key theme sections of the data analysis, that of terminology, location and function, the overall approach

identified seems to show a patient-centred focus for the encounters. Only when presented with the analysis of pain assessment and deriving the mentality of the process do I show that there are some conflicting uses of language that appear to go against the general feeling of patient-centredness that is found in the corpus linguistic overview stage of the analysis. One possible key to this finding may be that HCWs are paying 'lip-service' to the definition of pain suggested by McCaffery (1972) in being something that the patient says it is, and instead is more aware of the other definitions that I started with which are repeated below:

> "An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage." (IASP, 2012)

> "Pain is the unpleasant sensation that has evolved to motivate behavior which avoids or minimises tissue damage, or promotes recovery." (Wright, 2011)

Taking the IASP (2012) definition above, the 'unpleasant' description of the pain could be one interpretation that the HCW is making of the patient's pain. I am meaning by this that the HCW is assuming that the pain is not 'bad' as there has been some trivialising of the pain by the patients along with findings from previous research that suggests patients are reluctant to request analgesia (Edwards et al., 2001). Additional to this viewpoint is the reference made earlier to

the nature of acute pain, in that the HCW will be aware of the 'damage' caused by surgery, but their focus is on recovery not just of the affected tissue but also the belief that acute pain diminishes over time. Wright's (2011) definition makes similar reference to unpleasantness but this time links it to motivation. There is no doubt that the patients would be motivated to get over their surgery and so possibly the initial trivialisation may relate to them wanting to get out of hospital and back to normal! There have been reported differences between the perception patients have and that of nurses to the estimates of pain which have been shown to relate to factors for the nurses such as experience, type of operation or number of days post-surgery (Manias, Botti & Bucknall, 2002). This data also covers other allied health professionals who also exhibit similar perceptions about the patient's pain.

To some extent the same cultural conditions that affect patients also affect the ability of practitioners to describe pain, as they too are part of the same larger cultural group. Although they do have more exposure experience to many other people and how they describe their pain, this would suggest that they might be more aware of how to describe pain. To a degree this was personally experienced early on in this project when I was hospitalised following a skiing

accident. Despite having read and digested the common words used to describe pain for this research project I still found it difficult to actually describe my pain using terms that I had read. This then returns us to the opening issue about pain in that it is difficult to discuss / describe and even with the fall back to analogy, to try and reduce the description to a basic form, it still presents a problem for patients (Semino, 2010).

The findings concerning the whole aspects that I have classed as 'mentality' does reflect in some way previous findings that patients felt unbelieved in the whole process when dealing with their pain (Kugelmann, 1999; Lascaratou, 2007). However, this could also be reflected in the results seen from the National Patient Survey where 27% of patients reported that they felt staff did not know enough about how to control their pain (Healthcare Commission, 2004). An interesting note is that the percentage of patients (67%) experiencing pain has not changed that much since 2004 with 64% saying they experienced pain in the 2012 survey period (Care Quality Commission, 2010; Care Quality Commission, 2013). Pain therefore still presents a major challenge for patients and clinicians alike. Through identifying the difficulties in expressing pain along with the preconceptions that HCWs may

have will help to provide a basis for further discussion in those groups of HCWs involved with pain management.

The experience of the reluctance of some staff to be involved in the early stages of this project and the issues with having to change data collection sites suggests that HCWs may not be as open as researchers may like them to be. Interestingly a similar situation was faced in Lascaratou's study of pain language which took place in Greece where there was a reluctance of medical staff to take part in the study despite reassurances about confidentiality (Lascaratou, 2007). The initial reluctance to be involved in the study for this thesis may also reflect the fact that this was a unique (at the time) approach to take and there were concerns expressed about what the data would show or how it would be used. However, staff may actually want to embrace data of this kind to present their own evidence of how they provide care to possibly counteract the suggestion that patient-centredness becomes a means of avoiding litigation (Sarangi, 2007). The strength of this type of data however, requires dissemination to local and national audiences so that recording these potentially intimate interactions will gain more acceptance in the clinical areas. A word of warning though is necessary here. The current preoccupation of the NHS on monitoring along with the

reorganisation and realignment of health services which reflect consumer forces has given the patient voice more significance (Harvey & Koteyko, 2013). By making a recording of actual practice this may provide concrete evidence to be used in helping to express concerns where there may be issues regarding the quality of care provided. It would though not be right to suggest that there are huge amounts of poor practice happening across the health service but that staff do feel under pressure in the current healthcare environment. Here the local ethics committees play a very important part in governing how such data is used, but as yet there has been no challenge to obtain such data for these possible other purposes.

Patient-centred care has been highlighted as giving a channel for the patient voice (Kelly, 2013). This type of data also has the potential to increase awareness of the professional voice of the HCW. The ability to identify aspects of the communication process that affect the interaction between the patient and HCW that this thesis has discussed will allow a better understanding of this process and so start to meet the call for knowledgeable 'doers' (Sarangi, 2004; Skelton, 2005).

Communication is a key part of effective and efficient healthcare practice. This project set out to investigate the language used in the pain assessment process and answer the question 'do healthcare workers help or hinder patients to express their pain during their assessment process?' The findings indicate some influence to hinder expression exerted by HCWs through the trivialising and brevity of the pain assessment process. Interestingly, this is at odds with the patient-centred frame of the interactions and we cannot determine at this point whether this 'trivialising' is more than a consequence of familiarity with the types of pain that is experienced in the clinical areas. That said, through exploration and identification of what healthcare practitioners actually say and how this is responded to by patients, there is increased evidence to reflect upon and improve interactions in future to avoid HCWs subtly and perhaps unintentionally outlawing the expression of pain.

The next section will make recommendations that might be used to influence this process of pain assessment and management in the future.

5.2 Recommendations

In this final section of recommendations I shall look at those recommendations for clinical practice as well as those

recommendations for application of further studies into pain assessment language generally and also the potential to look at and compare language use in different clinical settings.

It appears that the number of patients experiencing pain in acute inpatient hospitals is still in the range of 60-70% (Healthcare Commission, 2004; Care Quality Commission, 2010; Care Quality Commission, 2013). This then suggests that the way that pain is being managed is not changing significantly and that there needs to be more attention paid to this aspect of patient care. In the literature review it was shown that increasing education in the way that pain assessment as a process was carried out had some varied success (de Rond et al., 2000a; Dahl et al., 2003; Gordon, Dahl, Miaskowski, McCarberg, Todd, Paice, Lipman, Bookbinder, Sanders, Turk & Carr, 2005). The recommendation I make here is that within the education process HCWs are also required to be educated to be more aware of the way they talk to patients about their pain. It may be that the findings relating to the mentality of pain assessment are more reflective of the familiarity that HCWs have with the types of pain they see and so become possibly 'numbed' to what the patient is actually saying. HCWs have though been shown to have a focus on being patient-centred in the way that they focus the talk about the function, location

and terminology of pain as being *your* pain when they discuss this with the patient. It is though this discrepancy between patient-centred about this aspect of the assessment process and being trivial about what this actually means to the HCW that needs to be addressed. Bringing this research evidence into the healthcare arena will hopefully start some discussion among practitioners to allow them to explore the effectiveness of their communication with patients.

I have noted that pain assessment in this acute clinical area does not use or follow a definitive assessment framework. This can be seen from the absence of any consistency in how questions about pain are asked. The solution recommended is that there is use made of a framework, or even just a simple consistency of how patients are questioned about their pain is required. These questions should include all aspects of function, location and clarification of terminology used so that those assessing the patient can be fully aware that they are focussed on what the patient is saying about their pain. Interpretation of what is said by the HCW can then occur but this needs to be directed back to the patient to check understanding that this meets with their perception of their pain.

The further recommendations concern the approach that this research project has adopted. Critical Discourse Analysis provides a wealth of tools to investigate the way in which language is used and by using Corpus Linguistics to assist with the enormity of data can, as has been seen, provide enlightening results about these naturally occurring interactions between HCWs and patients that go on day-in day-out in all our acute inpatient hospitals. As indicated above the percentage of patients experiencing pain appears to be widespread across the hospital environment and does not seem to be significantly changing. It is suggested that further research be undertaken to collect data in other clinical areas where acute pain is experienced to compare and contrast approaches to the pain assessment process.

Such a group to be considered would be to make use of those HCWs who take on a specialist role and therefore will probably have had either more experience or have had additional training for the role they are undertaking. It would be enlightening to investigate the type of language they use in comparison to the more 'general' staff in a clinical area. This was one area that this project set out to try and capture and is still an area that could provide rich data about the whole pain assessment process. Whilst the focus of this thesis has been

one small, yet very important, aspect of the patient's experience that of pain assessment there are other areas that would also probably benefit from similar investigation, again with the potential for specialist staff to be involved. Areas to be considered might be issues such as the discharge process or patient education processes or even discussion of important ethical issues such as do not resuscitate directives or end of life care decisions.

The overriding importance though of this work is that it has been able to capture naturally occurring interactions and through the use of a corpus-based critical discourse analysis approach has been able to identify aspects of language use by both parties in the pain assessment process. Naturally occurring data used in this way avoids some of the problems that can arise from interviewing participants in that they may not always recollect accurately what happened as time progresses between the event and the interview. People make their own choices about the discourse they will use, what the purpose of this will be and the type of language and words they utter. Meaning can be made of this interaction while at the same time there will be an impact on that meaning, reflecting the importance of the critical realism philosophy underpinning this research project.

Reference List

Adolphs, S. (2008) **Corpus and Context: Investigating pragmatic functions in spoken language.** Amsterdam: John Benjamins Publishing Company.

Adolphs, S., Atkins, S. and Harvey, K. (2007) Caught between professional requirements and interpersonal needs: vague language in healthcare contexts. In: Cutting, J. (Ed.) **Vague Language Explored.** Basingstoke: Palgrave Macmillan.

Adolphs, S., Brown, B., Carter, R., Crawford, P. and Opinder, S. (2004) Applying corpus linguistics in a health care context. **Journal of Applied Linguistics** 1.1pp. 9-28.

Ainsworth- Vaughn, N. (1998) **Claiming Power in Doctor-Patient Talk.** Oxford: Oxford University Press.

Allen, S., Chapman, Y., O'Connor, M. and Francis, K. (2007) The importance of language for nursing: does it convey commonality of meaning and is it important to do so. **Australian Journal of Advanced Nursing** 24(4): pp. 47-51.

Ang, P., Knight, H., Matadial, C., Pagan, A., Curty, R., Nieves, C. S., Acevedo, A. A. and Dalisay, F. P. (2004) Managing Acute Postoperative Pain: Is 3 hours too long? **Journal of PeriAnesthesia Nursing** 19(5 (October)): pp. 312-333.

Anthony, L. (2011) AntConc (Version 3.2.4w). Tokyo, Japan: Waseda University.

Arntz, A. and Claassens, L. (2004) The meaning of pain influences its experienced intensity. **Pain** 109(1-2): pp. 20-25.

Baker, P. (2006) **Using Corpora in Discourse Analysis.** London: Continuum International Publishing Group.

Baker, P., Gabrielatos, C., Krzyzanowski, M., McEnery, T. and Wodak, R. (2008) A useful methodological synergy? Combining critical discourse analysis and corpus linguistics to examine discourses of refugees and asylum seekers in the UK press. **Discourse & Society** 19(3): pp. 273-306.

Ballinger, C., Ashburn, A., Low, J. and Roderick, P. (1999) Unpacking the black box of therapy - a pilot study to describe occupational therapy and physiotherapy interventions for people with stroke. **Clinical Rehabilitation** 13(1): pp. 301 - 309.

Barber, A. (2003) **Epistemology of language.** Oxford: Oxford University Press.

Bell, L. and Duffy, A. (2009) Pain assessment and management in surgical nursing: a literature review. **British Journal of Nursing** 18(3): pp. 3-6.

Benton, T. and Craib, I. (2001) **Philosophy of Social Science.** Basingstoke: Palgrave.

Berger, P. and Luckmann, T. (1991) **The Social Construction of Reality: A treatise in the Sociology of Knowledge.** Harmondsworth, Middlesex: Penguin.

Bergh, I., Jakobsson, E., Sjöström, B. and Steen, B. (2005) Ways of talking about experiences of pain among older patients following orthopaedic surgery. **Journal of Advanced Nursing** 52(4): pp. 351-361.

Berwick, D. M. (2009) What 'Patient-Centred' Should Mean: Confessions of an Extremist. **Health Affairs** 28(4): pp. 555 - 565.

Bhaskar, R. (1975) **A Realist Theory of Science.** 2nd Edition. Leeds: Leeds Books.

Biber, D., Conrad, S. and Reppen, R. (1998) **Corpus Linguistics: Investigating Language Structure and Use.** Cambridge: Cambridge University Press.

Bray, C. A. (1986) Postoperative Pain: Altering the Patient's Experience Through Education. **AORN** 43(3): pp. 672, 674-675, 677, 683.

Breeze, R. (2011) Critical Discourse Analysis and its Critics. **Pragmatics** 21(4): pp. 493 - 525.

Breivik, H., Borchgrevink, P. C., Allen, S. M., Rosseland, L. A., Romundstad, L., Breivik Hals, E. K., Kvarstein, G. and Stubhaug, A. (2008) Assessment of pain. **British Journal of Anaesthesia** 101(1): pp. 17-24.

Breivik, H. and Stubhaug, A. (2008) Management of acute postoperative pain: Still a long way to go! **Pain** 137(2): pp. 233-234.

Britten, N. (2011) Qualitative research on health communication: What can it contribute? **Patient Education and Counseling** 82(3): pp. 384-388.

Brockopp, D. Y., Ryan, P. and Warden, S. (2003) Nurses' willingness to manage the pain of specific groups of patients. **British Journal of Nursing (BJN)** 12(7): p. 409.

Brown, B., Crawford, P. and Carter, R. (2006) **Evidence-based Health Communication.** Maidenhead: Open University Press.

Brown, B., Crawford, P. and Hicks, C. (2003) **Evidence-Based Research: Dilemmas and Debates in Health Care.** Maidenhead: Open University Press.

Buvanendran, A. and Kroin, J. S. (2007) Useful adjuvants for postoperative pain management. **Best Practice & Research Clinical Anaesthesiology** 21(1): pp. 31-49.

Candlin, C. N. and Candlin, S. (2003) Health Care Communication: A problematic site for applied linguistics research. **Annual Review of Applied Linguistics** 23pp. 134-154.

Care Quality Commission. (2010) Inpatient Survey 2010: Historical comparisons with previous surveys. London: Care Quality Commission.

Care Quality Commission. (2013) **National Inpatient Survey 2012.** [Online]. Available at: http://www.cqc.org.uk/public/reports-surveys-and-reviews/surveys/inpatient-survey-2012 [Accessed 1st August 2013].

Carr, D. B. (2001) The development of national guidelines for pain control: synopsis and commentary. **European Journal of Pain** 5(Suppl. A): pp. 91-98.

Carter, R. (1997) **Investigating English Discourse: Language, Literacy, Literature.** London: Routledge.

Chambers, J. K. (2003) Studying language Variation: An Informal Epistemology. In: Chambers, J., Trudgill, P. and Schilling-Estes, N. (Eds.) **The Handbook of Language Variation and Change.** Oxford: Blackwell.

Cicourel, A. (1992) The interpenetration of communicative contexts: Examples from medical encounters. In: Duranti, A. and Goodwin, C. (Eds.) **Rethinking Context: Language as an Interactive Phenomenon.** Cambridge: Cambridge University Press.

Clark, A. M., MacIntyre, P. D. and Cruickshank, J. (2007) A critical realist approach to understanding and evaluating heart health programmes. **Health (London)** 11(4): pp. 513-539.

Clark, W. C., Kuhl, J. P., Keohan, M. L., Knotkova, H., Winer, R. T. and Griswold, G. A. (2003) Factor analysis validates the cluster structure of the dendrogram underlying the Multidimensional Affect and Pain Survey (MAPS) and challenges the a priori classification of the descriptors in the McGill Pain Questionnaire (MPQ). **Pain** 106(3): pp. 357-363.

Clarke, E. B., French, B., Bilodeau, M. L., Capasso, V. C., Edwards, A. and Empoliti, J. (1996) Pain Management Knowledge, Attitudes and Clinical Practice: The Impact fo Nurses' Characteristics and Education. **Journal of Pain and Symptom Management** 11(1): pp. 18-31.

Closs, S. J. (2005) Assessment of pain in older people--the key to effective management. **Current Anaesthesia & Critical Care** 16(1): p. 40.

Closs, S. J. and Briggs, M. (2002) Patients' verbal descriptions of pain and discomfort following orthopaedic surgery. **International Journal of Nursing Studies** 39(5): p. 563.

Coll, A. M., Ameen, J. R. M. and Mead, D. (2004) Postoperative pain assessment tools in day surgery: literature review. **Journal of Advanced Nursing** 46(2): pp. 124-133.

Coulling, S. (2005) Nurses’ and Doctors’ knowledge of pain after surgery. **Nursing Standard** 19 May 4(34): pp. 41-49.

Crawford, C. S. (2009) From pleasure to pain: The role of the MPQ in the language of phantom limb pain. **Social Science & Medicine** In Press, Corrected Proof.

Crawford, P. and Brown, B. (2010) Health communication: Corpus linguistics, data driven learning and education for health professionals. **Taiwan International ESP Journal** 2(1): pp. 3 - 28.

Crawford, P. and Brown, B. (2011) Fast healthcare: Brief communication, traps and opportunities. **Patient Education and Counseling** 82(1): pp. 3-10.

Crawford, P., Brown, B. and Nolan, P. (1998) **Communicating Care: The Language of Nursing.** Cheltenham: Nelson Thornes.

Croft, P. (2008) The question is not "have you got it"? But "how much of it have you got"? **Pain** 141pp. 6-7.

Crowe, M. (1998) The power of the word: some post-structural considerations of qualitative approaches in nursing research. **Journal of Advanced Nursing** 28(2): pp. 339-344.

Crowe, M. (2005) Discourse analysis: towards an understanding of its place in nursing. **Journal of Advanced Nursing** 51(1): pp. 55-63.

Dahl, J. L., Gordon, D., Ward, S., Skemp, M., Wochos, S. and Schurr, M. (2003) Institutionalizing pain management: the post-operative pain management quality improvement project. **The Journal of Pain** 4(7): pp. 361-371.

Dalton, J. A., Brown, L., Carlson, J., McNutt, R. and Greer, S. M. (1999) An evaluation of facial expression displayed by patients with chest pain. **Heart & Lung** 28(May/June): pp. 168-174.

de Haan, P. (1992) The optimum corpus sample size. In: Leitner, G. (Ed.) **New Directions in English language Corpora.** Berlin: Mouton de Gruyter.

de Rond, M. E. J., de Wit, R., de Dam, F. S. A. M., van Campen, B. T. M., van Hartog, Y. M., den Klievink, R., Nieweg, R., Noos, J., Wagenaar, M. and van Campen, B. (1999) Daily pain assessment: value for nurses and

patients. **Journal of Advanced Nursing** 29(2): pp. 436-444.

de Rond, M. E. J., de Wit, R., de Dam, F. S. A. M., van Campen, B. T. M., van Hartog, Y. M. and den Klievink, R. (2000a) A pain monitoring program for nurses: Effects on nurses' pain knowledge and attitude. **Journal of Pain and Symptom Management** 19(6): pp. 457-467.

de Rond, M. E. J., de Wit, R., van Dam, F. S. A. M. and Muller, M. J. (2000b) A Pain Monitoring Program for Nurses: Effects on Communication, Assessment and Documentation of Patients' Pain. **Journal of Pain and Symptom Management** 20(6): pp. 424-439.

Derbyshire, S. (1996) Comment on Editorial by Anand & Craig. **Pain** 66pp. 210-211.

Dihle, A., Bjølseth, G. and Helseth, S. (2006) The gap between saying and doing in postoperative pain management. **Journal of Clinical Nursing** 15(4): pp. 469-479.

Dubuisson, D. and Melzack, R. (1976) Classification of clinical pain descriptors by multiple group discriminant analysis. **Experimental Neurology** 51(2): pp. 480 - 487.

Edwards, H. E., Nash, R. E., Najman, J. M., Yates, P. M., Fentiman, B. J., Dewar, A., Walsh, A. M., McDowell, J. K. and Skerman, H. M. (2001) of nurses' intention to administer opiods for pain relief. **Nursing and Health Sciences** 3pp. 149-159.

Elder-Vass, D. (2014) Debate: Seven Ways to be A Realist About Language. **Journal for the Theory of Social Behaviour** 44(3): pp. 249 - 267.

Erickson, F. and Rittenberg, W. (1987) Topic control and person control: A thorny problem for foreign physicians in interaction with American patients. **Discourse Processes** 10pp. 401 - 415.

Fairclough, N. (1993) Discourse and Social Change. Cambridge: Polity Press.

Fairclough, N. (2001) Critical discourse analysis as a method in social scientific research. In: Wodak, R. and Meyer, M. (Eds.) **Methods of critical discourse analysis.** London: Sage.

Fairclough, N. (2003) **Analysing Discourse: Textual analysis for social research.** London: Routledge.

Fairclough, N. (2005) Peripheral Vision: Discourse Analysis in Organization Studies: The Case for Critical Realism. **Organization Studies** 26(6): pp. 915-939.

Fairclough, N. and Wodak, R. (1997) Critical Discourse Analysis. In: van Dijk, T. (Ed.) **Discourse Studies: A Multidisciplinary Introduction.** pp. 258 - 284.

Fernandez, E. and Towery, S. (1996) A parsimonious set of verbal descriptors of pain sensation derived from the McGill Pain Questionnaire. **Pain** 66(1): pp. 31-37.

Ferrara, K. (1994) **Therapeutic Ways with Words.** Oxford: Oxford University Press.

Ferrell, B., Virani, R., Grant, M., Vallerand, A. and McCaffery, M. (2000) Analysis of Pain Content in Nursing Textbooks. **Journal of Pain and Symptom Management** 19(3): pp. 216-228.

Ferrell, B. R. and Juarez, G. (2002) Cancer Pain Education for Patients and the Public. **Journal of Pain and Symptom Management** 23(4): pp. 329-336.

Florin, J., Ehrenberg, A. and Ehnfors, M. (2005) Patients' and nurses' perceptions of nursing problems in an acute care setting. **Journal of Advanced Nursing** 51(2): pp. 140-149.

Flowerdew, J. (2013) **Discourse in English Language Education.** London: Routledge.

Fowler, R. (1996) **Linguistic Criticism.** Oxford: Oxford University Press.

Fox, G. (1988) Using corpus data in the classroom. In: Tomlinson, B. (Ed.) **Materials Development in Language Teaching.** Cambridge: CUP, pp. 25 - 43.

Frankel, R. M. (1984) From Sentence to Sequence: Understanding the Medical Encounter Through Microinteractional Analysis. **Discourse Processes** 7pp. 135 - 170.

Frankel, R. M. (2001) Clinical care and conversational contingencies: The role of patients' self-diagnosis in medical encounters. **Text** 21(1/2): pp. 83-111.

Friedson, E. (1970) **Profession of Medicine: A Study of the Sociology of Applied Knowledge.** New York: Dodd Mead.

Gatchel, R. J. (2005) **Clinical Essentials of Pain Management.** Washington: American Psychological Association.

Gee, J. P. (2011) **How to do Discourse Analysis.** Abingdon, Oxfordshire: Routledge.

Giddens, A. (1993) **Sociology.** Cambridge: Polity.

Gordon, D. B., Dahl, J. L., Miaskowski, C., McCarberg, B., Todd, K. H., Paice, J. A., Lipman, A. G., Bookbinder, M., Sanders, S. H., Turk, D. C., et al. (2005) American Pain Society recommendations for improving the quality of acute and cancer pain management. **Arch Intern Med** 165(14): pp. 1574-1580.

Groff, R. (2000) The Truth of the Matter: Roy Bhaskar's Critical Realism and the Concept of Alethic Truth. **Philosophy of the Social Sciences** 30(3): pp. 407-435.

Hamilton, H. E. (2004) Symptoms and signs in particular: the influence of the medical concern on the shape of physician-patient talk. **Communication & Medicine** 1(1): pp. 59-70.

Hamilton, J. and Edgar, L. (1992) A Survey Examining Nurses' Knowledge of Pain Control. **Journal of Pain and Symptom Control** 7(1): pp. 18-26.

Hammersley, M. (2002) **Discourse analysis: a bibliographical guide.** [Online]. http://www.cf.ac.uk/socsi/capacity/Activities/Themes/In-depth/guide.pdf. Available at: http://www.cf.ac.uk/socsi/capacity/Activities/Themes/In-depth/guide.pdf [Accessed 14 May 2009].

Harmer, M. and Davies, K. A. (1998) The effect of education, assessment and a standardised prescription on postoperative pain management: The value of clinical

audit in the establishment of acute pain services. **Anaesthesia** 53pp. 424-430.

Harrison, A. (1991) Assessing patients' pain: identifying reasons for error. **Journal of Advanced Nursing** 16(9): pp. 1018-1025.

Hart, C. (1998) **Doing a Literature Review.** London: Sage.

Harvey, K. (2012) Disclosures of depression: Using corpus linguistics methods to examine young people's online health concerns. **International Journal of Corpus Linguistics** 17(3): pp. 349 - 379.

Harvey, K. and Koteyko, N. (2013) **Exploring Health Communication: Language in Action.** Abingdon, Oxon: Routledge.

Harvey, K. J., Brown, B., Crawford, P., Macfarlane, A. and McPherson, A. (2007) 'Am I normal?' Teenagers, sexual health and the internet. **Social Science & Medicine** 65pp. 771-781.

Hayter, M. (2007) Nurses' discourse in contraceptive prescribing: an analysis using Foucault's 'procedures of exclusion'. **Journal of Advanced Nursing** 58(4): pp. 358-367.

Healthcare Commission. (2004) **Patient survey report 2004 - adult inpatients.** http://www.healthcarecommission.org.uk/assetRoot/04/00/81/82/04008182.pdf [Online].

Heritage, J. and Sorjonen, M. L. (1994) Constituting and maintaining activities across sequences: And-prefacing as a feature of question design. **Language in Society** 23pp. 1 - 29.

Hunston, S. (2006) Corpus Linguistics. In: Brown, K. (Ed.) **Encyclopedia of Language & Linguistics.** 2nd. Amsterdam: Elsevier, pp. 234-248.

Hyden, L.-C. and Mishler, E. G. (1999) Language and Medicine. **Annual Review of Applied Linguistics** 19pp. 174 - 192.

IASP. (2012) **International Association for the Study of Pain - Pain Terminology.** [Online]. Available at:

http://www.iasp-pain.org/AM/Template.cfm?Section=Pain_Definitions [Accessed 6th December 2012].

Illich, I. (1977) **Limits to Medicine.** Harmondsworth: Penguin.

Innis, J., Bikaunieks, N., Petryshen, P., Zellermeyer, V. and Ciccarelli, L. (2004) Education: professional and lay: Impact of pain education on patient satisfaction and nursing knowledge. **The Journal of Pain** 5(3, Supplement 1): pp. S136-S136.

Jaspers, J. (2010) Introduction - Society and language use. In: Jaspers, J., Östman, J.-O. and Verschueren, J. (Eds.) **Society and Language Use.** Amsterdam: John Benjamins, pp. 1 - 20.

Jensen, M. P., Chen, C. and Brugger, A. M. (2002) Postsurgical pain outcome assessment. **Pain** 99pp. 101-109.

Jensen, M. P., Chen, C. and Brugger, A. M. (2003) Interpretation of visual analog scale ratings and change scores: a reanalysis of two clinical trials of postoperative pain. **The Journal of Pain** 4(7): pp. 407-414.

Karlsten, R., Strom, K. and Gunningberg, L. (2005) Improving assessment of postoperative pain in surgical wards by education and training. **Quality and Safety in Health Care** 14pp. 332-335.

Katz, J. J. (1971) The Philosophical Relevance of Linguistic Theory. In: Searle, J. R. (Ed.) **The Philosophy of Language.** London: Oxford University Press.

Kelly, J. (2013) The effect of lean systems on person-centred care. **Nursing Times** 109(12): pp. 16 - 17.

Kennedy, G. (1998) **An Introduction to Corpus Linguistics.** Harlow, Essex: Pearson Education Ltd.

Kitwood, T. (1997) The task of cultural transformation. In: Kitwood, T. (Ed.) **Dementia Reconsidered: the Person Comes First.** Buckingham: Open University Press.

Kleinman, A. (1988) **Illness Narratives: Suffering, Healing and the Human Condition.** New York: Basic Books Inc.

Koester, A. (2006) **Investigating Workplace Discourse.** London: Routledge.

Koester, A. (2010) **Workplace Discourse.** London: Continuum International Publishing.

Kremer, E. F., Atkinson, J. H. and Kremer, A. M. (1983) The language of pain: Affective descriptors of pain are a better predictor of psychological disturbance than pattern of sensory and affective descriptors. **Pain** 16(2): p. 185.

Kress, G. (2001) From Saussure to Critical Sociolinguistics: The turn towards a Social View of Language. In: Wetherall, M., Taylor, S. and Yates, S. J. (Eds.) **Discourse Theory and Practice: A Reader.** London: Sage Publications.

Kugelmann, R. (1999) Complaining about chronic pain. **Social Science and Medicine** 49pp. 1663-16676.

Kugelmann, R. (2003) pain as symptom, pain as sign. **Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine** 7(1): pp. 29-50.

Kunz, M., Chatelle, C., Lautenbacher, S. and Rainville, P. (2008) The relation between catastrophizing and facial responsiveness to pain. **Pain** 140(1): pp. 127-134.

Lakoff, G. and Johnson, M. (1980) **Metaphors we live by.** Chicago: University of Chicago Press.

Lang, E. V., Hatsiopoulou, O., Koch, T., Berbaum, K., Lutgendorf, S., Kettenmann, E., Logan, H. and Kaptchuk, T. J. (2005) Can words hurt? Patient-provider interactions during invasive procedures. **Pain** 114(1-2): pp. 303-309.

Lascaratou, C. (2007) **The Language of Pain: Expression or Description.** Amsterdam: John Benjamins.

Leavitt, F. and Garron, D. C. (1979) Psychological disturbance and pain report differences in both organic and non-organic low back pain patients. **Pain** 7pp. 187 - 195.

Lee, D. (1987) The semantics of just. **Journal of Pragmatics** 11pp. 377 - 398.

Loeser, J. D. and Melzack, R. (1999) Pain: an overview. **The Lancet** 353(9164): pp. 1607-1609.

Malson, H., Finn, D. M., Treasure, J., Clarke, S. and Anderson, G. (2004) Constructing 'the eating disordered patient': A discourse analysis of accounts of treatment experiences. **Journal of Community & Applied Social Psychology** 14(6): pp. 473-489.

Manias, E., Botti, M. and Bucknall, T. (2002) Observation of pain assessment and management − the complexities of clinical practice. **Journal of Clinical Nursing** 11(6): pp. 724-733.

Manias, E., Bucknall, T. and Botti, M. (2005) Nurses' Strategies for Managing Pain in the Postoperative Setting. **Pain Management Nursing** 6(1): pp. 18-29.

Mattingly, C. (1994) The concept of therapeutic emplotment. **Social Science and Medicine** 38(6): pp. 811 - 822.

Mautner, G. (2009a) Check and Balances: How Corpus Linguistics can Contribute to CDA. In: Wodak, R. and Meyer, M. (Eds.) **Methods of Critical Discourse Analysis.** 2nd. London: Sage, pp. 122 - 143.

Mautner, G. (2009b) Corpora and Critical Discourse Analysis. In: Baker, P. (Ed.) **Contemporary corpus linguistics.** London: Continuum International Publishing Group, pp. 32 - 46.

Maybin, J. (2001) Language, Struggle and Voice: The Bakhtin/Volosinov Writings. In: Wetherell, M., Taylor, S. and Yates, S. (Eds.) **Discourse Theory and Practice: A Reader.** London: Sage Publications.

Maynard, D. W. (1991) The perspective-display series and the delivery and receipt of diagnostic news. In: Boden, D. and Zimmerman, D. (Eds.) **Talk and Social Structure.** Berkley: University of California Press.

McCaffery, M. (1972) **Nursing Management of the Patient in Pain.** Philadelphia: Lipincott.

McCaffery, M. (1992) Pain Control: barriers to the use of available information. **Cancer** 70(S3): pp. 1438 - 1449.

McCaffery, M. and Ferrell, B. R. (1997) Nurses' Knowledge of Pain Assessment and Management: How much Progress Have We Made? **Journal of Pain and Symptom Management** 14(3): pp. 175-188.

McDonald, D. D., LaPorta, M. and Meadows-Oliver, M. (2007) Nurses' response to pain communication from patients: A post-test experimental study. **International Journal of Nursing Studies** 44(1): pp. 29-35.

McEnery, T., Xiao, R. and Tono, Y. (2006) **Corpus-Based language Studies: An advanced resource book.** Abingdon: Routledge.

McEvoy, P. and Richards, D. (2006) A critical realist rationale for using a combination of quantitative and qualitative methods. **Journal of Research in Nursing** 11(1): pp. 66-78.

McNeill, J. A., Sherwood, G. D., Starck, P. L. and Thompson, C. J. (1998) Assessing Clinical Outcomes: Patient Satisfaction with Pain Management. **Journal of Pain and Symptom Management** 16(1): pp. 29 - 38.

Melzack, R. (1975) The McGill Pain Questionnaire: Major properties and scoring methods. **Pain** 1(3): pp. 277-299.

Melzack, R. (1983) The McGill Pain Questionnaire. In: Melzack, R. (Ed.) **Pain Measurement and Assessment.** New York: Raven Press, pp. 41 - 47.

Melzack, R. and Katz, J. (2006) A Conceptual Framework for Understanding Pain in the Human. In: Waldman, S. D. (Ed.) **Pain Management.** London: Saunders W.B.

Melzack, R. and Wall, P. D. (1988) **The Challenge of Pain.** London: Penguin.

Mishler, E. G. (1984) **Discourse of Medicine: Dialectstics of Medical Interviews.** Norword, New Jersey: Ablex.

Mishler, E. G. (1986) **Research Interviewing: Context and Narrative.** Cambridge, MA: Harvard University Press.

Murphy, B. (2010) **Corpus and Sociolinguistics: Investigating age and gender in female talk.** Amsterdam: John Benjamins.

Neilsen, P. R., Rudbin, A. and Werner, M. U. (2007) Prediction of postoperative pain. **Current Anaesthesia & Critical Care** 18pp. 157-165.

NMC. (2008) Standards for medicines management. London: Nursing & Midwifery Council.

Norvell, K. T., Gaston-Johansson, F. and Zimmerman, L. (1990) Pain description by nurses and physicians. **Journal of Pain and Symptom Management** 5(1): pp. 11-17.

O'Keeffe, A., Clancy, B. and Adolphs, S. (2011) **Introducing Pragmatics in Use.** London: Routledge.

O'Keeffe, A., McCarthy, M. and Carter, R. (2007) **From Corpus to Classroom.** Cambridge: Cambridge University Press.

Ong, L. M., de Haes, J. C., Hoos, A. M. and Lammes, F. B. (1995) Doctor-Patient Communication: A review of the literature. **Social Science and Medicine** 40(7): pp. 903 - 918.

Orpin, D. (2005) Corpus Linguistics and Critical Discourse Analysis. **International Journal of Corpus Linguistics** 10(1): pp. 37 - 61.

Parsley, K. and Corrigan, P. (1999) **Quality Improvement in Healthcare: Putting evidence into practice.** 2nd. Cheltenham: Nelson Thornes Ltd.

Pilnick, A. (1999) 'Patient counselling' by pharmacists: advice, information, or instruction? **The Sociological Quarterly** 40(4): pp. 613 - 622.

Potter, J. (1996) Discourse Analysis and Constructionist Approaches: Theoretical Background. In: Richardson, J. T. E. (Ed.) **Handbook of qualitative research methods for psychology and the social sciences.** Leicester: BPS Books.

Rasmusen, L. S. (2007) Focus on: Acute pain. **Current Anaesthesia & Critical Care** 18p. 125.

Riessman, C. (1993) **Narrative Analysis.** London: Sage.

Roberts, C. and Sarangi, S. (2003) Uptake of Discourse Research in Interprofessional Settings: Reporting from Medical Consultancy. **Applied Linguistics** 24(3): pp. 338-359.

Roberts, F. (1999) **Talking about Treatment: Recommendations for Breast Cancer Adjuvant Therapy.** Oxford: Oxford University Press.

Sarangi, S. (2004) Towards a communicative mentality in medicine and healthcare practice. **Communication and Medicine** 1(1): pp. 1-11.

Sarangi, S. (2006) The conditions and consequences of professional discourse studies. In: Kiely, R., Rea-Dickins, P., Woodfield, H. and Clibbon, G. (Eds.) **Language, Culture and Identity in Applied Linguistics.** London: Equinox.

Sarangi, S. (2007) Other-orientation in Patient-centred Healthcare Communication: Unveiled Ideology or Discoursal Ecology? In: Garzone, G. and Sarangi, S. (Eds.) **Discourse, Ideology and Specialized Communication.** Oxford: Peter Lang.

Sarangi, S. (2010) Practising Discourse Analysis in Healthcare Settings. In: Bourgeault, I., Dingwall, R. and de Vries, R. (Eds.) **The Sage Handbook of Qualitative Methods in Health Research.** London: Sage.

Sayer, A. (2000) **Realism and Social Science.** London: Sage.

Schegloff, E. (1997) Whose text? Whose context? **Discourse and Society** 8(2): pp. 165 - 187.

Seebach, C. L., Kirkhart, M., Lating, J. M., Wegener, S. T., Song, Y., Riley III, L. H. and Archer, K. R. (2012) Examining the role of positive and negative affect in recovery from spine surgery. **Pain** 153pp. 518-525.

Semino, E. (2010) Descriptions of Pain, Metaphor and Embodied Simulation. **Metaphor & Symbol** 25(4): pp. 205-226.

Sherwood, G. D., McNeill, J. A., Starck, P. L. and Disnard, G. (2003) Changing Acute Pain management Outcomes in Surgical Patients. **AORN Journal** 77pp. 374-395.

Shugarman, L. R., Goebel, J. R., Lanto, A., Asch, S. M., Sherbourne, C. D., Lee, M. L., Rubenstein, L. V., Wen, L., Meredith, L. and Lorenz, K. A. (2010) Nursing Staff, Patient, and Environmental Factors Associated with Accurate Pain Assessment. **Journal of Pain and Symptom Management** 40(5): pp. 723-733.

Silverman, D. (2010) **Doing Qualitative Research.** 3rd Edition. London: Sage.

Sims-Schouten, W., Riley, S. C. E. and Willig, C. (2007) Critical Realism in Discourse Analysis: A Presentation of a Systematic Method of Analysis Using Women's Talk of Motherhood, Childcare and Female Employment as an Example. **Theory Psychology** 17(1): pp. 101-124.

Sinclair, J. (1991) **Corpus, Concordance, Collocation.** Oxford: Oxford University Press.

Sjöström, B., Dahlgren, L. O. and Haljamäe, H. (1999) Strategies in postoperative pain assessment: validation study. **Intensive and Critical Care Nursing** 15(5): pp. 247-258.

Skelton, J. (2005) Everything you were afraid to ask about communication skills. **British Journal of General Practice** 55(510): pp. 40 - 46.

Skelton, J. R. and Hobbs, F. D. R. (1999a) Concordancing: use of language-based research in medical communication. **The Lancet** 353(January 9): pp. 108 - 111.

Skelton, J. R. and Hobbs, F. D. R. (1999b) Descriptive study of cooperative language in primary care consultations by male and female doctors. **BMJ** pp. 576 - 579.

Sloman, R., Rosen, G., Rom, M. and Shir, Y. (2005) Nurses' assessment of pain in surgical patients. **Journal of Advanced Nursing** 52(2): pp. 125-132.

Smith, M. V. (1998) Talking about pain. In: Carter, B. (Ed.) **Perspectives on pain: Mapping the territory.** London: Arnold.

Smith, M. Y., DuHamel, K. N., Egert, J. and Winkel, G. (2010) Impact of a brief intervention on patient communication and barriers to pain management: Results from a randomized controlled trial. **Patient Education and Counseling** 81(1): pp. 79-86.

Sofaer, B. (1984) **Pain: A Handbook for Nurses.** London: Harper & Row.

Strassels, S. A., McNicol, E. and Suleman, R. (2005) Postoperative pain management: A practical review - part 1. **Am J Health-Syst Pharm** 62(18): pp. 1904-1916.

Stubbs, M. (1997) Whorf's children: Critical comments on critical discourse analysis. In: Ryan, A. and Wray, A. (Eds.) **Evolving models of language.** Clevedon: Multilingual Matters.

Sullivan, M. D. (1998) Perspectives on pain and suffering. **Advances in Mind-body Medicine** 14pp. 167-203.

Sullivan, M. D. (2001) Finding pain between minds and bodies. **Clinical Journal of Pain** 17pp. 146-156.

Svensson, I., Sjöström, B. and Haljamäe, H. (2001) Influence of expectations and actual pain experiences on satisfaction with postoperative pain management. **European Journal of Pain** 5(2): pp. 125-135.

Taylor, C. (2008) **What is *corpus linguistics*? What the data says.** Available at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.184.3803&rep=rep1&type=pdf.

ten Have, P. (1989) The consultation as a genre. In: Torode, B. (Ed.) **Text and Talk as Social Practice.** Dordrecht: Foris.

Toolan, M. (1997) What is critical discourse analysis and why are people saying such terrible things about it? **Language and Literature** 6(2): pp. 83 - 102.

van Buren, J. and Kleinknecht, R. A. (1979) An evaluation of the McGill pain questionnaire for use in dental pain assessment. **Pain** 6(1): pp. 23-33.

Van Dijk, T. A. (2001) Principles of Critical Discourse Analysis. In: Wetherall, M., Taylor, S. and Yates, S. J. (Eds.) **Discourse Theory and Practice: A Reader.** London: Sage Publications, pp. 300-317.

Veilleux, S. and Melzack, R. (1976) Pain in psychotic patients. **Experimental Neurology** 52(3): pp. 535 - 543.

Von Korff, M. and Miglioretti, D. L. (2005) A prognostic approach to defining chronic pain. **Pain** 117(3): pp. 304-313.

Waddie, N. A. (1996) Language and pain expression. **Journal of Advanced Nursing** 23pp. 868-872.

Wall, P. (1999) **Pain: The science of suffering.** London: Weidenfeld & Nicolson.

Walsh, S., Morton, T. and O'Keeffe, A. (2011) Analysing university spoken interaction. **International Journal of Corpus Linguistics** 16(3): pp. 325 - 344.

Weiss, G. and Wodak, R. (2007) Introduction: Theory, Interdisciplinarity and Critical Discourse Analysis. In: Weiss, G. and Wodak, R. (Eds.) **Critical Discourse Analysis: Theory and Interdisciplinarity.** Basingstoke: Palgrave Macmillan, pp. 1 - 32.

Widdowson, H. (1998) The theory and practice of Critical Discourse Analysis. **Applied Linguistics** 19(1): pp. 136 - 151.

Widdowson, H. (2005) **Text, Context, Pretext: Critical Issues in Discourse Analysis.** Oxford: Blackwell.

Wittgenstein, L. (1967) **The Philosophical Investigations.** New York: Anchor Books.

Wodak, R. and Meyer, M. (2009) Critical Discourse Analysis: History, Agenda, Theory and Methodology. In: Wodak, R. and Meyer, M. (Eds.) **Methods of Critical Discourse Analysis.** 2nd Edition. London: Sage.

Wright, A. (2011) **A criticism of the IASP's definition of pain.** [Online]. http://www.academia.edu. Available at: http://www.academia.edu/1388768/A_Criticism_of_the_IASPs_Definition_of_Pain [Accessed 12th September 2011].

Appendix 1 Search Results

	Search terms	Search modes - Boolean/Phrase Limiters - Full Text	Database	Results
S1	(MH "Pain") OR "pain" OR (MH "Nociceptive Pain") OR (MH "Pain Measurement") OR (MH "Chronic Pain") OR (MH "Treatment Related Pain") OR (MH "Postoperative Pain") OR (MH "Back Pain")		Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	163,518
S2	(MH "Patient Assessment") OR (MH "Clinical Assessment Tools") OR (MH "Process Assessment (Health Care)") OR "assessment"			326,075
S3	(MH "Language") OR "language" OR (MH "Natural Language Processing") OR (MH "Figurative Language")			55,860
S4	((MH "Language") OR "language" OR (MH "Natural Language Processing") OR (MH "Figurative Language")) AND (S1 AND S2)			392
S7	((((MH "Language") OR "language" OR (MH "Natural Language Processing") OR (MH "Figurative Language")) AND (S1 AND S2)) AND (S2 AND S3)) AND (S1 AND S2 AND S3)			50
S8	(MH "Linguistics") OR "linguistics"			1,610
S9	(MH "Linguistics") OR "linguistics"			356
S10	((MH "Linguistics") OR "linguistics") AND (S1 AND S8)			15
S11	(MH "Discourse Analysis") OR "discourse"			6,471
S12	((MH "Discourse Analysis") OR "discourse") AND (S1 AND S11)			118
S13	(MH "Pain") OR "pain" OR (MH "Nociceptive Pain") OR (MH "Pain Measurement") OR (MH "Chronic Pain") OR (MH "Treatment Related Pain") OR (MH "Postoperative Pain") OR (MH "Back Pain")			163,518
S14	(MH "Patient Assessment") OR (MH "Clinical Assessment Tools") OR			326,075

	(MH "Process Assessment (Health Care)") OR "assessment"			
S15	(MH "Language") OR "language" OR (MH "Natural Language Processing") OR (MH "Figurative Language")			55,860
S16	((MH "Language") OR "language" OR (MH "Natural Language Processing") OR (MH "Figurative Language")) AND (S13 AND S14)			392
S17	(((MH "Language") OR "language" OR (MH "Natural Language Processing") OR (MH "Figurative Language")) AND (S13 AND S2)) AND (S2 AND S15)			392
S18	((((MH "Language") OR "language" OR (MH "Natural Language Processing") OR (MH "Figurative Language")) AND (S1 AND S14)) AND (S14 AND S3)) AND (S1 AND S14 AND S3)			392
S19	MH "Language"OR "language" OR MH "Natural Language Processing" OR MH "Figurative Language" AND S1 AND S14 AND S14 AND S3 AND S1 AND S14 AND S3)			50

OvidSP	Search Terms	Search Results
1	pain.mp. [mp=ti, ab, sh, hw, tn, ot, dm, mf, dv, kw, nm, kf, px, rx, an, ui, tx, sa]	1280588
2	limit 1 to english language	1095218
3	assessment.mp. [mp=ti, ab, sh, hw, tn, ot, dm, mf, dv, kw, nm, kf, px, rx, an, ui, tx, sa]	2402078
4	limit 3 to english language	2195969
5	language.mp. [mp=ti, ab, sh, hw, tn, ot, dm, mf, dv, kw, nm, kf, px, rx, an, ui, tx, sa]	264981
6	limit 5 to english language	239372
7	2 and 4	179235
8	2 and 6	7934
9	2 and 4 and 6	2664
10	critical discourse.mp. [mp=ti, ab, sh, hw, tn, ot, dm, mf, dv, kw, nm, kf, px, rx, an, ui, tx, sa]	330
11	limit 10 to english language	312
12	2 and 11	3
13	linguistics.mp. [mp=ti, ab, sh, hw, tn, ot, dm, mf, dv, kw, nm, kf, px, rx, an, ui, tx, sa]	28337
14	limit 13 to english language	26449
15	11 and 14	18
16	2 and 14	143

Web of Science	Search Term (limited to English)	Search Result
	Corpus	34209
	+pain	153
	+pain+assessment	11
	Pain	1669250
	+assessment	146411
	Nursing	10217

Scopus	
Search Term (limited to English)	Search Result
Pain	652211
+assessment	209453
+assessment+language	5898
+assessment+language+limit to nursing	601

Google Scholar	
Search Term	Search Result
Pain	3100000
Pain+assessment	2480000
Pain+assessment +language	152000
Pain+assessment +language +critical discourse analysis	154000
Pain+assessment +language +corpus linguisitcs	22300
Pain+assessment +language +corpus linguistics+critical discourse analysis	18800
Corpus linguistics	558000
CDA	2390000
CDA & CL	82500
CL & CDA	85000
CL + CDA + pain+ language	22400

Appendix 2 Letter of Introduction

Patient Letter

Dear Sir/Madam

This letter is inviting you to take part in a study that I am conducting as part of my Doctorate in Health Science. The study is exploring the way that patients, nurses and doctors talk about assessment. There are a number of assessments that nurses and doctors will make during your stay in hospital. This research project is investigating the ways that we use language, how we talk, during the assessment process. These assessments will include areas such as pain, mobility, and nutrition.

Please take some time to read through the attached information sheet which gives you information about why you have been chosen and what it means to take part. If after reading this document you still have any questions then please contact:

Nigel Slater
xxxx xxxxxxx (message recording also available)

Once you have read the information sheet and you decide to take part in the research study then you will need to complete the attached consent form. Please return this to the nurse on the day of your admission in the envelope provided. I will then see you on your day of admission and confirm your understanding of taking part in the study and complete the consent process. You are able at anytime during your stay to withdraw from the study.

Thank you for taking the time to read this letter.

Yours sincerely

Nigel Slater
Lecturer, School of Nursing, University of Nottingham

Staff Letter

Dear Sir/Madam

This letter is inviting you to take part in a study that I am conducting as part of my Doctorate in Health Science. The study is exploring the way that patients and healthcare professionals talk about assessment. There are a number of assessments that nurses and doctors make during a patient's stay in hospital. This research project is investigating the ways that we use language, how we talk, during the assessment process. These assessments will include areas such as pain, mobility, and nutrition.

Please take some time to read through the attached information sheet which gives you information about why you have been chosen and what it means to take part. If after reading this document you still have any questions then please contact:

Nigel Slater
xxxx xxxxxxx (message recording also available)

Once you have read the information sheet and you decide to take part in the research study then you will need to complete the attached consent form. Please return this to the collection box in the envelope provided by (insert date). When data recording is occurring I will check with you that your consent is complete

Thank you for taking the time to read this letter.

Yours sincerely

Nigel Slater
Lecturer, School of Nursing, University of Nottingham

Appendix 3 Information Letter

Patient Information Sheet

Study Title: An investigation of the language used by patients and healthcare professionals in the assessment process.

You are being invited to take part in a research study. Before you decide to take part it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. I can be contacted on the following number – xxxx xxxxxxx - or you can ask a member of staff to contact me so I can answer any questions you may have.
Thank you for reading this.

1. What is the purpose of the study?

To investigate how nurses and doctors talk with patients when they are assessing you while you are in hospital

2. Why have I been chosen?

You have been chosen as someone who is having an operation and will be having a number of assessments during your stay. In particular we are interested in the assessments that happen after your surgery.

3. What will be involved in the study?

The study will involve recording the information through the use of a small digital voice activated recorder to record the conversations you have with either a nurse or a doctor during different parts of the day. This recording device will record all conversations that you have. You will have control of this recording device and can decide at any time to stop recording, for example you may not want to record the discussion with your relative. Any conversations recorded that do not relate to assessment will be removed by the researcher (Nigel Slater) before the recording is used in the research. The researcher will be available during this time to give any help you may require with the device.

4. Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect the standard of care you receive. The information gathering process will not interfere with the normal process of your recovery.

5. What will I have to do?

If you decide to take part in the research project you will receive instruction on how to work the recording device so that you can stop the recording at any point. The recording device is voice activated so once it is running when you or anyone else speaks it will start recording. You will be asked at the end of the recording period if there is anything that you wish to be removed from the recording. This will be done with audio editing software. You may be asked by a member of staff not to record a conversation with them, in this case please turn off the recorder and then turn back on after the conversation.

6. Will my taking part in this study be kept confidential?

All information which is collected during the course of the research will be kept strictly confidential. The recording of the conversation will be edited to remove names. Your name will not be disclosed to anyone not involved in the research project. The "anonymous spoken material" will be used in presentations of the research to highlight specific issues. Recordings will be transcribed and used in any written reports.

7. What will happen to the results of the research study?

The results of this research will enable us to provide better assessment and care of patients following surgery. You will be contacted when results are available and will be able to obtain a copy of these.

8. Contact for further information

Please contact Nigel Slater, xxxx xxxxxxx

Thank you for reading this.

Please keep this information sheet for your future reference.

Information Sheet - Healthcare Professional

Study Title: An investigation of the language used by patients and healthcare professionals in the assessment process.

You are being invited to take part in a research study. Before you decide to take part it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. I can be contacted on the following number – xxxx xxxxxxx - or you can ask a member of staff to contact me so I can answer any questions you may have.
Thank you for reading this.

1. What is the purpose of the study?
To investigate how nurses and doctors talk with patients during the assessment process. Assessment takes many forms and there are many areas that are assessed. This research is investigating the language that is used during these assessments.

2. Why have I been chosen?
You have been chosen as someone who is working in this area. You will be involved with assessing patients during their stay. Some of these patients will be having continuous recording made of all interactions they have. You may be involved in such an interaction

3. What will be involved in the study?
The study will involve recording the information through the use of a small digital voice activated recorder to record the conversations that patients have. As a healthcare professional you may be involved with the assessment of these patients. This recording device will record all conversations that you have. The patients will have control of this recording device and can decide at any time to stop recording. However, if you do not want your conversation to be recorded you can ask the patient to turn off the device. Please remind the patient at the end of your conversation to turn the device back on. Any conversations recorded that do not relate to assessment will be removed by the researcher (Nigel Slater) before the recording is used as data in the research.

4. Do I have to take part?
It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. The information gathering process will not interfere with the normal process of your work. If you decide that you do not want to take part in the study you can ask the patient to stop the recording. If you are aware that your conversation may have been recorded, please let Nigel Slater know so your conversation can be erased from the data file.

5. What will I have to do?
If you decide to take part in the research project you will have your interactions recorded when you talk with patients who are in the study. You will not be required to work any of the recording devices as this will be done by the patients. You can indicate to Nigel Slater (Chief Investigator) if you do not wish specific recordings to be used in the final analysis. Such material will be removed by audio editing software after down loading to a secure university computer. A transcript of the data can be made available for you to read.

6. Will my taking part in this study be kept confidential?
All information which is collected during the course of the research will be kept strictly confidential. The recording of the conversation will be edited to remove names. Your name will not be disclosed to anyone not involved in the research project. The "anonymous spoken material" will be used in presentations of the research to highlight specific issues. Recordings will be transcribed and used in any written reports.

7. What will happen to the results of the research study?
The results of this research will enable us to provide better assessment and care of patients following surgery. You will be contacted when results are available and will be able to obtain a copy of these.

8. Contact for further information

Please contact Nigel Slater, xxxx xxxxxxx

Thank you for reading this.

Please keep this information sheet for your future reference.

Appendix 4 Consent Form

An investigation of the language used by patients and healthcare professionals in the assessment process.

Investigator: Nigel Slater

As the participant you should complete the whole of this sheet yourself.

Please cross out as necessary

- Have you read & understood the participant information sheet YES/NO
- Have you had opportunity to ask questions & discuss the study YES/NO
- Have all the questions been answered satisfactorily YES/NO
- Have you received enough information about the study YES/NO
- Do you understand that you are free to withdraw from the study
    - at any time YES/NO
    - without having to give a reason YES/NO
    - without affecting your future medical care YES/NO
- Parts of the recorded material will be used as part of the research reporting process. Anonymous transcripts of spoken material will be used in any written reports. Conference presentations will contain anonymous digital recorded excerpts from the data.
- Do you agree that material can be used in this way YES/NO
- Do you agree to take part in the study YES/NO

Signature (Participant)
Date

Name (In block capitals)

I have explained the study to the above participant and he/she has indicated his/her willingness to take part.

Signature
Date

Name (In block capitals)

Participant Identification Number (patient) :Pxxxx
An investigation of the language used by patients and healthcare professionals in the assessment process.

Investigator: Nigel Slater

As the participant you should complete the whole of this sheet yourself.

Please cross out as necessary

- Have you read & understood the participant information sheet
  YES/NO
- Have you had opportunity to ask questions & discuss the study
  YES/NO
- Have all the questions been answered satisfactorily
  YES/NO
- Have you received enough information about the study
  YES/NO

- Do you understand that you are free to withdraw from the study
  - at any time
    YES/NO
  - without having to give a reason
    YES/NO

- Parts of the recorded material will be used as part of the research reporting process. Anonymous transcripts of spoken material will be used in any written reports. Conference presentations will contain anonymous digital recorded excerpts from the data.
  - Do you agree that material can be used in this way
    YES/NO
  - Do you agree to take part in the study
    YES/NO

Signature (Participant)
Date

Name (In block capitals)

I have explained the study to the above participant and he/she has indicated his/her willingness to take part.

Signature Date

Name (In block capitals)

Participant Identification Number (staff) : Sxxxx

59940 words