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Keele
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Understanding the Primary Care Osteoarthritis Consultation using Video- Stimulated Recall

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SUBMISSION OF THESIS FOR A RESEARCH DEGREE**Part I. DECLARATION by the candidate for a research degree. To be bound in the thesis**

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Abstract

Background: Osteoarthritis (OA) is the commonest long term condition in primary care. Current guidance suggests that much can be done to improve outcomes but existing research suggests doctors and patients are pessimistic about OA treatment. An important question concerns the role of the primary care consultation in this incongruity. This study used a combination of video recorded consultations and post consultation interviews using video-stimulated recall (VSR), to uncover what happens when patients discuss OA with their general practitioners (GPs).

Methods: With ethical approval, GP consultations with 190 consenting patients aged ≥ 45 were recorded. Twenty consultations contained reference to OA, and 17 of these patients and their GPs (n=13) participated in post consultation interviews. Analysis involved thematic analysis of videotapes and comparisons of patient and GP interviews with the consultation findings.

Results: Osteoarthritis arises in the consultation in complex contexts of multi-morbidity, multiple and varied patient agendas which are often not explicit, and against a background of clinician agendas including time pressures, multiple guidelines and service requirements. Dissonance between doctors and patients was observed and was often underpinned by patient perception of lack of empathy and symptom validation. Doctors and patients often adopt a 'lay' construct of OA where joint pain is seen as a normal part of life; this influences doctor and patient behaviour and acts as a significant barrier to formal recognition and hence treatment of the condition.

Conclusions: The design of interventions to improve outcomes of patients with OA must take account of the complexity and heterogeneity of presentations in primary care. Osteoarthritis appears to be experiencing an identity crisis, with doctors and patients uncertain of what constitutes OA and when to use the term 'osteoarthritis'. Further work is needed to identify effective ways of translating best evidence about OA management into effective primary care strategies.

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List of Abbreviations

ACR	American College of Rheumatology
ARUK	Arthritis Research UK
ARUKPCC	Arthritis Research UK Primary Care Centre
CA	Conversation Analysis
CASP	Critical Appraisal Skills Programme ¹
CiPCA	Consultations in Primary Care Archive ²
CLRN	Comprehensive Local Research Network ³
DA	Discourse Analysis
EPR	Electronic Patient Record
GMC	General Medical Council
GP	General Practitioner
GDG	Guideline Development Group ⁴
IBS	Irritable Bowel Syndrome
JP	Joint Pain
KOFBeQ	Knee Osteoarthritis Fears and Beliefs Questionnaire
LTC	Long Term Condition
MOSAICS	Management of Osteoarthritis in Consultations Study ⁵
MSK	Musculoskeletal
NHS	National Health Service
NIHR	National Institute for Health Research
NICE	National Institute for Health and Care Excellence ⁶
NSAIDs	Non-Steroidal Anti-Inflammatory Drugs
OA	Osteoarthritis
PIS	Patient Information Sheet

¹ A non-profit making programme that has developed workshops and tools for critical appraisal for use by healthcare professionals.

² A database held at ARUKPCC with anonymised data from 14 general practice databases.

³ A local division of the national Comprehensive Clinical Research Network which provides infrastructure and support to many areas of publically funded clinical research.

⁴ The group appointed by NICE who are responsible for reviewing the evidence and the clinical guideline.

⁵ A pilot randomised cluster trial designed to evaluate the implementation of a 'model' OA consultation in primary care.

⁶ Non-departmental public body which develops guidance, standards and information on high quality health and social care.

QOF	Quality and Outcomes Framework ⁷
RCGP	Royal College of General Practitioners
SCHI	Subjective Health Complaint Inventory ⁸
SR	Stimulated Recall
VSR	Video-Stimulated Recall
WOMAC	Western Ontario and McMaster Universities OA Index ⁹

⁷ The Quality and Outcomes Framework (QOF) is the annual reward and incentive programme detailing GP practice achievement results. Clinical indicators or standards are incentivised.

⁸ A validated tool for scoring the presence of subjective health complaints.

⁹ A widely used set of standardized questionnaires used by health professionals to evaluate the condition of patients with OA of the knee and hip, including pain, stiffness, and physical functioning.

Chapter 1: Introduction

1.1 Study overview

Osteoarthritis (OA) is one of the most common long term conditions in primary care, yet little is known about what happens when patients with OA present to their general practitioners (GPs). This thesis explores what happens in primary care doctor-patient consultations in which OA is discussed. In addition to consultation events, patient and doctor experiences of the consultation are explored. As the title suggests, the study reported in this thesis uses video to record and explore the consultation, and these recordings have been shown to the relevant patient and GP during a post consultation interview to stimulate participants' recall; this method is called video-stimulated recall (VSR) and is a further focus of interest in this thesis.

In this introductory chapter, osteoarthritis is introduced, in addition to an overview of the primary care consultation. Both of these introductions are reasonably brief, as issues relevant to the thesis are developed in subsequent chapters. Following this is an introduction to, and overview of the thesis.

1.2 Introduction to osteoarthritis

1.2.1 Definition

1.2.1.1 Definition: clinical aspects

Arthritis refers to a condition of pain and inflammation arising from the joints.

Osteoarthritis is the most common form of arthritis. Understanding of OA has developed considerably over the last few decades, and the definition of OA has therefore evolved considerably as a result. In the following paragraphs, the key themes in various definitions which have been promoted over the years will be explored.

The first standard definition of OA was proposed in 1986 by the American College of Rheumatology (ACR) (Flores & Hochberg, 1998):

A heterogeneous group of conditions that lead to joint symptoms and signs which are associated with defective integrity of articular cartilage, in addition to related changes in the underlying bone margins

This definition raises the notion that OA represents a '*heterogeneous group of conditions*'. This reflects the diversity in clinical manifestations or 'phenotypes' of OA. Osteoarthritis may occur at different or multiple sites with the most common joints affected being the hands, knee, hip and spine. For the purposes of this thesis, the focus is on peripheral joint OA, due to the difficulty in distinguishing spinal OA from the broader 'syndrome' of chronic back pain.

The different phenotypes are sometimes associated with different trajectories and different causal risk factors; for example, genetic factors are more important in the development of hand osteoarthritis, which is sometimes referred to as 'nodal OA' than knee or hip OA. The notion of heterogeneity has continued though more

recent definitions and the current American College of Rheumatology (ACR) classification criteria for OA are subdivided to individual joints.

1.2.1.2 Definition: pathophysiological aspects

A second point of interest in the definition from 1986 above is the *part(s) of the joint* affected. This first standard definition emphasises the role of cartilage and bone; however, advances in understanding of the pathophysiology of OA now lead us to understand that in OA the disease process affects the whole joint, including the joint capsule, nerves, muscles and joint lining (synovial membrane). This is specifically described in more recent definitions (Flores & Hochberg, 1998, National Institute for Health and Clinical Excellence, 2008).

Flores and Hochberg (1998) describe a more comprehensive definition of OA that was developed at a conference of Etiopathogenesis of OA in 1986, which described the clinical, pathological, biochemical and biomechanical changes that characterise OA. Therein, this definition encompassed all the basic science knowledge of the time, and was the first to suggest a *repair* process was occurring at a pathological level, in contrast to previous descriptions of a purely *degenerative* change.

Current understanding is that the development of osteoarthritis is a complex process influenced by a variety of insults including biomechanical factors (such as muscle weakness and malalignment), inflammation in the joint lining, subchondral bone and surrounding tissues, and structural damage (Birrell et al., 2011).

1.2.1.3 Definition: epidemiological aspects

More recently, the authors of the National Institute for Health and Care

Excellence (NICE) guidelines for OA (2008, 2014) propose new definitions which incorporate current understanding of *epidemiology*, in addition to basic science. The 2008 NICE guideline definition describes the poor correlation between pathology and symptoms and the huge variability in clinical outcomes. The 2014 guidance definition goes further to state:

Contrary to popular belief, osteoarthritis is not caused by ageing and does not necessarily deteriorate. There are a number of management and treatment options (both pharmacological and non-pharmacological)...which offer effective interventions for control of symptoms and improving function. (National Institute for Health and Clinical Excellence, 2014)

1.2.1.4 Definition: summary

In summary, current understanding proposes OA as:

- a heterogeneous condition encompassing a number of varying clinical presentations, outcomes and severity, but all characterised by some degree of joint pain and altered function
- a pathological process that affects the whole joint with evidence of tissue damage, local inflammation and attempts at repair

Thus far, the description of OA has been clinical, pathological and epidemiological.

In section 1.2.2.2, the lay account of OA will be considered.

1.2.2 The burden of osteoarthritis

1.2.2.1 Population burden

Osteoarthritis is the most common cause of musculoskeletal pain in older people and is estimated to affect 8.75 million people in the UK alone (Arthritis Research UK, 2013). Osteoarthritis is a leading cause of pain and morbidity, and globally, is the fastest increasing cause of years lived with disability (Vos et al., 2013). This projection is related to the estimated increase in rates of obesity and the impact of an ageing population, as both age and obesity are determinants of OA¹⁰. An increase in mortality in patients with OA compared to the general population has also recently been identified (Nuesch et al., 2011).

In 2000, 80,000 hip and knee joint replacements were performed for OA at a cost to the National Health Service (NHS) of £405 million (National Institute for Health and Clinical Excellence, 2008). This figure pales into insignificance when the impact of OA on the economy as a whole is considered; estimates of lost productivity attributable to OA in 1999/2000 amounted to £3.2 billion, and the overall cost of OA is thought to equate to 1% of Gross National Product (National Institute for Health and Clinical Excellence, 2008).

1.2.2.2 Individual burden

Osteoarthritis most commonly affects the knee and hip, as well as joints in the hand and wrist, and foot and ankle. As a result of OA, patients may experience restricted mobility in addition to difficulty carrying out activities of daily living, such as washing, cooking and getting dressed. Joints are painful, and a large survey of

¹⁰ Note that although the definition of OA proposed by NICE suggests that OA is not *caused* by ageing, the prevalence of OA does *associate* with increasing age.

patients living with OA suggested 81% of respondents were living in daily pain or had restriction of activities (Arthritis Care, 2004). Restriction of activities may impact on employed work or leisure pursuits; this may have financial implications with some reporting increased personal costs associated with travel in addition to loss of earnings (Arthritis Care, 2012). The physical symptoms of OA also have an impact on patients' well-being and emotional health; anxiety, depression, frustration and anger, sleep difficulties and relationship problems have all been reported in association with OA (Arthritis Care, 2004, 2012, Katon et al., 2007). A further consideration is the impact OA has on other health problems. Weight loss and increased physical activity are promoted as part of management of a number of long term conditions such as ischaemic heart disease, diabetes and Chronic Obstructive Pulmonary Disease; painful and restricted movement in OA affected joints may limit the extent to which individuals may be able to engage with this sort of health promotion advice.

1.2.3 Osteoarthritis in primary care

Osteoarthritis is most commonly managed in primary care. Arthritis Research UK have recently published a report highlighting the significance and impact of OA on general practice, in which it is stated that a third of the population aged over 45 have consulted their GP for OA (2013). However, a number of studies report relatively low rates of consulting with a general practitioner (GP) (Bedson et al., 2007, Peat et al., 2001, Hill et al., 2007, Jinks et al., 2004, Linsell et al., 2005), with only 17% of patients with OA consulting annually (Peat et al., 2001) and over 50% of those with severe pain not consulting over an 18 month period, in the UK (Bedson et al., 2007).

Consultation frequency may be estimated by patient self-report or by medical record review. In the UK, GPs classify their consultations using Read codes, a clinical coding system (NHS Connecting for Health). Read codes may be specific and disease based, such as OA, or more generic and/or symptom based for example, knee pain. Table 1 summarizes consultation frequencies reported from seven UK studies, including the population studied and measure of consultation frequency.

Table 1: Consultation frequencies of patients with osteoarthritis or joint pain from UK studies

First Author (year)	Source of sample	Sample characteristics Diagnosis or symptom (age)	Number of participants	How consultation frequency was measured	Consultation frequency¹¹
Bedson (2007)	Sub-sample – respondents agreeing to attend research clinic from prospective observation cohort study in adults ≥ 50 registered with 3 GP practices (Clinical Assessment Study (Knee))	Knee pain Severe knee pain	742	Read codes Free text of medical record	28% over 18 months 49% over 18 months
Hill (2007)	Second stage of cross sectional survey of joint problems in older people. Adults ≥ 50 registered with 3 GP practices (North Staffordshire OA Project)	OA hand - self reported (≥ 50)	538	Self-report	24%
Jinks (2004)	Cross sectional survey of 8995 adults ≥ 50 in North Staffordshire	Knee pain (≥ 50)	3023	Self-report	33%
Jordan (2006)	Sub-sample agreeing to medical record review and still registered with GP from sample used in Jinks (2004)	Knee pain (≥ 50)	1797	Read codes Free text of medical record	20% over 18 months
Linsell (2005)	Cross sectional survey of adults in Oxfordshire on health authority register	Knee pain Hip pain (≥ 65)	612 212	Self-report	69.1% ever 50.3% ever

¹¹ In 12 months unless stated otherwise.

Mitchell (2006)	Sub-sample – respondents agreeing to attend research clinic from postal survey to adults ≥ 50 in 2 GP practices in London with knee pain	Knee pain (≥ 50)	231	Self-report	58%
Peat (2001)	National RCGP data	OA knee (≥ 55)		Diagnostic Read codes	17%
Thorstensson (2009)	Sub-sample – respondents agreeing to two clinic visits from Somerset and Avon Survey of Health cohort study	Knee and hip pain (≥ 35)	1117	Self-report	37%

According to data from the Royal College of General Practitioners, fewer consultations are coded for OA annually than diabetes, asthma, hypertension or bronchitis (Birmingham Research Unit, 2007).

1.2.4 Treatment of osteoarthritis

One difficulty in summarising the treatment for OA is that most research studies of therapeutic interventions have been directed at OA affecting a specific joint. The UK NICE guidance has been described here as it is the only guideline to date which has configured a 'whole body' OA approach, in contrast to European and international guidance which is based on individual joints, or hip and knee (Mazieres et al., 2001, Zhang et al., 2005, 2007, 2008, 2010).

The NICE guidance (2008, 2014) recommends a holistic approach to patient management and three core treatments for all, consisting of advice to lose weight (if appropriate), patient education and advice and support regarding strengthening and aerobic exercise. The patient education component of core treatment states within its recommendation:

Healthcare professionals should offer accurate verbal and written information to all people with osteoarthritis to enhance understanding of the condition and its management, and to counter misconceptions, such as that it inevitably progresses and cannot be treated (National Institute for Health and Clinical Excellence, 2008).

Thus the guideline emphasises the importance of addressing perceived negative conceptions regarding OA. Following the core treatments, a range of evidence-based pharmacological and non-pharmacological approaches are available, and are triaged according to efficacy and safety. These include paracetamol, topical

Non-Steroidal Anti-Inflammatory Drugs (NSAIDs), stronger analgesia, supports and braces, walking aids, joint injections, and referral for joint replacement among others.

The main message from this guidance, and others, is that a range of simple effective treatments exist for OA. However, studies that have aimed to evaluate adherence with these and other similar guidelines have not demonstrated comprehensive uptake of the recommendations (Steel et al., 2008, Brand et al., 2013, Chevalier et al., 2004, Porcheret et al., 2007).

1.2.5 Osteoarthritis: summary

In this brief overview of OA, it is apparent that OA is associated with a range of different perceptions and definitions. On the one hand, the NICE guidelines, informed by epidemiological research, build a description of a condition that is not inevitably progressive and that has many favourable treatments. However, in some contrast to this description, is the image of OA painted by surveys of patient experience, which refer to poorly controlled symptoms and marked restriction in activities. The condition is known to be associated with significant disability and symptom burden and yet compared to other long term conditions, patients do not appear to be consulting their GP as frequently. A range of treatments exist yet uptake of the guidance appears to be low. The study aims have therefore been designed with these incongruities in mind to explore to what extent events in the doctor-patient consultation might explain or account for the apparent inconsistencies regarding OA.

1.3 Introduction to the primary care consultation

1.3.1 Understanding the consultation using models: a historical perspective

The doctor-patient consultation is the heart of general practice (Royal College of General Practitioners, 2011). It could be described as a conversation or an interaction between the two parties (Fischer & Ereaut, 2012). The 'typical medical model' of the consultation describes four phases of history, examination, diagnosis and treatment (Byrne & Long, 1976). However, more sophisticated models of doctor-patient consultation exist and these may be useful to further understand the purpose, content and process of the consultation. This section is not designed to be a comprehensive overview of theory relating to the consultation but a brief overview, sufficient in detail to provide background to the thesis.

A number of consultation models exist, and these vary in the extent to which they are based on empirical research and whether they focus more on doctor or patient orientations. Consultation models have roots in sociology, psychology and medical anthropology, in addition to medicine, and may focus on tasks, behaviours, 'phases' or consultation outcomes.

Table 2 lists some commonly referred to consultation models, describes their key features and illustrates how each model was developed.

The models in the table provide an overview of how the theory and practice of consultations and consulting has changed over the decades. Although now, questions about social issues and emotional health are considered part of the medical history, prior to the work of Balint, and the report of the Royal College of Practitioners in 1972, doctors took more of an organic biomedical approach. Thus, the models quoted demonstrate how medicine has evolved in theory from a purely

biomedical view (as in the 'typical medical model' described above) to a bio-psychosocial approach. This is promoted in the training of consultation skills for both students and doctors; the models of Calgary-Cambridge and Neighbour are commonly used in undergraduate and postgraduate training respectively. Aspects of Pendleton et al's model also feature in medical training, specifically the need for doctors to elicit patients' ideas, concerns and expectations.

One further development, illustrated in part from the Table, is the shift from doctor centred to patient centred approaches. Historically, the consultation has been described as a paternalistic, doctor centred activity, largely attributed to the observations and writings of Parsons, one of the earliest sociologists to examine the consultation (Morgan, 1997). Byrne and Long's model is dominated by the doctor, although in this model, there are indications that the patient may be involved in some decisions. In Pendleton, Schofield, Tate and Havelock's model, the patient plays more of a key role and the notion arises that decision making may be 'shared' between doctor and patient.

Of the models listed, Byrne and Long's model has practical relevance to this thesis as it is the only model that is based on empirical observational research, and as such, provides several frameworks on which consultation analysis can be conducted. However, it has been criticised for being out of date and overly doctor-centred, and in the following section, some of the debates about current pressures and influences on the consultation will be considered. The analysis used by Byrne and Long has been described as 'code and count' (Pilnick & Dingwall, 2011); other methods of researching the consultation will be explored in Chapter 3.

Table 2: Key features of consultation models

Consultation Model/ Author	Key features	Development
Parsons (1951)	Described the role of the patient ('sick role') and the role of the doctor. The patient's role described in terms of <i>obligations</i> and <i>privileges</i> , and the doctor's role described in terms of <i>expectations</i> and <i>rights</i> . The doctor is described as having both autonomy and authority	
Balint (1957)	Advocates a psychodynamically informed approach to the consultation, eliciting patient problems in addition to diagnosing and treating illness. Recognises that psychological problems manifest as physical disease and vice versa, and also emphasises the importance of the doctor's thoughts and feelings in the consultation	Balint was a psychotherapist and developed this model after working with GP groups
Physical, psychological and social, RCGP (1972)	States that GPs need to consider aspects of emotional and social health in the consultation	Outlined in a document setting out a framework for GP training
Six category interactional analysis (Heron, 1976)	Classification of doctors' interventions in the consultation: prescriptive; informative; confronting; cathartic; catalytic; supportive	Developed by a humanistic psychologist
Byrne and Long (1976)	Presents various different classification schemes including the phases of the consultation and styles of the consultation. The 6 Phases: 1. The doctor establishes relationship	Derived from study of over 2000 audio recorded consultations. Developed by a GP (Byrne) and

	<ol style="list-style-type: none"> 2. The doctor discovers reason for attendance 3. The doctor conducts physical or verbal examination 4. The doctor (+/- patient) consider the condition 5. The doctor (+/- patient) detail further treatment/ tests 6. The consultation is terminated 	Educationalist (Long)
Stott and Davis (1979)	<p>Describes a model designed to endorse health promotion. Describes 4 tasks:</p> <ol style="list-style-type: none"> 1. Management of presenting problems 2. Modification of help seeking behaviour 3. Management of continuing problems 4. Opportunistic health promotion 	Theoretical model
Helman's folk model (1981)	<p>Describes what the patient wants from a consultation</p> <ol style="list-style-type: none"> 1. What has happened? 2. Why has it happened? 3. Why to me? 4. Why now? 5. What would happen if nothing was done about it? 6. What should I do about it? 	<p>Theoretical model</p> <p>Author GP and medical anthropologist</p>
Pendleton, Schofield, Tate and Havelock (1984)	<p>A task based model</p> <ol style="list-style-type: none"> 1. To define the reason for attendance including the patient's ideas, concerns and expectations 2. To consider other problems (continuing problems and risk factors) 	Developed from a literature review, authors' experience and research

	<ol style="list-style-type: none"> 3. To choose, with the patient, appropriate action 4. To achieve a shared understanding of the problem 5. To involve the patient in management and encourage them to accept responsibility 6. To use time and resources appropriately 7. To establish or maintain a relationship with the patient 	
Neighbour (1987)	Five 'checkpoints' to help uncover the unspoken agenda: Connecting; Summarising; Handing over; Safety netting; Housekeeping	Theoretical model Author GP trainer
Calgary Cambridge (Kurtz & Silverman, 1996)	A model of communication within the consultation. A practical model concerned with the process of the consultation from initiating the session, gathering information, providing structure to the consultation, building a relationship, giving information by explanation and planning, and closing the session	Theoretical model

A final note on consultation models is to state that not one model suits all situations or meets every need. It is difficult to reach agreement on the importance of even a single task within the consultation, such as the need to make a diagnosis, and some researchers have called for new models to reflect diversity and complexity of consultations (Fischer & Ereaut, 2012).

1.3.2 Consultations today: current pressures and influences

The primary care consultation has evolved over time, in response to changes in the health of the population, the expectations of patients and the wider context of national health policy drivers. In this section, some of the current pressures and influences on the consultation are reviewed and defined. Again, this is not designed to be an exhaustive list, but an introduction to some of the topical issues that will be discussed later in the thesis.

1.3.2.1 The drive for patient-centred medicine

In section 1.3.1, the notion that the consultation may be becoming less doctor centred was raised. Patient centred medicine has been described as:

Taking into account the patient's desire for information and for sharing decision making and responding appropriately (Stewart, 2001)

It has both been a subject of much research and promoted by policy makers. Patient-centredness is thought to increase patient satisfaction and treatment adherence, and is reported as being desired by patients (Little et al., 2001). However, despite the widespread endorsement of 'patient-centredness' in policy documents, including the NICE OA guidelines, evidence is contradictory about

whether patient centred medicine leads to improvement in health outcomes (Mead & Bower, 2002). Studies that have compared patient participation in recent times with similar studies or data from the 1980s have found little difference in the relative contribution of patient and doctor to the consultation (Bensing et al., 2006). Furthermore, Pilnick and Dingwall (2011) make the point that there may be good reasons for asymmetry in the doctor patient relationship; for example, the doctor's work of diagnosis will require more questioning in order to complete the task in hand.

1.3.2.2 The consultation in context

In the previous section, the influence of health policy on the consultation was described with reference to drivers to increase patient-centred approaches. This is just one of the wider organisational or institutional influences on the consultation. May (2007) argues that the consultation can no longer be seen as a dyadic event due to the importance of these external influences on the consultation.

Due to the increase in health demands of the population, increase in possible treatments and the limit in resources to supply these treatments, doctors are faced with ever increasing numbers of clinical guidelines and drivers to be accountable regarding their practice. Evidence based medicine is defined as:

The conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients (Greenhalgh, 2014)

Evidence Based Medicine (EBM) includes both utilising research and clinical experience to guide clinical practice, and the NICE guidelines described in 1.2.4 are an example of evidence based guidelines. May suggests there is a tension in

the consultation between the wish to treat the patient as an individual, with a patient centred approach, and the need to treat patients in an 'aggregate' fashion, as promoted by clinical guidelines and EBM.

In primary care in the UK, further quality standards exist which are financially incentivised: the Quality and Outcomes Framework (QOF). General practitioners have computer aided reminders to complete tasks that associate with QOF standards, such as checking blood pressure or giving the flu jab. This acts as a further influence on the consultation and as such, has been argued to promote a more biomedical approach to the consultation (Checkland et al., 2008).

1.3.3 Primary care consultation: summary

In this section the primary care consultation has been defined and described, including a discussion of how it has evolved over recent decades. Models have been reviewed that describe the consultation from the point of view of patient and doctor, and that are influenced by sociology, psychology, medical anthropology and medicine. Medical training over the years has encouraged doctors to adopt a bio-psychosocial approach to the consultation, and has advocated patient-centred consulting. However, current external influences on the consultation, such as guidelines and EBM, QOF, and healthcare policy, may all provide a challenging environment for patient centredness or bio-psychosocial approaches to occur.

1.4 Introduction to the thesis

1.4.1 Background to study development

The idea for this study was originally conceived by a group of researchers at the Arthritis Research UK Primary Care Centre (ARUKPCC) in discussions regarding a National Institute for Health Research (NIHR) funded programme of research that broadly aimed to enhance the care of OA in primary care. A trial was being designed to evaluate the implementation of a 'model' OA consultation in primary care: Management of Osteoarthritis in Consultations Study (MOSAICS)¹². In discussions about how the consultation could be enhanced, it became apparent that little was known about what happens within the consultation when OA is discussed and that a need existed to establish current practice before designing and implementing any interventions. An idea for an exploratory observational study of OA consultations emerged from these conversations. The observational study reported in this thesis was conducted at the same time as the MOSAICS trial, with the intention that the findings from both studies would inform future interventions.

In view of this context, a need to identify and characterise unmet patient need to which future interventions could be targeted is a key component of the study aims, which are detailed in the following section.

1.4.2 Study aims

The study has two overarching study aims:

¹² The MOSAICS trial <http://public.ukcrn.org.uk/Search/StudyDetail.aspx?StudyID=10104>

1. To understand what happens when a patient presents with joint pain to the GP, to determine if there is unmet patient need, and if so, the characteristics of any unmet need
2. To evaluate the use of video recorded consultation and video-stimulated recall during post consultation interview

There are seven more detailed objectives. The first five (a – e) relate to the first study aim and the last two (f, g) relate to the second:

- a. To describe current literature that details patient and doctor experience of OA consultations
- b. To use videotaped consultations to describe the circumstances in which the discussion of joint pain arises in the consultation
- c. To analyse the video-recorded consultations using qualitative methodology to explore the osteoarthritis consultation further, with attention to
 - How GPs respond to the mention of joint pain
 - What language GPs and patients use when describing osteoarthritis
 - The explanations given by GPs
- d. To explore GPs' expressed attitudes to the consultation in patients presenting with symptoms attributable to OA using stimulated recall
- e. To explore patients' perceptions and experience of the consultation where OA is discussed, including their interpretation of the advice given and language used, using stimulated recall
- f. To undertake a systematic review of studies using video to enhance participants' accounts of the consultation, in order to describe the methodological steps and the strengths and weaknesses of this approach

- g. To explore the acceptability to research participants of being video recorded and using video-stimulated recall in interviews

1.4.3 Overview of chapters

In Chapter 2, the existing literature is reviewed to address two questions related to objective a. Firstly, the influences on patients consulting with OA are explored (Paskins et al., 2013). This was considered important as patients' reasons for consulting will have an important influence on events in the consultation.

Secondly, the existing literature regarding the OA consultation is explored; as no previous studies were identified that have used observational methods, patient reported experiences of consulting with OA are compared and contrasted with GP attitudes and beliefs regarding OA (Paskins et al., 2014b).

In reviewing the literature on possible methodological approaches to studying the consultation (summarised in Chapter 3), video-stimulated recall (VSR) was identified as an appropriate method to meet the study aims. In view of the complexity of this method, a need was identified to understand in more depth the methodological issues associated with it, and for this reason, a systematic review of the use of this method was conducted (presented in Chapter 4, addressing objective f) (Paskins et al., 2014a).

In Chapter 5, the study methods are detailed, with particular attention to how the methods evolved during the course of the study.

The study results are presented in Chapters 6 to 10. Firstly, the process of recruitment and selection of the consultations in which OA was discussed is described (Chapter 6). Secondly, in Chapter 7, the results of a pre-consultation questionnaire are presented which detail the patients' agendas for the

consultation. This goes some way to addressing objective b, providing some context for the circumstances in which OA arises.

The key features of the consultations are described using a typology constructed by prominent themes in analysis in Chapter 8. This chapter both addresses objective b and c, and provides a detailed description of the OA consultations.

The themes that emerged from the comparison of each consultation with the matched post consultation interviews with patients and GPs are presented in Chapter 9, and this chapter predominantly addresses the objectives relating to GP attitudes and patient experience (objectives d and e).

The final results chapter (Chapter 10) concerns findings related to evaluation of the use of the method (objective g).

Finally, the findings are drawn together in the discussion Chapter (11) with implications for practice and further research.

1.5 Introduction: summary

In summary, this thesis describes a study, conducted in the context of translational research that aims to both explore what happens when patients present to their GPs with OA and to evaluate a novel methodology (VSR). Although research and guidelines paint a positive picture of OA, evidence exists suggesting that patients and doctors are more pessimistic about OA care. Therein a further aim of the thesis is to explore to what extent the primary care consultation influences, shapes and explains the apparent incongruity in views. The next chapter begins to address this by summarising the existing literature on the OA consultation in primary care.

Chapter 2: The Osteoarthritis Consultation

2.1 Introduction

In this chapter, the existing literature regarding the OA consultation in primary care is reviewed to answer two distinct questions, both of which relate directly to the research aims of this study. Firstly, in section 2.3, the consulting behaviour of patients with OA is considered, to address the question of what is currently understood about why patients with OA consult their GP (Paskins et al., 2013).

Answering this question is important to build an understanding of the precursors or antecedents to the consultation. This is important context, as the sequence of events that lead to a consultation shape an individual's ideas, concerns and expectations (Pendleton et al., 1984), in addition to the patient's agenda for the consultation. Failure of the doctor or patient to understand the other's agenda has been described as a common reason for a 'dysfunctional' consultation (Byrne & Long, 1976).

Secondly, in section 2.4, the views of both patients and GPs regarding the OA consultation are considered with a comparison of patient experiences of the OA consultation with GP attitudes and beliefs to OA (Paskins et al., 2014b). This draws on a range of mostly qualitative literature in which patients' healthcare encounters in primary care and GPs' attitudes and beliefs regarding OA are discussed. This review serves to summarize existing knowledge about the OA consultation and as a result, identify areas where further insight is needed and/or where conflict may exist in the literature.

Before the findings of the literature review are discussed, the methods of the literature search and review are described in section 2.2.

2.2 Literature review methods

An initial literature search, performed as a scoping exercise, identified relevant research using a range of methods including interviews, focus groups and surveys. Due to the diversity of studies, a narrative review was therefore felt to be most appropriate to confer the flexibility needed to review the relevant literature. A narrative review is described as a 'first generation 'traditional' literature review'; narrative reviews have a useful place for identifying themes and gaps in the literature and for informing direction of further research (Pope et al., 2007). The reviews are underpinned by two systematic literature searches; combining narrative and systematic methods has value in enhancing transparency and rigour of narrative reviews.

2.2.1 The literature searches

The literature searches were undertaken by searching relevant databases (Medline, CINAHL, Psychinfo, EMBASE and Google scholar), reference checking, manual searching of relevant journals and recommendations from experts. The search terms used specified the population of interest (patients with osteoarthritis), the setting (the primary care consultation with a general practitioner) and either consulting (2.3) or 'experiences' (2.4). Search terms used are shown in

Table 3. All MeSH headings relating to OA were used with the exception of OA spine; this review aimed to summarise the experiences of those with peripheral joint OA, and not back pain.

For the first research question regarding influences on consulting, no search terms were used to limit the 'influences' on consulting to avoid the risk of excluding relevant papers.

The second research question aimed to compare patient and doctor consultation experiences; however, an initial literature search, performed as a scoping exercise, revealed that papers exploring GPs' perspectives addressed more abstract components of 'experience' and tended to report attitudes and beliefs, rather than 'experience' of consultations, per se. For this reason, attitudes and beliefs were added to the search string, and the research question changed accordingly.

Table 3: Search terms used

1 Setting: Primary Care	2 Population: patients with OA	3 Consulting	4 Experience¹³
Primary Health Care	Osteoarthritis	Consult* AND behavio*	Qualitative Research
GP OR General Practitioners	Osteoarthritis, knee	Consult* AND frequency	interview
Family Physicians	Osteoarthritis, hip	Consult* and prevalence	observation
Family Practice	Arthritis	Seek	Theme*
General Practice		Visit	finding
		Utili*ation	Experience*
			View*
			Attitude*
			Belief*
			Experience*
Notes			
Setting and Population terms and 'qualitative research' searched as MeSH headings, other terms searched as keywords			
Results within columns combined with OR operator.			
Results across columns 1,2 & 3 combined with AND operator (Section 2.3)			
Results across columns 1,2 & 4 combined with AND operator (Section 2.4)			

2.2.2 Inclusion and exclusion criteria

As in qualitative research generally, this review sought to describe a range of phenomena, and with this in mind, inclusion and exclusion criteria were not overly restricted. Papers were included if they concerned patients with a diagnosis of OA or if the population studied were aged over 45 and had a clinical syndrome of chronic peripheral joint pain without a specific clinical diagnosis of OA. These were included with the assumptions that influences on consulting were likely to be

¹³ For the literature search regarding consulting experiences, consult* was added to the primary care list of terms.

similar for patients with joint pain and OA, and that the majority of those included were likely to represent people with OA. In primary care research, a clinical rather than radiographic indicator or diagnosis may be more pragmatic, and there is high discordance in the use of the label osteoarthritis (Peat et al., 2005). Non-English language papers were excluded. 'Primary care consultations' were defined as consultations between a GP and a patient for the purpose of this review with consultations with other members of the primary care team excluded.

For the first research question, no exclusions were made on the basis of study design or patient population studied with the assumption that all studies may further understanding about consulting behaviours.

For the second research question, papers were included if any of the empirical data in the results related to patient consultation experience or GPs' attitudes and beliefs regarding OA. However, only the findings relating to consultation experience or GP attitudes and beliefs were extracted for inclusion in the review. Quantitative studies reporting GP consultation behaviours only were excluded, for example, medical record reviews, unless additional methodology elicited attitudes and beliefs, for example, free text responses in a survey.

2.2.3 Quality appraisal

To appraise the evidence, no single tool was appropriate for the range of methodologies; however, qualitative research appraisal was informed by the CASP tool (Critical Appraisal Skills Programme Collaboration, 2006). Key themes were extracted from the relevant findings of the included papers and a narrative review approach (Pope et al., 2007) applied to the results.

2.3 What influences patients with osteoarthritis to visit their general practitioner?

2.3.1 Overview of search findings

In a number of papers identified in this review, the Andersen-Newman model was used to describe influences on consulting (Bedson et al., 2007, Jordan et al., 2006a, Cronan et al., 1995, Hoozeboom et al., 2012, Dieppe et al., 1999). This framework is used to describe factors that influence healthcare utilisation and is divided into three areas (Andersen & Newman, 1973):

1. Predisposing factors, the social and cultural characteristics of a person (including factors that may have existed prior to illness)
2. Enabling factors, the logistical issues affecting accessing care
3. Need factors, the most immediate cause for seeking healthcare (usually related to the illness itself)

The influences on consulting behaviour have been classified under these headings in the results, in order to provide a framework for the narrative review and to organise discussion of similar themes.

Table 4 summarises the papers identified with respect to their methodology and the influences on consulting behaviour identified, as classified by the Andersen Newman model.

Table 4: Summary of papers identified exploring influences on consulting behaviour

First Author, year	Population: Age; (OA or joint pain (JP)); Country of origin	Methodology			Influences evaluated		
		Quantitative	Qualitative	Mixed	Predisposing	Need	Enabling
Arthritis Care (2012)	OA, UK	•				pain	
Bedson (2007)	≥ 50, JP (knee), UK	•			age gender occupational class educational attainment marital status social network depression	pain disability comorbidities	health beliefs ¹⁴
Coxon (2012)	≥ 50, JP (hand, knee or hip) UK	•			health beliefs	pain disruption of daily activities comorbidities	
Cronan (1995)	≥ 60, OA (defined by symptoms) USA	•			depression self-efficacy age	health status (as measured by arthritis impact)	previous healthcare use social support

¹⁴ Classified by Bedson et al as enabling

					gender		
Dieppe (1999)	Literature review and consensus techniques with health professionals			•	health beliefs	functional status	previous experience of healthcare family beliefs and expectations
Grime (2010)	≥ 50, OA or JP (self-report), UK		•		age	onset and severity of pain	
Hill (2007)	≥ 50, OA hand (self-report), UK	•			health beliefs		
Hoogeboom (2012)	OA, Netherlands	•			age gender ethnicity	pain	previous healthcare use
Jinks (2007)	≥ 50, JP (knee), UK			•	health beliefs	severity of pain	
Jordan (2006)	≥ 50, JP (knee), UK	•			age gender anxiety depression	widespread pain frequent consulter pain duration bilateral symptoms previous injury	practice registered with education cohabiting previous use of GP
Linsell (2005)	≥ 65, JP (hip & knee) UK	•				joint affected	
McHugh (2007)	OA patients awaiting joint replacement, UK		•			pains severity Visits to GP with	

						other problems	
Mitchell (2006)	≥ 50, JP (knee), UK	•			age gender health beliefs	severity of pain	urban GP practice
Rao (1997)	≥ 18, self-reported arthritis USA	•			age gender ethnicity overweight	activity and work limitation doctor visits for other health problems	area of residence income health insurance
Rosemann (2007)	OA, Germany	•			age gender obesity	comorbidities number of prescriptions pain severity physical limitation	previous healthcare use marital status
Sanders (2004)	≥ 51, OA (self-report) UK		•		age health beliefs		previous use of healthcare
Schellevis (1994)	age not stated, OA, Netherlands	•				comorbidities	
Thorstensson (2009)	≥ 35, JP (hip or knee), UK	•			obesity age gender depression	comorbidity which joint affected mobility problem pain severity	living in urban area living in deprived area
Watts (2011)	JP, UK		•		age	site of pain	

There is some overlap in the scope of the three categories; some authors have already classified the influences they measured using the model (Bedson et al., 2007), and in these instances the authors own classification has been applied, leading to certain themes (such as health beliefs) appearing in more than one column. Sixteen papers evaluated need factors, 15 evaluated predisposing factors and ten papers evaluated enabling factors. Individual themes are discussed below.

2.3.2 Predisposing factors

2.3.2.1 Gender, age and body mass index (BMI)

A prospective study of consulting behaviour of older adults with knee pain demonstrated that female gender was a significant predictor of a new episode of consultation (Jordan et al., 2006a) and this finding is replicated in an American study of patients with self-reported arthritis (Rao et al., 1997). However, four other UK studies do not report any influence of gender on consulting (Bedson et al., 2007, Hill et al., 2007, Mitchell et al., 2006, Thorstensson et al., 2009).

Similarly, there does not appear to be a clear influence of age on consulting. Jordan et al (2006a) found a modest increase in incidence of consultations in patients aged 65-74, although this lost significance when adjusted for other variables. In a postal survey of patients with self-reported hand problems, those over 70 were less likely to have consulted their GP about their hands in the last 12 months when adjusted for other significant factors (Hill et al., 2007). However, two American studies report that younger patients with arthritis are less likely to consult (Cronan et al., 1995, Rao et al., 1997).

Jordan et al (2006a) and Thorstensson et al (2009) have both demonstrated a modest association between obesity and likelihood of future consultation about knee pain; in the former study this lost significance when corrected for other factors. Rao et al (1997) also reported an association between being overweight and self-reported consultation rates.

2.3.2.2 Health beliefs

The influence of health beliefs on consulting was considered in both qualitative work looking at individuals' perspectives and quantitative population studies.

Qualitative research reveals the nature of the beliefs and quantitative studies are useful for establishing the effect of the beliefs on behaviour. Prevalent disorders, such as joint pain in the elderly may be regarded as less serious or as a normal consequence of ageing (Dieppe et al., 1999, Jinks et al., 2007), and therefore not necessarily a symptom of illness (Dieppe et al., 1999, Jinks et al., 2007, Sanders et al., 2004). It has been suggested that by not consulting, patients may seek to maintain a 'healthy' identity (Jinks et al., 2007).

Some patients hold the belief that OA is not a treatable condition, that 'nothing can be done' and this may have been reinforced by previous visits to GPs (Jinks et al., 2007, Sanders et al., 2004). Coxon et al (2012) describe results from a choice based conjoint analysis study where the perceived attitude of the GP was an important determinant in deciding whether or not to consult the GP; this was second only to restriction of activities, and found to be more significant than other health problems and episodes of severe pain.

Population studies demonstrated significant effects of health beliefs on consulting. Mitchell et al (2006) reported that participants who held beliefs that their (knee)

pain would have a permanent effect and that it affected the way they were viewed by others, were more likely to consult when corrected for other significant variables. A larger postal survey of patients with self-reported hand symptoms (including OA) also demonstrated illness perceptions associated with consulting, including believing the hand problem was permanent/would last a long time; believing that treatment could control symptoms and reporting more severe perceived consequences of hand pain. This study also demonstrated frustration and 'emotional representations', which included statements about anger, were associated with consulting a GP (Hill et al., 2007). Positive perceived general health status has also been associated with non-consulting for patients with self-reported arthritis (Cronan et al., 1995, Rao et al., 1997).

Self-efficacy has been shown to inversely correlate with total healthcare visits in patients with OA in another study, and was the psychological variable which best predicted healthcare use (Cronan et al., 1995).

2.3.2.3 Depression

Depression is an important condition that may be a barrier to consulting but again, the evidence here is somewhat contradictory. Consulters with severe knee pain in a study reported by Jordan et al (2006a) were significantly less depressed than non-consulters. However, in contrast, the total number of GP visits by patients with OA has been reported to correlate positively with depression scores (Rosemann et al., 2007). Thorstensson et al (2009) did not demonstrate an association between anxiety and depression and consulting in a population with self-reported hip and knee pain; however, in this study the population were aged 35 and over and there may have been a significant proportion of participants who did not have OA. The

relationship between anxiety and depression and consulting may be mediated by health beliefs; Hill et al (2007) reported associations between anxiety and depression and certain health beliefs (e.g. frustration), but unfortunately did not measure the correlation between anxiety and depression directly with consulting behaviour.

2.3.2.4 Predisposing factors: summary

In summary, the pre-disposing factors which appear to have the clearest association with consulting are health beliefs. Holding beliefs that OA can be treated successfully and perceiving severe consequences of pain have been associated with consulting in population studies, whereas believing OA is a 'normal' consequence of ageing or that the GP may have a negative attitude towards OA are described as disincentives to consulting. Anger, frustration and depression may also be associated with consulting but the evidence here, particularly for depression is less clear.

2.3.3 Enabling factors

2.3.3.1 Previous use of healthcare

Jordan et al (2006a) reported that a previous knee injury was one of only three predictors of consulting with knee pain that remained significant when adjusting for all other variables. Jordan et al attribute this to previous contact with the GP and knowledge of the healthcare system. In this study, having previously used non-GP services was also a significant predictor of seeking healthcare in the participants with severe pain. A Dutch study also reported previous healthcare use as a

predictor of consulting with joint pain (Hoogeboom et al., 2012). However, a previous visit to the GP regarding joint pain may be a barrier to further consultation if the patient has encountered a negative attitude from the GP; patients have reported hiding their symptoms in this context (McHugh et al., 2007a). Patients also reported very few consultations with GPs while on the waiting list for joint replacement surgery, feeling they were 'under a specialist' and so joint symptoms were no longer the remit of the GP (McHugh et al., 2007a).

2.3.3.2 Cohabiting and social networks

Rosemann et al (2007) reported that living alone was a predictor of number of GP attendances (all reasons) and living alone was also a weak predictor of consulting for knee pain in the study by Jordan et al (2006a). This may be explained by lack of a social network although no studies have examined this directly.

2.3.3.3 Area of residence

Living in an urban area has been reported as a strong predictor of consulting with hip and/or knee pain, whereas deprivation scores were not significantly related to consultation rates (Thorstensson et al., 2009). In contrast, Mitchell et al (2006) reported social domain score was a predictor of consulting behaviour in patients with knee pain; however, this study recruited from only two general practices in London and had relatively low numbers.

2.3.3.4 Enabling factors: summary

In summary, in terms of enabling factors, few studies have evaluated the impact of deprivation on consulting and none have looked at the influence of social networks. Living alone appears to be associated with higher consultation frequency. The influence of previous use of healthcare is an area where conflicting findings exist between quantitative and qualitative research, the former suggesting a positive influence.

2.3.4 Need factors

2.3.4.1 Severity of pain

Studies show that pain severity is higher in consulters compared to non-consulters (Bedson et al., 2007, Jinks et al., 2004, Jordan et al., 2006a, Mitchell et al., 2006) in addition to clinically detectable joint swelling (Mitchell et al., 2006). Patients have identified severity of pain as an important trigger to consultation (Arthritis Care, 2012, Jinks et al., 2007). However when severity of pain is included in statistical models to evaluate predictors of consulting, the results are conflicting and appear to be dependent on the tool used to measure pain. Studies that evaluated pain severity using the WOMAC (Western Ontario and McMaster Universities OA Index) indicate that it is not a significant predictor of consulting (Jordan et al., 2006a, Mitchell et al., 2006), whereas studies using other measures found a significant association (Bedson et al., 2007, Thorstensson et al., 2009). The data on consultation frequency would suggest that a large proportion of patients with severe pain are not consulting their GP about joint pain but are consulting with other problems (Bedson et al., 2007); consulters and non-

consulters with severe knee pain had a higher number of comorbid consultations than those with mild pain. This observation led the authors to suggest that there may be multiple occasions on which to opportunistically assess and manage joint pain when there is another reason for consultation. However, it is possible that discussions regarding joint pain are occurring but are not being recorded, as suggested by Cronan et al (1995).

2.3.4.2 Duration of pain

Recent onset of pain (within one year) has been significantly associated with consulting with knee pain (Bedson et al., 2007). In contrast, a large postal survey of adults over 50 with self-reported knee pain identified a higher frequency of self-reported consultation rates in those with chronic pain, although in this study chronicity was defined as more than three months (Jinks et al., 2004). It may be that the peak duration of symptoms to trigger consulting is somewhere between three and 12 months.

Characteristics of the pain, such as being of sudden onset, may lead patients to identify symptoms they perceive as less likely to be 'ageing related' or normal for them and therefore more in need of medical attention (Grime et al., 2010).

2.3.4.3 Joint affected

Linsell et al (2005) compared the likelihood of consulting in individuals with hip or knee pain. They reported that patients with knee pain were more likely to consult the GP (self-reported rates) than those with hip pain when adjusted for age, sex, severity, bilaterality and duration. Watts et al (2011) reported that hand pain was

more often referred to as normal for ageing (by patients) when compared with pain at other sites.

2.3.4.4 Disruption of daily activities

Disruption of normal activities appears to be clearly related to consulting behaviours. Mobility problems were the most significant predictor of consulting a GP in a study of patients with self-reported hip and knee pain (Thorstensson et al., 2009). The extent to which pain disrupted everyday life was also the most important determinant of the patient's decision to consult in a conjoint analysis study (Coxon et al., 2012). Furthermore, activity limitation was also a significant factor affecting consultation rates in a US study of patients aged over 60 with OA (Cronan et al., 1995).

2.3.4.5 Multi-morbidity

Osteoarthritis patients have more multi-morbidity than age and sex matched controls (Kadam et al., 2004); however how the presence of comorbid conditions affects consultation remains unclear. Thorstensson et al (2009) found that the number of comorbid conditions was not related to consulting rates in patients with self-reported hip and knee pain in patients aged 35 and over. Bedson et al (2007) also reported that there was no difference in the number of comorbid consultations in consulters and non-consulters. However, selection bias may have resulted in under-representation of patients with comorbidity, and the study reported by Thorstensson et al may have included patients who did not have OA due to the age inclusion range.

In contrast, Schellevis et al (1994) report a study from the Netherlands, recording consultation frequency in patients with five chronic diseases, and report that patients with OA are more likely to consult their GP if they have comorbidities compared to single disease (6.4 consultations per year compared with 4.2). However, whether or not the consultation was for joint pain was not recorded and so this finding may be explained by the observation that patients with more severe pain visit their GP more, although not necessarily about their joints (Bedson et al., 2007, Rosemann et al., 2007). This study is limited by missing data in 30% of consultations and only 80 of the total 962 patients had OA of the knee and hip, with other types of OA excluded.

Bedson et al (2007) report that participants' rating of knee pain as the 'most important health problem' was significantly associated with likelihood of consulting with knee pain, suggesting that patients do prioritize their health problems. The authors suggest that if comorbid illness is perceived as important this may result in non-consultation for joint related problems.

In summary, disrupted function is a clear influence on consulting. Characteristics of joint pain including severity, duration and distribution also appear to influence consulting decision making. Multi-morbidity appears not to be associated with increased frequency of consultation for joint pain in patients with OA; however this finding may be limited by under-representation of patients in studies or by the completeness of medical record data.

2.3.4.6 Need factors: summary

Disruption of daily activities appears to be an important driver to seeking medical help. Severity of pain is higher in consulters compared to non-consulters, and

described by patients as being an important influence in consulting. Duration of pain and the joint affected appear to be important, but this effect may be mediated by health beliefs and patients' perceptions of what constitutes 'normal' pain or not. Finally, the influence of multi-morbidity on consulting patterns has not been established.

2.3.5 Summary and discussion

The influences on consulting a general practitioner using Andersen and Newman's model of healthcare utilisation which incorporates biological, psychological and social factors, have been reported.

Health beliefs appear to be important predisposing factors in deciding whether or not to seek health care. The belief that OA is an inevitable part of ageing, about which little effective treatment exists and a perceived negative attitude of the GP are reported as disincentives to consulting. Health beliefs are also likely to interact with other identified themes; for example age, and the influence of previous healthcare use on consulting. Previous healthcare use has been associated with increased consulting, but could also result in less future consultations if the patient perceived a negative response from the healthcare practitioner consulted. Other important health beliefs include perceiving severe consequences of pain and frustration, which are associated with increased likelihood of consulting.

Depression is a further psychological variable for which the evidence is contradictory, and which is likely to be closely related to social context.

The 'need' factors, in the context of OA are mostly represented by joint related symptoms, impact of the symptoms or comorbidities. Disruption of daily activities appears to be an important driver to seeking medical help. Severity of pain is

higher in consulters compared to non-consulters although tests of statistical significance yield contradictory results; individual patients have reported pain as of importance in qualitative research and the lack of statistical evidence to support this may be related to limits of the quantitative measures used. Qualitative research has demonstrated a vast range of descriptors that patients use to describe pain which suggests the questionnaire tools used may be limited in ability to capture the full pain experience (Gignac et al., 2006), which may explain the discrepancy in findings. Again, need factors are likely to interact with an individual's health beliefs. The physical factors such as severity, distribution and duration of pain may form a 'pattern' of pain that patients perceive as normal or abnormal, which in turn will influence decision making to seek healthcare. Patients with OA who consult their GP appear to have more comorbid conditions but how comorbidity affects consulting frequency about joint pain is not clear. Related to this is the finding that patients with severe pain are visiting their GP frequently about issues other than their joints. The literature would suggest these patients are not having their symptomatic joint pain managed, but this may be due to limitations in the various methods of estimating consultation frequency and content. Furthermore, the ways in which patients and doctors prioritise symptoms in the context of multi-morbidity is not well characterised in the literature. In general, the social aspects and 'enabling' factors are reported on less frequently than other variables in research in this area, although living alone and the area of GP practice appear to be important. The healthcare system is a further important contextual influence and some of the observed differences in findings may be explained by variation in healthcare access and availability, for example, the relationship between health insurance and financial status and consulting.

Furthermore, differences in GP training across countries may impact on the consulting behaviours.

The predisposing, enabling and need factors are not mutually exclusive and there is some overlap between categories. For example, comorbidities may be 'pre-disposing' in the case of long term conditions that existed prior to the current illness, or 'need' factors that are directly influencing the need for seeking health care. A further example are health beliefs, which may be classified as 'predisposing', 'need' or 'enabling' factors. The model has been criticised for generally underplaying psychological factors (Jordan et al., 2006a).

An alternative theoretical lens through which to consider access to healthcare is the notion of 'candidacy' (Woods et al., 2005). Candidacy refers to negotiation around an individual's eligibility for healthcare and is a process involving interaction between the health professional and patient. Thus, candidacy is influenced by cultural values e.g. the perception OA is a normal change and the beliefs and values of the doctor. Candidacy is a dynamic process, and influenced by context including local resources and political pressures, previous relationships and experiences and this 'dynamism' goes some way in explaining the lack of clear observed relationships between some factors and seeking healthcare.

One of the general methodological limitations of the studies included relates to estimates of consultation frequency. Consultation prevalence that is calculated using only diagnostic codes may underestimate consultation prevalence as there is evidence that GPs exercise caution when using diagnostic codes and may favour symptom descriptors (Bedson et al., 2005). Coded data may also underestimate frequencies if not all aspects of the consultation are recorded (Jordan et al., 2006b). However, studies that identify consulters on the basis of all

joint related medical record codes as well as a free text search may overestimate consultation frequency of OA specifically as alternative diagnoses will be included. Furthermore, overestimation of consultation rates in some of these studies may be attributable to selection bias due to the possibility that similar factors influence participation in research as those influencing decision-making to seek healthcare. Self-report is limited by recall bias which may over- or under-estimate consultation frequency.

A further limitation of the included studies that used quantitative measures to calculate influences on consulting are that these may underplay the interaction between variables. Depression is an example of a variable where the evidence was weak and there may be variation in how this factor could influence consulting. One could argue that depression could both increase or decrease consultation frequency due to coping difficulties and lack of social support or due to isolation. Qualitative research may be better placed to explore complex influences, taking into account the social and environmental context.

2.4 Comparison of patient experiences of the osteoarthritis consultation with general practitioner attitudes and beliefs to osteoarthritis

2.4.1 Overview of search findings

The search identified 552 papers, of which 22 papers were identified as relevant to the review. One of the four papers excluded at full text stage was a conference abstract that repeated findings of a paper already included; the other three did not describe consultation experience. The majority of included papers represented UK research (13) with the remainder constituting North American (5), European (3), and Australian (1) studies. The majority of studies evaluated patient experience (12), with the remainder investigating GP views (5) or a combination of the two (5). The majority of included studies used predominantly qualitative methodology (interviews: 15; focus group: 5). A summary of the papers identified is shown in Table 5 including a summary of each study aim, the methods used, the relevant findings and limitations.

Table 5: Summary of papers identified exploring patient consultation experiences in osteoarthritis and general practitioners' attitudes and beliefs

First Author, Year, Country	Participants¹⁵	Methods¹⁶	Aim	Extracted findings relating to consultation experience and/or GPs attitudes and beliefs	Comments and Limitations
Alami (2011), France	81 Patients, 11 GPs 6 Rheum 4 Orth 4 Alt Med	Interviews	To explore views on management and barriers to improvement	Patients report importance of doctor patient relationship and various barriers to treatment including side effects, fear of addiction, fear of masking pain, and a wish to focus on preventative options. GP's report range of attitudes including the belief that OA is not a disease. Some patients and GPs identified OA as an area of uncertainty for GPs.	Not always clear which results (health care practitioners) pertained to GPs. No findings in results to support author claims in abstract and conclusion that patients feel they are not taken seriously and that GPs act as 'technicians'; findings do not entirely match authors' conclusions.
Busby (1997), UK	80 Patients, 3 GPs 1 Rheum	Interviews Fieldwork	To understand perceptions and experiences of OA	Patients describe multiple attempts at seeking healthcare, explanations couched in terms of ageing meant OA was inevitable and that nothing could	Results in book chapter. Authors' report findings from GPs don't constitute 'a systematic study'. 80 patients

¹⁵ Alt Med: GP specialising in alternative medicine; HP: Health professional; NP: Nurse Practitioner or practice nurse; Orth: Orthopaedic Surgeon; PA: Physician assistant; OT: Occupational Therapist; Physio: Physiotherapist; Rheum: Rheumatologist.

¹⁶ Methods in square brackets yielded data that was not extracted for the purposes of this review.

				be done. GPs report lack of therapeutic options threatening doctor-patient relationship.	but only 7 cited in findings. No reported analysis methods.
Coar (2004), UK	9 GPs 3 Physio 3 Rheum	Interviews	To explore GP's beliefs and attitudes regarding OA	Diagnosis and use of 'wear and tear' emergent themes. Use of 'wear and tear' perceived as acceptable and useful given lack of alternative terms. Evidence of practitioners playing down severity.	MPhil thesis. Author (GP) reports on limitations and influence of interviewing their peers.
Davis (2004), USA	57 Patients	Focus groups	To explore barriers to chronic pain management in arthritis	In the theme 'relationship with healthcare providers', patients describe unwelcome focus on prescriptions, and miscommunication in the consultation.	Small part of results relevant to this review; 'Relationship with healthcare providers' was one of nine emergent barriers to pain management.
De Bock (1992), Netherlands	14 GPs	Interviews [Medical record review]	To explore GP's 'policy' in managing OA	Marked variance in the perceived importance and management of OA. Authors conclude consensus needed.	Small part of results relevant to this review; small focus on interview findings in results. Little information on analysis of qualitative data.
Gignac (2006),	53 Patients	Focus groups	To compare health experiences of	Patients reported being told OA was normal for age, going to get worse,	Study design included 'control' focus groups which did not

Canada			middle aged and older adults with OA	and were encouraged to accept their symptoms. Conversely, patients felt they had more control over the trajectory of OA. Delays in diagnosis reported and insufficient communication around prescriptions.	appear to add to conclusions or findings.
Glauser (2011), USA	152 GPs 99 NP & PAs	[Vignettes] Survey	To examine the knowledge, attitudes and beliefs and practice of GPs regarding OA management	Most common educational need identified in free text part of survey was around treatment.	Small part of results relevant to this review; methods state researchers elicited barriers to care and confidence in managing OA, but only vignette results and educational needs reported in results. As a result, results mainly address 'practice' aspect of study aim.
Grime (2010), UK	27 Patients	Interviews	To explore perceptions of wellness in elderly people with OA	Reports both discordance and acceptance of 'wear and tear' used in diagnosis.	Small part of results relevant to this review; most of the results relate to everyday activities and not consulting with a doctor.

Hill (2011), UK	29 Patients	Focus Groups	To explore perceptions and experience of treatment and management of hand OA	Patients described dissatisfaction with amount of information, feeling that 'nothing can be done', and held perceptions that GPs lacked understanding of the impact of hand OA. Authors conclude some of the findings imply lack of knowledge of treatment options.	Sample included 14 patients from secondary care, and not always clear which setting consultation experiences related to.
Jinks (2007), UK	22 Patients	Survey Interviews	To investigate population and individual needs assessment	Patients report being told their pain is 'wear and tear', related to age, to 'live with it' and that nothing can be done. Patients also held the view nothing could be done.	Small part of results relevant to this review; most of the results relate to living with knee pain. Patients were > 50 years and had self-reported knee pain, and may not all have had OA.
Kee (1998), USA	20 Patients	Interviews	To gain an 'insider view' of living with OA	The theme 'staying in charge' describes patients' lack of adherence with GP recommended interventions, with examples of miscommunication.	Small part of results relevant to this review; most of the results relate to living with OA.
Kingsbury (2012), UK	232 GPs	Survey	To identify GP reported management of	GPs described barriers to effective OA management including inability to manage pain adequately, time in the	Small part of results relevant to this review; most of the findings relate to self-reported

			OA	consultation and enabling patients to make lifestyle changes.	GP behaviours. Low response rate.
Lambert (2000), USA	12 Patients, 14 Doctors (including GPs, rheum and others)	Focus groups	To understand views and experience of OA care and expressed needs	Patients value 'low-tech' treatments with doctors tending to value medicines and surgery. Doctors report OA as being related to ageing, which patients report as difficult to accept. Doctors reported lack of musculoskeletal training as an issue, and specific educational needs were identified.	Authors do not specify number of GPs, and sample includes other secondary care doctors; not clear which findings relate to GPs.
Mann (2011), UK	16 Patients, 2 GPs 1 Rheum 1 OT 2 Physio 4 NPs	Focus groups and interviews	To explore views on provision of care and possible improvements	Patients reported delays in diagnosis, a feeling that 'nothing was done', and difficulty knowing when to return to the doctor. Patients reported OA was not a priority and health professionals reported lack of time as an issue. A GP participant reported not perceiving a need for patient information, although the HP as a whole identified a need for more information.	Only 2 GP participants.

McHugh (2007), UK	21 Patients	Semi-structured interviews	To investigate the experiences of patients on the waiting list for joint replacement	Patients reported hiding their symptoms from their GP after previous negative experiences.	Small part of results relevant to this review; much of the results about living with OA and self-management etc.
Pitt (2008), Australia	13 GPs	Focus groups Semi-structured interviews	To explore enablers and barriers to referring patients with OA to self-management programmes	A range of referral patterns and attitudes to self-management in OA were uncovered. Barriers to referral included GPs holding the belief that OA was different to other chronic diseases and time in the consultation.	Small part of results relevant to this review; attitudes to OA not primary objective of researchers, and so attitudes elicited were only those of relevance to self-management programme referral. Small sample.
Rosemann (2006), Germany	20 Patients 20 GPs 20 NPs	Interviews	To identify health care needs and obstacles for improvements	Patients reported pain and fear of disability as their most important concerns that were inadequately addressed in the consultation, with insufficient information about prognosis. Doctors reported resource issues as barrier to effective treatment, while patients reported	Issues of transferability due to healthcare funding in Germany which reportedly does not 'value' conservative treatments equally with non-conservative, and due to large number of non-surgical orthopaedic specialists working in primary

				communication deficits.	care. More findings reported from GPs than patients.
Sanders (2002), UK	27 Patients	Interviews	To examine the meanings of symptoms of OA	Delays in diagnosis reported. Older participants reported down-playing symptoms.	Small part of results relevant to this review; paper concerns general experience of living with OA.
Sanders (2004), UK	27 Patients	Interviews	To explore barriers to joint replacement	Participants describe being told nothing can be done; often those who asked about surgery reported being told they were unsuitable for various reasons, including age, by their GP.	Small part of results relevant to this review; data extracted from one of 3 themes relating to experiences of primary care.
Thomas (2013) UK	11 Patients	Semi structured interviews	To describe patient experience of seeing their GP with foot OA	Patients described being given little information, felt foot OA was low priority, and felt there was an 'unwelcome focus on drugs'.	Conference Proceeding, and therefore limited information on findings.
Turner (2007), UK	31 Patients	Interviews	To investigate beliefs about causes of OA	'Overwhelming majority' reported no negative psychological reaction to diagnosis. Some patients reported that GPs had reinforced the belief that OA would deteriorate over time.	Small part of results relevant to this review, around the theme of diagnosis.
Victor	170 Patients	Interviews	To explore	Participants reported a lack of	Small part of results relevant to

(2004), UK		[Patient diaries, Group sessions]	patients' perspective on meaning and significance of OA	information that had been given by GPs previously and uncertainty about the nature, self-management and outcomes of OA.	this review; research conducted in the context of a randomised controlled trial therefore only data relating to participants' previous interaction with healthcare was extracted.
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The evidence is grouped below under four themes derived from the included studies: diagnosis; explanations; management of the condition; and the doctor-patient relationship. Patient and doctor perspectives are discussed under each theme.

2.4.2 Diagnosis

The issues identified around diagnosis predominantly relate to delays in diagnosis and the diagnostic term or phrase used at the time of diagnosis. Patients describe long delays before being diagnosed in both UK and Canadian research (Gignac et al., 2006, Busby et al., 1997, Mann & Goberman-Hill, 2011) in addition to difficulty obtaining a diagnosis and 'relief' at symptoms being legitimised (Sanders, 2002). There is some evidence to suggest multiple visits prior to receiving a diagnosis may be a particular issue in younger patients (Gignac et al., 2006). 'Wear and tear' has been reported by patients as conveying a range of negative meanings including 'it's your age' and 'nothing can be done for you' (Jinks et al., 2007), or that the physician who used the term is 'giving up' (Victor et al., 2004). Busby (1997) argues that the connection with ageing results in the phrase conferring inevitability. However, the phrase is not exclusively associated with negative connotations. Grime et al (2010) found participants used it as 'shorthand for normal bodily change' and adopt a 'use it or lose it' philosophy to exercise; Grime et al report the latter finding is in contrast to other reported research suggesting patients may avoid activity due to connotations of wear and tear. In one UK study of GPs' perceptions of OA, GPs reported withholding or 'playing down' the diagnosis, using 'wear and tear' in preference to osteoarthritis or

degenerative arthritis, in order to either avoid upsetting the patient or prevent the adoption of a 'sick role' and increased disability (Coar, 2004). 'Wear and tear' was reported by GP participants as a term that may facilitate acceptance on the part of the patient and that saves time; introducing the term osteoarthritis was felt to necessitate a more detailed explanation (Coar, 2004). In one French study, GPs described their diagnostic priority as identifying inflammatory joint pain, with the precise nature of mechanical pain being considered unimportant and unrelated to treatment (Alami et al., 2011).

2.4.3 Explanations and patient information

There are a number of studies in which patients report that they have been told their joint pain/arthritis is normal for their age (Jinks et al., 2007, Sanders et al., 2004, Gignac et al., 2006, Alami et al., 2011, Busby et al., 1997), and is likely to deteriorate over time (Gignac et al., 2006, Turner et al., 2007). Similarly, reports of being told 'nothing can be done' are common (Jinks et al., 2007, Gignac et al., 2006, Busby et al., 1997, Sanders et al., 2002), and this has been described as a 'fatalist' viewpoint. Patients describe being encouraged to accept their symptoms and 'live with it' (Jinks et al., 2007).

Some patient narratives do indicate a degree of acceptance of their symptoms and perseverance with daily activities. Beliefs about symptoms being 'normal for age' are moderated by shared experiences of friends and family, and the societal view of ageing (Sanders et al., 2002, Turner et al., 2007). It is also worthy of note that patients holding beliefs that nothing could be done or that symptoms were 'just' age related have reported withholding symptoms from the GP (McHugh et al., 2007a, Sanders et al., 2002).

However, there is evidence of patients rejecting the notion that OA is age-related (Lambert et al., 2000), particularly younger adults (Gignac et al., 2006) who may search for alternative explanations (Sanders et al., 2002).

In an interview study with 81 patients with knee OA, a general dissatisfaction with the 'vague' information about the condition is reported (Alami et al., 2011).

Dissatisfaction with the amount of explanation is also reported in other UK studies (Hill et al., 2011), with a feeling that OA is low priority (Thomas et al., 2013). The lack of precision in explanations has been interpreted as both lack of interest and lack of knowledge on behalf of the doctor (Alami et al., 2011, Hill et al., 2011).

Patients reported that more information regarding disease progression may facilitate self-management and coping (Mann & Gooberman-Hill, 2011).

Education regarding prognosis has been identified as a particular area of unmet need in patients with OA (Victor et al., 2004), underpinned by fear of lifelong pain, and of becoming disabled. Victor et al (2004) tested knowledge of 170 patients with OA and found that 51% agreed with the statement 'most people with osteoarthritis end up in a wheelchair'.

General practitioners have reported giving patients advice on likely outcomes, but in the same study avoidance of the term 'osteoarthritis' for fear of upsetting patients, appeared to be associated with a perception by GPs that OA does in fact have a poor outcome (Coar, 2004).

Some GP interview findings do concur with the patients' reports regarding consultation experience, with some GPs holding the belief that OA is a normal part of ageing and inevitable (Alami et al., 2011). General practitioners have also clearly expressed the view that OA is 'not a disease' (Alami et al., 2011, Mann &

Goberman-Hill, 2011) and in some instances, that there was therefore not a need for patient education (Mann & Goberman-Hill, 2011).

General practitioners have reported reasons for not giving written information, including lack of availability of quality resources and limited time (Kingsbury & Conaghan, 2012). Time in the consultation has been reported as a barrier to information giving in other UK studies (Kingsbury & Conaghan, 2012, Mann & Goberman-Hill, 2011), but did not appear to be an issue in a non-UK European study (Rosemann et al., 2006). General practitioners have also reported their own knowledge needs as a barrier to information provision (Alami et al., 2011, Glauser et al., 2011, Lambert et al., 2000).

2.4.4 Management of condition

In considering management, a number of studies referred to priorities, barriers, and challenges in treating patients with OA.

For patients, pain management and fear of disability have been reported as consultation priorities (Rosemann et al., 2006). Jinks et al (2007) reported that patients tended to make their own decisions about medications, implying that consultations did not seem to contain lengthy discussions about the pros and cons of medication. Gignac et al (2006) report patient concerns that medication masks, rather than cures symptoms and dissatisfaction with the amount of explanation accompanying prescriptions. Fear of side effects is reported (Alami et al., 2011, Rosemann et al., 2006) and the presence of comorbidities has also been described as contributing to patient hesitancy to take medication, in addition, again to suboptimal communication around prescriptions (Davis et al., 2004).

Throughout these studies is a recurring belief among patients that they receive

inadequate information and communication around prescriptions, and Alami et al (2011) describe this as leading to suspicion of drugs. Alami et al (2011) describe patient expectations, with those with more chronic symptoms seeking 'cure'.

Patients describe physicians communicating treatment options as 'palliative', causing patients to question the efficacy of 'modern medicine'.

Two studies of patient experience suggest practitioner focus on pharmacological intervention is 'unwelcome', suggesting patients want more information about other approaches (Davis et al., 2004, Thomas et al., 2013).

Patients in focus groups discussed the inconsistency in advice regarding referral for joint replacement (Mann & Goberman-Hill, 2011). Patients also expressed having inadequate knowledge to make choices about surgery and anxiety about feeling the decision was theirs (Mann & Goberman-Hill, 2011). Patients have reported care for OA to be reactive and not proactive, with some expressing difficulty in knowing when to return to the doctor for follow-up (Mann & Goberman-Hill, 2011).

General practitioners feel that patient led follow up is appropriate (Coar, 2004), particularly if they also hold the view that OA is 'not a disease' (De Bock et al., 1992). Interestingly, this belief seemed to underpin a reluctance to refer to self-management programmes, with GPs not identifying OA a chronic disease with the same standing as diabetes, but as a condition with little or no opportunity for modification of outcomes (Pitt et al., 2008).

General practitioners also report pain control as the biggest challenge in a survey of OA management in the UK (Kingsbury & Conaghan, 2012). General practitioners in this study identified practice and logistical barriers to managing pain such as lack of specialist teams and time in the consultation, in addition to

lack of training. In a German study, GPs talked about specific patient barriers to managing pain; for example, they reported patients either did not accept paracetamol as a treatment due to its common use or had already tried it (Rosemann et al., 2006). Rosemann et al (2006) also described a reluctance among GPs to prescribe opiates for OA, considering that patients would automatically reject these 'heavy' drugs, in addition to GPs perceiving opiates were 'over-treatment' for OA.

With regard to lifestyle change such as promotion of exercise and weight loss, GPs have described getting patients to change their lifestyle as challenging (Kingsbury & Conaghan, 2012) and described patients as generally unwilling to change, having 'learned to live' with their symptoms (Rosemann et al., 2006). General practitioners have also expressed uncertainty regarding exercise prescriptions (Lambert et al., 2000). Lambert et al (2000) highlights the different perspectives of patients and physicians; in their study doctors were reported as valuing surgical options and medication in OA treatment, with the implication non-pharmacological, non-surgical treatments were less valued by physicians, than patients.

2.4.5 Osteoarthritis and the doctor-patient relationship

The need for doctors to value or legitimise symptoms emerges strongly from published studies (Grime et al., 2010, Sanders et al., 2002), with patients in one study describing that they have not been taken seriously (Alami et al., 2011).

Patients report feeling OA is not a priority (Thomas et al., 2013).

Patients described the importance of the doctor-patient relationship in the study by Alami et al (2011) and the need for doctors to be patient centred. Kee (1998)

describes participants with OA 'stay[ing] in charge' by not taking medications recommended by GPs, or not seeing doctors again who had recommended joint replacement, when this was not favoured by the patient. However, this also represents a breakdown in communication and shared decision-making. As previously mentioned, Davis et al (2004) found that patients reported communication and unmet expectations as barriers to effective pain management, in addition to personal barriers such as comorbidities and emotional distress. General practitioners have reported feeling that the lack of therapeutic options or cure in OA threatens the doctor-patient relationship (Busby et al., 1997, Coar, 2004). Further evidence of this comes from GP reports of either requesting X-Rays or referring patients to secondary care, when they don't believe it clinically indicated, in order to preserve the relationship (Coar, 2004, Rosemann et al., 2006). General practitioners may have resultant feelings of frustration (Coar, 2004) and feel that patients have 'unrealistic expectations' (Lambert et al., 2000). An alternative viewpoint is provided by Gignac et al (2006) who imply the different orientations of doctor and patient; doctors may approach OA from a perspective of acceptance whereas patients may believe they have more power to exert control and influence over their symptoms. Busby et al (1997) describe the GP as translator of knowledge, and suggest how tensions in the doctor-patient relationship may exist between biological and sociological knowledge; if a doctor has uncertainty about biological explanations he or she may favour sociological descriptors, for example 'wear and tear'.

General practitioners are described as reporting OA as less important than other 'life-threatening' conditions such as ischaemic heart disease (Coar, 2004). Coar

(2004) also discusses the notion that a common condition may be considered less important by GPs: 'familiarity breeds contempt'.

2.4.6 Summary and discussion

A broad range of literature has been reviewed in order to understand what happens when patients consult with osteoarthritis. A strength of this review is the breadth of included literature, including a MPhil thesis, which has been particularly useful in illuminating the GP perspective.

From the literature reviewed, a number of issues have emerged. Firstly, patient studies indicate a range of patient-perceived negative talk that may occur in the consultation. This includes the phrase 'wear and tear' which may have negative connotations, reporting OA is something to be lived with and nothing can be done. The negative perception of 'wear and tear' is likely an unintended outcome of a term that GPs may choose with the best of intentions, to avoid causing alarm. However, patient preferences for diagnostic labelling are not clear. This review also highlights that negative comments about OA may relate to the GP's underlying beliefs that OA is 'not a disease' and that it is likely to deteriorate. Importantly, negative talk may not always originate from the GP with evidence that patients may hold similar views. A need for primary care to endorse a more positive view of OA has previously been identified (Dziedzic et al., 2009) and this review serves as a useful reminder for clinical practice of the impact of negative talk in the consultation.

Secondly, this review highlights marked divergence over management, between patient and doctor. Patients may have complex expectations and fears regarding treatment that are inadequately explored in the consultation. While patients seem

keen to explore non-pharmacological options, GPs report frustration and lack of knowledge around issues to do with lifestyle change. When asked about challenges to management, GPs tend to report resource issues or time in the consultation, or patient factors, whereas patients report lack of communication. Both GPs and patients have identified knowledge deficit, and it is possible that enhanced management of OA requires an approach that addresses knowledge, communication and shared decision making, which in turn may promote greater self-management (Bodenheimer et al., 2002).

Finally, this review highlights the importance to patients of feeling that their joint pain is being taken seriously and validated. General practitioners that hold the belief that OA is a normal change may not adequately legitimise their patients' symptoms and engage with management approaches. The failure to adequately validate a patient's symptoms may lead to a downward spiral of discordance within the consultation, and this finding has resonance with research regarding patients with medically unexplained symptoms (Wileman et al., 2002).

In considering the limitations of this review, it is worthy of note that the majority of cited studies concentrate on deficits in quality of care, and this may reflect publication bias to some extent. Some of the studies described are over 10 years old and may not accurately reflect the issues relevant at the current time, especially in light of new insights with regard to disease pathophysiology, treatment and outcomes. Furthermore, the attitudes and beliefs of patients and doctors who agree to take time to participate in research about OA may not be representative of the population as a whole. Some of the qualitative research included had only brief mentions of a consultation with a GP, and it is possible that some of the views elicited were not entirely based on consultation experiences.

2.5 Conclusion

Patient preferences around the labelling of the condition, the nature of doctor explanations of osteoarthritis and discussion around management options have emerged as areas for further research. Furthermore, perceived 'negative' attitudes to OA have been described by both doctors and patients and are also described as an important disincentive to consulting with a GP; a need exists to establish whether these 'negative attitudes' are evident in consultations.

The subjective issue of negativity is a difficult topic to research using retrospective measures such as post-consultation interviews, and would require a research approach that incorporated multiple perspectives on the consultation. Not all aspects of the consultation may be recorded or remembered and given the limitations of the studies reviewed, observational research would be well placed to explore these issues further. Observing the consultation, and matching patient and doctor behaviours and reactions will go much further in unlocking the important 'chain of events', and the origin of any negative talk. The following chapter explores methodological approaches that can be used in the study of consultations.

Chapter 3: Methodological Approaches to the Study of Consultations

3.1 Introduction

In Chapter 1, the scene was set with respect to the research purpose, to explore what happens during the doctor-patient consultation when a patient presents with OA. In Chapter 2, the case was made for observation of consultations. In this chapter, methodological approaches for the study of consultations are reviewed. One of the key influences on research design is the epistemological and ontological viewpoint of the researcher. As these are referred to throughout the chapter, a brief overview of these issues is presented first, in section 3.2. Following this is a review of possible study designs including the methods of observation, methods of analysis and issues associated with multiple sources of data. At the end of each section, a summary details the relevance of the issues discussed to the thesis. The final section of this chapter draws this together to demonstrate how the methodology was selected for this study.

3.2 Epistemology and ontology

3.2.1 Epistemology

Epistemology concerns the issue of 'what is regarded acceptable knowledge within a discipline' (Bryman, 2001). A central issue in the discussion of epistemology is whether the social world can be studied according to the same principles as those of the scientific world. Historically, natural science research is associated with the epistemological position of positivism. Bryman (2001) suggests positivism is by nature objective (value free), that truth is derived only from facts or knowledge confirmed by the senses and that it entails a deductive approach with an inductive strategy.

Interpretivism is a contrasting epistemology that is predicated on the assumption that human beings and objects in the natural world need to be researched with a different logic, emphasising the 'subjective meaning of social action' (Bryman, 2001). The term is generally associated with qualitative research and encompasses a number of viewpoints concerned with understanding human behaviour.

Most published research does not start with a declaration of the researcher's epistemological viewpoint. Creswell (2007) avoids classifying or naming specific epistemological positions and simply states that for qualitative researchers, the epistemological assumption simply means that researchers effectively get closer to research participants, interacting with them and becoming 'an insider'. Avis (2005) too, suggests the approach to epistemology should be grounded in practice.

Mays and Pope (2006) state that in part, contrasting epistemological viewpoints have led to quantitative and qualitative researchers adopting adversarial positions, and overstatement of the differences between the two approaches. Several authors reject the proposition that positivism is entirely synonymous with natural science research (Bryman, 2001, Creswell, 2007, Avis, 2005, Mays & Pope, 2006, Pope & Mays, 2009). In the light of increasing use of mixed methods in healthcare research, which are described in more detail in this chapter, adversarial approaches to quantitative and qualitative methods may be inaccurate and unhelpful.

3.2.2 Ontology

Ontological viewpoints relate to the 'nature of reality and its characteristics' (Creswell, 2007). In essence, for qualitative researchers, there may be multiple subjective realities, as seen by individual participants in a study. The term paradigm or worldview may also be used to refer to different ontological perspectives.

Creswell (2007) defines four paradigms with relevance to qualitative research: post-positivism; social constructivism; advocacy and pragmatism.

- *Post-positivism* is described as an approach to research that is scientific, reductionist and emphasises rigour; however, researchers do believe in multiple perspectives and realities, in contrast to positivism. This approach may be common in health services research where researchers appeal to funders or publishers who may expect quantitative methods.

- *Social constructivism* is a worldview whereby researchers search for meanings constructed with interactions with other persons. Subjective meanings may be multiple and varied resulting in complexity of views.
- The *advocacy* or participatory paradigm advocates action for marginalised groups, and thus research adopting this position may have a political impetus.
- *Pragmatism* does not subscribe to any individual philosophy or view on reality but is concerned with the research question and outcomes of research; pragmatists may adopt mixed methods to best address the research purpose (Creswell, 2007). This term is also associated with action research.

Guba and Lincoln (2005) refer to the blurring of the boundaries between paradigms, and the potential for 'interweaving of viewpoints' and 'borrowing' from different paradigms. A 'purist' view of a paradigm can be problematic. For example, an extremist view of social constructivism is that all observable reality is socially constructed. In practice, many qualitative researchers adopt a 'realist' stance, that reality can both be socially constructed and found (Avis, 2005).

3.2.3 Epistemology and ontology: summary and relevance for thesis

In this study, a qualitative methodology is appropriate for the exploratory nature of the research question. A realist ontological stance (incorporating aspects of social constructivism) has been adopted by the researcher; for example, in considering a patient with OA one might suggest that their diagnosis is real, that the events they describe are real, but that their interpretation and perception of what it means to

have OA is constructed socially through interactions. The remainder of this chapter is concerned with which research method best fits the research questions outlined in Chapter 1, and thus adopts a more pragmatist outlook.

3.3 Observation

Observation is one of four broad methods of data collection used by qualitative researchers, (the other three being interviews, analysing texts or documents and recording or transcribing) (Silverman, 2001). Observation may be particularly useful in the preliminary work of a study where a need exists to understand a new phenomenon or culture. There has been some criticism of studies in medical sociology that do not use observational methods, and that only employ interviewing of health professionals in particular; health professionals are well experienced at 'presenting' themselves in public and the accounts presented in an interview may not represent their underlying beliefs or behaviours (Pope & Mays, 2009, Checkland et al., 2007). Observation allows researchers to systematically watch participants' behaviours; on a simple level you can compare what people say they do with what they actually do (Mays & Pope, 2006). Observational methods in healthcare research may be particularly useful for looking at institutional or contextual factors, interactions between individuals and for examining participant roles (Mays & Pope, 2006). In the following paragraphs, different methods of observation will be considered.

3.3.1 Direct observation

Direct observation is often described as participant observation. The 'observer' may be immersed in the setting which is being observed and may vary in the extent to which they participate with those being observed (Bryman, 2001).

Although the method is described as one of the 'best known' methods in social sciences (Bryman, 2001), the use of direct or participant observation in healthcare

is less common than interviews, due in part to the additional time incurred in this methodology (Holloway & Wheeler, 2013). One of the disadvantages is that the presence of the researcher may alter the behaviours of those being observed: the 'Hawthorne Effect' (Jones, 1992). Alternatively, the researcher may 'go native' and find it difficult to distance themselves from the behaviours being observed (Holloway & Wheeler, 2013). Ethical issues are paramount in direct observation and the researcher needs to demonstrate sensitivity to the participants being studied, in addition to respecting confidentiality. Rigour and robustness of observational analysis is sometimes challenged, particularly around the extent to which the researcher interprets findings, or the inter-observer consistency of more structured observations (Bryman, 2001). One of the logistical difficulties is making appropriate field notes which are sufficiently detailed; notes not made at the time of observation are based on the researcher's recollections of events, and important observations may be forgotten.

3.3.2 Audio and video recording

Making recordings of the consultation is not a new phenomenon; in 1976, Byrne and Long used over 2000 audio taped consultations to describe six phases of the consultation. More recently, video has become a widely used method to record consultation data and in the UK is now an established part of GP training.

Compared with direct observation, the main advantages of audio and video recording are that transcripts of recordings can be produced, which provide a comprehensive and more complete record of a naturally occurring interaction than field notes alone. Arguably, the presence of a dictaphone or video camera may exert less of an influence on the interaction under observation, than the presence

of a direct observer. A potential disadvantage is that participants may be anxious or worried by the presence of a camera or audio recorder and may not wish to have their actions recorded (Holloway & Wheeler, 2013).

Audio recording may be less technically challenging to achieve than video recording, and may be considered more acceptable to participants. Video data has the advantage of providing information about non-verbal behaviour and also provides data on physical contextual variables (Schensul et al., 1999). However, the visual image captured by video is a challenge to preserving anonymity of participants.

Rates of consent for patients to participate in research involving video are reported as being around 80%, although there is some indication that younger patients and those with gynaecological or mental health problems are more likely to withhold consent, which may affect generalisability of results (Coleman, 2000). Similarly, evidence suggests younger GPs and GP trainers are more likely to agree to being recorded (Coleman, 1996).

The evidence exploring the extent to which video recording alters behaviour of GPs is limited to self-report (Coleman, 2000), and one study that compared behaviour in covert and overt recordings using a coding scale of verbal and physical behaviours (Pringle & Stewart-Evans, 1990). Coleman (2000) reviewed this literature and suggested that although the literature suggests little or no effect of video recording on GP behaviour, there is a lack of empirical evidence supporting this assertion. He suggests there is a need for further research in this area, but also recognises the difficulty with conducting this research, and therefore suggests exercising caution when interpreting video data which aims to record 'normal' behaviour.

Lomax and Casey (1998) argue that a reflexive stance to analysis overcomes any possible impact of the video on behaviour. They argue that participants' reactions to the video camera are important findings in their own right; for example, in a study of midwives that investigated body taboos associated with exposure, touch and examination, the way in which both midwives and patients reacted to the camera, and the point at which they asked for it to be turned off, was instructive and relevant to the study aims.

3.3.3 Observation: summary and relevance for thesis

For the purposes of this study, the recording of consultations was considered essential in order that a written and permanent record of the consultation could be achieved. Video was chosen in preference to audio recording so that the full encounter, including non-verbal behaviour, could be observed. A further consideration was that indirect observation using video may be more acceptable to participants than direct observation by a researcher due to the established culture of video-recording in primary care for training of doctors and students. The characteristics of patients who consent to video may not be entirely representative of the population as a whole; however, given that younger patients, and those with personal or intimate problems appear to be less likely to consent, this was felt to have less relevance to a study where the population of interest have joint pain, and are aged 45 and over. Nonetheless, a need to determine the characteristics of both consenters and non-consenters to evaluate this was identified. Furthermore, the effect of video on participants' behaviour is reported as minimal but little empirical data exists to support this assertion and thus an evaluation of the impact of the video during the study was incorporated in the analysis.

3.4 Observation in conjunction with other sources of data

3.4.1 Combining observation with other sources of data

Direct or indirect observation as a method that does not involve participation on the part of the researcher is subject to criticisms of being subjective and lacking validity (Adler & Adler, 1998). Observational research is likely to produce greater rigour when combined with other methods, particularly those that encompass the views of the participants such as in-depth interviewing. A consultation is one event in a longitudinal doctor-patient relationship and studying this event in isolation may overlook important contextual factors. Combining naturalistic study of the consultation using video recordings with participants' accounts is likely to shed light on contextual information such as accounts of previous consultations, while also enabling exploration of participants' experience of the consultation. Care must be taken to avoid the assumption 'the more, the better'; multi-strategy research must be 'dovetailed' and address the research question (Bryman, 2001).

3.4.2 Triangulation and crystallisation

One advantage of collecting more than one source of data are that findings can be compared and cross referenced; triangulation describes the process of collecting more than one source of data relating to a particular phenomenon, with the intention of increasing confidence in one's findings as a result. The multiple data sources may be all qualitative or a mix of qualitative and quantitative.

However, triangulation as a measure of validity is also subject to criticism as it may lead the researcher to prioritize some data sources over others as 'right' or more

significant, if there is a discrepancy in findings. Critics of this approach suggest it aligns with a positivist view that there is only one truth, and not multiple layers of reality as an interpretivist view might suggest. Therefore contradictions between findings should instead be viewed as inter-method discrepancies and encourage more reflexive analysis (O'Cathain & Thomas, 2006). Using multiple sources of data in this way has been described as 'crystallisation'; a process to enable exploration of divergence and contradiction, as well as convergence (Janesick, 2003).

3.4.3 Multiple sources of data: summary and relevance to thesis

In this study, a need for further data, in addition to video recordings, was identified, to provide context to the consultations and to address the specific research questions concerning doctor and patient perceptions of the consultation. Care has been taken to ensure all data collection was purposeful, matched to research questions and to ensure all sources of data were treated equally in analysis. The study of multiple sources of data, and of divergent cases can be used to strengthen analysis, but not with the aim of distilling findings to one truth; rather, a complex understanding of the consultation, composed of multiple layers of realities can be constructed through the process of crystallisation.

3.5 Study designs using video

3.5.1 Methodological approaches using video: introduction

Video-recorded consultations have been used in research for a broad range of purposes, as detailed in Table 6.

Table 6: Uses of video recordings in consultation research, adapted from Coleman (2000).

1. To develop, refine or demonstrate measures of consultation competence
2. To describe communication quantitatively
3. To evaluate the accuracy of medical records
4. To evaluate the impact of technology
5. To generate qualitative information about patient and doctor views of the consultation, decision making or communication

A broad range of methodologies incorporating video have been used to generate qualitative information about patient and doctor views, decision making or communication, and these vary in the extent to which other data sources have been employed, in the epistemological orientation of the researchers, and in the analytical approaches used. In this section, an attempt to categorise and describe these various approaches follows, using examples where possible. The section headings that have been chosen are not mutually exclusive and there is some overlap between approaches. For the purposes of this section, the discussion is restricted to approaches relevant to item 5 in Table 6.

3.5.2 Sociolinguistic approaches

Many researchers that have made recordings (audio or video) of the medical consultation have employed either Discourse or Conversation Analysis in their study of talk. A brief discussion of these approaches follows but it is worth noting that there are several other approaches to discourse beyond the scope of this discussion including Foucauldian research, Bakhtinian research and interactional sociolinguistics (Wetherall et al., 2001).

Conversation analysis (CA) has its roots in ethnomethodology, a sociological position that focuses on how participants 'do' social life and how they construct entities such as gender, self and family (Gubrium & Holstein, 2003).

Conversational analysis is the detailed analysis of talk as it occurs in naturally occurring situations. The analysis requires particularly detailed transcription that include pauses (and their duration), overlapping talk, and prolongation of sound. Conversational analysis focuses on single utterances, with the implication that utterances accomplish social actions (Maynard & Heritage, 2005). Importance is also paid to sequencing or turn-taking within the consultation. Examples of research questions that have been addressed using CA include the study of how understanding is achieved and misunderstanding repaired, and study of opening and closing interactions (Maynard & Heritage, 2005). These are focused areas of the consultation; one described limitation of the CA approach is that it does not permit the researcher to take into account the wider context, even the mutual knowledge of context shared by the research participants (Bryman, 2001).

Discourse analysis (DA) differs from CA in that it can be applied to texts other than conversational transcripts or talk, and if applied to talk, it doesn't have to be 'naturally occurring', e.g. interview transcripts (Bryman, 2001). It is therefore a

more diverse approach and difficult to define (Silverman, 2001). A broad description is that it pays attention to the way meanings of the world, society and events are relayed in discourse (Bryman, 2001). Discourse analysis adopts an anti-realist stance, and as such reality is restricted to that constituted by talk. Practitioners of DA do take into account external contextual factors to some extent; example of this is a study of the communicative significance of coughing in the consultation which used a DA approach to the study of talk in the consultation but also included participant interviews and the study of written material to provide an ethnographical context (Bailey, 2008). However, as DA draws on the ideas and insights of CA, Bryman (2001) suggests this consideration of external context is a possible source of epistemological dilemma.

3.5.3 Ethnography

The term ethnography is closely associated with the practice of observation and some researchers using video recordings of the consultation in conjunction with other methods have described their work as ethnographic (Ventres et al., 2005, 2006).

Ethnography is both a process of research, and the written outcome or account (Creswell, 2007). In common with many other terms in qualitative research, there is some debate and differing interpretations and definitions of the term. The characteristics of ethnographic research are as follows:

- Ethnography usually incorporates participant observation. The researcher immerses him or herself in the culture and lives of those who are studied, making observations, taking field notes and asking questions. This is situated in the participant's everyday context

- Data are gathered from more than one source, including observations, interviews and documents
- The data gathering may be relatively unstructured and flexible
- The focus is on a small group of people to facilitate in depth study. A ‘thick description’ can therefore be generated
- Analysis focuses on interpretation of meanings and functions of human actions and how they relate to the wider institutional or societal context (Hammersley & Atkinson, 2007)

The researcher conducting observations can be placed on a continuum of involvement, from a complete participant to complete observer (Gold, in Bryman, 2001). A complete participant is a fully functioning member of the culture being studied, and as such is likely to be conducting covert observations. This type of observation in health care settings is now almost unheard of due to ethical implications of covert observation and the need for informed consent from research participants. Next on the continuum is the ‘participant as observer’, where members of the setting being studied are aware of the researcher’s role. A researcher who is ‘observer as participant’ is involved in very little participation and may just be interviewing. Ethnographic research in the police is often of this type due to issues of legality (Bryman, 2001). One might suggest the same is true of ethnography in healthcare but there are ethnographic reports from researchers with dual roles e.g. nurse and ethnographer, who may therefore be fully participant (Wind, 2008). The complete (non-participant) observer would not be participating or immersed in the culture which may be considered not to ‘qualify’ as ethnography (Bryman, 2001). However, some authors have employed indirect observation using video recorded consultations and described the research as

ethnographic: for example, Ventres et al (2005, 2006) used video recording, in addition to other sources of data including interviews, to describe the impact of the computer and the Electronic Health Record on consultations in primary care.

A number of authors have discussed the difference between the term ethnography and observational methods: when does a study employing methods of observation become an ethnography? Bryman (2001) suggests there is an historical perspective that the terms have been used interchangeably, but in the 1970s, ethnography became the preferred term. Many suggest that the style of the written report, the ethnographic account distinguishes the two (Savage, 2000). The most common form of ethnographic writing is termed 'realist tales' which means that the author 'presents an authoritative, dispassionate account that represents an external, objective reality' (Bryman, 2001). Silverman (2001) states that ethnographers may not always be present for direct observation, but may study artefacts or recordings of events, including video. However, other authors suggest that ethnography requires the researcher to immerse his or herself in the culture being studied, 'living with them and living like them' (Bryman, 2001, Mays & Pope, 2006). Ethnography may have a specific focus on culture, and this may have implications for sampling; the implication is that the object of study is *one* culture sharing group (Bryman, 2001, Creswell, 2007). A further distinction is that participant observation is part of a range of methods used in ethnography, although the term 'participant observation' may be still be used when observation is combined with other methods (Bryman, 2001).

3.5.4 Multi-strategy approaches and use of quantitative methods

Bryman describes the use of quantitative methods to supplement qualitative methods as multi-strategy (Bryman, 2001). The addition of quantitative methods can serve a number of purposes, including the need to 'fill the gaps'. For example, some contextual information about participants may not be accessible by observation or interview and may necessitate more quantitative approaches such as structured questionnaires. In video research, a number of studies have employed quantitative methods to enhance the sampling of patients, in order that the sample of video recorded consultations contain more talk of relevance to the research question (Coleman, 1996, Epstein et al., 1998).

Quantitative methods may supplement qualitative approaches in the analysis of video recorded data. For example, simple frequency counts of non-verbal behaviours or measures of length of time can be used as part of analysis (Schensul et al., 1999). Silverman (2001) argues that simple frequency counts can quickly and easily give the reader a 'flavour' of the data and may enhance the persuasiveness of the researcher's conclusions. However, he also states the importance of quantitative measures being theoretically derived. Some quantitative measures or approaches can be incorporated by the use of typologies or cross tabulations. Silverman gives the example of a cross tabulation of doctor greetings with patient diagnoses in a paediatric clinic, through which he could demonstrate that doctors avoided the use of the term 'well' with children with Down's syndrome. In video research, Saba et al (2006) used counts to describe the nature of decision moments in a study concerning shared decision-making and a typology to categorise the findings.

The subject of mixed method research that crosses the quantitative – qualitative divide is subject to some debate, and the argument is largely an epistemological and ontological one. The notion is that the epistemological viewpoints associated with quantitative research are incompatible with qualitative methods; however the relationship between method and epistemology is not clear cut and subject to 'blurring of boundaries' as stated in 3.2.3, and the use of multi-strategy approaches is increasing (Bryman, 2001).

3.5.5 Visual methods

As the name suggests, studies employing visual methods make explicit the study of visual data. Qualitative researchers are sometimes criticised for the focus on transcriptions or audio data and an apparent failure to 'use their eyes' (Silverman, 2001).

The study of non-verbal behaviours can be used to *supplement* a predominantly textual analysis. For example, Heath used the direction of participants' gaze and body movements in conjunction with a CA approach to add to analysis of doctor patient communication; the addition of the non-verbal data added to the description of difficulty the patient experienced in conveying disability to the GP (Heath, in Silverman, 2001). However, in including visual data in analysis, problems may exist in how the researcher decides which non-verbal behaviours to record and which to omit.

An alternative approach to using visual data to *supplement* textual analysis is to interpret audio-visual data in an *integrated* fashion: 'Visual methods' describes a subset of visual sociology where researchers both collect and analyse visual data in this way (Harper, 1988). Bickerton et al (2011) describe a study using visual

methods to examine health consultation participation in consultations in a Walk in Centre. This approach is based on a theoretical framework of the consultation representing life-world, and each consultation is described using three dimensions of knowledge, emotion and movement. Analysis explores how these three dimensions interact and identifies common themes across these dimensions, and across consultations. Key features of this approach (in this example) are that it does not involve transcription and aims to seek a generalised, rather than discrete, interpretation of events.

3.5.6 Presenting video data to participants: video-stimulated recall

In 3.5.5, in the discussion of visual methods, the primary purpose for the *visual* data derived from video was to contribute to consultation analysis. However, an alternative purpose for the visual data would be to show the tapes to participants; this may be with the aim of conducting respondent validation (a check that the participants' perspectives are reflected in the researcher's analysis) or with the aim of gaining further data about the participant's interpretation of events. In this sense, the researcher collaborates with the participant to become co-researchers (Schensul et al., 1999).

Participant accounts are by nature retrospective and limited to that which is remembered and reported; however, recall accuracy and completeness may be enhanced by playing back the video-recorded consultation within the interview context; this has been described as video-elicitation or 'video-stimulated recall' (VSR). Video-stimulated recall may be useful for improving recall, for uncovering cognitive processes and as a tool to facilitate reflections on elements of social interaction. When data derived from participant accounts using VSR is combined

with consultation analysis an in-depth exploration of consultation events may be achieved. The method of VSR has been used extensively in educational and counselling research (Lyle, 2003) and to a lesser extent in medicine and nursing. Coleman et al (2000a, 2000b) used this technique to explore issues in the consultation around the discussion of smoking cessation. By presenting GPs with a range of different video consultations where they either had or hadn't discussed smoking cessation, Coleman was able to explore GP decision making in this regard. The addition of the video appeared to add value to the interview as GPs expressed surprise at their behaviour and were able to then reflect on behaviour of which they appeared to be unaware.

3.5.7 Study designs using video: summary and relevance to thesis

In this section, different study designs and approaches that have been used with the aim of generating qualitative information from consultations have been described. For this study, the research question concerned identifying different individual's perceptions (researcher, GP and patient) of 'what happens' in OA consultations; therefore, CA or DA were felt to be inappropriate as a research strategy for a consultation study with a broad exploratory research question, and that needs to consider behaviours as well as talk, in addition to contextual aspects of the consultation.

The need for participant interviews in order to elicit participant reactions to the consultation has been identified; therefore the primary use of the visual aspect of the data in this study was to show research participants during a VSR interview; in addition aspects of visual non-verbal behaviour contributed to consultation analysis.

Although the research design has much in common with the description of ethnography, this term has not been adopted in the thesis due to the inclusion of non-direct participant observation and the study of more than one 'culture' or general practice.

Finally, in this study, quantitative data collection tools have been included, in order to gain contextual information. For example, an indication of the patient's agenda for the consultation could not practically be collected by interview in the time available before the consultation; hence, a questionnaire was used. Further quantitative contextual data of interest were obtained from the patients' medical records, including their comorbidities and previous OA diagnoses. In addition some quantitative analysis of the consultation was performed to supplement the qualitative data interpretation.

3.6 Methodological approaches: summary and relevance to thesis

In this study, a predominantly qualitative, multi-strategy approach that is not bound by epistemological or ontological constraints is most appropriate. Consultations have been observed indirectly, using video recorders to capture the events. However, as the consultation represents one point in time, further data that builds a picture of events before the consultation (the reasons for consultation and medical history of the patient) have been collected using quantitative collection tools. Interviewing participants was necessary, in addition to observation of consultations, to address the specific research questions concerning doctor and patient perceptions of the consultation and to understand the impact and outcome of the consultation, and video-stimulated recall was used to enhance their accounts. The following chapter explores the use of the method of video-stimulated recall in primary care in more depth.

Chapter 4: Video-Stimulated Recall

4.1 Introduction

In Chapter 3, various approaches used for the study of consultations were reviewed. Video-stimulated recall was introduced: a method whereby the visual data of video recorded consultations can be presented to research participants in order to enhance their recall and interpretation of events.

In this systematic review we describe studies in primary care consultation research that have used VSR, in order to describe the utility of the method in consultation research (Paskins et al., 2014a).

Video-stimulated recall is described as useful for the study of social interactional components of the consultation and complex, context dependent occurrences, in addition to permitting more accurate recall of events that may have been forgotten (Henry & Fetters, 2012). The technique is also complex, costly and time consuming and it is suggested it should be reserved for research questions that cannot be answered with consultation analysis or participant interviews alone (Henry & Fetters, 2012, Coleman & Murphy, 1999). Henry and Fetters (2012) conducted a literature review of studies using the method; however in the absence of quality appraisal of the studies, no empirical evidence was presented to guide future researchers in the most appropriate use of VSR or to illuminate the methodological strengths and weaknesses particular to VSR. The question remains as to which types of research question lend themselves best to this method.

Video-stimulated recall may be conducted in a number of different ways. For example, the video may be shown in entirety prior to a semi-structured interview or the participant may be asked to comment during playback on specific areas of

interest. The nuances of VSR procedure are considered important in the design of research although they have not been previously described in medical literature.

4.1.1 Video-stimulated recall procedures and techniques

One inherent limitation of the technique of VSR is that the feelings and thoughts expressed in the context of a post-consultation interview may not reflect the thoughts at the time of the consultation, and are subject to researcher influence (Lyle, 2003, Henry & Fetters, 2012). Careful attention to the procedure of VSR may reduce this effect. Techniques of VSR vary widely and different methods may be more suited to capturing recall, reliving or reflection (Henry & Fetters, 2012). Gass and Mackey (2000) have reviewed the literature across different disciplines in the techniques of stimulated recall (SR), although not restricted to video, in their text relating to second language research. Their methodological theoretical framework has applications beyond language research; Lyle (2003) considers this a useful starting point for researchers considering the method. In Table 7, the techniques of SR are listed, as adapted from Gass and Mackey's classification (2000).

Table 7: Components of SR procedure and theoretical effect on outcome, adapted from Gass and Mackey (2000)

	Example/ comments
Time between video recorded event and SR	Participant recall of events will be greater immediately after the interview.
Strength of stimulus	Video is an example of a strong stimulus, but the strength of stimulus may be increased still further by additional stimulus for recall e.g. transcripts of consultation. The greater strength of stimulus, the more enhanced the recall.
Procedural Structure of accompanying interview	<p>A structured interview is an example of high procedural structure and will result in more specific information relative to the research question.</p> <p>A low structure approach would involve minimal questioning and the use only of neutral prompts during playback e.g. “what were you thinking then?” This method may be more suitable where the research question concerns cognitive processes at the time of the interview and is less likely to result in researcher contamination.</p>
Initiation of recall event	The researcher may lead recall by asking the participant to comment on areas of interest to the researcher, or the participant may be asked to comment on aspects of their choice. Again, researcher initiated events may encourage more reflection than recall alone.
Relationship between video recorded event and line of inquiry	During a VSR interview, a participant may be questioned only on events that occurred during the video, described as a ‘concrete relationship to action’. However, they may be asked to abstract to other general events, an example of a ‘non-specific relationship to action’. In this instance, their recall may not be as great.
Participant training	Participants may need training and practice if asked to comment on stimulus in an unstructured way. Training may enhance a participant’s ability to reflect on observed events.

In theory, the recall accuracy will be greatest if the interview takes place immediately after the consultation event, with the highest strength of stimulus and

if the stimulus has a concrete relation to the area of questioning. Concern is reported in the psychology literature about the types of memory accessed with delayed recall which is reported to affect validity of responses. However, as short term memory decays within a few hours, it is suggested that there may not be much difference in recall performed at three hours, compared with three days (Gass & Mackey, 2000).

Lyle (2003) argues research questions concerned with decision making or cognitive processes *during* the video recorded event should influence the choice of structure of the post consultation interview and the individual initiating recall to reduce the likelihood of reflection and subsequent re-interpretation of proceedings. The wording of questions would therefore seem to be of great importance in reducing researcher contamination. There is some empirical evidence for this from a number of studies in psychology around 'think aloud' protocols. Although these do not strictly represent SR, a participant is asked to verbalise thoughts while completing a task. Ericsson and Simon have conducted many reviews on this subject and their consistent finding is that verbalisation during a task does not change performance *unless* participants are asked to verbalise motives or reasons for their behaviour; in this case, participants are observed to change behaviour. This finding is attributed to participants speculating or theorising about higher cognitive processes that may be automatic (Ericsson & Simon, 1980).

In summary, VSR appears to be an important methodology for researching the consultation but what is missing from the existing literature is an understanding of the strengths and weaknesses particular to the method, the way in which VSR procedure influences study quality and the type of research questions that may be

best addressed using the method. This systematic review aims to address these gaps.

4.1.2 Specific objectives of this review

This systematic review aims to increase understanding of the role of VSR in doctor-patient consultation research to describe:

- a. The research questions that have been addressed using VSR
- b. The methodological strengths and weaknesses particular to VSR, including its acceptability to participants
- c. The procedure of VSR (using the theoretical framework in Table 7) and how the choice of procedure influences overall considerations of study quality and utility
- d. The areas of research in which VSR adds value

4.2 Methods

4.2.1 Literature Search

Based on the assumption that in primary care the consultation may differ in character and structure from secondary care settings, this review is restricted to studies in primary care. The search was divided into four areas: consultation; primary care; video; and qualitative research. The literature search was conducted in March 2012 and repeated in November 2012 in Medline, Psychinfo, CINAHL, Embase and HMIC, Web of Science and BIOSIS. Additional references were obtained by reference checking, contacting experts, searching conference abstracts and cited reference checking using Web of Science. The search was limited to English language publications.

Given the wide range of terms used for video-elicitation and the possibility that terms exist of which the authors of this review are unaware, the search was left broad and all results relating to video searched for details of stimulated recall. If a post consultation interview was reported in the abstract the full text was reviewed to establish if VSR had been used.

A full list of search terms appears in Table 8 and the full Medline Search in Appendix 1. Inclusion and exclusion criteria are listed in Table 9.

Table 8: Search terms used

Consultation	Primary care	Video	Qualitative Research
consultation	Primary health care	video	Qualitative
communication	Family medicine	film	experience
Doctor (or physician, clinician) patient relationship (or talk or rapport or relations)	Family practice	recording	attitudes
	General practice	Videodisc	findings
	GP	Videotape	interviews
	Family physicians	Digital recording	theme
	Family doctor		account
Notes			
Terms within columns combined with OR operator, results across columns combined with AND operator			

Table 9: Inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
Studies in primary care	Hospital-based studies, including outpatient clinics
Observational studies of “real life” GP-patient consultations	Papers written in languages other than English
Studies that have used video to record the consultation	Video-recorded consultations not shown to research participants
Studies that have showed the video-recorded consultation to research participants as part of further data collection	Educational research studies concerned with making assessment of doctor or trainee performance
Describes research question and results, not just methodology	Consultation with other healthcare practitioner (e.g. nurse, physiotherapist)
	Experimental studies or trials
	Studies involving children
	Studies using actors or standardised patients

In the first stage of sorting all record titles were screened and exclusions made where possible by the first author (ZP). The remaining records were then viewed as abstracts, by two reviewers independently (ZP and GMcH), and exclusions made where possible. Those titles and abstracts not fulfilling the inclusion criteria at each stage were discounted, with one reason for exclusion recorded. The full text of the remaining articles was then requested, including those with no abstracts. Disagreements between the reviewers were resolved by discussion and consensus on inclusion or exclusion reached for both abstract and full text review. All full text articles retrieved were read, decisions made regarding their inclusion, and the reason for exclusion recorded, again by two reviewers. An Access database containing the data extraction and quality assessment items was designed and piloted by two reviewers and minor amendments made. Thereafter, data extraction and quality appraisal forms were completed for each paper by two reviewers (ZP, and either GMcH or ABH) independently. Two papers described methodology only (Coleman & Murphy, 1999, Timpka & Arborelius, 1991), with no independent research question; these were not counted in the final sample, but the content was used to aid quality appraisal of their related papers.

4.2.2 Quality assessment

A list of characteristics for quality assessment was designed, based on the following two sources:

1. Coleman (2000) cites four aspects of 'bias' of research using video, namely the effect of the video-recorder on the patient and GP (described as internal validity) and the characteristics of patients and GPs who consent to being

videotaped, compared with non-consenters (described as external validity). The extent to which authors reported on these aspects was recorded.

2. Papers included used qualitative methodology as a framework for analysis and so questions from the Critical Appraisal Skills Programme (CASP) Qualitative appraisal tool (2006) were incorporated in the checklist. This tool has been used in other qualitative systematic reviews (Pope et al., 2007); the eight detailed questions from CASP included are detailed in Table 10.

Table 10: Quality assessment items derived from CASP checklist

1. Was the research design appropriate to address the aims of the research?
2. Was the recruitment strategy appropriate to the aims of the research?
3. Were the data collected in a way that addressed the research issue? [This was adapted to 2 sub questions ‘was the data collection clearly described’ (as without this it is not possible to answer whether data collection is appropriate or not) and ‘was the data collected in an appropriate way to address the research question?’]
4. Has the relationship between researcher and participants been adequately considered?
5. Have ethical issues been taken into consideration?
6. Was the data analysis sufficiently rigorous? [This includes whether the analysis process is clearly described]
7. Is there a clear statement of findings?
8. How valuable is the research?¹⁷

4.2.3 Data extraction

The data extraction elements are shown in Table 11. The full data extraction form used by the authors, including the quality assessment, is included in Appendix 2.

¹⁷ This has been incorporated into the ‘Reviewer’s main conclusions’ – see Table 11.

Table 11: Data extraction questions

1. What is the research question?
2. How were consultations selected?
3. Who were the population of interest?
4. How many consultations were videotaped? How many were analysed?
5. What methods have been used for analysis of the consultation?
6. Has the visual data been analysed?
7. Who was subsequently shown the videotapes? (patient or GP)
8. How many interviews were conducted?
9. How were the videotapes in the interviews selected?
10. What format did the interview take? (i.e. how the video playback was incorporated in the interview)
11. What was the analysis method of the interviews?
12. Has the researcher commented on the acceptability of the research method to participants?
13. What are the main findings?
14. What are the authors' main conclusions?
15. What are the reviewer's main conclusions?
16. Did each component (interview vs video) contribute to the findings?
17. To what extent did the VSR interview add to the research findings?

4.2.4 Synthesis

A narrative synthesis approach was used, guided by the aims of the review; this method is ideally suited to combining results from qualitative studies where quantitative synthesis is not possible and easily adaptable to describing process (methods) rather than synthesizing study outcomes (Popay et al., 2006). The outline of SR techniques described by Gass and Mackey (2000) was used as a theoretical framework to inform analysis. Following individual data extraction and quality appraisal, authors met to first discuss and compare findings for each study. Secondly, emergent patterns and themes across studies were discussed.

Thereafter, a preliminary synthesis was achieved using tabulation of studies.

Relationships between studies were explored by using moderating variables to group similar studies.

4.3 Results

4.3.1 Identification of studies

Two thousand one hundred and thirty two papers were identified by the initial search, and 28 ultimately fulfilled inclusion criteria. Figure 1 shows the phases of identification, and Table 12, the reasons for exclusion.

Figure 1: Phases of identification of papers

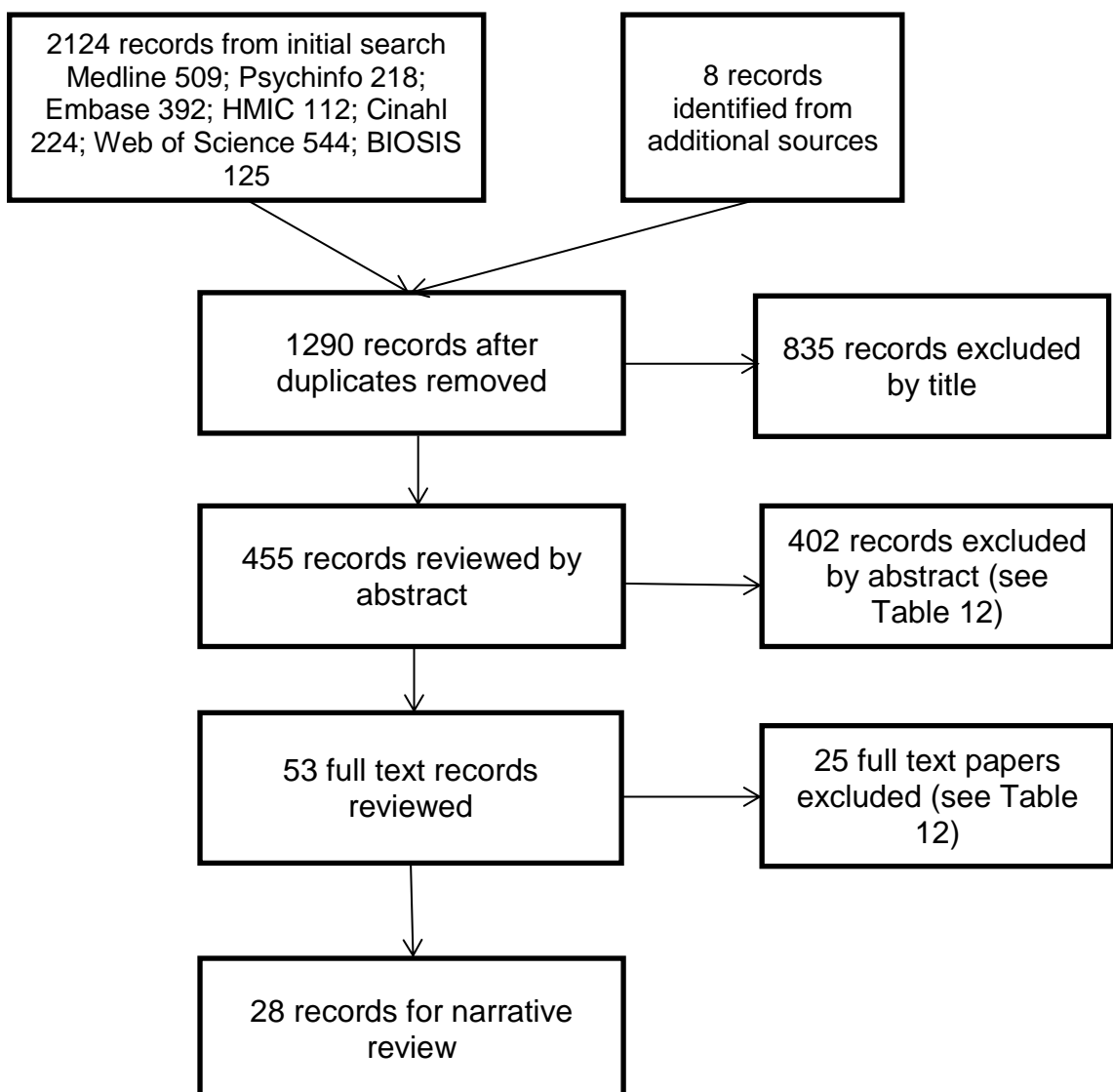


Table 12: Reasons for exclusion

Reason for exclusion	Number excluded from abstracts	Number excluded from full text
Setting: not primary care	14	0
Participants: GPs not included	15	0
Method: did not include video recorded consultations	198	9
Method: Consultations not 'real life'	42	1
Method: video not shown to research participants	133	12
Described method only, no research questions or results	0	1
Full text unavailable	-	2
Total	402	25

4.3.2 Description of included studies

The included articles are described in terms of research question and area in

Table 13.

Table 13: Description of included studies

First author	Research Question	Population/ Consultations of interest	Area of research
Ali (2006)	To provide a detailed understanding of the ways in which white and South Asian patients communicate with white GPs and to explore any similarities and differences in communication.	South Asian patients	Communication: cross cultural
Als (1997)	To identify patterns of GP and patient behaviour related to computer and to identify patient and doctor perceptions of the computer	Unselected	Doctor patient relationship: impact of computer
Arborelius, (Arborelius & Timpka, 1990a, 1990b, 1991, Arborelius et al., 1991, 1992, Arborelius & Bremberg, 1992, 1994, Timpka & Arborelius, 1990)	<p>To describe and evaluate a stimulated recall methodology</p> <p>To study the difficulties and dilemmas a GP faces during daily consultations</p> <p>To understand phenomena in consultations where the GP has expressed difficulties</p> <p>To compare the patients' and the doctors' comments on video-recorded consultations in order to increase understanding of shortcomings in patient-doctor relationship</p> <p>To describe and understand the experiences of general practitioners in consultations</p>	Unselected (but stratified with respect to age & gender)	<p>Evaluation of VSR method</p> <p>'Difficult' consultations</p> <p>Doctor patient relationship</p>

	<p>To describe and understand patients' positive and negative experiences of general practitioners</p> <p>To describe the specific behaviour in consultations where the patient experiences a satisfying human relationship with the GP</p> <p>To characterise health counselling discussion in the consultation</p>	Subsample where health promotion discussed	Health promotion advice
Blakeman (2010, 2011)	<p>To explore self-management support in primary care consultations</p> <p>To explore the relevance of computer information systems in self-management dialogue</p>	Patients with long term conditions	Self-management impact of computer
Bugge (2006)	To investigate incidences, consequences and reasons for non-disclosure of information in decision making	Consultations in family planning clinic and diabetes clinic ¹⁸	Decision making
Cegala (1995)	To compare doctor and patient views on communication during the consultation	New and follow up patients	Doctor-patient relationship
Coleman (2000)	To elicit, relate and interpret GP accounts of why they discuss smoking with some patients and not others	Patients who smoke	Decision making
Cromarty (1996)	To describe the range and type of thoughts	Unselected	Patients experiences

¹⁸ Included other non-primary care consultations.

	patients have during their consultations		
Epstein (1998)	To describe the structure of HIV related discussion, characterise effective and efficient communication and identify common difficulties	Consultations where HIV risk is discussed	Communication Doctor-patient relationship Difficult consultations
Frankel (2005)	To understand the characteristics of the 'optimal healing environment' in the consultation	Established patients presenting to doctors with a range of satisfaction scores	Doctor- patient relationship
Gao (2009)	To explore the influence of cultural practices on discussion of colorectal screening	Patients having colorectal screening recommendations	Communication: cross cultural
Henry (2011)	To understand the impact of tacit clues on making judgements in the consultation	Patients undergoing health maintenance examinations	Decision making
Rosenburg (2007, 2008)	To understand what occurs in a triadic encounter To delineate differences in encounters between professional and family interpreters	Triadic consultations involving an interpreter	Communication
Rosenburg (2006)	To explore the communication patterns and perceptions between family doctors and psychologically distressed immigrant patients	Immigrant patients with psychological problems	Communication: cross cultural
Saba (2006)	To examine shared decision making and the experience of partnership of the doctors and patients	Stratified sample of patients presenting with diabetes or hypertension	Shared decision making
Timpka (2000)	To compare the experiences of patients and	Patients who encountered	Clinician-patient

	care givers of consulting across the primary care team	more than one team member in a visit	relationship and team working
Treichler (1984)	To identify and explore the power relations in a triadic consultation with GP, patients and medical student	Triadic consultation with medical student	Doctor-patient relationship
Ventres (2005, 2006)	To explore how electronic health record affects encounters between physicians and patients	Unselected	Doctor-patient relationship: impact of computer

The 28 individual articles refer to 18 sets of video recorded consultation data, and multiple publications from a single data set are listed together in a single row. The areas of research fall into eight categories: decision making; communication (including a subset of cross-cultural communication); doctor-patient relationship; patient experiences; evaluation of the method of VSR; self-management; health promotion and team working. Many of the studies were concerned with generic aspects of the consultation and as such have a relatively unselected sample. However, five studies were focused on specific consultation content: patients' expressed psychological problems (Rosenberg et al., 2006); discussion of smoking cessation (Coleman et al., 2000a); HIV risk (Epstein et al., 1998); self-management in long term conditions (Blakeman et al., 2010) and health promotion (Arborelius & Bremberg, 1994). In justifying the choice of method, many sought simply to gain a fuller understanding of participants' experiences. The doctor-patient relationship and communication were the most common areas of inquiry with three studies researching the effect of the computer on the relationship, and three looking specifically at cross-cultural communication. Specific events within the consultation were the focus of the study in studies concerning decision-making, or discussions around HIV risk and smoking cessation. Two studies used the method to explore non-deliberate behaviour: unspoken information or non-verbal cues (Bugge et al., 2006, Henry et al., 2011).

4.3.3 General methodological considerations

The results of the quality appraisal are summarised in Table 14.

Frequently, studies had insufficient detail in their methods section to properly evaluate the quality of the study. Three author groups described their methodology in separate publications (Henry & Feters, 2012, Coleman & Murphy, 1999, Timpka & Arborelius, 1991, Arborelius & Timpka, 1990b). Some authors also reported analysis of different data components in separate publications where there were individual research questions (Ventres et al., 2005, 2006, Timpka & Arborelius, 1991, Arborelius & Timpka, 1990a, 1990b, 1991, Arborelius et al., 1991, 1992, Arborelius & Bremberg, 1992, 1994, Blakeman et al., 2010, 2011, Coleman et al., 2000a, 2000b, Ali et al., 2006, Neal et al., 2006). These associated publications were not always referenced in the included study (Ali et al., 2006, Neal et al., 2006). Multiple publications on the same dataset were generally not felt to be of high methodological quality, predominantly due to the lack of alignment between research question and methods, particularly participant sampling. For example, Arborelius et al (1994) focused one paper on health promotion advice when only eight of the original 46 video recorded consultations contained discussion of this nature.

Table 14: Findings from quality appraisal

First author and year	Sampling and consent	Effect of video or study methods on behaviour	Other methodological issues identified from Quality Appraisal using CASP tool
Ali (2006)	No mention. Characteristics of consenters described in unreferenced related paper only	States GPs were recorded over a period of time to try and reduce effect	Mentions inclusion criteria but doesn't describe these. Not clear in interview if interpreter was used or not, and what questions the patient was asked. Analysis not clearly described. Conclusions appear to be derived from literature review rather than empirical findings.
Als (1997)	States attempted to recruit a sample of variation, characteristics and consent not described	No mention	Analysis not described in detail
Arborelius (1990a, 1990b, 1991, 1991, 1992, 1992, 1994, Timpka & Arborelius, 1990)	Characteristics of consenting patients described but not non-consenters. Research question not aligned to sampling resulting in small numbers of relevant consultations for some papers (Arborelius et al., 1991, Arborelius & Bremberg, 1994)	Mentions in 2 papers the influence of the camera was minimal (self-report from participants)	Participant comments during VSR often not aligned to research question as only neutral prompts, therefore small number of comments relevant to study aims. (Arborelius et al., 1992, Arborelius & Bremberg, 1992) Analysis clearly described in 2 papers in this group (Arborelius & Timpka, 1990a, Arborelius & Bremberg, 1992). Possible over-interpretation of participants' comments (particularly assumptions on when GP had failed to

			<p>'grasp' situation) (Arborelius & Timpka, 1990a, Arborelius et al., 1991) with limited discussion of implication of findings (Arborelius et al., 1992). Analysis mostly conducted across case and not within case: within cases analysis and comparison may have enhanced analysis and understanding of cases where difficulties exist in the consultation (Arborelius & Timpka, 1991) (where within case approach was used, only 1 minute of consultation analysed (Arborelius & Bremberg, 1992))</p>
Blakeman (2010, 2011)	Characteristics of consenting patients and GPs described but not non-consenters	No mention	<p>Data collection, rationale for study and analysis described in detail. Possible limited conclusions to be drawn from the study of one consultation when studying self-management support which may happen longitudinally in the doctor patient relationship. Only empirical quotes from nurses reported in 2nd paper, yet conclusions refer to doctors and nurses. In 2nd paper, no discussion about how context of nurse or doctor consultation would influence findings in relation to QOF</p>
Bugge (2006)	Characteristics of consenting	Brief mention as limitation	Relative contribution of different post consultation

	patients described but not non-consenters. Limited characteristics of GPs described		interviews not described (3 per participant). Analysis well described
Cegala (1995)	Characteristics of consenting patients and GPs described but not non-consenters. No information about sampling	No mention. Effect on behaviour may be more likely as consultation taken out of normal surgery context and separate microphone on table	Paper based on assumption that participant's spontaneous comments during playback (with no guided prompts) can be used to draw conclusions about patient perceptions of doctor competence in communication exchange. No empirical quotes to support findings
Coleman (2000)	Characteristics of consenters and non-consenters presented. GPs sampled to represent a range of attitudes to smoking	Discussed as potential limitation	Quantitative methods to support sampling helped gain a maximum variation sample. Analysis well described. Author's role as GP and peer to GP participant's not explored
Cromarty (1996)	No mention of details of video selection or recruitment (videos selected by participating GPs and not researcher)	No mention	Relative contribution of different phases of post consultation interview not described (unprompted, with video recall and then written transcript). Analysis not described in depth
Epstein (1998)	Characteristics of consenting	One comment that GPs	Robust analysis strengthened by different approaches

	<p>patients and GPs described but not non-consenters.</p> <p>Discussion of how GPs volunteering to be video recorded may not be representative of GP population.</p> <p>Purposive sampling used to identify patients/ consultations more likely to contain discussion of HIV risk</p>	stated not affected	<p>including coding of behaviours, attention to conversation flow and classification scheme of the level and depth of discussion of HIV risk.</p> <p>More than one consultation per GP facilitated robust analysis.</p> <p>Not clear how video shown or VSR procedure</p>
Frankel (2005)	<p>No mention</p> <p>Sample size unclear</p>	No mention	<p>Research question or theoretical framework lacking</p> <p>Participant comments (GP or patient) on video not confidential and revealed to other participant. Consent not mentioned.</p>
Gao (2009)	<p>Characteristics of consenting patients described but not non-consenters. Limited characteristics of GPs described</p>	No mention	<p>Recruitment strategy not entirely appropriate: GP interviews not needed to answer research question and weren't utilised.</p> <p>Three stage analysis clearly described.</p>
Henry (2011)	<p>Variation sampling of patients to gain mix of gender, age and race. GPs sampled with respect</p>	No mention	<p>Insufficient detail about structure of interview or VSR procedure to judge how appropriate study method was for exploring tacit clues.</p>

	to years in practice and specialty		No discussion of how context of health maintenance consultations might influence findings.
Rosenburg (2007, 2008)	Characteristics of sample described (patients and interpreters), but not non-consenters	No mention	Conclusion not supported by results and patient views would have added value and been relevant to research question (Rosenburg et al., 2007). Little information about VSR procedure of format of interview (Rosenburg et al., 2008)
Rosenburg (2006)	Recruitment well described. Characteristics of sample described, but unclear how many underwent VSR	No mention	Method successful in identifying consultations of interest and evidence supports authors' conclusions. No discussions of limitations. Patients made few comments over video and structure of interview not clear.
Saba (2006)	Characteristics of sample described but low consent rate not discussed	Brief mention of possible effect	Robust analysis strengthened by different approaches including analysis within and across cases, contrasting observed and subjective experiences of shared decision making to construct typology of shared decision making archetypes and using themes from interviews to explore differences
Timpka (2000)	Characteristics of consenting patients described but not non-	Brief mention of possible effect	Complex study but not clear how much video the participants viewed, the instructions the participants

	consenters		were given when watching the video or the consent arrangements. Conclusion not supported by results.
Treichler (1984)	Case study of one patient. No mention of sampling	No mention	Limitations associated with the study of one consultation
Ventres (2005, 2006)	Not described	Brief mention	Analysis well described but no empirical quotes to support findings. More description of consultation context would have increased credibility of findings

Sampling emerged as a particularly important component of quality in research design. For example, Coleman et al (2000a) ensured richness of data in their video data about smoking cessation by a deliberate sampling strategy: GPs were sampled to represent a range of attitudes to smoking identified on a questionnaire; patients were selected on basis of smoking status; the videos shown to the GPs were chosen to reflect a range of different types of discussion around smoking e.g. smoking cessation discussed in the presence or absence of smoking related problem. Epstein et al (1998) also enhanced sampling by using pre-consultation questionnaires to identify patients for their sample concerned about HIV risk. Although a number of studies described the characteristics of the sample of their study, only one did this with reference to non-consenters enabling the reader to judge the transferability of the results (Coleman et al., 2000).

Five studies solely analysed VSR data from either patient or doctor, 10 used VSR data from more than one perspective (patient, doctor or interpreter) and 13 studies analysed both VSR and consultation data together. The research question did not always match the data collected; for example in four studies researching communication (Ali et al., 2006, Rosenberg et al., 2006, 2007, 2008), the VSR interviews were the only data analysed whereas analysis of the consultation itself may have added value. Furthermore, three of these studies did not study all parties in the consultation.

Conversely, in two studies, the study findings did not appear to represent all the different data sources collected. Gao et al (2009) researched communication, looking in detail at cross-cultural influences on colorectal screening; in their study only patient VSR and consultation findings are reported despite the methods indicating they also conducted VSR with GPs. Blakeman et al (2011) interviewed

both doctors and nurses in their study regarding the influence of the Quality and Outcomes Framework (QOF) on the consultation. The doctor responses appeared to be under represented in the results; in this instance this may have been due to the context of the study as nurse consultations may have been more QOF orientated.

In terms of the effect of the video on participants' behaviour, two studies reported that GP behaviour was not affected by the video (Ventres et al., 2005, Epstein et al., 1998). Arborelius et al (1990b) asked GPs if they thought their behaviour was altered on a questionnaire pre and post viewing; 80% reported feeling 'slightly' or 'not' affected, which increased to 90% post viewing of the video. The physicians felt more affected by the presence of the camera than patients. Only two other studies mention this as a limitation with no studies giving any empirical evidence to support or refute an effect.

Most studies limited their discussion about ethical implications of the study to a statement about ethics board approval (10 datasets) or that participants consented (14 data sets). In one study, patients were video recorded before their consent was given (Timpka, 2000). Due to the brevity or absence of statements about ethical issues, it was usually unclear what participants had been told was the purpose of the study. In studies where doctor deficiencies were the clear focus of the paper, it is unclear whether participating GPs knew this in advance, and whether they would have agreed to participate if they had known. In one exception to this, Coleman et al (2000a) state that GPs did not know the study was about smoking, presumably to reduce influence of the study on the behaviours and talk of interest. A few studies referred to anonymity and confidentiality, and gave

participants the option to withdraw (Arborelius & Timpka, 1990b, 1991). Epstein et al (1998) disclosed that some GPs were 'visibly upset' when viewing the videos. The influence of the researcher on the research process was generally not discussed. Indirectly, this was alluded to in studies using neutral prompts during video playback and participant led recall, to reduce researcher influence. However, beyond this there were no critical reflections whereby authors considered their own role in the research process.

4.3.4 Acceptability to participants

No studies directly addressed the issue of acceptability of the method to participants. Patient participants have expressed the novelty of watching themselves on screen and directed a number of their comments during playback around this issue. In one dataset, the authors intentionally showed the video first in an introductory manner so that participants could become more used to watching themselves on screen, noting that patients 'comment in a neutral and polite way' (Arborelius & Timpka, 1990a, 1990b, 1991, Arborelius et al., 1991, 1992, Arborelius & Bremberg, 1992, 1994). Acceptability of the method can be inferred to some extent by participant consent rates but only six datasets recorded consent rates of patients in any associated paper and none indicated consent rates of GPs. Interestingly, Blakeman et al (2010) did not incorporate patient VSR into their study design as they anticipated this would be unacceptable to participating GPs. Blakeman has since indicated this assumption was probably unfounded (personal communication¹⁹).

¹⁹ Email correspondence, 1st June 2010.

4.3.5 Video-stimulated recall procedure: relationship to research question and study quality

In the Introduction (4.1.1), a classification of six elements of VSR procedure was introduced (Table 6). This classification comprises: time interval between consultation and VSR; strength of stimulus; structure of interview; who initiates recall; relationship between line of questioning and stimulus and participant training. This classification was used as a lens through which to view the included studies in this review. Table 15 details the procedures used in each study using this classification. Participant training was not described in any study and similarly the relationship of events on the video to the researchers' line of inquiry in interview was difficult to evaluate in the absence of an interview schedule and so these two elements are not included in the Table.

Table 15: Techniques of VSR compared with area of research and data used for triangulation

First Author	Area of research	Sample size²⁰	Interval between consultation and interview	Nature of stimulus	Initiation of recall Participant (P) Researcher (R)	Procedural Structure	Data used in analysis
Bugge	Decision making	26(26)C 9 GP 9 Pt ²¹	Not stated	Selected clips only Transcripts from previous interview	P (clips by researcher)	'Think aloud' technique Individual topic guides for interviews 'designed to promote reflection'	Pre-consultation interview Consultations Immediate post consultation interview VSR interview GP VSR interview Pt
Coleman	Decision making	162(86)C 39GP	Immediately post	More than one video consultation	Video not stopped	Video shown first, semi structured interview following. Consultations selected for VSR chosen to reflect different discussions regarding smoking	VSR Interview GP (consultations analysed in other paper)

²⁰ Number of consultations collected (analysed) (C); Number of GPs undergoing VSR (GP); Number of patients undergoing VSR (Pt).

²¹ Primary care data only, study included 14 other health professionals and 11 other patients.

Henry	Decision making	72C 36Pt 18GP	'Shortly after'	Video	P and R	Asked to stop video whenever wanted to comment generally or about preventative service plus semi structured interview	Pt VSR interview GP VSR interview
Saba	Shared decision making	22(18)C 10GP 18Pt	Within 2 weeks	video	P	P asked to stop when identified thoughts, feelings or behaviours associated with decision-making, followed by semi-structured interview	Pt VSR interview GP VSR interview Consultations
Als	Impact of computer on doctor patient relationship	39(39)C 12Pt 5GP	1 week	Video	P and R	Interview guided by video analysis	Consultations Pt VSR interview GP VSR interview
Ventres	Impact of computer on doctor patient relationship	29C 6GP	Not stated	Video	Not stopped	Separate interview and video viewing. GP completed questionnaire when viewing the video	GP post consultation interviews GP questionnaire completed when watching video Consultation Observations at 4 sites (2006)

							Pt interviews
Blakeman	Describe self-management interactions Impact of computer	86(40)C 11GP	1 week	video	P and R	Semi structured interview and prompts during playback	Patient post consultation interviews 6 VSR interviews (Nurses) Consultations (CA (2010)) GP VSR interview
Arborelius	Evaluation of SR method (1990b) Difficult consultations (Arborelius et al., 1991, 1992, Timpka & Arborelius, 1990) Doctor patient relationship (Arborelius & Timpka, 1990a, 1991, Arborelius & Bremberg, 1992) Health promotion (1994)	46C 46Pt 12GP (8C, 5GP, 8Pt)	About 1 week	Video, shown more than once	P	No interview. P asked to say what thinking. Neutral prompts if no response. GP asked to comment if unsure how to proceed	Pt VSR comments (Arborelius & Timpka, 1990b, 1991, Arborelius et al., 1992, Arborelius & Bremberg, 1992, 1994) GP VSR comments (Arborelius & Timpka, 1990a, 1990b, 1991, Arborelius et al., 1991, Arborelius & Bremberg, 1994, Timpka & Arborelius, 1990) Pt and GP questionnaire post viewing (effect of video on behaviour and satisfaction with

							consultation) (Arborelius & Timpka, 1990b) Consultation (Arborelius et al., 1991, Arborelius & Bremberg, 1992, 1994)
Cegala	Doctor patient relationship	32 C 16GP 32 Pt	Immediately	Video	P	Asked to say stop when they recalled thought or feeling	Satisfaction questionnaire (post consultation) GP VSR comments Pt VSR comments
Frankel	Doctor-patient relationship	30C 15GP 30Pt	Not stated	Video	P	P asked to comment on effective communication, things that were new, significant, unusual or important	Pt VSR comments and GP VSR comments edited in to original consultation tape for analysis
Treichler	Doctor patient relationship	1C 1GP 1Pt	Not stated	Video	P	P asked to identify problems and concerns	Consultation Medical record Pt VSR comments GP VSR comments
Epstein	Communication Doctor patient relationship Difficult consultations	78(31)C 26Pt 17GP	Not stated	Video	P and R	P asked to stop if any comment, particularly about HIV. R stopped tape after HIV	Consultation Pt VSR interview GP VSR interview

						discussion Semi structured interview after viewing	
Rosenburg	Communication	24C 24GP 22C 15 Inter- preters	Not stated	Video	P and R	R stopped for 'key moments', when interpreter did anything other than translate. Semi- structured interview	GP VSR interviews (2007) Interpreters VSR interviews (2008)
Ali	Cross cultural communication	25C 25P	As soon as possible	Video	Video not stopped	Structured Interview post viewing	Pt VSR interview (consultation analysed in other paper)
Gao	Cross cultural communication	U 44 pts U GP	P immediately GP not stated	Video	P	Questioned first about recall, then asked to stop tape at any point	Pt VSR interview GP VSR interview Consultations
Rosenburg (2006)	Cross cultural communication	24(24)C 12GP 24Pt	Within 2 weeks	Video	P and R	R stopped for 'key moments' around cross cultural communication Semi-structured interview	Pt VSR interview GP VSR interview
Cromarty	Patients covert agenda	121C 18Pt	Within 8 days	Video Written transcript of	P	3 phases: unprompted recall of consultation; asked to comment on	Pt VSR interview

				consultation		any topic during video; then prompted by transcript of consultation	
Timpka	Clinician-patient relationship and team working	24Pt 3 GP ²²	One week	Video	P	Asked to stop tape and comment spontaneously	Pt VSR comments GP VSR comments Other team members VSR comments

²² Unclear how many consultations as the 24 patients saw more than one member of the team.

Unfortunately, there is no empirical evidence from this review which allows inferences to be drawn on the importance of the timing of the VSR event or the strength of the stimulus, due to either a lack of reporting or lack of process evaluation. With regard timing of VSR, 10 papers did not report the length of time between video and VSR event. Of the other 18 studies, the VSR event occurred immediately post consultation in two, and up to two weeks later in the remainder. It was not possible to assess whether the studies with longer intervals had poorer recall. Bugge et al (2006) employed more than two post consultation interviews and for some participants, a further telephone interview at six months; it was not clear in this study how the additional post consultation reviews contributed to the results, or how recall differed in each review.

Three author groups enhanced the strength of the stimulus by either showing the video more than once, or by giving the participant a written transcript in addition to the video. Unfortunately, these studies did not evaluate to what extent the additional stimulus elicited additional information from participants.

A number of studies adopted participant-led low structure procedures where the participant was asked to comment on the video with no associated semi-structured interview, and neutral prompts only. As previously suggested, this method would be recommended for exploring decision making; however none of these studies were primarily concerned with decision making. Some studies did not report the nature of the prompts that were given to participants. Examples of prompts that were reported are listed in Table 16.

Table 16: Examples of prompts given by researcher during VSR

- Stop the tape when you felt uncertain as how to go on (Timpka & Arborelius, 1990)
- Comment on anything new, unusual or different (Frankel, in Arborelius & Timpka, 1990b)
- What do you think when you look at the videotape? (Arborelius & Timpka, 1990b)
- Stop the tape when you identify thoughts feelings or behaviours associated with decision making (Saba et al., 2006)
- Stop the tape at moments you feel important or where you wish to comment, describe what you were thinking or feeling (Preceded with reminder of study focus - communication and cultural differences) (Rosenberg et al., 2006)
- Tell me what was happening (Blakeman et al., 2010)

A low structure procedure allows the participant to specify what is discussed but in some cases this method yielded little data. Arborelius and Timpka (1990b) stated that patients are less likely to comment spontaneously than doctors and Rosenberg et al (2006) and Epstein et al (1998) also reported low frequency of comments from patients. In some instances, the small amount of yielded data affected the robustness of the study conclusions, particularly if no additional data were analysed. In a study about the characteristics of a 'human relationship' with a doctor, analysis hinged on 21 of the original 227 patients' spontaneous comments that related to this subject (Arborelius & Bremberg, 1992). When doctors were asked to comment on the video with no specific line of inquiry, they usually focused on deficiencies in their behaviour; in one instance the conclusions of the study focused on doctor deficiencies as a result, although the original study question concerned GP experiences of the consultation (Arborelius & Timpka, 1990a).

Conversely, in the studies exploring decision making, there was limited acknowledgement of the possible influence of a semi-structured interview and

researcher behaviour in altering participants' accounts of consultation events. However, the use of semi-structured interviews generally elicited more information specific to the research question. Only one study did not use face to face VSR, but instead used a questionnaire to capture GPs' thoughts during video playback in addition to a face to face interview (without VSR); again, the authors did not make clear in the results how the questionnaire results contributed to the findings of the study (Ventres et al., 2005, 2006).

4.3.6 What does video-stimulated recall add? The contribution of video-stimulated recall to findings

4.3.6.1 Video-stimulated recall to explore participants' perceptions

Video-stimulated recall was shown to have advantages over a non-stimulated interview approach in three studies with GPs.

Firstly, in a study of discussion around smoking cessation, doctor participants showed great surprise at their actions on video; it was apparent from findings presented that the videos had uncovered aspects of behaviour that the GPs had previously not given any thought to, such as the impact of the computer on smoking cessation discussion (Coleman et al., 2000a, Coleman & Murphy, 1999). General practitioners incorporated commentary on the patient's nonverbal response to smoking cessation (viewed on video) to elaborate their accounts. Furthermore, the GPs in this study were asked about the *absence* of smoking related discussion and without VSR to cue the specific times when smoking could have been discussed, one can hypothesise that un-stimulated recall may not have been as effective. This work showed the importance of the context in which doctors practice in influencing smoking discussions, explaining why few doctors choose to discuss this issue with patients. Coleman et al (2000a) attributed the utility of the method to the subject of interest (smoking cessation) being mundane and therefore easily overlooked, and forgotten.

In a similar vein, Blakeman et al (2010) reported that VSR was useful for researching 'taken for granted practice'. In their study regarding self-management, a GP expressed annoyance when watching himself weighing a patient, revealing insights about the doctor's perceptions of roles, an issue that one can speculate may have been overlooked in a non VSR interview.

The third example concerns GPs' reactions to their discussions around HIV risk (Epstein et al., 1998). The GPs in this study were 'generally surprised' at their actions and offered unexpected insight into communication barriers, such as the importance of the lack of a simple opening statement in starting HIV risk discussion.

Of the other studies researching patient experiences, the added value of VSR was unclear (Ali et al., 2006, Arborelius et al., 1992, Cromarty, 1996, Timpka, 2000).

There were no reports of patients showing surprise at the video findings, as has been reported in several VSR interviews with GPs (Epstein et al., 1998, Coleman & Murphy, 1999, Als, 1997). One interpretation may be that VSR is more useful for enhancing reflection in clinicians; however, the studies with patients had a number of methodological limitations. In general, the lack of detail around methods was accompanied by insufficient detail in results with which to judge the added value of VSR.

4.3.6.2 Video-stimulated recall to explore non-spoken behaviours

In two studies, non-verbal events were the focus of the research question and the VSR. Bugge et al (2006) explored the significance of non-disclosure of information during decision making. In this study the value of VSR was evident; clinicians reported information they typically sought in certain decision making situations, but the video consultations revealed the absence of the reported behaviour. During the VSR interviews the authors were able to unpick the reasons for non-disclosure including assumptions about patient preferences and uncertainty about treatment effectiveness. As clinicians were clearly not aware of some episodes of non-disclosure prior to viewing, a non-stimulated interview could not have reached the

same findings. This study also gives further weight to the suggestion that VSR may be particularly useful with doctors.

Henry et al (2011) identified how tacit clues, including non-verbal behaviours, subconsciously inform clinical judgements. In this study, patients were found to be very attuned to doctor body language and doctors were often unaware or unable to articulate the rationale behind their judgements; however, doctors were found to have a varying sensitivity to tacit clues. Both of these studies have useful implications for our understanding of doctor patient communication and necessitated a VSR approach due to the specific nonverbal or nondisclosure event in the consultation that needed further elucidation.

4.3.6.3 Video-stimulated recall in conjunction with consultation analysis

In this review, the included studies varied in the extent to which different sources of data contributed to the overall analysis, as detailed in Table 15. In the studies where the consultation was analysed alongside the VSR interviews, a number of different methods of analysis were used. Analysis was conducted both 'across cases', and 'within cases'. In across case analysis, VSR interviews were analysed as a whole with no comparison to the relating consultation; in within case analysis, the consultation and VSR transcripts pertaining to one consultation were analysed together.

In the studies using within case analysis, the added value of using VSR was clearly evident. The use of VSR was particularly illuminating in a study exploring shared decision making and the experience of partnership. By comparing and contrasting physician and patient views on episodes of decision making, Saba et al (2006) have been able to shed light on previous work that has identified

discordance between satisfaction and shared decision making in consultations. This study has reported that shared decision making could occur in the presence of mistrust and frustration, and they conclude that both good communication and relationship dynamics are necessary for a positive experience of partnership in the consultation. A further example of the strength of the within case analysis approach comes from Rosenberg et al's (2006) study of intra-cultural encounters. The detailed descriptions in the paper of consultation excerpts alongside patient and doctor responses during interview enabled the authors to draw novel insights about areas for improvement in intra-cultural encounters, again with important educational implications.

The use of VSR to study specific instances of sensitive talk around HIV risk was also very successful in identifying the successful elements of HIV risk discussion, with educational implications (Epstein et al., 1998). Although the VSR component seemed to contribute a small amount to the study findings (compared to consultation analysis), the GP interviews did appear to be useful in eliciting the nature of barriers to effective discussion. In this example, the research participant almost becomes researcher, aiding the interpretation of findings.

In the quality appraisal of papers, studies that analysed consultations in a silo independent of VSR findings (across case analysis), were identified as lacking in depth and rigour with missed opportunities for insight from the data (Als, 1997, Arborelius & Timpka, 1991).

4.4 Discussion

This review highlights that VSR is particularly useful for the study of specific consultation events when analysis adopts both a within and across case approach. For enhancing participant recall, VSR may be particularly relevant for topics which are routine and easily overlooked, for interviewing doctors and for exploring non-spoken and non-verbal behaviour. The method may be particularly useful for exploring clinicians' perceptions, as differences in rhetoric and behaviour can be explored; the use of interviews alone to research doctor perceptions has been criticised (Pope & Mays, 2009, Checkland et al., 2007) and VSR may provide a useful alternative. Blakeman et al (2010) state that the method helps to explore interactions that may have remained unremarkable to both participant and researcher, particularly where the researcher has the same professional background as the participant ('shared conceptual blindness').

In reviewing study quality, frequently there was insufficient reporting of methods to properly evaluate this; one contributory factor to this may be that many journals' word limits may not facilitate full reporting of complex methodology. Ensuring the technique of VSR, the study sampling and the choice of data sources align to the research question have emerged as particularly important elements in the quality of these studies. Video-stimulated recall studies may generate a lot of data, and care needs to be taken to ensure data collected are relevant to the research question, and represented in the study findings. Studies identified in this review have generally not used opportunities to evaluate their methods e.g. by reporting how un-stimulated recall compared to recall, or how different aspects of data contributed to findings.

As stated in the introduction to this chapter, there is concern, particularly in the psychology and sociology literature about the method of VSR producing ‘a second-order reconstituted account’ (Lomax & Casey, 1998), influenced by the degree of researcher ‘interference’ in the process of VSR. Few authors commented on this limitation, with some stating the counter argument, that using participants as experts to interpret their own behaviour yielded unexpected issues (Epstein et al., 1998). To some extent the argument here will be influenced by a researcher’s theoretical and epistemological viewpoint; a post-positivist approach would align with the need to maximise validity and reduce researcher interference, whereby an interpretivist approach would sit more comfortably with the need to respect the differences between viewpoints and make sense of findings using the meanings derived from the ‘actors’ within the consultation. In the papers included, researchers did not make their viewpoint explicit. However, the majority of studies did aim to elucidate participant experience in some way, and as such vigorous attention to validity of recall may be less important than research in other disciplines where the concern is to accurately reflect cognitive processes.

In this review, studies which have tried to reduce researcher interference, for example by using only neutral prompts during VSR, have often resulted in small amounts of data, much of which was unrelated to the research question. This may have been due to lack of participant or researcher training in the method. The findings of this review suggest that although the limitations of moderate to high structure reviews/post consultation interviews should be acknowledged, that these methods usually resulted in richer data related to the research question than low structure, participant-led approaches. Prompts given by researchers during

playback may still remain 'neutral' while providing a context e.g. study aim or orientation for the participant to comment.

Video-stimulated recall is an intrusive methodology and it is likely that ethical issues arise during the conduct of these studies, such as patient distress during video review. Guillemin and Gillam (2004) refer to this as 'ethics in practice' as opposed to 'procedural ethics', concerned with consent processes and formal approval. No study referred to any ethical issues arising during data collection. Related to this is the issue of acceptability, and how participants react to VSR, which remains unknown.

Lomax (1998) argues a reflexive stance is essential when collecting video data as the entire research process has a distorting effect on 'real life'. Increased reporting of the ethical issues 'in practice' and the influence of the researcher on the process would increase the quality of reporting of these studies. These issues are common to other qualitative research (Newton et al., 2012), although particularly relevant to VSR, as evidenced by the distress during VSR described in one study (Epstein et al., 1998).

This review was conducted with a systematic search. Searching all papers containing reference to video for evidence of VSR, instead of restricting the search by identified terms for VSR, has identified more studies than a previous literature review (Henry & Fetters, 2012), which also did not quality appraise identified studies. A strength of this review is the use of quality assessment, using the CASP tool to both inform results and underpin conclusions. No study was excluded based on methodological quality and the heterogeneity of studies may limit the robustness of the synthesis. The most striking difference was in the design of older

studies, possibly conducted in an era where the use of video was not as widespread as it is today.

4.5 Conclusion and relevance to thesis

In summary, this systematic review enhances understanding of both the role of VSR in understanding the consultation and the methodological strengths and weaknesses of this approach.

The use of the Gass and Mackey model as a theoretical framework has resulted in practical conclusions which influenced the study design and procedures in this study, and this is described in the following chapter (Methods). Specifically, the importance of sampling in generating data that is relevant to the research question has been highlighted. In terms of the technique of VSR, more structured interviews appear to result in more specific information relative to the research question. Also identified was the need to adopt both within and across case approaches to analysis.

In light of the lack of empirical evidence identified in this review, a second research aim for this study was added to incorporate an evaluation of the use of the VSR method (as described in 1.4.2). In particular, the need for studies using VSR to describe the acceptability, utility and ethical considerations of the method has been established, and this is therefore an objective of this thesis. The evaluation of VSR in this study is described in the last of the results chapters (Chapter 10). The following chapter describes the detail of the study methods.

Chapter 5: Methods

5.1 Introduction

In the previous two chapters, the various approaches to the study of video recorded consultations have been explored, with a focus on VSR. In this chapter, the methods of the study are described in detail, along with discussion around how some particular decisions regarding methods were made, how the study evolved over the course of data collection and a discussion about ethical considerations.

5.2 Study overview

This study used videotaped consultations from primary care, where OA was discussed, in conjunction with other data sources collected before and after the consultation. This is displayed schematically in Figure 2. The study also captured three perspectives on the consultation: from the researcher, the doctor and the patient. The sources of data relating to each individual's perspective are displayed in Figure 3.

Figure 2: Study design: before, during and after the consultation.

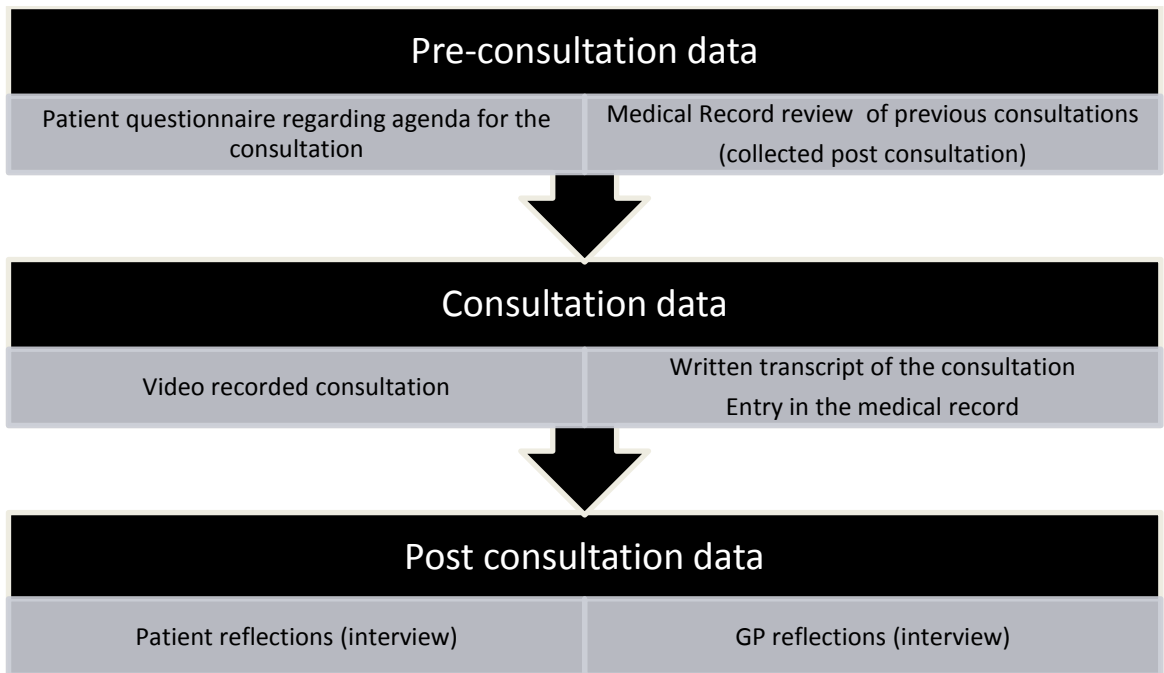
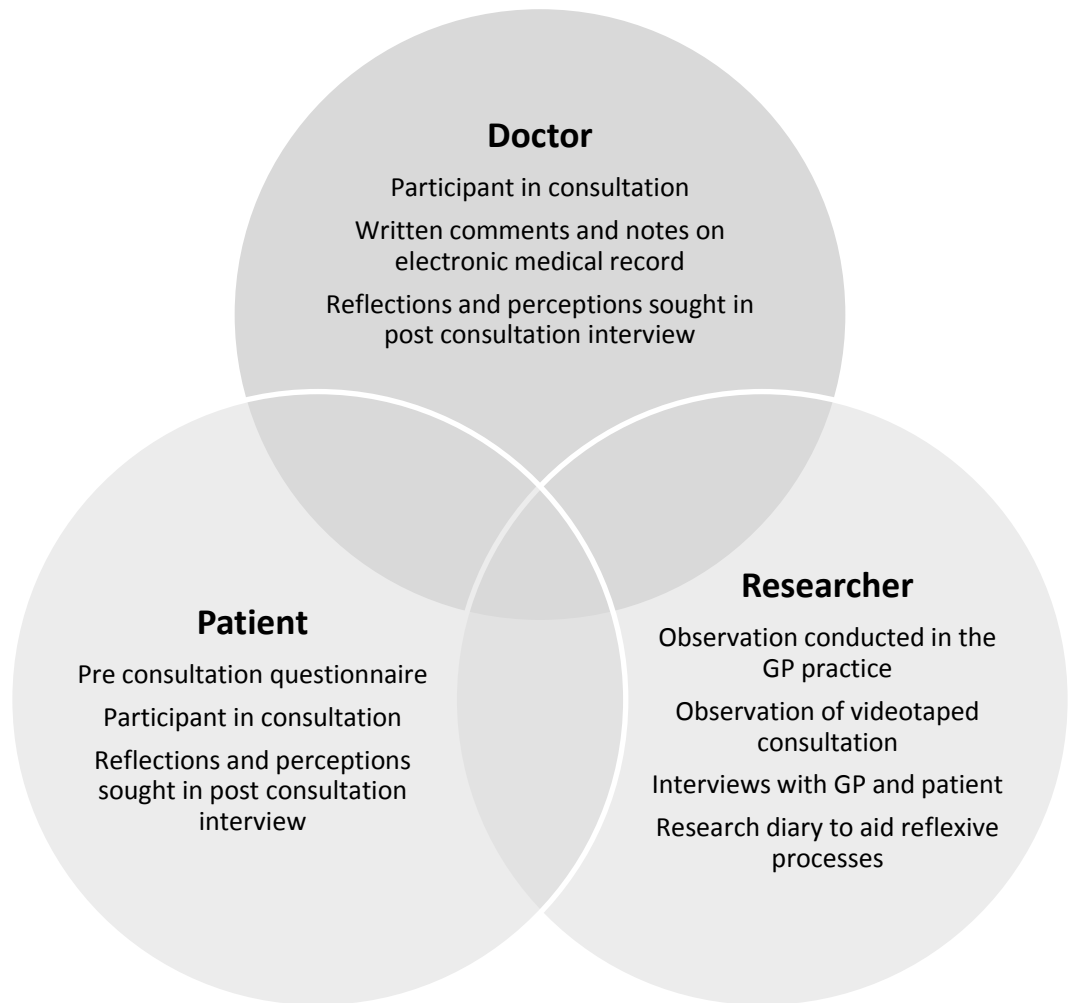


Figure 3: Study overview: three perspectives on one consultation



Thirty half day surgeries on different dates spread over approximately a 12 month period were selected with a purposive sample of GPs from different practices. Unselected consecutive consenting patients over the age of 45 attending one of these GP surgeries were approached and asked to agree to their consultation being videotaped, regardless of their reason for consultation. They filled in a short questionnaire before the consultation about their demographics and reasons for consulting. Those consultations where joint pain was discussed were transcribed and analysed. Patients and GPs in consultations where OA was discussed were invited for interview, where possible, within two weeks of the consultation. The participants interviewed were shown video clips of their consultation to prompt

discussion. A medical record review of participants who discussed OA was also undertaken to provide contextual information to aid the analysis of both the interview and video recorded consultation.

5.3 Methods

5.3.1 Sampling and recruitment

5.3.1.1 General practitioner recruitment

General practitioners in practices in the local primary care research network were invited to participate in the study. These were purposively sampled to include GPs who were both GP trainers and non-GP trainers, and GPs from rural and urban practices and different sized practices. General practitioners were asked to consent:

- to having consultations with consenting patients videotaped in two pre-arranged surgeries
- to the patients viewing the video during a subsequent interview
- to provide access to the practice for the researching team to conduct a medical record review
- to agree to interview within two weeks following the videotaped surgery (this was optional, and did not preclude involvement in the study)

General practitioners were offered remuneration for their time for interview and for anticipated reduced clinical activity during the video recorded surgeries.

5.3.1.2 Patient recruitment

Each consenting GP nominated two half day surgeries to be video recorded. For each given surgery, consecutive, eligible patients (aged over 45, not pregnant,

able to provide informed consent) were approached for consent. Patients who booked their appointment more than 48 hours in advance were posted Patient Information Sheet 1²³. All patients attending the surgery were seen by a researcher (ZP) in the waiting room prior to their appointment, and asked to provide consent to:

- a. filling in a short questionnaire (see pre-consultation data below)
- b. having their consultation videotaped
- c. having their medical records reviewed
- d. having further contact from the researchers

As it was not possible to anticipate the discussion of joint pain in any given consultation, all patients were included, regardless of their response to the questionnaire which indicated their reasons for consulting.

All patients were informed that they would be requested to give consent on three occasions: before the consultation; immediately after the consultation (in line with GMC guidance) and 48 hours later, by telephone. The arrangements (convenient time and phone number) for this telephone call were made prior to the consultation. The primary purpose of the three-stage consent process was to allow patients time to consider their decision regarding consent; the ethics guidelines stipulate that patients must have time²⁴ to consider consenting to study involvement and most patients did not have sufficient time to fully consider participating prior to their appointment. Unfortunately, contacting patients before the day of the surgery was not practicable given the late booking of many

²³ This was an amendment to the original protocol that was requested by the reviewing Ethics Committee.

²⁴ Forty eight hours is suggested as a minimum.

appointments and so telephoning them after the day of the consultation allowed a cooling off period; this has been recommended as good ethical practice by other researchers describing the use of video in research (Block et al., 1985).

5.3.1.3 Sample size calculations

The anonymised Consultations in Primary Care Archive (CiPCA) general practice consultation database at ARUKPCC suggests that the mean number of patients coded with OA or joint pain in one week is 13.5 (personal communication²⁵). The average practice size within the database is 8800 patients with 3-4 GPs. Further work suggests that estimates based on GP coding may represent less than half of actual joint pain consultations (Jordan et al., 2006b). From these figures, one would expect an OA consultation every 1.4 surgeries. However, by sitting in general practice surgeries as part of pre-study development work, the researcher observed that discussion about OA often arose as a small part of consultations about something else; in four observed surgeries, eight consultations included discussions regarding osteoarthritis.

Most studies report consent rates to being videotaped that are greater than 80% (Coleman, 2000). The study aimed to capture 20 videotaped consultations where osteoarthritis is discussed, and to invite all of the patients and GPs in these consultations for interview. A conservative estimate, based on the figures above, would predict 30 half day surgeries to yield 17 consultations, assuming a consent rate of 80%.

²⁵ Email correspondence with K Jordan, May 2010.

5.3.2 Sources of data

5.3.2.1 Pre-consultation data

Pre-Consultation questionnaire description and purpose

Patients completed a questionnaire prior to their consultation (see Appendix 3). This included four demographic questions: age, sex, employment status and ethnic origin. The remainder of the questionnaire related to their current symptoms and their agenda for the consultation, including a free text box in which to indicate the main reason for consultation, and a series of tick boxes next to symptom groups; patients were asked to indicate which symptoms they had experienced in the last week and which symptoms they were intending to discuss with the doctor. The purpose of the pre-consultation questionnaire was twofold. The first aim was to collect demographic information so that the characteristics of the non-consenters as compared to consenters to being videotaped could be described (non-consenters to video were also asked to fill in the questionnaire). The demographic information was restricted to age, sex, employment status and ethnic origin as these are the characteristics most frequently reported in previous studies. Other items that could have been included such as marital status and education level were omitted in favour of keeping the questionnaire brief.

The second function of the questionnaire was to gain some insight into the patients' symptoms and agenda. It was not possible to anticipate the discussion of joint pain in a consultation so all patients were included regardless of their response to the questionnaire. Within the questionnaire, joint pain was nested within a range of other symptoms to reduce the influence of the questionnaire on the patients' reported symptoms in the consultation.

Pre-consultation questionnaire development

There are no standard generic questionnaires that present a comprehensive list of symptoms, and therefore a symptom list was derived using both the CipCA general practice database (Jordan et al., 2007) and the scoring system for subjective health complaints (Subjective Health Complaint Inventory (SHCI)) (Eriksen et al., 1999). Initially, the eight most common symptom areas as derived from CiPCA, and reported in the ARUKPCC Musculoskeletal Matters Bulletin (2009) were translated into actual symptoms e.g. respiratory translated to 'shortness of breath and/or cough'. This list was then compared to the list of symptoms in the SHCI list. The wording of some of the eight symptom areas was changed to descriptors used by Eriksen if it was perceived they were easier for a patient to understand e.g. shortness of breath was changed to breathing difficulty. Symptom descriptors from the SHCI list were added that were not included in the initial list of eight items e.g. sleep problems. Some symptoms were grouped together e.g. cough with breathing difficulty to produce a shorter list than the SHCI. The final pre-consultation questionnaire list consisted of 11 items (shown in Table 17) and was therefore considerably shorter than the SHCI, which contains 29 items. Finally, the questionnaire was piloted with the ARUKPCC Research User Group. The questionnaire was well received by the group and no changes made following this exercise.

Table 17: Symptom descriptors derived from CiPCA and SCHI and included in the final pre-consultation questionnaire

- Cough/cold or breathing difficulty
- Joint pain
- Skin rash
- Chest pain/dizziness
- Headache
- Problems with passing urine
- Stress, worries or sadness
- Stomach upset
- Intimate/personal
- Tiredness/sleep problems
- Back or neck ache
- Other (please state)

Undoubtedly some symptom areas will have been missed by this list. However, the symptom of primary interest was joint pain and so the other items acted to 'nest' this rather than act as an exhaustive list in their own right. The process of asking the patients their agenda may have affected the consultation itself. However, as the study did not aim to estimate the prevalence of joint pain consulters, it was not considered this would affect the results adversely. The patient's agenda was also considered in the context of local practice rules (in other words, whether patients were 'allowed' to mention more than one agenda item). In summary, a careful decision was reached to include this data collection, despite the possibility of influencing the process, in order to provide more depth to the data regarding consultation pattern.

5.3.2.2 Video recorded consultation

Logistics specific to each practice

For each practice where GPs consented to the study, initial meetings were arranged to discuss logistical issues specific to each practice.

These included:

1. Arrangements prior to the day
 - a. the length and frequency of appointment slots
 - b. the information patients would be given on the phone when booking their appointment
 - c. the most appropriate half day surgeries to choose e.g. doctor not on call etc.
 - d. the availability of video equipment
 - e. arrangements for posting out patient information sheets to any patient that booked their appointment more than 48 hours in advance.
2. Arrangements on the day
 - a. how early it would be possible to access the surgery
 - b. what the process of the patient checking in would be
 - c. how the researcher would identify the patients to approach
 - d. whether or not there was a separate room for consenting patients
 - e. how the GP would know when patients had finished the consent process
 - f. how the GP would know whether or not the patient had consented in order to turn the video on or off

- g. how the likelihood of the patient leaving without signing the second consent could be reduced

Field notes

During and after the initial meeting to establish logistical issues, field notes were taken, and this marked the start of fieldwork. In this initial meeting, characteristics of the practice that may impact on the consultation were noted, for example, whether the practice had a policy of limiting patients to one agenda item and previous history of using video for teaching. The process of observation within the practice continued during the video recorded surgery sessions and subsequent visits for medical record review and interviews. The role of the researcher was 'observer as participant' i.e. the level of participation was minimal (see 3.5.3).

Video recording

The practice's own video camera equipment was used if the surgery had a permanent room dedicated to videoing consultations and digital equipment with a recordable hard drive. Most surgeries did not have a dedicated video facility and in these instances the ARUKPCC digital camera was used. The researcher or the GP turned the video facility off if the patient did not fulfil inclusion criteria or withheld consent before the consultation, and the GP was instructed to turn off the video at the patient's request²⁶. At the end of surgery, the video data were transferred to an encrypted laptop, and video camera files all deleted.

²⁶ This occurred once at the end of one consultation when a patient wanted to discuss a private matter with the GP.

Selection of 'index cases' and telephone call at 48 hours

In the 48 hours following the consultation all video recordings were viewed once only (but no transcript made) to determine firstly if the consultation contained reference to OA or not and secondly, to record the main items of discussion, for comparison with the pre-consultation questionnaire data.

The inclusion and exclusion criteria used to define the 'index cases', the consultations in which OA were discussed, are detailed in Table 18.

Table 18: Inclusion and exclusion criteria for selection of index cases (consultations containing reference to OA)

<p><u>Inclusion</u></p> <ul style="list-style-type: none">• Term ‘wear and tear’, arthritis or osteoarthritis used <i>diagnostically</i> by GP• OR if no diagnosis given <p>Working diagnosis of OA based on that recommended by NICE Guideline Development Group (GDG):</p> <ul style="list-style-type: none">• Persistent joint pain worse with use• Patient 45 and over• Morning stiffness lasting no more than 30 minutes
<p><u>Exclusion</u></p> <ul style="list-style-type: none">• Regional soft tissue diagnosis or generalised soft tissue (e.g. fibromyalgia) diagnosis given by GP• OR soft tissue diagnosis felt to be more likely given clinical presentation by researcher (in absence of diagnosis given by GP)• Inflammatory arthritis (or suspected inflammatory arthritis) apparent during consultation or present on medical record if clinical suspicion• Malignancy• Referred to secondary care because of diagnostic uncertainty• Spinal symptoms only

All patients were contacted by telephone to confirm their (third) consent verbally to participation after the cooling-off period. During this phone call, patients who had discussed joint pain and whose consultations met the inclusion criteria were invited for post-consultation interview. It was explained that they would be shown their video recording during the interview. If they agreed, they were posted Patient Information Sheet 2 with details about the interview, and a mutually convenient time was arranged at the patient’s home. Following the 48 hour telephone call all patients were sent a letter detailing the outcome of the call, as shown in Table 19.

Table 19: Action following patient telephone calls at 48 hours

Consultation identified as index case	Outcome of call	Letter sent	Additional Patient Information Sheet (PIS)	Additional Consent form	Additional Action
No	Agreed for video to be used for research purposes	Cover letter 1a	None	None	
Yes	Agreed for video to be used and to interview	Cover letter 2	PIS 2	Consent form 2 ²⁷	Consent 2 sought in person at interview
Yes or No	Withheld consent for video to be used	Cover letter 1b	None	None	Video recording deleted
Yes or No	Agreed for video to be used but withheld consent for further contact	Cover letter 1c	None	None	
Yes or No	Unable to contact on 3 attempts	Cover letter 4	Resent PIS 1	Consent form 4 ²⁸	Video recording deleted if no response within 2 weeks

²⁷ PIS 2 and Consent Form 2 detailed the interview only.

²⁸ Consent Form 4 was the final attempt to achieve the 3rd consent to use and store the video recording, if patients were unable to be contacted by phone.

5.3.2.3 Post consultation interviews using VSR

Post-consultation interviews were arranged with all GPs as soon as possible following the second video recorded surgery and in some instances on the same day (after a break of a few hours to enable ZP to view all videos first). The interviews with GPs focused on their attitudes to the consultation with patients with OA. They were asked to describe a typical OA consultation initially, before being shown either a selected video-recorded consultation in full or clips of videos if more than one index consultation had been selected for that GP. Questioning following the video playback served to:

- clarify any unclear dialogue identified by researcher viewings
- explore GP views on likely antecedents to consultation
- establish differences between the consultation observed and the typical osteoarthritis consultation described, in terms of the way the patient presents with joint pain, and the GP response
- establish what the GP would like to achieve in an “ideal” joint pain consultation, and what barriers or challenges might exist to this
- establish what messages the GP perceives the patient took away from the consultation
- evaluate the acceptability, validity and utility of the research method

For patients, the interview followed a similar pattern, but prior to video playback they were asked their recollections of the consultation, including the advice and management given by the doctor. They were asked about antecedents to the consultation, and previous consultation history. Additional areas explored with patients included:

- the relationship of joint pain to any other symptoms or problems mentioned

- any differences between their unprompted recall of events and the video
- their interpretations of any advice or terms by the doctor

Full interview guides appear in Appendices 4 and 5. At the onset of video playback, patients and doctors were both asked to comment on anything of interest, anything they were thinking during the consultation and anything that ZP may not know. They were also showed how to stop the recording in order to comment.

The interviews were audio-recorded and transcribed verbatim. The index case consultations were also transcribed, and to facilitate this, the audio file was separated from the video file. Transcriptions were annotated to demonstrate patients' or GPs' comments over or during video playback and any non-verbal behaviours felt to be significant that were noted on field notes during the interviews.

5.3.2.4 Electronic medical record review

As the consultation provides only a snapshot in time of the interaction between GP and patient, contextual data were gathered from the Electronic Patient Record (EPR) in addition to the subsequent interviews with the patients and GPs. Patients indicated their consent to medical record review in the initial consent process although consent to medical record review could be withheld without precluding involvement in other aspects of the study.

Contextual information sought from the medical record included information about comorbidities, previous consultations coded for OA or related Read codes and previous treatments and referrals (see Appendix 6). The data were collected

individually in each surgery from the EPR for the patients who discussed OA and consented to medical record review.

5.3.3 Analyses

5.3.3.1 Quantitative analysis

Quantitative data analysis of the whole sample consisted of the following:

1. Descriptive statistics reporting characteristics of patients and GPs who consented to being video recorded compared to those that withheld consent. Differences between groups were compared using Chi-squared testing (for categorical variables such as gender) and T testing (for quantitative variables e.g. age).
2. Descriptive statistics reporting how many patients had had joint pain in the last week, had intended to discuss joint pain, and actually had discussed joint pain. This has been compared with other symptom groups.

In addition, some quantitative approaches supplemented the predominantly qualitative analysis of the index OA cases, including the following:

3. Descriptions of how discussion regarding joint pain arises in the consultation. Quantitative measures such as the length of time of consultation, the length of time discussing OA and the order in which subjects were discussed has been recorded in order to enhance the description of consultations.
4. Descriptive statistics comparing the patient reported diagnosis with the diagnosis entered on the medical record.

5. Descriptive statistics detailing the patients' number of comorbidities and previous consultations.

5.3.3.2 Observational methods

The analysis of the consultation was both structured and unstructured.

Structured observation occurred on the initial viewing of *all* the video-recorded consultations, when the main goal was to ascertain if joint pain was discussed or not, and to compare the topics discussed within the consultation with the patients' intended agenda on their questionnaire. The topics of discussion were noted first, independently of the questionnaire, to avoid introduction of bias.

A separate tick box present on the questionnaire next to each item in the symptom list was used for the researcher to tick to indicate if a symptom had been discussed, following the observation. Unstructured observation was conducted on the index consultations; for a discussion of this analysis see qualitative analysis below.

5.3.3.3 Qualitative analysis

Analysis focused primarily on the index consultations and interview transcripts, using field notes of surgery observations and medical record review data as contextual information. Thematic analysis was primarily used for analysis, broadly based on grounded theory.

The first step in analysis was familiarisation with the data, and, for both the consultation and interview data this was aided by viewing of the video and annotation of the transcripts to note any significant non-verbal actions for example,

pain behaviours such as grimacing with pain. Secondly, the process of open coding identified key themes noting both behaviours and talk. Hammersley (2007) suggests that attention needs to be paid to form and function of talk as in everyday talk individuals are performing social actions e.g. explaining, justifying, making excuses, attributing motives etc. For the consultations, coding was performed watching the video and viewing the transcript simultaneously in NVivo (see 5.3.3.4).

The process of coding entailed constant comparison; this term was originally coined by Glaser and Straus (1968) in reference to grounded theory and implies constantly moving back and forth from the data to emerging theory and also to refine descriptions of codes. Grounded theory has been criticized for assuming a positivist approach; more recently, Charmaz (2008) has described a 'reconstruction' of grounded theory with a social constructivist approach. The key features of this approach are a constant reflection and scrutiny of methods during data collection, revision of methods of data collection and analysis in light of this scrutiny using an iterative process, and obtaining thorough, rich data (Charmaz, 2008).

Initially, all consultations were viewed and coded in a descriptive manner.

Outcome and length of the consultation were also recorded. A sample of five consultations with paired doctor and patient interview transcripts were coded by ZP and a second researcher (TS). ZP and TS then met twice, firstly to discuss consultation themes, and then secondly, themes arising from interview transcripts. ZP then continued to analyse the remaining dataset, coding at a more interpretative level, to move the analysis on from pure description, with constant comparison within and across cases and with regular meetings with TS and

supervisors to discuss emergent themes. A taxonomy of consultations was devised, using prominent themes, in the initial phases in order to group and classify consultations.

5.3.3.4 Use of computer software

NVivo Version 9 was used to aid qualitative analysis. This qualitative data analysis software facilitates analysis by allowing the researcher to easily retrieve coded text (Bryman, 2001). In addition, this software supports video as well as word processed documents and so the video data itself can be subject to coding. One of the arguments levelled against the use of such software is that it results in a fragmentation process and the original context of the text coded can be lost, but with the video consultation data this risk is minimised by the addition of the visual image.

IBM SPSS 21.0 was used for calculation of descriptive statistics.

5.3.4 Output

The ARUKPCC's large and active users group has contributed to the design of this protocol and in particular to the form and content of the consent. This group, which includes patients and doctors have and will be asked to review the text of the draft papers to ensure that balance and anonymity has been preserved in presenting the results.

5.3.5 Measures of quality in qualitative research

The nature of 'validity' in qualitative research is a controversial one; validity, when applied in the quantitative paradigm implies there is only one truth or correct interpretation which would not be an appropriate concept for qualitative researchers (Janesick, 2003). However, there are several strategies in qualitative design which confer more trustworthiness and authenticity in the data and these will be discussed here.

Recognition of the researcher as a central part of the research process is a core characteristic of qualitative research. The researcher needs to continually reflect on his or her role in shaping the research design and in the interpretation of findings, and this is referred to as reflexivity. The open reporting of this is referred to as transparency. Reflexivity also describes the author's efforts to be aware of the extent to which their own biases, beliefs and experiences may affect the interpretation of the data. In this instance, the researcher's role as a doctor and fellow professional is important and has been discussed in context with the findings.

Reflexivity was operationalised during analysis by frequent meetings with supervisors, including viewing of the videos, early on in the analysis process. During these meetings there was explicit discussion of the interpretations that ZP felt may be influenced by her role as a rheumatologist. These meetings were instrumental in steering analysis away from events that might be of clinical interest and to approach the consultation in a more nuanced way. Careful attention was paid to constant checking that the analysis was taking into account both doctor and patient perspectives at each stage. In efforts to avoid being doctor centric, ZP noted that the patients' perspectives were sometimes emphasized: a more

balanced view was achieved by discussions with the sociologist (and supervisor) who also conducted analysis alongside ZP.

The second researcher also brought new insights to the; in quantitative terms this would serve as increasing inter-rater reliability, but in qualitative research this can be interpreted as a further form of triangulation.

Transparency is aided if an 'audit trail' of the research process is clear, including changes to the study design that occurred while the study was in process. Memos were kept using NVivo to maintain a record of ideas that were generated during the analysis process and changes to this study design are described in 5.3.7.

Triangulation is a feature of this study which uses multiple data sources. However, as stated in Chapter 3, in view of the nature of multiple truths, crystallisation may be a more appropriate term than triangulation. With crystallisation, attention to deviant cases or inconsistencies across data sources permits more reflexive analysis and thus contributes to a robust analysis.

Respondent validation is often quoted as a further quality measure. This is the process of asking participants to either check transcripts or to check a summary of findings. Some writers on qualitative research methods advocate this as one of the most important validity measures (Lincoln and Guba, in Creswell, 2007). However, others think its usefulness is limited. The account the researcher produces for a general audience is likely to be different to an individual's account of events and so Mays and Pope (2006) consider that this can be considered at best, a form of 'error reduction' than a straightforward check on validity. In practice, if asking respondents to review summary of findings, it is best to frame this by asking them if the findings 'capture' or include their thoughts. Any new insights or comments at this stage also need to be treated as new data. For this study, a respondent

validation process of the consultation itself is implicit in the study design; the act of the researcher viewing the video with both research participants involved hopefully avoided the researcher misinterpreting or misunderstanding events within the consultation. In this study participants did not check interview transcripts or findings due to the limitations mentioned above. However, the discussion of findings and publications with the ARUKPCC Research User Group will provide a check that balance has been preserved in the presented findings.

5.3.6 Ethical considerations

This study was reviewed and favourable opinion given by North West 8 Regional Ethics Committee, Manchester (see Appendix 7). Often, NHS Ethics committees are not familiar with qualitative research; having a flexible research design that changes over the course of data collection is not really compatible with the current ethics application and approval process, whereby any change to protocol or documents needs to be re-reviewed by the committee.

The General Medical Council (2002) has published guidance on using video recordings for research, to which this study adheres. This includes:

- ensuring that the patients understand the purpose of the recording, who will view the recording and in what circumstance, and the arrangement and duration of storage
- that patients have adequate time to consider consent and that they understand they may withhold or withdraw consent at any time with no consequence to their treatment

- that patients are asked if they want to vary or withdraw consent after the recording that they may view the video if they wish that the video is erased as soon as possible if the patient withdraws consent
- that the video data are given the same level of protection as medical records

Informed consent of patients has been discussed in section 5.3.1.2. The ethics committee were in agreement with the procedures of allowing patients a cooling off period after the consultation rather than before, as outlined previously.

However, they also felt that patients should be warned in advance of their appointment if there was sufficient time to do so and it was their requirement that patients booking their appointment more than 48 hours in advance should be posted information sheets prior to their appointment.

With consenting GPs, an additional problem arose of how much information to give about the purpose of the study; a balance needed to be sought between giving minimal information, thereby reducing risk of causing behaviour change (the Hawthorne effect, or reactivity) and giving sufficient information in order that they may give *informed* consent. The GP information sheets described the subject of interest as 'chronic musculoskeletal conditions', and it was clear the population of interest were aged 45 and over. However, OA was not specifically mentioned.

For patients, the initial meeting with the researcher resulted in a slight delay to their appointment time. Developmental work prior to the study demonstrated that this was no longer than 10 minutes. This point was raised with the ARUKPCC osteoarthritis Research User Group and with a local GP advisory group, who advised on ways of minimising delays such as ensuring appointments are timed appropriately with suitable catch up periods and informing patients on the

telephone when their appointment is booked that there will be a researcher present for that particular surgery. Our patient user group did not feel that the consent process led to an unreasonable time delay for patients.

Provision was made for the fact that the videos may have identified compromised patient safety by inadequate premises, equipment, or other resources, policies or systems, or the conduct of a health professional. If this had occurred, then appropriate steps were to be taken in line with the recommendations in Good Medical Practice (General Medical Council, 2013) and in line with local research governance Standard Operating Procedures, reported through the GP Medical Director of the Primary Care Trust hosting the research, and their respective Directorates for Care Quality and Clinical Governance.

It was considered possible that the presence of the video camera could result in distress in the consultation, although this is not particularly reported in other researchers' work using video in primary care. The patient and GP were informed the video could be turned off and video file deleted at any point on request. The researcher was also aware that watching the video after the consultation may also cause some distress for the participants. The interviewer was therefore sensitive to this and offered to stop or pause the interview where appropriate. The patients were forewarned that the interview involved viewing the video recording. The Research User Group felt that it would be important to explain the purpose of showing the video clips i.e. that it is helpful for the research to explore patients' reactions to the tape, to avoid the patient making the assumption they were being mocked.

5.3.7 Changes to method during data collection

5.3.7.1 Amendments submitted to the reviewing ethics committee

Following the original ethics application, some minor changes to the protocol were deemed necessary. A minor change was the addition of comorbidities as a category in the medical record review. This was deemed important in order to contextualise both the content of the consultation and the pattern of consultation.

5.3.7.2 Changes to GP recruitment and number of video recorded surgeries

Originally the intention was for a maximum variation sample, i.e. the maximum number of different practices and GPs. The original protocol specified each GP would be video-recorded for one half day surgery, to maximise the number of GPs. When GP recruitment started, these aspirations were scaled down in favour of a more logistically viable study. Due to the possibility that one half day surgery may contain no reference to joint pain or OA, all GPs were asked to give dates for two half day surgeries at the outset rather than one. As there was not an intention to interview GPs unless OA was mentioned, this reduced the likelihood of having to cancel a previously arranged appointment with a GP for an interview. Secondly, due to the variation between practices in the practical running of the study, and the need for meetings with Practice Managers and reception staff, it soon became apparent that studying more than one GP per practice was more practicable. Although originally a change for logistical reasons, this change also made sense methodologically. Studying fewer practices afforded more time within each practice, more time conducting observations and therefore a more in-depth description of the possible contextual influences on the consultation.

In practice, although two GPs had no index consultations identified, the interviews with these GPs still went ahead as at the time, it was felt there were other small sections of interest in consultations regarding other musculoskeletal (MSK) problems that could be reviewed (for example, the use of 'wear and tear' for spinal pain). However, due to the large amount of data collected and the sense of saturation with the data in the GP interviews, these transcripts were not included in the final analysis.

5.3.7.3 Changes to selection of index cases

On the initial viewing of the videos, it became apparent that some consultations had very brief mentions of OA. For example, one GP referred to 'wear and tear' on a knee X-Ray from a previous consultation, at the beginning of the consultation, or 'arthritis tablets' were mentioned very briefly in a medication review. The first time OA was mentioned in a brief manner, the case was included and the patient interviewed (Case 17). This was early on in data collection and at this stage, there was still uncertainty about the number of cases that would be identified.

Thereafter, as more cases were identified, the selection criteria were changed, with 'brief mentions less than 30 seconds in duration' added as an extra exclusion criteria, in order to focus on consultations with greater OA content.

5.3.7.4 Changes to VSR procedures

Flexibility was necessary during the VSR with GPs as some GPs had index cases that contained very brief mentions of OA. The intention had been initially to show the entire index consultation; however, sometimes clips were shown, where there were large chunks of consultation about other subjects, in view of limited time

available with the GPs for interview. In one exceptional case, the researcher observed pertinent points in other MSK, but non-index consultations (a recurring pattern of not giving a diagnosis to MSK presenting complaints). The researcher therefore showed clips from these consultations (in addition to the index case) in order to illustrate this observation without directly questioning the GP on this behaviour. This was all in line with patient participants' consent which included viewing and storage of the videos regardless of whether they were index cases or not. The GP recognised the pattern of observed behaviour which they reported being unaware of and was then able to reflect on this.

5.3.7.5 Changes to interview schedules

Both interview schedules for GPs and patients contained a number of questions designed to evaluate the acceptability of the method. After the first few patient interviews it became clear that these questions were not discriminatory with all patients reporting favourable experiences, and therefore the decision was made to reduce the amount of questions on this and use other data, particularly from observations, to evaluate the acceptability of the method.

As is the norm with qualitative research, analysis began while data collection was still taking place. As such, questions were incorporated into the interview schedule to explore emerging themes, such as the observation that OA was often raised as a late arising concern (with GPs) and questions exploring particular language around OA, such as 'wear and tear' (GPs and patients).

5.4 Summary

In this chapter, the detailed methods have been presented. With any qualitative research, there is a need for the research design to be flexible and responsive to findings, and the main changes to the method that were necessary during data collection have been described. The ethical considerations that were considered at the outset of the study have been described (further emergent ethical considerations are considered in Chapter 10, Evaluation of the Method). The following chapters will now move to presenting the results of the study, starting with the study recruitment and participant characteristics in Chapter 6.

Chapter 6: Results - Study Recruitment and Sample Characteristics

6.1 Introduction

In this chapter, the process of recruitment of GPs and patients, and the selection of the index cases of OA are described, in addition to the characteristics of the sample.

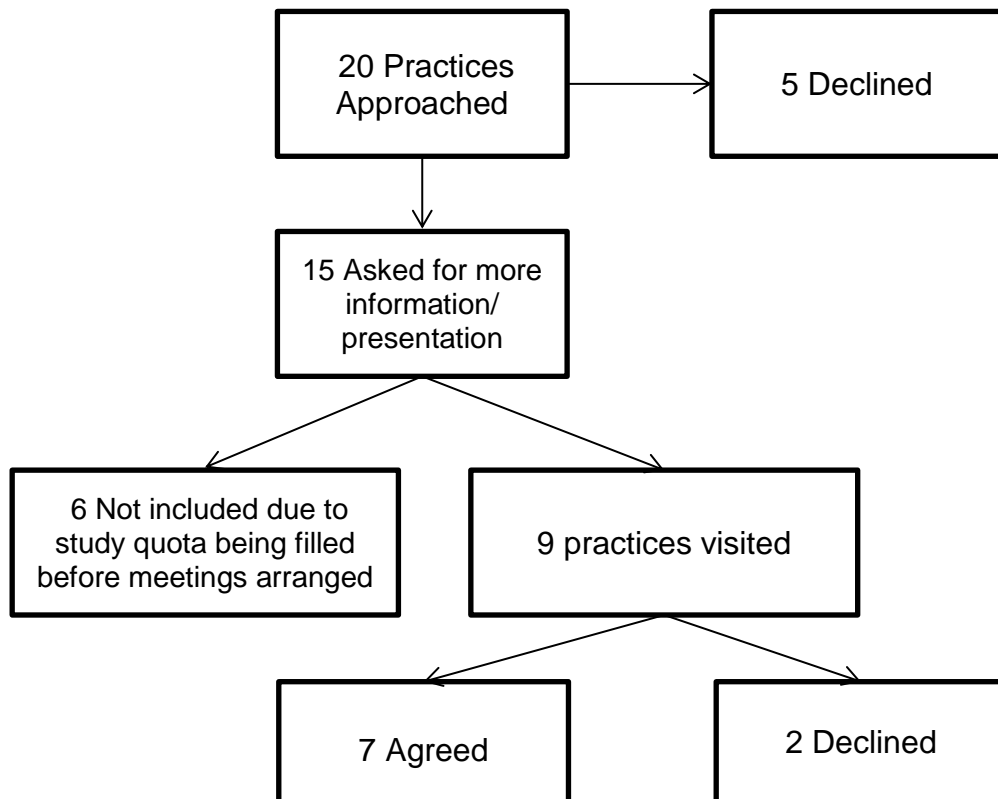
The aim of this chapter is to set the context for the future chapters and provide information on which the risk of bias in this study may be assessed.

In 6.2, the process of GP recruitment is described in addition to the characteristics of the GPs and their practices. In 6.3, the stages of patient recruitment are described, followed by, in 6.4, a comparison of the demographics of those consenting to video with those who declined participation. Finally, the selection of the OA 'index' cases is described.

6.2 General practitioners and practices: recruitment and characteristics

General practitioners or practice managers were initially approached to be in the study by GP facilitators working within one local Comprehensive Local Research Network (CLRN). Twenty practices of 146 in the CLRN were initially approached. Fifteen showed initial interest and nine were visited by ZP to give information about the study. The process of recruitment at practice level is illustrated in Figure 4.

Figure 4: Flowchart of GP practice recruitment



The practice characteristics are described in Table 20. Fifteen GPs in a total of seven practices agreed to participate. Of the 15 GP participants, four were female. Seven were GP Trainers and a further three regularly supervised and taught medical students. Two of the GP trainers had videotaping facilities already set up

in practice and were used to video recording themselves; all had been video recorded before at some point in their career. The mean number of years in practice was 13.6, (median 10), with a range of one to 29 years. Two GPs held roles in Clinical Commissioning Groups²⁹ and three had previous careers in hospital medicine (two in surgery and one in medicine). One GP also worked academically (although not in musculoskeletal medicine).

Table 20: Practice characteristics

Practice Number	Number of patients registered³⁰	Number of GPs in practice	Description of catchment area	Deprivation Decile³¹	Number of GPs in study
1	13175	8	town	6	1
2	3810	2	rural	9	2
3	7788	6	large town	8	1
4	8577	6	market town	6	2
5	5862	4	market town	8	1
6	18054	12	rural/ large town ³²	9	6
7	10453	7	large town	7	2

²⁹ Clinical Commissioning Groups are NHS organisations that have replaced primary care trusts, set up by the Health and Social Care Act 2012 to organise the delivery of NHS services in England.

³⁰ Data from www.apho.org.uk/PracProf/, accessed 10th October 2013 [Data updated Dec 2012].

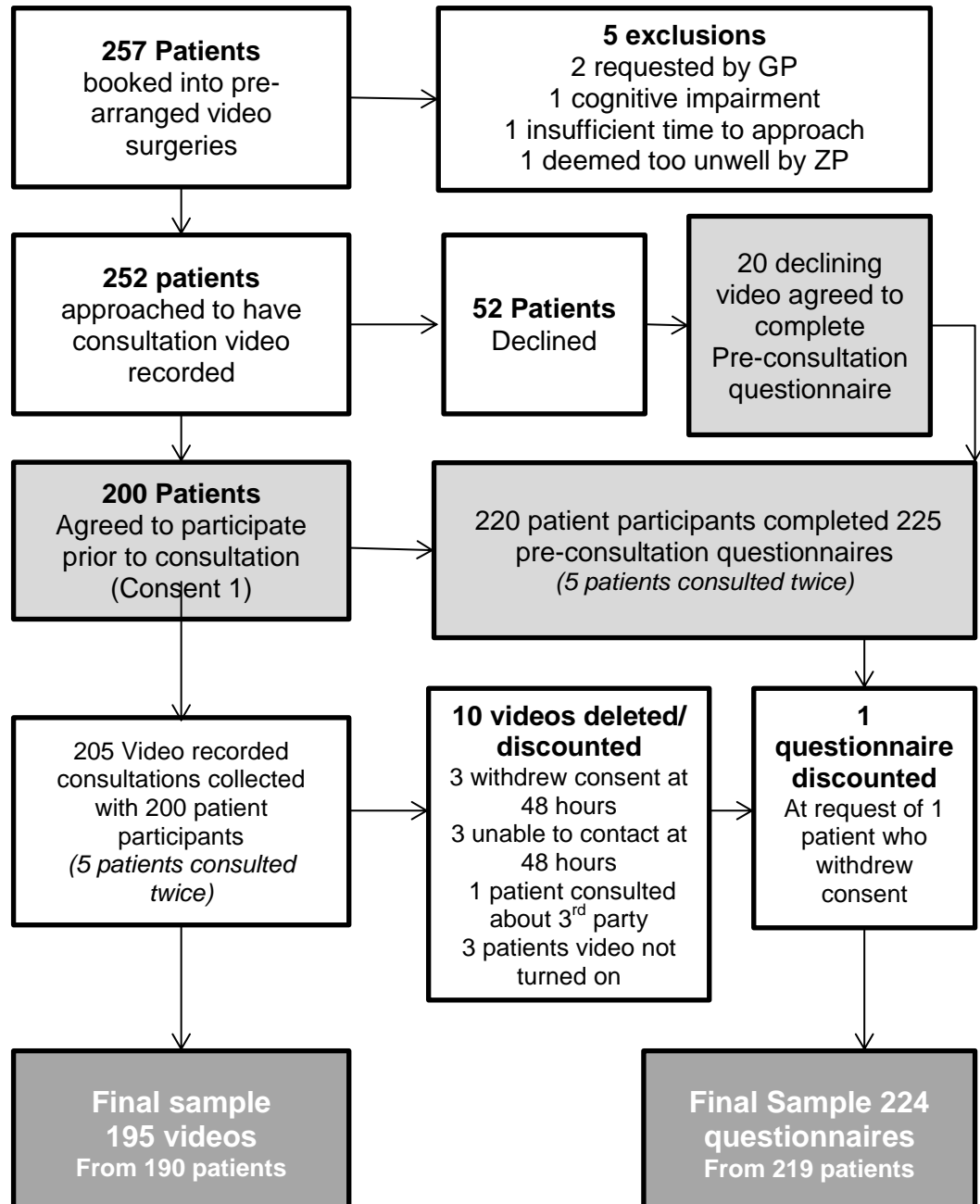
³¹ Decile reports a level of deprivation where 1 is the most deprived and 10 is the least deprived.

³² Surgeries with 4 GPs recorded in satellite surgery in rural location.

6.3 Patient recruitment

Patient Recruitment is detailed in Figure 5

Figure 5: Patient recruitment



The consent rate for video recording was 79.4%. Reasons given by patients who declined involvement are listed in Table 21. The most common reasons reported were feeling unwell, anxiety or low mood, intending to consult about a personal or

intimate problem or reasons associated with the research process, such as not wanting an additional phone call or not wanting to complete the questionnaire. The withdrawal rate was low, with no patients withdrawing consent immediately after the consultation (Consent 2) and only three (1.5%) patients withdrawing consent at 48 hours (Consent 3)³³. Three patients were lost to follow up, due to being unable to contact at 48 hours: either the phone number given was incorrect or the patients did not answer the phone on three occasions. These three videos were deleted as per the ethics agreement and original protocol which specified all three consents were necessary for the videos to be retained. A further four videos were excluded due to technical reasons or the patient consulting about a third party. Of the 252 patients approached, seven patients were approached twice. Five of these agreed and two declined on the 2nd occasion; all of these seven had agreed on the first occasion. Recruitment varied by practice, from 63.8 to 100%, and this is detailed in Table 22.

³³ One participant withdrawing consent asked for their questionnaire to be deleted (hence the total number of questionnaires analysed was 224).

Table 21: Reasons given for non-participation

Reason given to researchers	Number (n=52)
None given	19
Feeling too unwell	5
Personal reason/intimate problem	4
To avoid further delay/in a hurry	4
Participated in this or other research before	4
Already anxious about consultation/low mood	3
Didn't want further contact or phone call	3
Concern about data/data protection/confidentiality	2
Not keen on video	2
Participant stated hearing/visual impairment as a barrier	2
Was intending on complaining and so didn't think video appropriate	1
Couldn't see the relevance (didn't believe GP could be improved)	1
Didn't want to complete questionnaire	1
Seeing GP for first time	1

Table 22: Patient recruitment by practice

Practice	Number of patients approached	Number (percentage) consenting³⁴	Number of video recorded consultations
1	13	13 (100)	14 ³⁵
2	47	30 (63.8)	30
3	13	9 (69.2)	9
4	29	24 (82.8)	24
5	8	8 (100)	8
6	109	89 (81.7)	93 ³⁶
7	33	27 (81.8)	27

³⁴ Of those patients who were approached twice, their initial response is included.

³⁵ Includes 1 patient video recorded twice.

³⁶ Includes 4 patients who were video recorded twice.

6.4 Characteristics of patient participants: consenters compared with non-consenters

Consenters to video tended to be younger and there were proportionately more males in the consenting group. One variable that appeared to associate with consent being withheld was receipt by the patient of information about the study prior to being approached. However, none of these observed differences were statistically significant (Table 23).

Table 23: Characteristics of consenters and non-consenters: age, gender and prior knowledge of the study

Characteristic	Consenters to video, n=200	Non-Consenters to video, n=52	P value (test)
Gender Female n (%)	85 (42.5%)	29 (55.8%)	0.087 (Chi squared)
Age, Mean (SD)	66.0 (11.5)	69.4 (11.8)	0.066 (T Test)
Received patient information sheet prior to appointment in the post, n (%)	51 (25.5%)	18 (34.6%)	0.189 (Chi Squared)

Details on working status and ethnicity were only available for those completing the questionnaire: 199/200 consenters (to video) and 20/52 non-consenters³⁷. The majority of the sample comprised White UK/European participants as shown in Table 24.

³⁷ Two hundred and nineteen of the total 224 questionnaires, because five participants completed two questionnaires.

Table 24: Ethnicity of consenters and non-consenters

Ethnicity	Consenters, n = 199	Non-Consenters, n = 20
White UK/ European	195	19
Asian	2	0
Other	0	1
Not completed	2	0

The employment status of patient participants is shown in Table 25.

Table 25: Employment status of consenters compared with non-consenters

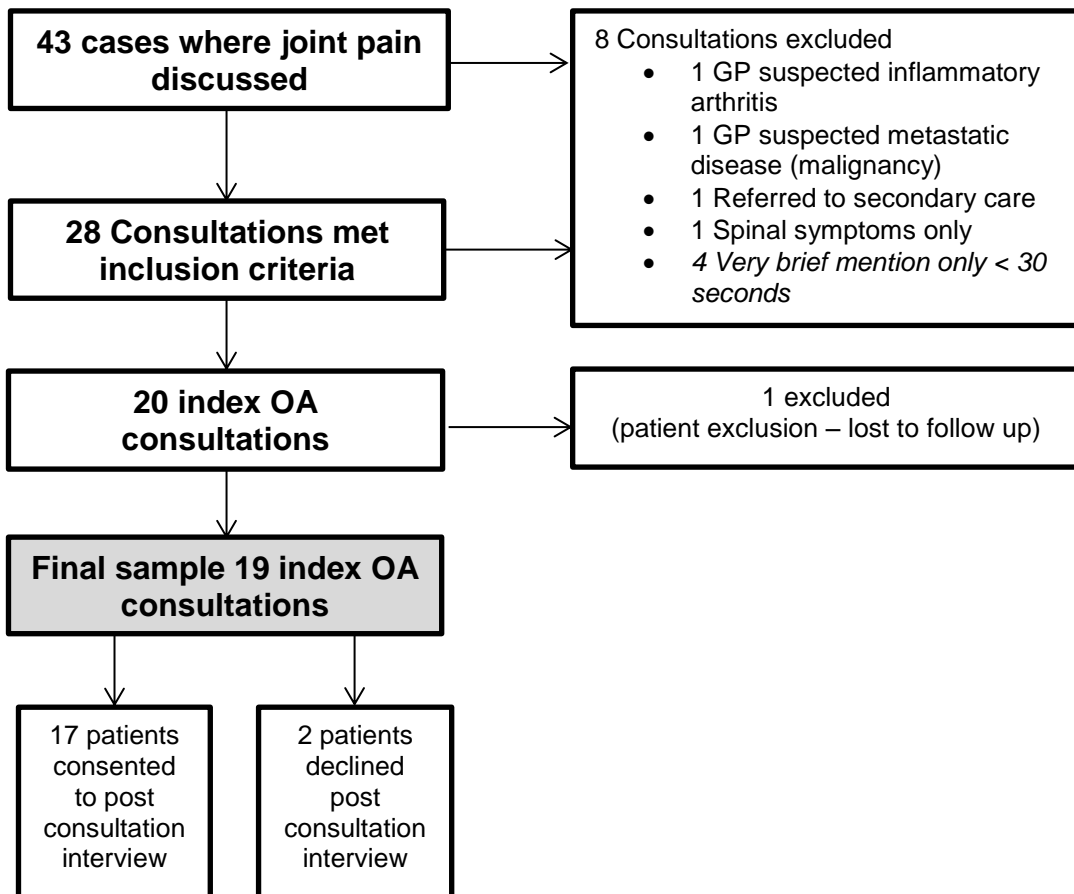
Employment status	Consenters, n = 199, n (%)	Non-consenters, n = 20, n (%)
Employed/ self employed	64 (32.2)	6 (30.0)
Not working due to ill health	15 (7.5)	2 (10.0)
Retired	112 (56.3)	8 (40.0)
Unemployed/ seeking work	1 (0.5)	0
Housewife	4 (2.0)	3 (15.0)
Other	3 (1.5)	0
Not stated	0	1 (5.0)

Non-consenters tended to be older than consenters, but non-consenters who chose to complete the questionnaire appeared to be more likely to still be in work compared with consenters. The reported symptoms of the non-consenters who completed the questionnaire are reported in Chapter 7.

6.5. Selection and characteristics of osteoarthritis index cases

In the initial viewing of the videos, 24 cases of likely OA were initially identified (12% of the study sample) applying the inclusion and exclusion criteria outlined in Chapter 5. In brief, inclusion criteria resulted in consultations being selected if any of the terms 'wear and tear', 'arthritis' or 'osteoarthritis' were used by the GP, or if a working diagnosis of OA could be made based on the NICE guideline group recommendations (2008). Exclusion criteria included suspected soft tissue diagnosis or inflammatory arthritis, spinal symptoms only, or if the GP referred to secondary care because of diagnostic uncertainty. Four of the 24 likely OA cases were excluded due to the brevity of discussion regarding OA. The process of case selection is detailed in Figure 6.

Figure 6: Selection of osteoarthritis cases



All GPs agreed the index cases either had or were likely to have osteoarthritis in post consultation-interview. One of the index cases was subsequently lost to follow up after the screening stage, leaving a total of 19.

Table 26 shows the characteristics of the OA cases compared with the sample as a whole.

Table 26: Characteristics of OA index cases

Characteristic	OA Cases, n = 20	All patients consenting to consultation video
Gender, Female, n (%)	14 (70)	85 (42.5)
Age, Mean	69.5	66.0
Ethnicity, White UK/ European, n (%)	20 (100)	195/197 (99)
Working status, retired, n (%)	16 (80)	112/199 (56.3)

In summary, the OA index cases selected represented 10% of the study sample. Proportionately, there were more females in the OA index cases than males and the mean age of this group was slightly greater than the mean age of the consenters as a whole.

6.6. Discussion and conclusion

Recruitment and consent rates in the first video phase of the study were just under 80% (79.4%), and in line with other published work describing recruitment to video studies, described in Chapter 3. However, the three levels of consent, required to be compliant with both GMC and Research Ethics guidance were a deterrent to a small number of patient participants. Recruitment to the second interview phase was slightly higher (89.5% of those who had consented to videotaping of their consultation).

The characteristics of GP practices in the study may not be representative of the UK as a whole, with few patient participants from ethnic minorities and no practices from areas with low deprivation scores. Socio-economic deprivation is known to associate with higher prevalence of multi-morbidity, painful conditions and mental health disorders (Barnett et al., 2012). Furthermore, it is likely that individuals from deprived areas are likely to have differing attitudes, beliefs and experiences of healthcare than individuals from areas of low deprivation.

Within the West Midlands in 2013, 14.8% of GPs were registered as GP Trainers (personal communication³⁸), and therefore the relatively high proportion of GP trainers (7, 47%) in the GP sample, in addition to the preponderance of males (11, 73%) may limit the generalisability of the results.

Proportionately, the non-consenters (to video) group contained more females, and had an older mean age than the consenters. The pre-consultation questionnaire data revealed non-consenters were more likely to be in work than consenters; however the non-consenters who completed a questionnaire had a mean age of 66 (non-consenters total group mean age 69) and so this group may not have

³⁸ Email correspondence with M Wilkinson, Health Education West Midlands, 25th March 2014.

been representative of the non-consenter group as a whole. The proportion of those consenting also varied by practice, and this may be influenced by a 'culture of video'; for example, Practice 7 frequently used video and so the patients may have been more used to being asked.

The differences in age and gender between consenters and non-consenters were not statistically significant, but may have affected the number of index cases identified, as OA index cases tended to be older, with a higher proportion of females. Despite this potential limitation, proportionately more index cases were identified than expected.

The frequency of OA consultation in this sample is markedly higher than published figures (ARUKPCC, 2009); part of this observation may be explained by a number of consultations in which OA was discussed very briefly, as such discussion is unlikely to be reflected in the medical record. Furthermore, efforts were made to deliberately enhance the frequency of OA consultations by restricting surgeries to patients aged over 45 and by limiting the number of 'acute slots' available for patients to book into.

Describing the participation rate and representativeness of the sample is important not just in considering, as one would in quantitative research, the generalisability of the results. In qualitative research it is important to make efforts to ensure that a wide range of beliefs and behaviours are unearthed to fully explore the topic of interest. The final sample of 19 index cases and 15 GPs was therefore considered large enough to generate a broad range of experience of osteoarthritis and a heterogeneous spread of beliefs and behaviours.

Chapter 7: Results - Symptoms and Consultation

Agenda of the Video Recorded Patients

7.1 Introduction

In this chapter, the results of the pre-consultation questionnaires for all patients, not only those subsequently selected to take part in the OA interview study, will be presented. The purpose of the questionnaire was to obtain some data, particularly concerning patients' symptoms and intentions for the consultation. This sheds important light on how joint pain compares to other symptoms in the likelihood of being disclosed or withheld by patients during the consultation.

Firstly, the prevalence of various symptoms (including joint pain) is reported in this sample; this serves as a contribution to a description of the epidemiology of older people who consult their GP and provides background context for the videos and interviews.

Secondly, patients' symptoms that they intended to discuss in the consultation are reported, in order to establish how joint pain compares with other symptoms in likelihood of patients intending to discuss it within the consultation.

Thirdly, the video consenters' intended agenda (including any symptoms they had expressed intention to discuss) has been compared to what was actually discussed on the initial screening view of the videos. The proportion of joint pain concerns that were voiced and unvoiced has also been compared with other symptoms to establish if joint pain differs in likelihood of being discussed.

7.2 Overview of method

The pre-consultation questionnaire included questions about the patient's current symptoms and their agenda for the consultation (Appendix 3). The list of symptoms was derived from data from the CipCA general practice database (Jordan et al., 2007) and the scoring system for subjective health complaints (Subjective Health Complaint Inventory (SHCI)) (Eriksen et al., 1999), as described in Chapter 5. The patient participants were asked to tick one or more of the boxes adjacent to each of 11 groups of symptoms to indicate if they had experience of the symptom in the last week, and a second box if they intended to discuss that group of symptoms with the doctor. The patient participants were also asked to complete a free text section indicating their main reason for the consultation, hereafter referred to as the consultation 'agenda'.

In the first 48 hours after the consultation, all the videos were viewed once to screen for cases of OA. During this initial viewing, all patient agendas and 'symptoms with intention to discuss', as indicated on the questionnaire, were compared with the actual topics of discussion during the consultation.

7.3 Results

Two hundred and twenty four pre-consultation questionnaires were completed (Figure 5) from 199 video consenters and 20 video non-consenters. Five video consenters completed a second questionnaire as they were video recorded during two separate consultations, and these five (second) questionnaires have not been included in the following results. Unless otherwise stated, the results refer to the sample of video consenters, and this term is used to include the index cases, non OA consultations and cases with excluded videos.

7.3.1 Reported symptoms and consultation agenda

Ninety one (45.7%) of those consenting to video reported joint pain in the past week and this was the most common self-reported symptom; 54.9% of individuals reporting joint pain also expressed intention to discuss this in the consultation.

One hundred and fifteen (57.8%) patients ticked more than one box in the list of symptom groups suffered in the previous week, ticking a mean of 2.3 boxes each.

Sixty three patients (31.7%) also ticked more than one box for groups of symptoms they wished to discuss with the doctor (mean 1.25 boxes ticked per patient).

Thirty one of those consenting to video (16.1%) recorded a musculoskeletal symptom as the main reason for consultation in the free text section, with 91(47.1%) recording another symptom. Six patients (3.0%) declined to complete the free text reason for attendance. The remainder (71, 36.8%) recorded a 'process' issue, such as review of results or medication.

Eight of the 19 (42.1%) index cases had expressed a musculoskeletal complaint as the main reason for attendance on their questionnaire, with a further two stating (joint) X-ray results as the main reason.

Eight of the 20 (40%) non-consenters completing a pre-consultation questionnaire reported joint pain as a symptom, with four intending to discuss this in the consultation; however, none of these four indicated joint pain was the main reason for consultation.

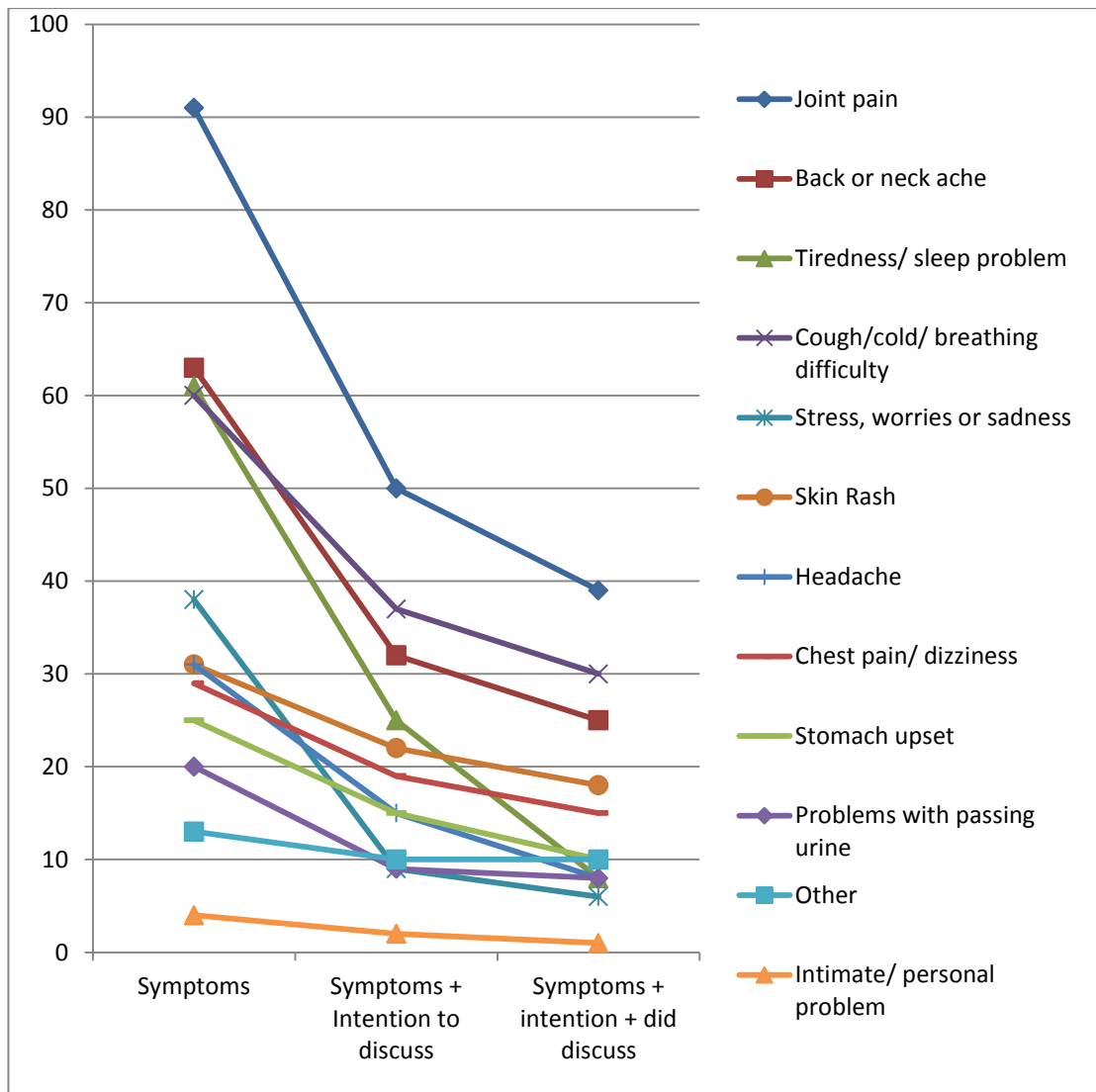
7.3.2 Agenda compared with observed discussion

Of the 193 video consenters who completed a free text main reason for consultation, 186 (96.4%) discussed that main issue as they had intended.

However, in only 178 of 245 (72.7%) instances where an intention to discuss a symptom group was indicated by a box tick, was that discussion observed to take place in the consultation. Furthermore, in 29 instances a symptom was discussed where no intention to discuss had been expressed on the questionnaire. Eighty six (44.8%) patients were observed to discuss more than one of the 11 groups of symptoms during the consultation (mean 2.1).

Figure 7 illustrates the pattern of reported symptoms, intention to discuss and observed discussion. In this unselected sample of general practice consultants, joint pain was the most frequently reported symptom on the pre-consultation questionnaire, and the most frequent symptom that patients intended to, and subsequently did, discuss in the consultation.

Figure 7: The number of patients reporting specific symptoms, the number of those patients intending to discuss those symptoms with the GP and the number of those so reporting who were observed to discuss the symptoms



With respect to joint pain, a steep gradient is evident between the first two points (54.9% of those with symptoms expressed an intention to discuss), with a smaller difference between the group who expressed a wish to discuss and those who ultimately did discuss (78% of those intending to discuss, did). In Table 27, 28 and 29, the symptom groups are ranked according to the proportion of those with symptoms who intended to discuss, and those who did discuss.

Table 27: Proportion of those with symptoms, who also intended to discuss symptoms with GP, ranked by symptom group

Proportion with symptom, that also expressed intention to discuss symptom with GP, %, (n)	
Skin Rash	71.0, (22/31)
Chest pain/dizziness	65.5, (19/29)
Cough/cold/breathing difficulty	61.7, (37/60)
Stomach upset	60.0, (15/25)
Joint pain	54.9, (50/91)
Back or neck ache	50.8, (32/63)
Intimate/personal problem	50.0 (2/4)
Headache	48.4 (15/31)
Problems with passing urine	45.0 (9/20)
Tiredness/sleep problem	41.0 (25/61)
Stress, worries or sadness	23.7 (9/38)

Table 28: Proportion of those with intention to discuss, who were observed to discuss symptom, ranked by symptom group

Proportion with intention to discuss that did discuss %, (n)		Number of patients not discussing symptom after an intention to discuss had been expressed
Problems with passing urine	88.9, (8/9)	1
Skin Rash	81.8, (18/22)	4
Cough/cold/breathing difficulty	81.1, (30/37)	7
Chest pain/dizziness	78.9, (15/19)	4
Back or neck ache	78.1, (25/32)	7
Joint pain	78.0, (39/50)	11
Stomach upset	66.7, (10/15)	5
Stress, worries or sadness	66.7, (6/9)	3
Headache	53.3, (8/15)	7
Intimate/personal problem	50.0, (1/2)	1
Tiredness/sleep problem	32.0, (8/25)	17

Table 29: Proportion of those with symptom, who intended to and did discuss symptom, ranked by symptom group

Proportion with symptom that intended to and did discuss %, (n)	
Skin Rash	58.1 (18/31)
Chest pain/dizziness	51.7 (15/29)
Cough/cold/breathing difficulty	50.0 (30/60)
Joint pain	42.9 (39/91)
Problems with passing urine	40.0 (8/20)
Stomach upset	40.0 (10/25)
Back or neck ache	39.7 (25/63)
Headache	25.8 (8/31)
Intimate/personal problem	25.0 (1/4)
Stress, worries or sadness	15.8 (6/38)
Tiredness/sleep problem	13.1 (8/61)

7.4 Discussion

The questionnaire findings demonstrate that, in a population of patients aged 45 and over visiting their GP, 45.7% reported joint pain in the last week, more than 50% were poly-symptomatic, and one in three intended to raise more than one symptom with the GP. The frequency of joint pain and intention to discuss was lower in the non-consenters than in the consenters, suggesting that this group did not contain a large number of missed cases.

In the consultations, a mean of 2.1 different symptom groups were discussed. However, there were 67 instances when patients intended to discuss something and subsequently didn't, and 29 instances when patients discussed items they hadn't intended to. Joint pain did not appear to differ greatly from other symptoms in terms of the proportion of those with symptoms who intended to, and subsequently did, discuss. However, because of the relatively high prevalence of joint pain, this was the second most frequent symptom to be withheld, after intention to discuss had been expressed.

This is the first work to the author's knowledge that reports the prevalence of joint pain in adults aged over 45 who are visiting their GP, although population studies have found similar rates of prevalence of musculoskeletal pain in this age group for example (Urwin et al., 1998).

Barry et al (2000) elicited patient agendas before the consultation by interview, and included ideas, expectations, emotional and social issues, in addition to symptoms. In this study, audio recordings of the consultation were used to determine if agenda items had been discussed. They found nine out of 35 (25.7%) patients did not raise symptoms they had reported the intention to mention; the

results presented in this chapter suggest a similar proportion of unvoiced symptoms (27.3%).

One explanation for non-disclosure of symptoms is that the patient changes their mind during the course of the consultation. Barry et al (2000) describes 'dynamism' in the consultation, the way in which patients may choose to withhold information, on the basis that some pre-consultation plans and thoughts may seem less relevant as the consultation progresses. Alternatively, the patient may forget their prior intentions, feel there is insufficient time to raise additional concerns or be anxious about wasting the doctor's time (Barry et al., 2000).

The notion of patients having unvoiced agendas is not new, but what this empirical data adds is how different symptoms vary in likelihood of being discussed. Joint pain was the second most common symptom to be withheld after an intention to discuss had been expressed, second only to tiredness and sleeping difficulties. In light of the findings from the literature review in Chapter 2, one of the possible explanations for this is that patients perceive a negative response from the GP which acts as a barrier to raising concerns about joint pain (Coxon et al., 2012). Alternatively, the patient may not feel the symptom is sufficiently severe enough to mention. These issues are discussed in more depth in the following two chapters. The questionnaire itself is not validated, and the symptom groupings may not accurately reflect the symptomatology of the patients in the study. For example, many more patients were observed to be consulting about skin lesions than had indicated a skin issue on the questionnaire, and this may be due to the use of the word 'rash'. However, the primary purpose of including other symptoms on the questionnaire was to 'nest' joint pain, rather than to produce an exhaustive list of possible symptoms. A further limitation is that the process of articulating any

agenda items before the event may impact on the number of items and/or the likelihood of these items being discussed; Middleton et al (2006) demonstrated that patients who wrote down their agenda discussed 0.2 more items than those who didn't, but didn't specifically look at non-disclosure of agenda items.

The categorisation of one observer, on one viewing is open to bias and may have missed brief consultation events. Measures were taken in order to reduce the influence of the questionnaire groupings on observer coding; the video was observed and each topic discussed coded first, before then cross checking the topics discussed with the participant's completed questionnaire.

The results presented in the following two chapters will now focus on the OA index cases, starting with Chapter 8, and a typology of consultations.

**Chapter 8: Results - Heterogeneity, Complexity and
Prioritisation: Description of the Osteoarthritis
Consultations and Development of a Typology**

8.1 Introduction

In the preceding chapter, the characteristics of the GPs and patients in the study and the selection of the OA cases have been described. In this chapter, the focus turns to the index consultations. The original intention of this chapter was to simply describe the consultations in order to set the context for the in depth, within-case qualitative analysis in the following chapter. However, initial analysis revealed key themes which enhance understanding of these consultations and lift the findings in this chapter beyond simple description.

Within this chapter, one of the prominent features of this set of consultations about OA emerges, their variability or heterogeneity. Two key aspects of this variability are discussed, namely the patient's previous experience of OA, and the time spent discussing OA, and a typology of the consultations is presented. The typology illustrates how OA often presents as a minor component of the consultation: an OA 'fragment'. The typology further facilitates the study of patterns across the consultations, including the circumstances in which fragments occur, and the implications of discussions occurring in this way.

Few consultations followed the 'typical medical model', with most involving complex discussions about multiple items. This is discussed further under the theme of complexity, in 8.3. The prioritisation of OA, by both doctor and patient is considered in 8.4, with a discussion of how this prioritisation influences time spent in the consultation discussing OA. Finally, the findings are discussed in relation to existing consultation research in 8.5.

The findings in this chapter relate to the 19 index cases of OA. The findings centre on the initial observations of the videotaped consultation; however, in order to enlarge on the three themes presented, additional pre and post consultation data

has been used. Table 30 demonstrates the sources of data that have been used for each section in this chapter. The pre-consultation questionnaire has been described in Chapter 7. The medical record review contained details about the patient's previous OA history, consulting history and comorbidities.

Table 30: Sources of data used in Chapter 8

Theme	Source of data			
	Pre-consultation questionnaire	Observation of videotaped consultations	Medical Record Review	Post-consultation interviews
Heterogeneity	• (Demographics)	•	•	
Complexity		•	•	•
Prioritisation	• (Agenda)	•	•	•

8.2 Heterogeneity and development of a typology

8.2.1 Overview of factors associated with heterogeneity

The index cases reveal considerable variability or heterogeneity. In this section, the factors associated with heterogeneity are explored and classified into a typology to facilitate the study of patterns across consultations. The findings from this section are derived from observation of the consultation, with the addition of demographic characteristics derived from either the patient pre-consultation questionnaires or medical record.

The index cases are detailed in Table 31. The columns describe some of the factors associated with heterogeneity in the consultation and these are briefly discussed individually below.

8.2.1.1 Age and gender

Thirteen of the 19 patients were female and the mean age was 69.6 (male mean age 66.1, female mean age 71.2). Although the age of patients varied from 49 to 85, the content of the consultation did not appear to be overly influenced by the age (or gender) of the patient.³⁹

³⁹ However, issues associated with age and gender did arise in the in-depth analysis of the post-consultation interviews and are discussed in more detail in Chapter 9.

Table 31: Characteristics of OA patients and consultations

Case No	Patient demographics		Joint(s) discussed in order presented <u>most symptomatic</u> , <i>Spinal pain</i> ⁴⁰	New problem or follow up ⁴¹	Previous OA related Read code (any joint)	Joint pain primary or secondary complaint ⁴²	Number of other problems discussed	Length of consultation	
	Age	Gender						Total	Time on OA (%)
1	62	Female	<u>Hip</u> , knee, back	Follow up	No	Primary	3	14:10	08:46 (61.9)
2	65	Male	<u>Hip</u> , back	Follow up	Yes	Secondary	1	07:00	05:56 (84.8)
3	75	Female	shoulder, <u>neck</u> , <u>knee</u>	Follow up	Yes	Primary		16:14	16:14 (100)
4	69	Male	<u>Knee</u>	Follow up	Yes	Secondary	2	12:44	01:00 (7.9)
5	70	Male	<u>Knee</u>	Follow up	Yes	Primary		12:17	12:17 (100)
6	79	Male	<u>neck</u> , <u>hip</u>	New	Yes	Secondary	3	10:44	01:51 (17.2)
7	65	Female	<u>knee</u> , <u>hip</u>	New	No	Secondary	2	13:36	00:45 (5.5)
8	49	Male	<u>Knee</u>	Follow up	No	Secondary	4	20:23	10:72 (54.9)
9	67	Female	<u>Hip</u>	Follow up	Yes	Secondary	1	06:40	01:15 (18.8)
10	75	Female	Hip, <u>knee</u>	New	Yes	Secondary	4	12:16	00:50 (6.8)
11	74	Female	<u>Knee</u>	Follow up	Yes	Secondary	3	18:29	01:49 (9.8)
12	79	Female	<u>knees</u> , hip	Follow up	Yes	Primary		08:36	08:36 (100)

⁴⁰ Spinal pain was not the focus of the study and patients with spinal pain only were excluded. It is included here where spinal symptoms were discussed in conjunction with peripheral joint OA, in order to further illustrate how many patients had multi-site pain.

⁴¹ A 'new' presentation indicates the patient had not discussed the most symptomatic joint (underlined in column 'joint discussed') with GP before, data derived from medical record and patient report.

⁴² Primary complaint defined as first presenting complaint mentioned to doctor in consultation.

13	72	Female	<u>Knee</u>	Follow up	Yes	Secondary	1	09:21	02:37 (28)
14	65	Male	<u>Knee</u>	New	No	Primary	2	10:05	8:05 (80.2)
15	65	Female	<u>Hip</u>	New	No	Secondary	3	12:53	01:10 (9.1)
16	61	Female	<u>Knee</u>	Follow up	Yes	Secondary	2	08:49	06:00 (68.1)
17	84	Female	<u>Knee</u>	Follow up	Yes	Secondary	4	22:42	00:25 (1.8)
18	62	Female	<u>Hands, feet</u>	New	No	Primary		09:44	09:44 (100)
19	85	Female	<u>Knee</u>	Follow up	Yes	Primary	1	20:20	20:00 (98.4)

8.2.1.2 Site of joint pain

The knee was the most frequent joint discussed (14 consultations), followed by hip pain which was discussed in eight consultations. Eight consultations contained discussion about more than one site of pain; however in all of these the majority of discussion focused on one area (this is discussed further in prioritisation, below).

8.2.1.3 OA experience of the patient

The consultation content appeared to vary significantly according to the OA experience of the patient. The 'OA experience' may firstly be considered in terms of whether the patient had previously experienced OA in other joints, and secondly, whether the patient was presenting with a new or follow up problem with the joint in question.

Patients with a prior history of OA who presented with problems in new joints had consultations that appeared similar to those with no previous OA diagnosis, with little or no acknowledgement or connections made to any previous diagnosis.

However, consultation content varied according to whether the patient had previously consulted about the index joint. For the patients with new problems in the index joint, much of the consultation centred on diagnosis, whereas this was infrequently discussed in patients with known existing OA in the index joint. Six patients presented with joint pain for the first time, with two of these recorded as having OA in other joints in their medical record. Of the patients who had previously seen a GP about the joint in question, and were thus attending for a 'follow up' visit, there was a spectrum of presentations relating to the number of previous healthcare encounters with the condition. One patient was attending for a second time to be given the results of an X-Ray and was given the diagnosis of

OA in the index consultation (Case 8), whereas others had experienced OA for a number of years and either had, were waiting for, or being considered for joint replacement (Cases 2, 3, 13, 17).

8.2.1.4 Time

Consultations varied significantly in the time taken on OA. Only four of the consultations were solely about OA. In the other 15 consultations, the amount of time spent on OA was influenced by firstly, how the discussion of joint pain arose in the consultation, i.e. whether the joint pain was the first item discussed (a primary complaint) or secondary to another issue, and secondly, the nature and amount of other items discussed. The number of other items discussed is listed in Table 31. An 'item' was defined as a presenting complaint or problem⁴³. The mean number of items discussed per consultation was 2.89. The mean consultation length was 13 minutes, with a mean of 6 minutes 14 seconds being spent on OA. In ten consultations, talk on OA accounted for more than 50% of the total time of the consultation (defined for the purposes of this study as a 'major' component of the consultation). In the remaining nine consultations, talk on OA accounted for less than 50% of the total time, and this is referred to as an OA 'fragment'.

8.2.2 A typology of the osteoarthritis consultation

In order to study patterns in the across-case analysis of the consultations, a typology has been developed, which classifies and groups consultations with

⁴³ For example, blood pressure review was scored as an item if it was apparent the patient was having a review of their hypertension; however, it was not scored as a separate item if the patient had blood pressure checked as part of an examination for another problem e.g. syncope.

similarities. The dimensions 'OA experience of the patient' and 'time in the consultation' have been used to construct this typology of the consultation, illustrated in Table 32. These two dimensions were observed to clearly influence the consultations during the initial analysis.

As previously mentioned, OA talk that took more than 50% of the total consultation time has been defined as a 'major' component. All of the consultations where OA was raised as a primary complaint were classified as major, in addition to three where OA was a secondary complaint. Conversely, OA talk lasting less than 50% of the time is classified as a 'minor' component or 'OA consultation fragment'. The OA experience of the patient was established from the observed consultation and the medical record. Previous consultations about the same joint or other joints identified on the medical record resulted in the classification of 'established OA' or 'new diagnosis with experience of OA in other joint' respectively. Discussion in the consultation about consideration of referral for joint replacement, imminent or recent joint replacement (as opposed to the mention of joint replacement as an option in a general explanation) resulted in the case being classified as 'end-stage OA'.

Table 32: Typology of consultations: Cases classified by OA experience and time spent on OA discussion in the consultation

OA experience of patient / Time spent on OA discussion in Consultation	Major component of consultation	Minor component of consultation: <i>consultation fragment</i>
New presentation⁴⁴ and no prior experience of OA	Case 8 Case 14 Case 18	Case 7 Case 15
New presentation of OA with experience of diagnosed OA in other joints	Case 16	Case 6 Case 10
Established OA	Case 1 Case 5 Case 12 Case 19	Case 4 Case 9 Case 11
End stage OA – peri-joint replacement	Case 2 Case 3	Case 13 Case 17

This typology provides the framework for analysing patterns across similar cases and the content of the consultation, and this will be explored further in 8.2.3.

⁴⁴ 'New' presentation here defined as first or second visit with index joint. Hence, Patients 8 and 16 marked as new patients (although marked as Follow up in Table 31) as the index consultation was their 2nd appointment, with a short interval between the first and second consultation. Furthermore, the consultation took the form of a new complaint with examination and/or diagnosis being given.

8.2.3 Using the typology to describe consultation patterns and content

The typology illustrated in Table 32 has been used to compare and contrast consultation content across the two dimensions of OA experience and time in the consultation.

Table 33 summarises the consultation outcomes in terms of GP actions or interventions. The outcomes listed in Table 33 are mostly centred on management of OA: discussion of medication (M); advice about exercise (EX); giving of advice or information (A/E); discussion of surgical options (S); requesting of further investigations (I) and follow up (F). These six have been selected as they were the most commonly observed events⁴⁵. It is worthy of note that Table 33 is not intended to be an evaluation of adherence to guidance on OA; adherence to guidance is not part of the research question, the study numbers are too small to make such an evaluation and the data are limited by the nature of data collection (the absence of an outcome may be explained by the outcome in question having been addressed in a previous consultation e.g. exercise advice). Therefore, discussion here will be limited to emergent patterns only.

⁴⁵ Other interventions that occurred not listed in Table 33 were recommendation or provision of a disability badge for the car (Cases 9 and 19), or recommendation of a device (knee support or shoe insole, Cases 5 and 18). Weight loss was discussed in two consultations although in connection with co-morbidities rather than OA per se.

Table 33: Consultation content for each index case

OA experience of patient	Major component of consultation	Minor component of consultation: <i>consultation fragment</i>
	Consultation Content M = Medication discussed EX = Advice about exercise A/E = advice/explanation ⁴⁶ S = surgical options discussed I – Further investigations F = Follow up offered <u>Key</u> n (Case number) <div style="border: 1px solid black; padding: 2px; display: inline-block;"> occurred </div> <div style="border: 1px solid black; padding: 2px; display: inline-block; background-color: #cccccc;"> Did not occur </div>	
New presentation and no prior experience of OA	8 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div> 14 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A S I F </div> 18 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div>	7 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div> 15 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div>
New presentation of OA with experience of diagnosed OA in other joints	16 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div>	6 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div> 10 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div>
Established OA	1 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div> 5 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div> 12 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div> 19 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div>	4 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX E S I F </div> 9 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div> 11 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A S I F </div>
End stage OA – peri-joint replacement	2 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div> 3 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div>	17 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div> 13 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> M EX A/E S I F </div>

⁴⁶ Advice and explanation does not include advice about exercise or talk about surgical procedures, marked separately.

From interrogation of Table 33, the first point of note is that there appears to be no broad difference, in terms of management approaches, between those newly presenting with OA and patients with end-stage disease. An example of this lack of difference is discussion of surgical options for management; one might expect that these discussions would occur predominantly with patients with advanced OA, but this illustrates how discussions about surgery are occurring in patients' first consultation about joint pain. In patient 18, the discussion was about bunion surgery, but in Case 8, the patient had asked if something could be done regarding their OA and the GP had answered with surgical options:

[Patient 8] But what are the options, I mean if it does start getting worse?

[GP F] The options are another arthroscopy, wash it out, yeah? [yeah] If it's really bad you might need a knee replacement. But at your age they wouldn't do a full replacement [no], the option would be a partial knee replacement. Extract from Case 8

In Cases 12 and 19, discussion about joint replacement was framed in discussions about when to return, and discussions around follow up, with the message that if symptoms worsened, a surgical referral might be considered. The discussions around surgery early on in the OA 'journey' tended to be more general, abstract explanations about the option of surgery, whereas in the 'end-stage' cases, there was more specific personal discussion about whether the patient was ready for referral. Hence, the variability in these cases was not simply the presence of discussion about surgery, but the way in which those discussions related to the patient. The nature of the content of the consultations is examined in more depth in Chapter 9.

Table 33 also shows no clear patterns for the presence of advice and explanations, or discussion of exercise. Medication was recommended in all but one 'major' consultation. Interestingly, the majority of these were recommendations to take or increase the frequency of over the counter medicines (Cases 1, 3, 12 and 19, all classified as established/end stage OA), with two new presentation cases (Cases 8 and 18) declining prescriptions.

Follow up was recommended for most of the 'major' cases. This was either a request to come back for an investigation result or to return to discuss suggested surgery. In the other cases where follow up was discussed, the suggestion was from the GP, to return if symptoms got worse:

[GP K] Obviously if your knees getting too problematic and you want something doing about it, come back, alright? Extract from Case 16

[GP E] If it ever comes to the stage where it stops you doing what you want to do, that's the time to say to me, let's have a look a bit further. Extract from Case 7

These two quotes illustrate how this suggestion could be an active request, or a more passive suggestion to come back.

When looking at the consultations in the right hand column of Table 33, the 'OA consultation fragments', it is clear that these were completely different types of consultation, with very little in the way of outcomes/interventions. In three of these cases, no intervention has been identified (Cases 9, 13 and 17). In Case 9 and 13, the joint pain was mentioned almost 'incidentally' with no apparent agenda from the patient. In Case 9, the patient was focused on the task of completing a form for a disability badge for their car, and in Case 13, the patient mentioned imminent

joint replacement surgery. In Case 17, the GP enquired about the patient's knee as the patient had recently undergone replacement surgery.

In the 'minor' cases where explanations or advice occurred, this was usually in response to direct questions from the patient (Cases 4, 11 and 15). Two asked about the cause of their pain, with the other two asking about causal factors (stress and family history). Follow up was not discussed with any of the patients with established or end stage OA who presented as a 'fragment'. In most of these examples the patient or GP appeared to have a specific agenda or question that was answered in the consultation, and thus there did not appear to be an apparent need to suggest follow up.

In the cases where OA was mentioned as a new problem within a consultation fragment there were also few outcomes recorded (Cases 6, 7, 10 and 15).

Although follow up was mentioned with two of these patients, it is possible that Cases 15 and 10 may have had unmet needs within the consultation. Similarly, in Case 4, the patient mentioned worsening knee pain in the context of a consultation regarding angina. Although this patient had previous knee OA related codes in their medical record, the knee pain was raised in this consultation as if it were a new problem. The discussion of joint pain in these cases was not entered on the medical record.

8.2.4 Heterogeneity: summary

The OA experience of the patient and time spent in the consultation are prominent components of the heterogeneity of the index cases, which have been displayed in a typology to facilitate study of patterns across the consultation.

The most obvious contrasts are between the 'major' and 'minor' components or consultation fragments; the OA consultation fragments in particular, are clearly different consultations with little in the way of OA related outcomes. These fragments can be further subdivided into almost 'incidental mentions' and new presentations of joint pain, and it is this latter group where there is the suggestion of unmet need; this is explored further in Chapter 9. The influences on the amount of time taken in the consultation will be considered further in the following two sections.

8.3 Complexity within the consultation

8.3.1 Introduction

On the first viewing of the videos, the apparent complexity of the consultation was evident. Few consultations followed the typical 'medical model' where one item would be discussed, a history taken (with or without examination) and a subsequent management plan discussed. The majority of the consultations contained talk about multiple items, with a mean of 2.89 items per 13 minute consultation (median 3). In this section, the nature of the complexity will be described in addition to discussion of possible influences on complexity. For the purposes of this theme, analysis is limited to the 15 consultations where more than one item was discussed.

The consultation data are presented first, in order to describe the complexity. Following this, medical record data are explored to look at influences on complexity and finally, results from the post consultation interviews to explore participants' reflections to complexity.

8.3.2 Number of items discussed, flow of the consultation and 'topic shift'

In this section, the way in which multiple items are discussed is viewed in more detail using the consultation data. Consultations appeared more complex when multiple items were discussed, and in particular, when the topic of talk changed rapidly to and from topics.

In Table 34, the index consultations are listed against the number of items discussed, and the number of times conversation changed topic from one item to

another: a 'topic shift'. For the purposes of this analysis, a 'topic shift' is defined as change in talk from one 'presenting complaint' or 'item' as defined in 8.2.1.4, to another. At a minimum, the number of topic shifts would be equal to the number of items discussed, less one. Where the number of topic shifts greatly exceeds the number of items discussed, the talk was moving away from an item of discussion and then returning to it later on in the consultation, sometimes on multiple occasions.

Table 34: Number of items discussed and number of topics shifts

Case⁴⁷	Number of items discussed	Number of topic shifts
9*	2	2
2	2	3
19	2	3
4*	3	4
13*	2	5
15*	4	5
16	3	7
7*	3	8
8	5	9
14	3	9
1	4	10
11*	4	10
17*	5	10
6*	4	11
10*	5	16

From Table 34, it is apparent that the number of topic shifts appears to associate with the number of items discussed.

⁴⁷ *Denotes OA consultation fragment.

In order to explore the nature of topic shifts, and how these relate to complexity, three cases will be examined in more detail, using stacked bar charts to illustrate how talk moved from topic to topic during the consultation, and illustrative quotes. The bar charts for the remaining 12 multi-item consultations can be found in Appendix 8.

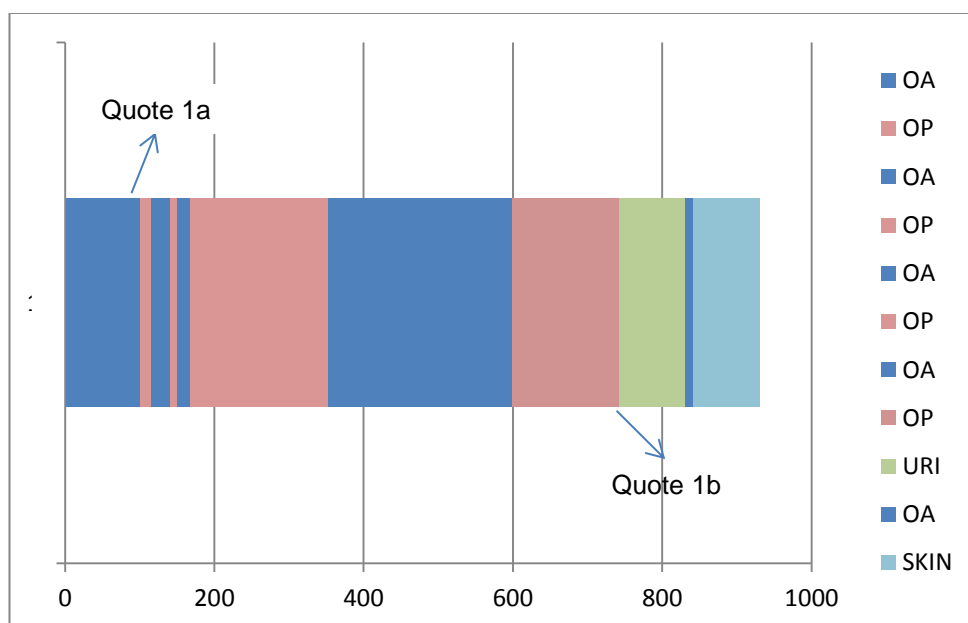
8.3.2.1 Multiple items with high number of topic shifts

In Figure 8, the time taken in Case 1 on each different item is displayed. The x axis represents the time in the consultation in seconds, and the coloured sections in the bar chart, a different topic of discussion. From this chart, one can see how often the topic was changed in each consultation. The first prominent finding here is that talk moved to and from the two topics of osteoporosis and osteoarthritis seven times.

Figure 8: Topic shifts in Case 1

Key: OP Osteoporosis; URI urinary symptoms.

Numbers on x axis = time in seconds into the consultation



The dialogue at the time of topic change or 'topic shift' can be studied to show how talk moves from one subject to another. In this case, the patient was frequently interrupting and talking over the doctor. After the patient introduced the topic of joint pain, the GP looked at the computer and commented (Quote 1a):

[GP A] Now, I'm just having a little look back to remind myself...

[Interrupting, Patient 1] And then you sent me for a bone density... and I presume you're going to tell me I've got osteoporosis. Extract from Case 1

In this example, the patient may well have felt the two topics were interrelated, and talked interchangeably about back pain, osteoporosis and peripheral joint pain.

However, this interruption appeared to have a significant effect on the consultation; the GP then had to communicate results and treatment relating to osteoporosis (a finding on the bone density scan) in addition to dealing with the presenting complaint of knee and hip pain, which was dealt with as a new problem. The patient also brought up a third issue (recurrent urinary tract infections) while the GP was typing, before the discussion on joint pain had 'closed'; the prescription and X-ray request had not yet been handed over.

Following this, the GP handed over a prescription and X-ray form during their closing talk (Quote 1b):

[GP A] There we go [thank you]. So, all on repeat now.

[Patient 1] Excellent, excellent.

[GP A] And we may need to increase but let's, er, get that x-ray

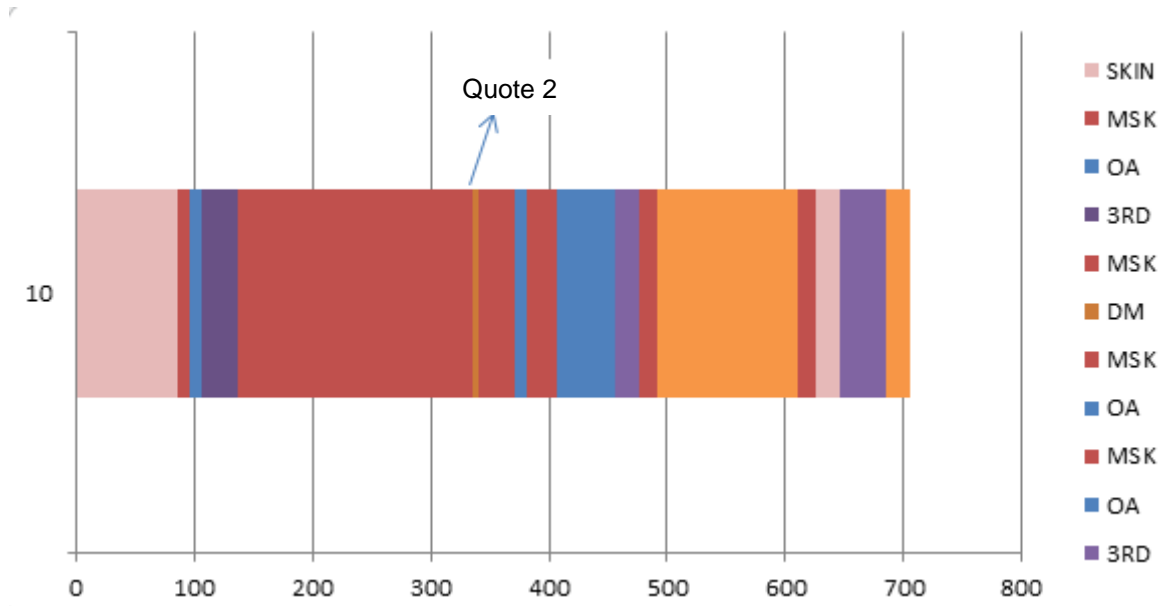
[Patient 1, interrupting GP] Just as a, a very minor thing [yeah]. I had a mole, a cancerous mole removed from my neck. Extract from Case 1

The GP did not return to the topic of OA and the patient was not asked to come back for the X-Ray results; it appeared that the interruption had interrupted the GP's flow and the completion of their 'closing talk'.

In Case 10, an example of an OA fragment, 16 topic shifts were observed. This consultation is shown in Figure 9.

Figure 9: Topic shifts in Case 10

Key: MSK: musculoskeletal problem; 3RD: talk about third party; DM: talk about diabetes
Numbers on X axis = time in seconds into the consultation



This was a further case where the patient was observed to be interrupting the GP. However, in the following extract, the GP realigned discussion to finish the point

they were making. The GP had paused and was looking at the computer screen for insoles on prescription when the patient commented (Quote 2):

[Patient 10] I'll have a look round anyway. Say {shop name}, I bet they'd have something. What's my diabetes doing?

[GP G] So just on that, [yeah] just before you do, the heel, so you - so what you need is to use your foam rubber heel pads. We need to.. Extract from

Case 10

Figure 9 also shows how OA (coloured in light blue) was mentioned briefly 2 times before it was addressed, as shown by the two narrow blue columns followed by a wider column. A similar pattern was also seen in Cases 7 and 8, and is explored further in 'prioritisation' below.

Case 6 was a further example where the patient appeared to be flitting from topic to topic describing multiple unrelated complaints, discussed further in 8.4.2.

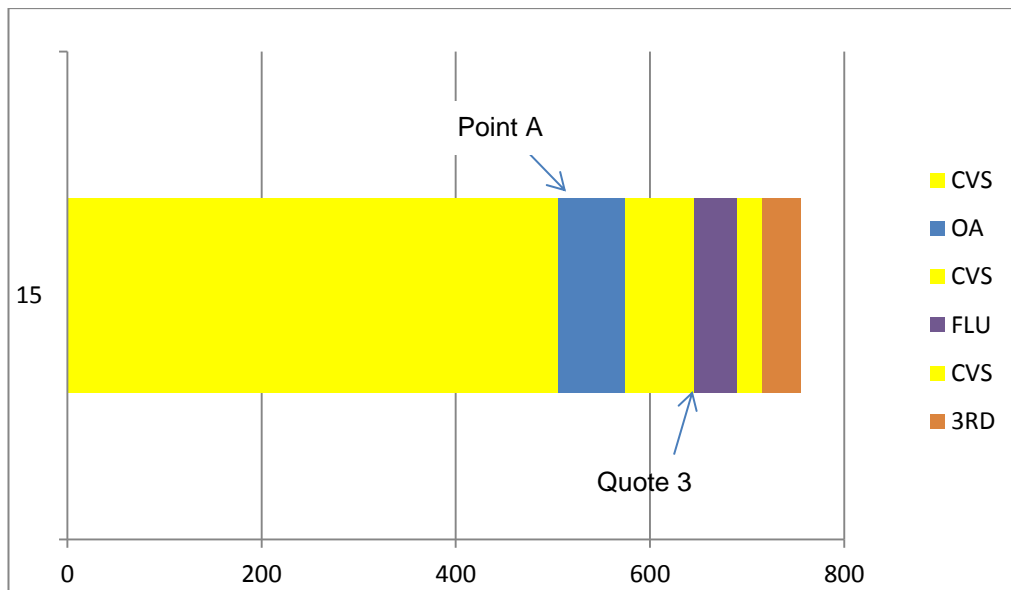
8.3.2.2 Multiple items with low number of topic shifts

Case 15 stands out as a slightly different case in Table 34 as the number of items discussed is relatively high (4) with a relatively low number of topic shifts. The bar chart for this case is shown in Figure 10.

Figure 10: Topic shifts in Case 15.

Key: CVS heart complaint; FLU flu jab; 3RD talk about 3rd party

Numbers on X axis = time in seconds into the consultation



In this case, the patient interrupted at Point A with a question about OA, (a fragment) and this is described with quote, under 8.4.2.2, (consultation findings relating to prioritisation). The case is illustrated here, in order to show the influence of the GP on topic shifts, as Quote 3 illustrates:

[GP J] Er, so I will write to the cardiologist and you will hear from them in due course.

[Patient 15] Okay, thank you.

[GP J] Do you normally have your flu vaccine?

{Further talk about flu vaccine}

Have a think and if you're a carer, carers are entitled to have it even if they're below 65...okay, anything you want to ask me before you go?

[Patient 15] No, that's been very thorough.

[GP J] Yeah, so atrial fibrillation this is a very common condition... Extract

from Case 15

In this case, one topic was completed before moving onto the next one. The GP returned to the heart complaint (atrial fibrillation) a third time only in order to summarise the main points of the consultation, and this was also evident in Cases 6, 13, 16 and 17. This case illustrates the influence of the Quality and Outcomes Framework (QOF)⁴⁸ on number of items discussed, as the flu jab discussion was observed to be influenced by a computer QOF prompt. Furthermore, in consideration of the cases with low number of topic shifts, the patient was observed to be taking more of a passive role in the consultation.

8.3.3 Influences on complexity

In this section, the relationship between multiple items being discussed in the consultation and the patient's medical and consulting history is considered. Table 35 details the patients' previous consulting frequency and the number of comorbid conditions, alongside information about the index consultation.

⁴⁸ Quality and Outcomes Framework is a set of indicators that are incentivised; GPs are rewarded for the level of achievement against each indicator e.g. percentage of eligible patients who receive a flu jab.

Table 35: Comorbidity and consulting frequency in relation to content of consultation

Case Number ⁴⁹	No. of problems discussed in index consultation	Proportion of consultation spent on OA	No. of comorbid conditions derived from medical record ⁵⁰	No. of previous consultations in preceding 24 months ⁵¹	No of previous OA related consultations in preceding 24 months ⁵²
1	4	61.9	7	7*	2
2	2	84.8	6	18	3
3	1	100	5	10	7
4*	3	7.9	3	13	0
5	1	100	2	6	2
6*	4	17.2	7	12	3
7*	3	5.5	2	0**	0
8 ⁵³	5	54.9	-	-	-
9*	2	18.8	2	5	1
10*	4	6.8	6	6	0
11*	4	9.8	3	8	4
12	1	100	5	3	2
13*	2	28	5	15	5
14	3	80.2	5	5	1
15*	4	9.1	2	2**	0
16	3	68.1	2	8	1
17*	5	1.8	15	16	6
18	1	100	2	12	0
19	2	98.4	6	15	1
Mean	2.8	50.2	4.7	8.9	2.1

Comorbid conditions were those listed as 'major problems' in the GP medical record. 'Major problems' relating to previous OA were discounted (including OA,

⁴⁹ * Denotes OA consultation fragment.

⁵⁰ Excluding OA/ Joint replacement.

⁵¹ Excluding index consultation. Patients marked with ** were new to the practice so 24 months data not available.

⁵² Including spinal pain thought to be related to OA. Excludes index consultation.

⁵³ Patient withheld consent for medical record review.

joint replacement and spinal degeneration), as were previous surgical operations e.g. hernia repair, hysterectomy, as these were considered not to be 'active' comorbid conditions. All patients had at least two comorbid conditions, with the most common being hypertension. The medical record may underestimate comorbid conditions due to incomplete coding: however, it is also possible this overestimates comorbidity as some 'major problems' may also not be currently active e.g. anxiety and depression.

Although statistical correlation has not been performed on the data in Table 35, it is apparent that there is no clear relationship of the number of items discussed and time spent on OA (or the occurrence of a 'fragment') with either the number of comorbid conditions or the frequency with which patients consult. Table 35 also demonstrates the considerable burden of multi-morbidity in this sample; all patients had at least two other comorbid conditions. Furthermore, the consulting behaviour of this sample varies a great deal, with a large variation in consultation frequency for all problems and consultation frequency for OA, with little apparent correlation between the two.

In Table 36, the ten most common comorbid conditions are listed, alongside the case numbers where these conditions were discussed in the index consultation. Four conditions stand out as being commonly discussed. Firstly hypertension and skin conditions were both discussed in a number of consultations. As well as being very common, these conditions are often quickly or easily dealt with and therefore 'lend' themselves to a quick mention in a consultation about multiple things.

The other two commonly discussed conditions were other musculoskeletal (MSK) conditions and irritable bowel syndrome (IBS), and these other conditions were all discussed *in conjunction* with arthritis, rather than as a separate issue; in the case

of IBS, this was mentioned by the patients as a reason for caution with recommended analgesia in the four consultations listed (and in these examples, IBS was therefore not 'scored' as a separate discussion item). For other MSK problems, frequently the symptoms of musculoskeletal pain from other, for example soft tissue complaints, were interwoven with OA symptoms. This is illustrated by the discussion about Case 1 in 8.3.2.1. Ischaemic heart disease was a further comorbid condition where discussion about OA was very interlinked: the patient felt weight gain was exacerbating knee symptoms and this was in turn related to lack of activity as a result of worsening angina (Case 4).

Table 36: Ten most common comorbid conditions and frequency with which these were discussed in index consultations

Ten most common comorbid conditions	Number of cases with comorbid condition on record	Condition mentioned in consultation (Case numbers⁵⁴ shown)
Hypertension	9	4, 6, 15*
Anxiety and/or Depression	7	11*
Skin condition/lesion	6	1, 8, 10*, 13*, 14,
Ischaemic heart disease	5	4*
Gastritis, oesophagitis or hiatus hernia	5	
COPD or asthma	5	19
Other musculoskeletal problem	5	2, 6*, 10*, 17*
Irritable bowel syndrome or diverticulitis	5	1, 3, 12, 19 ⁵⁵
Cancer	4	
Osteoporosis	4	1

The findings in Table 36 illustrate the high prevalence of anxiety and depression in this sample, but the relatively low frequency with which this was discussed in the consultations. Anxiety and depression could well influence, and be influenced by joint pain, but in these consultations patients infrequently offered psychological symptoms and GPs also did not elicit them.

⁵⁴ *Denotes OA fragment.

⁵⁵ Not on this patient's medical record, but mentioned as an issue with analgesia.

8.3.4 Patient and doctor reflections on complexity

The 'success' of discussing multiple problems was considered by both GPs and patients in the post consultation interviews. Patient 8 reported being pleased with a number of areas being covered in one consultation:

I'm glad he - I mean it shows that he's actually looking at what is happening, obviously it's on the screen there. It's good because I didn't - he explained stuff to me that I didn't realise. Patient 8

Patient 15 felt the consultation might have been better if the focus was on one problem rather than two:

I might have, I might have, erm, well, I was taking two strands really, instead of focusing on one, wasn't I? Yeah. Perhaps I should just focus on the one and say, 'I'm not ill in...er, my joint pain is not bad enough to go to the doctor.' Patient 15

In Case 1, the changes in topic frequently occurred as a result of patient interruptions. In some cases this seemed to disrupt the flow of the consultation, and at one point may have prevented the GP from discussing follow up, as previously discussed. The consultation appeared more disordered as a result; the patient did not reflect on this in the post consultation interview although the GP did:

And normal that's often, is quite often quite complicated...And you, kind of, almost feel like you're fire-fighting, you're balancing it all. GP A

8.3.5 Complexity: summary

The complexity of these consultations is an important contextual issue in the consideration of both 'major' OA consultations and OA fragments. The observed

complexity in the consultations can firstly be considered, not just in terms of the number of items discussed, but in the shift or flow of conversation from one item to another and in the interrelation of items discussed. Where multiple items were discussed and dealt with individually, e.g. hypertension or looking at a skin lesion, the consultation was able to maintain structure. Complexity was increased when talk kept moving to and fro between unrelated topics. The patient's consulting style appears to influence complexity and disorder, particularly when patients initiate multiple topic shifts, sometimes causing GPs to overtly try and re-establish structure in the consultation.

The complexity of the patient's medical history does not appear to associate with the number of items discussed in the consultation. The nature of the comorbid condition and the relationship to OA may be more important in the complex consultation, rather than simply the number of comorbid conditions, particularly when symptoms from more than one musculoskeletal condition are presented at once, and when comorbid conditions are implicated as barriers to treatment.

The study of topic shifts also revealed that patients may mention joint pain more than once in the consultation before it is addressed and this is discussed further in the following discussion on prioritisation.

8.4 Prioritisation

8.4.1 Introduction

The study of the complexity of the consultations reveals the amount of comorbidity in this sample and that often, more than one item is discussed within one consultation. The prioritisation of symptoms of joint pain by both doctor and patient influences how much time is spent on discussion of OA, and is important in the consideration of consultation fragments, particularly those in which new symptoms are raised. Whether joint pain was raised as a primary or secondary complaint appears to associate with the amount of time spent on OA in the consultation. Additionally, the study of consultation topic shift and flow in 8.3 demonstrated that patients may raise joint pain more than once within the consultation before it is addressed.

In this section, issues to do with prioritisation are examined in more detail, starting with the consultation findings, and how the discussion of joint pain arose in the consultation. In this section, the questionnaire results are also used to compare the patients' pre-consultation agenda regarding their joints, with the way in which discussion started. Following this, post-consultation interview findings relating to prioritisation of complaints are discussed, in order to explore patient and doctor perceptions on how OA is prioritised within the consultation.

8.4.2 Consultation findings: how discussion of joint pain arose and was prioritised within the consultation

Discussion of joint pain arose in five different scenarios, and was either initiated by the patient or doctor, as shown in Table 37.

These five scenarios are discussed below, with examples.

Table 37: Circumstances in which discussion of joint pain arose in the consultation

How discussion of joint pain arose in the consultation	Who initiated discussion	Case Numbers⁵⁶	Patient indicated intention to discuss joint pain on pre-consultation questionnaire	Number of minutes into consultation when OA was mentioned by patient⁵⁷
Joint pain as a primary complaint	Patient	1	Yes	start
		3	Yes	start
		5	Yes	start
		8	Yes	start and 12:42
		12	Yes	start
		18	Yes	start
Joint pain as a secondary complaint	Patient	11*	No	8:25
		13*	Yes	1:20
		15*	Yes	8:28
	GP	2	Yes	
		9*	Yes	
		17*	Yes	
Patient, prompted by GP with open question	4*	No	6:10	
	6*	No	4:05	
Joint pain presented with one or more problems together	Patient	7*	Yes	start and 11:00
		10*	No	1:30 and 6:52
		14	Yes	start
		16	No	start
		19	Yes	start

8.4.2.1 Joint pain as a primary complaint

In six consultations, including the four where OA talk accounted for 100% of the consultation, the patient presented with joint pain as a primary symptom.

⁵⁶ *Denotes consultation fragment.

⁵⁷ Where two times are recorded, this is because the patient returned discussion back to the joints after discussion on other problems.

[Patient 1] Oh, I'm fed up with this pain in my hip and knees. Extract from Case 1

[GP M] Right, what can I do for you my dear?

[Patient 18] Painful hands and feet... Extract from Case 18

In two consultations, the GP framed the consultation with reference to a previous consultation before the patient spoke:

[GP D] I'll just quickly remind myself more than anything, so we had a chat on May 31st when you had pain in your right knee [yeah], the knee wasn't locking or swelling or giving way, er, and you said you could easily walk quite a few miles. Extract from Case 5

This GP knew the patient was attending about joint pain again, as the receptionist in the practice had entered information about this alongside the appointment in the medical record.

In two consultations where OA was a primary complaint, multiple items were discussed. Case 1 has previously been discussed in 8.3.2. In Case 8, talk on OA accounted for 54.9% of the total consultation. In this case, it was the GP who led talk onto other areas of discussion. After 3 minutes 15 seconds of history elicitation, the GP asked if the patient had any other concerns. The patient indicated they were waiting to see a life style counsellor, after having had a borderline diabetes blood test. The GP then directed conversation to explanation of the diabetes result, discussion of the patients weight, alcohol, smoking and activity and a skin rash (the reason why the diabetes blood test had been requested). After 12 minutes 42 seconds, the patient brought conversation back to the knee pain during an exchange about the patient's diet:

[GP F] One good idea, is to write Monday to Monday, write everything you eat. Okay. And then when you go back you know if things which are still the offending ones, you think I could probably cut down on this. Because if you try to remember it's difficult. That's one of ..

[Patient 8] So with the knee...

[GP F] With the knee, yeah, coming back to the knee...

[Patient 8] Is there anything that can be done or is it just one of those things you've got to wait until... Extract from Case 8

The patient thus took an active role in the flow of discussion, although they may have been considered to have had a passive role up to this point.

8.4.2.2 Joint pain as a secondary complaint: patient initiated

In three consultations, the patients interjected discussion on the main topic of discussion, with a question or statement about their joints. In all three examples, the patient expressed concern that the main topic of discussion was affecting their joints. In Case 11, both patient and doctor had been discussing the effect of stress on general health when the patient asked if stress could exacerbate osteoarthritis. In this example, the GP answered the patient's question and then brought discussion back to the previous point of discussion; Patient 11 was known to suffer with OA. They had not indicated intention to mention joint pain on the pre-consultation questionnaire, and so this case may reflect a degree of dynamism in the consultation, with the patient choosing to raise an issue that wasn't pre-planned but became relevant as the consultation progressed.

In Case 15, the main topic of discussion centred around a patient's ECG results and the patient was being given the diagnosis of Atrial Fibrillation (AF), an irregular

heart rhythm. At 8 minutes 26 the patient asked the GP if the AF was a 'precursor' for arthritis, and then if one of their medications could cause joint ache.

[Patient 15] Yes, I've had a bit of joint ache in the hip and I was wondering, I read somewhere about Atenolol causing aches and also with my sister having this happen, maybe I'd mention it.

[GP J] No, I suspect your sister probably has a type of wear and tear arthritis or osteoarthritis....um, but the important thing is to stay active, don't feel that by staying active you're going to make your joint worse. Extract from Case 15

This was the patient's first mention of hip pain; the GP gave general advice about the importance of an active lifestyle but did not pursue discussion any further and did not enter the discussion on the medical record.

In the third example in this category, Patient 13 expressed concern that abnormal urine dipstick results may delay their imminent joint replacement surgery for OA, for which they were 'desperate'. Thus, in these three examples, the motivation for raising joint pain as a secondary issue was all quite different: Case 11 had a specific question about flares; Case 15 raised a new complaint wondering if the cause was related to their sister's arthritis and Case 13 wanted the GP to know how much they needed the planned joint replacement surgery.

8.4.2.3 Joint pain as secondary complaint: GP initiated

In three cases, the GP initiated talk about OA by asking specific joint related questions. In two cases, the GP used prior knowledge of the patient's OA. In Case 2, the patient presented with soft tissue pain in the feet (plantar fasciitis). Early on

in the consultation the GP asked about the patient's joints, about which the patient had not been forthcoming:

[GP B] And your other joints are okay because you've had your hip done, haven't you?

[Patient 2] This hip's giving me a lot of pain and me back. Me back and this hip. I wondered if I could increase me painkiller.

[GP B] Which is worse, your hip, your back or your foot?

Extract from Case 2

This extract shows how the GP prioritised further discussion by asking the patient which the most troublesome symptom was. The patient answered their hip, and the rest of the consultation was then devoted to the hip, with no further discussion about the foot pain the patient had presented with.

In Case 9, the patient requested paperwork to be signed for a disabled parking badge application. The GP asked questions about the degree of functional restriction from the patient's hip OA, in order to complete the form. The patient indicated they were intending to discuss joint pain on the pre-consultation questionnaire but were not forthcoming about symptoms in the consultation, focused only on the task of completion of the form. This necessitated elicitation of information by the GP.

In Case 17, the GP enquired about the patient's symptoms following recent joint replacement surgery for OA, although the patient had attended for other musculoskeletal (soft tissue) pain. In this example, the questioning was seen to be almost a social inquiry, with it being apparent that the GP knew the patient from previous consultations.

Thus, again, the situations in which GPs initiated discussion of joint pain were different; however, in two of these examples it is possible that the patient's lack of assertion about their symptoms necessitated a more direct approach.

8.4.2.4 GP initiated: open question about general health or concerns

Two of the observed 'OA fragments' occurred as a result of the GP asking an open-ended question to elicit the patients' concerns or possibly to make conversation. In the first example, Case 6, GP E was seen to be making conversation while applying a blood pressure cuff:

[GP E] Life is treating you well then? Extract from Case 6

In the talk that followed, the patient then raised several further complaints, including problems with their neck, knee and 'waterworks':

[Patient 6] My leg aches occasionally...

[GP E] Hang on a second.

[Patient 6] Yes, sorry.

[GP E] No, no, you know I can only do one thing at a time.

[Patient 6] [Laughing] Having trouble doing one.

[GP E] No your blood pressure's excellent.

[Patient 6] Good, thank you...I still dribble a bit when I have a wee. Extract from Case 6

The problems were mentioned in quick succession, so that the GP interjected in order to organise and prioritize the consultation:

[GP E] Hang on, you've mentioned two things, you've mentioned your hip [yeah] and you've mentioned your waterworks [yeah], tell us about your hip first. Extract from Case 6

The GP discussed the hip pain and then returned to the issue at the end of the consultation:

[GP E] Otherwise, and your hip, you know...

[Patient 6] Well I said, you know, what was, you said way up here and I was like...I feel I'm not...

[GP E] You wouldn't have mentioned it if I hadn't have asked?

[Patient 6] No, not really. Extract from Case 6

In this consultation, the GP seemed to be asking the patient to confirm that the hip was not a particularly troublesome symptom, and was only mentioned 'in passing'. In the second example of this nature, GP C asked Patient 3 if they had any concerns midway through a consultation about angina management. The patient talked about the lack of ability to exercise, weight gain and pain in their knees:

[Patient 3] Even lying in bed sometimes I wake up and my leg, my knees ache. I was wondering if that's arthritis. And I'm not getting rid of this weight.

[GP C] I think your knees may well be arthritis but it's quite important, isn't it, not to get weight on there for all reasons. You're still an ex-smoker, is that right? Extract from Case 3

The GPs response to this concern was to answer the specific question and echo the patient's sentiments before moving discussion back to the angina.

Neither of these two patients had indicated a wish to discuss joint pain on their pre-consultation questionnaire. These examples show that GPs may elicit further symptoms when asking open questions; however, the GP may not wish to pursue

these in depth in the context of a consultation about something else, or the GP may perceive the symptoms are mild if raised in this way.

8.4.2.5 Patient initiated: joint pain presented concurrently with other symptoms/problems

In five consultations, joint pain was presented in a 'shopping list' of other problems:

[Patient 7] I've come over from {other practice} over to you [okay, yeah]. Just to sort of set up I think for having repeat prescriptions....Also I put on my sheet that I've got problems with joints and also my bladder. Extract from Case 7

In this example, the GP directed the consultation by gathering information about the patient's past history and medications, as the patient was new to the practice, and then proceeded to take a history about the patient's urinary symptoms. There was no discussion about how the consultation would be structured or what complaints would be addressed or prioritised. At 10 minutes 50 seconds the patient directs conversation back to their joints, during discussion about thyroid medication:

[Patient 7] Because I don't know whether it's that that is causing the joints to hurt. Extract from Case 7

In Case 10, the patient also mentioned a number of problems in close succession. They had attended the GP to review a skin lesion, and not indicated a wish to consult about joint pain on the pre-consultation questionnaire. The skin lesion was dealt with swiftly in 1 minute 20 seconds, and the patient then listed a number of other complaints:

[Patient 10] Right. And the other thing is I can hardly walk for my heel.

[GP G] Right. Painful?

[Patient 10] Mmm.

[GP G] Do you want to show me?

[patient 10] Mmm. I know I've got problems, all my screws are dropping out like I've told you, I've got bad hip and this knee has been based on carrying me around, is arguing. But I have had such a rough time, Harry's been in intensive care for five days. Extract from Case 10

The GP enquired about the patient's relative who had been in intensive care and then returned to the heel pain. The patient then mentioned the knee again (at 6 minutes 50 seconds), this time with a more specific question:

[Patient 10] While we're talking about erm - about bone problems, can you have a look at my old knee? Extract from Case 10

In the third example, the patient was slightly hesitant to mention joint pain, fearing that a consultation could only be limited to discussion of one agenda item:

[GP M] Right, what can I do for you today to start off...?

[Patient 19] Well the first thing is I need a review of my prescription, that's the...

[GP M] Right, is that the main thing that's...?

[Patient 19] Well...I suppose if it's only one thing that's it; but I have, I've been having awful trouble with my knees. Extract from Case 19

This patient was aware of a practice initiative to limit the consultation to one problem. On two occasions, the joint pain was presented at the beginning with another symptom, because the patient had made a causal connection between the joint pain (or joint pain treatment) and the other presenting symptom. In Case 14,

the patient had made a causal connection between knee pain on squatting and dizziness on standing and presented the two problems together. The GP took a history and examined the knee but did not pursue a diagnosis or course of action regarding the knee; they mentioned in interview that they felt the patient wanted reassurance about the dizziness, but there was no elicitation in the consultation of patient concerns. The patient too, did not communicate any expectation about their joints during the consultation.

The second patient who mentioned joint pain alongside another complaint due to a perceived causal relationship felt the medication given for knee pain had triggered urinary symptoms:

[Patient 16] Well I was here the other day about my knee [yeah] and she gave me these [yeah] because she said if they upset my stomach...And I don't know if it's got anything to do with it but I've been getting water infections the last couple of months [yeah] and I can feel it this morning.

Extract from Case 16.

The GP decided to ask more about the knee, and asked the patient if they wanted their knee pain addressing. The patient answered 'no' but the GP continued to take further history, examine the knee and offer a management plan. The patient then steered discussion back to the urinary symptoms later on in the consultation.

These examples illustrate that patients often have multiple complaints that they sometimes may have connected; the connections might be explicit or implicit.

General practitioners were generally not seen to be explaining the order in which they were discussing or prioritising multiple problems. In three examples, the patient was then active in returning conversation back to a previously mentioned symptom.

8.4.3 Prioritisation of multiple problems: interview findings

Interestingly, when asked about the 'typical' OA consultation, most of the GPs described a consultation where OA would be the sole complaint. However, GP B did recognise that the patient with OA often had multiple problems. Clearly, time was a significant pressure in the consultation and all GPs spoke about actively managing the limited time available.

8.4.3.1 Influences on prioritisation

General practitioners were asked in interview about how they might prioritize multiple complaints. Not surprisingly, GPs discussed the need to prioritise life threatening complaints over arthritis:

You're not going to have a knee attack and be dead. GP M

Patient 4, who consulted with a primary complaint of angina, but mentioned arthritis secondarily, also agreed with this prioritisation, although also commented that arthritis pain was interfering with their activities of daily living to the same extent as their angina. Here, the arthritis and the angina were closely intertwined: reduced exertion as a result of both angina and arthritis had contributed to weight gain which was potentially exacerbating arthritis. However, the GP did not pursue the mention of joint pain beyond an acknowledgement of the reported problem. General practitioner B discussed prioritising on the basis of picking issues for which they felt they could offer a positive solution. General practitioner B used Patient 3 as an example:

I didn't start to tackle the psychological distress that she'd had as a consequence of death in the family, and ignored that one completely. Like I ignored some of her other symptoms completely to try and concentrate on what I thought I could get productively out of the so called ten minutes we have .. try and concentrate on what I thought I could do to help her. Rather than keep going back through old issues like neck pain and shoulder pain, where clearly she'd seen lots of people and nobody could help her. GP B

A third issue which influenced discussion in the consultation was the computer prompts associated with Quality Outcomes Framework (QOF):

They will present multiple problems and the patient will have multiple medical conditions. So some of it will be very much patient orientated and some of it may well be doctor orientated as a consequence of the need to manage on-going problems as well as little computer fliers coming up on the screen in order to push me in certain directions to - regarding national standards of clinical care and the requirement for me to hit targets. GP B

This appeared to be an influence in Case 8, where the GP steered talk away from the joints. The patient felt the GP was less interested in their joints:

There was probably more concentration on my bloods rather than my knee, my arthritis. Patient 8

8.4.3.2 Patient's motivation for raising complaints part way through the consultation

There appeared to be some assumption that symptoms raised towards the end of the consultation were likely to be less troublesome, and that the patient may just be 'letting the doctor know' and not necessarily requesting any intervention:

Sometimes patients actually give us information that they don't want us to do anything with. GP E

Some GPs suggested that if joint pain was raised towards the end of a consultation they would tell the patient to make another appointment about their joints, although this was not observed. Other GPs suggested that this should be patient led, and inferred that if patients didn't value their joint pain sufficiently to make an appointment about it, then why should the GP pursue it:

People frequently come in with, erm, more than one problem, erm, and it's a bit frustrating when they do and you have to prioritise them... 'I don't wonder your back is still bad because you don't give me enough time. You always come with three or four things, well, why don't you give some more time to your arthritis then we can do it properly?' GP C

This quote illustrates the GP's annoyance and frustration with patients who present multiple issues in one consultation, but also the responsibility the GP places on the patient to 'give more time' to their arthritis, in other words to make an appointment solely for that purpose. General practitioner C also took this idea further, by suggesting that a patient who did not value joint pain sufficiently to make an appointment about it, would be unlikely to adhere to physiotherapy: thus, the act of mentioning joint pain as a secondary complaint may have implications for the management suggested by the doctor.

General practitioner J felt patients might raise joint pain as a secondary issue due to a combination of prior acceptance that the problem was normal, and also an anticipation that not much may be done:

I feel they suspect...in their mind they think it's, 'Me getting old.' And that's why they, they'll just drop it in at the end. They'll come in with their main what they want to get from you and the advice they want from you and then, 'Whilst I'm here,' or, 'By the way, you know, my hip's causing me pain or my knee.' Because I think they probably accept...they probably feel they're going to be told its arthritis and, you know, fobbed off. GP J

Of the six patients who raised joint pain in the second half of the consultation, three patients had already mentioned joint pain at the start, and the GP had either not pursued it or changed the subject (Case 7, 8, and 10, see Table 37). Of the remaining three patients, one had a specific question which could be swiftly answered (Case 11), leaving only two with a more open presentation of joint pain (Case 4 and 15), and one of these was elicited by the GP (Case 4). Patients 4 and 15 reported they did not feel their symptoms warranted making a separate appointment. However, Patient 4 also had some anxiety about raising the symptoms which may have contributed to the de-prioritisation:

{The GP} might send me for to have my knees examined and I thought that would lead to surgery so I didn't really want that [right] so I was a bit anxious about it. Patient 4

Case 15 was also an example of how the process of raising joint pain as a secondary issue could evolve into a vicious cycle:

Nothing...I don't think it's...I have mentioned it a couple of times but no one's taken it seriously, I don't think it's anything much. Patient 15

The suggestion from this quote that raising joint pain as a secondary issue, that consequently is not pursued, may then be a negative influence on further consulting.

8.4.4 Prioritisation: summary

Although seven of the consultations were those in which the patient presented with joint pain as a primary complaint, some patients may not prioritise their symptoms, either choosing not to mention them until GPs ask, or choosing not to make an appointment solely for this purpose. Conversely, GPs may not prioritise joint pain or verbalise their prioritisation strategy, and patients may take an active role in driving the consultation and returning discussion to their joints. There was some evidence of dynamism in these consultations, with patients raising topics or concerns that they may have not 'prepared' beforehand, or indicated on their pre-consultation questionnaire.

Two patients raised concerns about their joints after the GP asked how they were, or if they had any concerns. The GPs did not tend to pursue symptoms that were raised in this manner. This and other evidence from the interviews suggests that GPs may assume secondary complaints have low priority for the patient. However, interview and consultation findings have shown that other factors influence joint pain being raised as a secondary issue, such as anxiety, and a perception that not much will be offered or done - a self-fulfilling prophecy as little will be done if the GP perceives the patient is unlikely to have troublesome symptoms.

General practitioners were often quite vocal in their reflections about the negative impact of patients mentioning new symptoms late on in the consultation. The observational findings indicate that only one patient did this, with three others mentioning joint pain later on as a result of it not being pursued when mentioned earlier on in the consultation.

8.5 Discussion

In this chapter, the heterogeneity and complexity of the index consultations have been described. Few of the consultations adhere to 'the typical (biomedical) model', with one complaint being addressed with a history, examination and management plan. Rather, the consultations contain complex discussions regarding a number of different items.

One aspect of complexity is the extent of multi-morbidity in the participants. Multi-morbidity, defined as the presence of two or more chronic conditions, is increasingly common, with a prevalence of 66% in over 50 year olds (Glynn et al., 2011). Patients with multi-morbidity are more likely to consult and utilise healthcare, and as many as 78% of all primary care consultations may be accounted for by patients with multi-morbidity (Salisbury et al., 2011). Multi-morbidity is also known to be increased in patients with OA, after correction for age, sex and social class (Kadam et al., 2004). Estimates of prevalence and consultation prevalence vary according to the measure of multi-morbidity used; however, there is some evidence to suggest that simple counts of conditions perform as well as complex measures of multi-morbidity in predicting outcomes (Huntley et al., 2012). The prevalence of comorbidity in this sample (100%) may be a little higher than expected; however, the number of items discussed per consultation is in line with an American observational study in family practice recording a mean of 2.7 items being discussed per consultation (Flocke et al., 2001).

Although multi-morbidity is recognised as a huge challenge to primary care, with patients reporting 'interactions' between conditions as a significant barrier to treatment (Bayliss et al., 2008), little is known about the influence of multi-

morbidity on the process of the consultation (Fortin et al., 2007). An interview study with GPs exploring the influence of multi-morbidity on clinical decision making concluded that GPs adopted an 'additive-sequential' model of dealing with multiple items until consultation time was exhausted (Bower et al., 2011). In this model, items are dealt with in isolation with little attention to interaction between conditions. The authors report that multi-morbidity may have little effect on clinical decision making and make the case for observational research to explore this further.

The analysis of the data in this study with respect to multi-morbidity has been limited as this is not the focus of this study. However, in the results presented in this chapter, interactions between OA and other comorbidities (particularly other MSK problems, IBS and ischaemic heart disease) have been noted and contribute to consultation complexity. These interactions are presented by patients, but rarely acknowledged or discussed by GPs, and this is discussed further in the following chapter. General practitioners were not observed to suggest patients book other appointments to better manage time as they reported doing in interview in this, and other interview research (Bower et al., 2011); this may be one example of where GPs' reported behaviour differs from that observed.

General practitioners are reported to avoid difficult areas of multi-morbidity interaction (e.g. a limp in an obese patient) in order to focus on more minor problems (e.g. a sore throat) (Smith et al., 2010); the interview findings in this chapter suggest that as an alternative to viewing this as avoidance (negative) behaviour, GPs may focus on areas where they consider they can most be productive (positive).

Time spent on OA is the variable which most clearly divides the consultations, and the occurrence of an 'OA consultation fragment' has been defined as discussion lasting less than the half of the total time of the consultation. In such fragments, there is usually little in the way of OA management or outcomes. The OA fragment aligns with what has been described as the 'door handle remark', or a 'by the way, doctor': a concern arising late within the consultation. This is a well-established phenomenon and was originally described by Byrne and Long (1976) and is reported to occur in 23% of consultations (White et al., 1994).

The 'by the way syndrome' has been the subject of research focusing on the closing phase of the consultation (White et al., 1994, Robinson, 2001). Robinson described that a natural break in conversation most often occurs in the activity of closing the consultation, leading this to be an opportunity for patients to raise an additional concern, basing this assumption on the typical model of the consultation. Subsequent work by Champion and Langdon (2004), demonstrates that the true 'door handle remark' (at the end of the conversation) is rare, but patients frequently raise other topics during any pause in conversation, described as 'in situ or opportunistic announcements'.

Additional concerns raised late in the consultation may be unavoidable if the concerns do not occur to the patient until part way through the consultation, or if the patient is waiting to build a relationship or rapport before divulging a particular problem (Marvel et al., 1999). However, studies have shown that if doctors elicit concerns during the consultation and do not interrupt the initial opening statement of the patient, late arising concerns are less likely to occur (Marvel et al., 1999, Rodondi et al., 2009).

In the results in this chapter, GPs did actively elicit other concerns and therefore played an active role in promoting 'fragments'. General practitioners used specific questions to elicit concerns, or sometimes more conversational language. For example, GP E's open enquiry into the patient's welfare (life treating you well?) could be viewed as a more social enquiry, using the 'voice of the lifeworld' (Gafaranga & Britten, 2003, Barry et al., 2001). In this example, when the patient answered with a list of complaints the GP then appeared to switch to a 'medical voice', treating each as an individual symptom. This may have been a mechanism by which the GP could regain control on the consultation; however, the manner in which these symptoms were swiftly addressed could be described as 'blocking the lifeworld' (Barry et al., 2001); the swift change of the GP to the voice of medicine may not have permitted the patient to fully raise their concerns. Furthermore, patients may be confused by doctors who switch between the voice of the lifeworld and the voice of medicine (Gafaranga & Britten, 2003); both the 'blocking of the lifeworld' and the possible confusion may contribute to discordance.

Patient factors are also likely to influence the occurrence of OA fragments, although interestingly the frequency of fragments did not appear to associate with either comorbidities or consultation history. Late arising concern or fragments sometimes occurred when the same concern raised earlier in the consultation had not been acknowledged by the GP.

In addition to establishing the existence of fragments, the doctor's response to the 'fragment' or late arising concern is of interest; in the examples given in this chapter, the symptoms raised as fragments were often not pursued beyond an acknowledgement. Rodondi et al (2009) studied doctors responses to 'by the way' comments, and categorised concerns into biomedical, bio-psychosocial or

psychosocial. The authors report that the majority of patient concerns were bio-psychosocial or psychosocial and the majority of GP responses were biomedical, with 22% of total patient concerns being unaddressed by the doctor. The content of the response was not detailed any further. In the data in this chapter, four of the nine consultation fragments were patients presenting with new symptoms of pain. Although there were no instances of these reported symptoms being unaddressed, the GP response was little more than an acknowledgement.

This data illustrates how the occurrence of an OA fragment could have far reaching consequences. General practitioners often made assumptions that complaints raised late on in the consultation were not overly troubling the patient. However, interview findings revealed other explanations and motivations for patients not being upfront about their symptoms, including anxiety and expectation that little would be done. Therein lies a potential self-fulfilling prophecy: the patient may assume that little will be done or that the GP will not be interested and so mentions joint pain late in the consultation, and the GP may then not intervene assuming the symptoms are not troublesome, thus reinforcing the patient's initial perceptions.

The results in this chapter also illustrate, using a novel combination of qualitative and quantitative data, how patients sometimes raised their symptoms more than once in order to engage the GP. Champion and Langdon (2004) studied topic shifts in the primary care consultation using conversation analysis, and described this phenomenon as a 'pre-announcement', a warning by the patient, early on in the consultation that another concern would be raised later on. However, the examples in this dataset (Cases 7 and 10) could be described as failed, forgotten or ignored 'pre-announcements' as the doctor made no acknowledgement of the

first mention. Furthermore, in Case 8, the patient had to bring the topic of discussion back to OA after initial discussion had not been fully closed and did not address their concerns. These examples are not represented in the work by Champion and Langdon and demonstrate how patients may have to 'work hard' to get their symptoms dealt with, and may take an active role in steering the consultation. The hard work of living and managing with chronic illness has been described (May et al., 2009, Ong et al., 2011), but these findings suggest that this hard work extends to the consultation, in ensuring that symptoms are heard. Patient participation has a prominent role in policy and research, in line with a drive for more patient centred medicine (Collins et al., 2007). Patient participation is promoted and prioritised as a positive ideal; however, in some of the index cases, the active participation of the patient appeared to contribute to disorder in the consultation, increasing the number of 'topic shifts' and disrupting the flow of the GP. When the patients took an active role, GPs were also seen to be 'working hard' to try and maintain structure, although they usually did not explain the reasons behind prioritisation of symptoms.

The typology presented, and the existence of the consultation 'fragment' may not be specific to OA and, as this is not the focus of the thesis, the extent to which other symptoms and conditions may present in this way has not been explored. However, this work does suggest that the nature of the symptom may be an important influence on the extent to which the patient adopts an active role, and the occurrence of late arising concerns. Previous research exploring the extent of active patient participation in the consultation, reports that this is associated with female gender, being Caucasian, level of education and the physicians'

communication style (Street et al., 2005). However, the nature of the symptom in influencing this dynamic may not have previously been considered.

8.6 Conclusion

In this chapter, the complexity and heterogeneity of the consultations have been described. Initial introductory analysis suggests these are complex patients and consultations and that doctors may not be attending to interactions between conditions and multi-morbidity. However, despite the heterogeneity, similarities and patterns are identifiable and a typology of the OA consultation has been presented in order to group consultations and study patterns across the dataset. This typology has led to the identification of the OA fragment, a consultation where talk on OA accounts for less than half of the consultation and in which new complaints of joint pain are little more than acknowledged. Doctors and patients may both de-prioritise symptoms of OA which is a likely contributory factor in the occurrence of fragments.

The existing research around 'late arising concerns' (which are synonymous with the notion of 'fragments') focuses on frequency, with little attention to the content or nature of GP responses. This study's findings demonstrate the importance of the response and the possible negative consequences of symptoms being discussed in this way. Furthermore, the novel use of quantitative and qualitative approaches has further illustrated how patients may have to work hard to get their symptoms heard within the consultation. Active patient participation in the consultation is universally considered a positive ideal, although these results show how active patient participation may contribute to disorder within the consultation. It is worthy of note that some of the observations about the pattern and content of consultations may have been influenced by the research process and this is discussed further in Chapter 10: evaluation of the research method.

**Chapter 9: Results - Dissonance and Consonance in
the Consultation: Qualitative Analysis of the
Consultation and Interviews**

9.1 Introduction

In the previous chapter, the 19 index OA consultations have been characterised and described. In this chapter, the in-depth qualitative analysis of the consultations is reported, drawing on data from both the consultations, post-consultation interviews and medical record data and including within and across case analysis.

9.1.1 The themes

Dissonance between the GP and patient emerged as an overarching issue in analysis; the term 'dissonance' is used to imply lack of alignment or harmony between doctor and patient (with consonance implying compatibility between opinions)⁵⁸. Separately, four themes emerged from the analysis of the content of the consultations: reassurance; symptom normalisation; personalised talk; and 'doing something'. Reassurance and normalisation of symptoms were both commonly observed in the consultations, in addition to emerging as significant themes in the post-consultation interviews. 'Personalised talk' refers to the extent that GPs used set 'scripts' in the consultation, or adapted their talk depending on features of the patient and/or consultation. Finally, 'doing something' refers to doctors' approaches to management. Although the majority of the themes refer primarily (but not exclusively) to doctor behaviour, patient perspectives and reactions are explored within each theme. Within the discussion of each of these themes, the extent of dissonance and interrelationship of dissonance with the theme are discussed. The findings are drawn together in the summary section in a

⁵⁸ Dissonance has been used in preference to 'discordance' which implies a more active disagreement, to avoid any assumption that observed differences between doctor and patient are a negative influence on the consultation.

typology of dissonance, followed by discussion and reflection on the causes of dissonance and the impact of dissonance on the outcomes of the consultation.

9.1.2 The post consultation-interviews

The analysis that follows draws on the interviews with 17 patients and 13 GPs (two GPs did not have matched index cases of OA and their transcripts were not included in the analysis), in addition to the index consultations. Patients were interviewed between seven and 39 days after the index consultation (mean 14.6 days, median 12 days).

Eight GPs were interviewed on the same day of the second video recorded surgery, with the remaining 5 being interviewed between 6 and 35 days after the second surgery. Seven GPs held the first and second video recorded surgery within seven days of each other; the longest interval between first and second video recorded surgery was 28 days. General practitioners were interviewed between 0 and 35 days after the index consultation (mean 9.9 days, median 6 days).

Patient interviews lasted a mean time of 50 minutes (range 34 to 75 minutes) and GP interviews lasted a mean time of 62 minutes (range 52 to 75 minutes).

9.2 Reassurance

Reassurance was a recurring theme in both patient and GP interviews. This theme is first considered in terms of how it might influence GPs' choice of diagnostic label. Patient preferences, responses and meanings attributed to the labels are then discussed. Next, the reassurance in explanations is considered, first from the GP perspective, and secondly, from the patients' perspective.

9.2.1 Influence of reassurance on choice of diagnostic label: avoidance of using 'osteoarthritis'

The term 'osteoarthritis' was used infrequently, with only two GPs mentioning the term in a consultation (GPs I and M, Cases 14 and 18); in both of these instances this was part of a general explanation, and not used diagnostically. 'Wear and tear' and 'arthritis' were the most common terms used by doctors. Table 38 lists the terms used by patients and doctors in the index consultations. In eight consultations, no name or label was used.

General practitioners described a strong reassurance agenda, underpinned by the belief that patients may fear disability; with this in mind, osteoarthritis was described as a problematic term that carried an implication of severity.

The trouble is.... people will lump all arthritises together, so they will have an experience of a great aunt who had a nasty rheumatoid arthritis. If you tell them they've got osteoarthritis, before you know it they think that's what they're going to end up like. GP H

'Wear and tear' was seen as a preferable, less upsetting term. General practitioner L described how they would explain the condition using the term 'wear and tear' in order to reassure:

I will describe it as sort of a wear and tear condition rather than an active disease because they tend to think 'oh no, if it's started, now it's going to be progressing' so tend to try when giving a name, call it arthritis, but then specify that it's not inflammation, it's not destructive, it's more a sort of wear and tear. GP L

Other GPs talked about using the phrase 'wear and tear' earlier in the condition as a 'softer' way of introducing OA:

You may actually be using it as an ice breaker or a warning shot. Uh, as a softer term than saying you've got osteoarthritis, you've got COPD. You've got heart failure. GP L

This quote illustrates that osteoarthritis is considered equal to 'heart failure' in potential to result in distress. 'Arthritis' was also viewed as a problematic and potentially distressing term by some GPs who felt patients were likely to get mixed up with different types of arthritis, and assume the condition was debilitating.

Although many GPs discussed the need to reassure patients, some also suggested diagnostic uncertainty as the reasoning for avoidance of using the label 'osteoarthritis'. Two GPs suggested they would prefer to have X-Ray confirmation before labelling someone as having osteoarthritis. In Table 38, the previous

medical record entries for patients are listed. Of note, four patients were allocated an OA code during the index consultation and a further five had a previous OA Read Code attributed to the presenting joint in their medical record.

Implications of avoidance of using 'osteoarthritis': patient understanding

GPs generally talked about using 'wear and tear' synonymously with osteoarthritis. General practitioners who used the term 'arthritis' felt that patients would understand this without much further explanation:

I think most patients, if you tell them it's arthritis ... not saying rheumatoid or inflammatory arthritis and then I think most of them think of it as wear and tear already. GP B

However, there was some evidence from the patient interviews that patients did not consider 'wear and tear' and arthritis to share the same meaning, as this extract illustrates:

[GP G] And she {previous GP} told you you had some arthritis of your hip?
[Patient 9] She didn't say arthritis, she just said it was a worn hip, so I don't... [GP G] Okay, okay, I think that's probably what that means. Extract from Case 9

I didn't think the two were connected, I thought arthritis was people in a lot of pain. Patient 9, in interview

Patient interviews revealed uncertainty about the meanings behind the different labels used. Some patients did not recognise arthritis was a problem of joints and the term osteoarthritis generated a wide range of meanings from patients, with

many being unsure of what it meant. A number emphasised the connection of 'osteo' with meaning the problem was with the bone:

And I think the osteoarthritis is to do with your bones, erm is it like the brittle bones, I'm not altogether sure, I get mixed up when I read up on all this.

Patient 16

Well, that's the bones, isn't it?... Well, I suppose they're shrinking; drying up or something. Patient 15

Table 38: Alignment of labels used by GPs and patients, and comparison with medical record entry

Case No	Joint affected (n = new problem)	Label used by GP in consultation	Label used by patient in consultation (patient used term first (1); GP used term first (2))	Patients understanding of problem in interview (when prompted with options)	Medical record entry	
					Read Code (RC), Free Text (FT)	
					In consultation, regarding joints	Previous code or entries for OA
1	knee	arthritis	arthritis (2)	arthritis (rheumatoid)	Arthralgia (RC)	-
2	hip	-	-	osteoarthritis	OA hip (RC)	OA generalised/hip (RC)
3	knee	arthritis, wear and tear	-		OA knee (RC)	OA knee (RC)
4	knee	arthritis	arthritis (1)	arthritis	-	OA knee (RC)
5	knee	-	arthritis	arthritis	OA knee (RC)	OA knee (RC)
6	hip (n)	wear and tear	wear and tear (2)	old age	-	OA hand (RC)
7	knee (n)	wear and tear	-	wear and tear	-	-
8	knee (n ⁵⁹)	degenerative change, wear and	arthritis (2)	arthritis		

⁵⁹ Second visit for results following first consultation with knee pain.

		tear, arthritis				
9	hip	arthritis	worn hip (1)	worn hip, wear and tear, old age	Musculoskeletal pain (RC)	OA hip (RC)
10	knee (n)	-	-		-	OA hip (RC)
11	knee	wear and tear	osteoarthritis (1)	osteoarthritis	-	OA knee (RC)
12	knee	wear and tear	-	unsure (arthritis)	OA knee (RC)	OA knee (RC)
13	knee	-	-	wear and tear	awaiting knee replacement (FT)	OA hip (RC)
14	knee (n)	-	-	wear and tear	knee pain (FT)	arthritis (FT)
15	hip (n)	-	-	unsure	-	-
16	knee(n ⁶⁰)	arthritis ⁶¹	-	wear and tear	knee pain (FT)	Generalised arthritis (RC)
17	knee	-	-	arthritis	-	OA hip and OA knee (RC)
18	hands (n)	-	possible osteoporosis	(wear and tear)	wrist pain (RC)	-
19	knee	arthritis	arthritis (2)	arthritis	knee pain (RC) arthritic (FT)	OA knee (RC)

⁶⁰ One previous visit to different GP - this GP directed consultation as if new problem with history and examination.

⁶¹ Mentioned while talking about treatments rather than used diagnostically.

9.2.2 Reassurance derived from diagnostic labels: patients' preferences

Patients were asked in interview, about their preferences for diagnostic labels.

This extract from a consultation, followed by a quote from the matched patient interview illustrates how this patient wanted labels to be more specific:

[GP E] Right you've probably got the start of some wear and tear. Extract from Case 7

I want it, you know, somebody to say whether I have got osteoarthritis or arthritis, or whatever, you know. Just to, sort of, know what's going on really. Patient 7, in interview

Similarly, Patient 6 did not feel 'arthritis' was a worrying problem but would want to know more. When asked how they would feel if the GP told them they had arthritis they commented:

I'd ask him okay, what does it mean, what have I got to do to sort of live with it. But as I say, I've no experience of arthritis although I could well have it. Again unless it's going to cause me problems or it's going to stop me doing things that I want to do then I'm not going to be too upset about it. Patient 6

However, one younger patient (aged between 50 and 60) did feel osteoarthritis was a distressing term, conveying a poor outlook as this quote from their interview demonstrates:

Well I think it's very likely that I've got wear and tear... [ZP - How would you feel if somebody said you had osteoarthritis?] I think I'd be pretty devastated. Patient 18

They went on to describe their view of osteoarthritis:

I would associate it {osteoarthritis} with restriction, lack of mobility, pain, old age. I don't want that. Patient 18

9.2.3 Influence of reassurance on explanations: ruling out rheumatoid

In 9.2.1, the impact of reassurance on GP choice of diagnostic labels was discussed and the fact that this is influenced in part by the desire to avoid making connections to rheumatoid arthritis. This was also explicit in GP explanations to patients, in reassuring patients that they did not have an inflammatory or rheumatoid arthritis. Explaining the difference between the two sorts of arthritis appeared to be part of a strategy to convey messages about severity with the aim of reassuring; the patient could be given the clear message they did not have the 'worst' type of arthritis:

I sometimes do say to the patient, 'this isn't the severest form of arthritis, you might've seen people with deformed hands and deformed joints, this is not what you've got' particularly if they're younger and sometimes there's fear. GP C

In addition to being important at the point of diagnosis, and in choosing a 'label' for OA, one GP explained the importance of making the distinction between OA and inflammatory arthritis in explanations with the patient:

Talking about arthritis, obviously differentiating from inflammatory. Sometimes people drop in words like rheumatism and different things, so it's just making sure they understand there are two differences and what the differences are. GP H

Many GPs in the interviews spoke of their priority to distinguish OA from an inflammatory arthritis when patients first present with symptoms. This was usually the reasoning supporting the use of additional clinical tests such as blood tests (and sometimes X-Rays). Two consultations also contained reference to this with the doctors explaining this process to the patient:

[GP M] I think what we'll do, we'll run a blood test anyway just to check its not inflammatory, we'll x-ray that joint and then we're going to know, if the blood tests show it's an inflammation then we'll take it very seriously, not that we won't take it seriously, what I mean is we will then look at probably a referral, although it's probably less likely.

[GP M, summarising at the end of the consultation] Right, so you now know .. we'll just make sure it isn't an inflammatory thing, okay...?

Extract from Case 18

This GP had also explained the differences between the different types of arthritis earlier in the consultation. The patient did not seem to have taken on board these explanations and commented in interview:

But, as a precaution, she wants to have a blood test for arthritis I think.

Patient 18

A similar example was observed in Case 1, where the patient did not seem to understand the reason for the investigations:

[GP A] So, we checked your inflammatory markers, and we checked your rheumatoid factor and CRP, yes, so I

[Patient 1] Well, yeah, you sent some bloods off for something and you sent me for an x-ray. Extract from Case 1

9.2.4 Reassurance derived from explanations about inflammatory arthritis

The consultation examples in 9.2.3 suggest that patients may not fully take on board the reasoning behind the tests organised to exclude an inflammatory arthritis. This may explain why one patient in interview described being puzzled about having had negative tests in previous consultations, yet being told they had arthritis. They also described how ‘nothing showed up’ resulting in no action being taken:

When I've had blood tests, or anything, nothing shows up so they've more or less said well if it hasn't showed up I haven't got it, but when I've spoken to them, about my hands and things, they've told me I've got arthritis ... it's never gone any further than that because when they send you for blood tests and things, they come back with nothing showing, so it's just stopped there and then. But I mean my hands, I have a lot of trouble with my hands. But nothing ever shows up, so they don't do nothing. Patient 16

This quote suggests that the patient may have received reassurance that there was no inflammatory arthritis, that this ‘reassurance’ may have contained contradictory messages and that it may have been interpreted by the patient to mean nothing is wrong. The interpretation of the reassurance as ‘nothing showing up’ resulted in dissonance between patient and doctor. The medical record for this patient stated OA on a number of previous entries. The patient’s narrative describes how OA may have been diagnosed by exclusion, ruling out other conditions. It also suggests that no ‘action’ was taken as a result of ruling out inflammatory arthritis.

Some patients did have knowledge of different types of arthritis in interview, with some describing experiences of family or friends (a spouse, in one example) who have rheumatoid arthritis. One patient described being told they had hands that looked like rheumatoid arthritis previously, and one patient thought they had rheumatoid arthritis (Patients 1 and 16). Neither of these patients described seeking reassurance, but both described frustration, feeling that nothing has been done (Patient 16, as quoted above) and that treatment had been slow to progress. Their frustration appeared to be due in part to a feeling their symptoms had not been validated.

9.2.5 Patients seeking reassurance

In contrast to the Patients 1 and 16 mentioned above, some patients were actively seeking reassurance. In this first example, the patient mentioned hip pain at the end of a consultation regarding a heart complaint.

The patient described the GP as 'very reassuring' and added:

I took that to mean, you know, this is natural, and it will happen. Patient 15

In this second example, the patient was asked in interview what they wanted from the consultation:

I think mainly it was reassurance, and with my feet I wasn't quite sure what was going on, so I just wanted to check about that. Patient 18

However, in the consultation the GP assumed the patient wanted symptom relief:

[GP M] So that the main stay of this is that should probably be taking some pain killers, because pain is limiting you isn't it, like you're having trouble, like having trouble peeling things like squash and what, thick vegetables
[Patient 18] Yes, yes vegetables with thick skin... But I don't really want to be doing that. Extract from Case 18

Although some GPs recognised that some patients were seeking reassurance, others described the 'typical' OA patient presenting at a point where they wanted 'something done' about their pain and this is discussed further in 9.5.

9.2.6 Reassurance: summary

The avoidance of using the term 'osteoarthritis' by GPs is likely to be related, at least in part, to GPs wishing to avoid patient distress. Dissonance may result if patients are seeking a more specific term or diagnosis. Furthermore, these findings suggest that the avoidance of the term may be contributing to confusion about what OA is among patients.

Patients vary in their preference in receiving reassurance, and were often not explicit about this during the consultation. Consonance may be achieved if patients seek reassurance and are given it. However, reassurance about lack of evidence of inflammatory arthritis may be 'lost in translation' and may be interpreted negatively by patients who perceive 'nothing showed up', which fails to validate symptoms. Furthermore, dissonance may also result when patients seek reassurance and are offered symptom management instead.

9.3 Symptom normalisation

In this theme, talk that served to normalise the symptoms of OA is explored. The mechanisms by which symptoms were normalised are explored first, followed by an exploration of the possible reasons for this, and the consequences.

9.3.1 Normalisation in consultation talk

The use of language to describe, label or explain joint pain as normal was a frequent finding:

[GP E] ...the normal degree of wear and tear... Extract from Case 6

'Wear and tear' was described as a normal process by GPs and a term that did not normally require any further explanation. General practitioner J was observed using the phrase 'type of wear and tear arthritis or osteoarthritis' in Case 15. This technique of combining terms was viewed as a way of suggesting OA was the 'normal' type of arthritis.

'Wear and tear' was commonly referred to in patient interviews with a number of patients attributing their symptoms to this, without the doctor having used the term. Many patients reported wear and tear as a normal change. The term was so frequently used, it became apparent in the interviews that some patients and GPs had never really considered the meaning of 'wear and tear' before they had been asked. One patient, who initially felt it was normal or 'natural' developed their thoughts as they spoke:

Wear and tear, it's just a cliché, isn't it, that we use to just say, natural. I suppose, now that you mention it, it could mean damage, couldn't it? Hmm, and I'm just thinking, not just progressively small progressions, it could mean something more... But when you think about it, wear and tear of the bones, suggests, erm, wearing away, I suppose and rubbing and, maybe that's maybe, you're making me think it may be more serious than I'm thinking. Patient 15

Patients also used other language that served to normalise or play down their symptoms, both in the post consultation interviews and in the consultations:

It's nothing, I suppose. I'm making more of it than it needs. Patient 15

[Patient 18] I mean nothing horrendous, but my feet are hurting as well.

Extract from Case 18

In this case, the patient avoided the word 'pain':

[Patient 9] But I can't walk - even now my legs are hurting me, well it doesn't - it isn't hurt pain as such, I'm not in pain, pain, but it feels, what can I say, it's weak. Extract from Case 9

Talk around 'what is normal' often referred to the patient's age, in that experiencing some amount of joint pain could be expected in older people:

I tend to use wear and tear a lot err rather than say degeneration or arthritis. But err yeah, that the joint isn't as good as it was, or isn't as free as it was, and that, you know, if you talk to 100 people of that kind of age there would be a lot of people who had some, who had similar symptoms.

GP J

This was a further example where patients had differing views on the acceptability of this argument as illustrated by the examples below:

I think these different things do happen when you get older, they're bound to aren't they? Patient 9

I mean, because I'm 65 this year. So, you know, you, you're not quite sure where the, the guiding is with it all, you know, what you're supposed to expect at a certain age. Patient 7

Emphasising the normal nature of symptoms was also achieved by playing down severity. In Cases 1 and 8, GPs used the phrases 'early onset arthritis' and 'a bit of arthritis' respectively. These preceding words implying 'mild' were clearly recalled by both patients in the interview, before viewing the video consultation. Both patients had significant symptoms and the use of these words also served to play down the importance of the pain, which Patient 1 particularly reported as frustrating:

[Patient 1] I'm a bit fed up really. I mean, you'd, sort of, said it was early onset. Well...

[GP A] Yeah, let me just...

[Patient 1] I think my, my question would be, well, God help me when it's late onset. Extract from Case 1

The thing I can't quite grasp, that if it's only, er, if it's only early onset, why I am in so much pain? Patient 1, in interview

The use of the term 'early onset' did not appear to adequately validate the patients' symptoms.

In the following extract, GP J talked about how they use the terms 'wear and tear' and arthritis:

'Wear and tear' is the mild, degenerative. And then we kind of get to mild arthritis when we get to moderate changes on the X-ray. GP J

Their description implies that moderate X-Ray change translates as mild arthritis. Further evidence of downplaying the severity on X-Ray was evident from the medical record review of Patient 18. When they had returned for X-Ray results after their video recorded consultation, the X-ray demonstrated moderate degenerative change and the medical record entry stated in free text that the patient had been told the X-ray was normal.

A further observed finding that implied the symptoms were normal, was the lack of need to offer a diagnosis or label at all. Four of the eight consultations where no diagnostic label was given were new complaints of joint pain where advice or management was given with no follow up. For example, in Case 10 and 14, explanation that served to normalise the problem was given, without giving a label:

[GP I] I think if you've used your knees that hard, then they're actually doing very well. Extract from Case 14

[GP G, talking during an examination] Looks a pretty good knee, it's not thickened, I don't think it's got any - any fluid on it. It straightens completely.

Extract from Case 10

In Case 16, the GP conducted a history and examination, and proceeded to offer management advice with no formal diagnosis. However, when recommending glucosamine, they mentioned arthritis, thereby, indirectly giving a diagnosis:

[GP K] There is some evidence that it works for arthritis of the knee.

Extract from Case 16

The patient was asked what diagnosis they had been given:

I think it was just age and wear and tear. Can't remember. I think it was just wear and tear or something. Patient 16

This GP was noted to avoid diagnostic labels in other musculoskeletal consultations. During video playback, they reflected:

I don't think the other ones I gave a diagnosis. I gave treatment options and trials, but not diagnosis. I didn't even discuss that with them really, which I don't know if it's right or wrong. GP K.

Patients differed in their need for a diagnostic label:

[ZP - Does it matter that he didn't sort of give you a label or a name?] No, I don't - I didn't go in there thinking he's going to say it's something or other. As you say you're just looking for reassurance that it's okay. Patient 14

General practitioner C also felt patients were not overly interested in diagnostic labels:

I don't necessarily think they come with wanting a diagnosis. GP C

In Case 7, the patient presented with two presenting complaints: hip pain and urinary incontinence. The GP chose to explore the latter first, and took a full history. The patient then brought the topic of conversation back to their joints:

[Patient 7] I don't know whether it's that {thyroid problem} that is causing the joints to hurt. On my knee, well sometimes on my knee and sometimes on that hip it's...I can hear it go sort of like a clonk and then, but then it goes.

[GP E] Right you've probably got the start of some wear and tear in that. As long as it doesn't limit you in what you do want to do you're safe to just, you know...

[Patient 7] Carry on.

[GP E]...keep an eye on it. Extract from Case 7

The idea that this was 'normal' was conveyed here, not so much by what was said, but the absence of the need for any further enquiry or elicitation of symptoms. The patient described feeling the joint symptoms had been dismissed. The overall message that joint pain was normal was also in stark contrast to a statement the GP made following the previous exchange regarding urinary incontinence in the same consultation:

[GP E] I'm certain something can be done...you don't have to put up with this. Extract from Case 7

9.3.2 The purpose and consequence of normalising symptoms

The language GPs used in normalising OA may have reflected their underlying beliefs regarding the condition:

The way I feel arthritis, osteoarthritis is that it is, in some people, it is a kind of normal change. GP J

Furthermore, one GP holding a similar view appeared not to use patient information materials as a result of this view:

And in terms of leaflets, about what is wear and tear in arthritis, what is osteoarthritis, I don't give them out and nobody asks for them either....I think people resign themselves to it, it's just, you know, 'I'm 80 and I'm worn out. My joints are worn out, part of me's worn out'. I suppose the idea that it's just, it's a wearing of a joint is a, is a, it doesn't need any more explanation in their mind for them. They don't come and say, you know, 'Oh, tell me what it is.' GP C

In Case 6, the GP responded to a mention of hip pain (after three other complaints and symptoms) with:

[GP E] It's always that, what's the normal degree of wear and tear that you have to just get on with. Extract from Case 6

In this example the emphasis on normalising symptoms is used to facilitate acceptance. This is also an example of how normalisation could be construed as negative and dismissive. However, this patient did not feel dismissed and was very satisfied with the consultation, stating it was the 'best ever'. In this consultation, the patient had used language 'playing down' or normalising symptoms before the doctor spoke:

[Patient 16] I've got the usual aches and pains that you learn to live with ... it's {hip pain} okay to start with then it starts to hurt a little bit. I just roll over and it doesn't cause me any sort of great problems but it just, it's there and... Extract from Case 6

One could argue that the GP was echoing the patient's sentiments. When watching this video consultation the GP stopped the tape and commented:

It's interesting he said, 'I've got the usual aches and pains that you learn to live with,' and I think, is that not an uncommon, well, I wonder if that's not an uncommon experience of people. GP E

Here, the GP had clearly identified the patients' language as important in the tone of the consultation, and the case illustrates where normalising does not necessarily result in dissonance, and may be driven by the patient as much as the doctor.

The definitive nature of the normalising statements used by GP E in Case 6 and 7, quoted above (but also witnessed with other GPs) also allowed the GP to move on to a different topic or reach an endpoint, and illustrates how normalisation may serve the function of 'disposal' for the GP. This is likely to have been a factor in both of these consultations where the symptom of joint pain was not the primary reason for consultation and was mentioned several minutes into the appointment. A further purpose of normalising symptoms was to explicitly avoid the patient adopting a 'sick role'; one GP (who had another role reviewing medical reports for disability claims) spoke of the importance of not medicalising the condition and contributing to a perception among patients that their joint problem may render them disabled or inactive:

I think arthritis and osteoarthritis is a condition where if you give it, give a label, people think, 'oh I can't do this, I can't do that.' GP K

9.3.3 Normalising symptoms: summary

These examples illustrate that normalisation messages are not one-sided, and both GPs and patients may collude in playing down symptoms and their significance, thereby reflected in consonance. General practitioners may use talk

implying OA is normal as a strategy to facilitate acceptance, avoid adoption of the sick role or to 'dispose' of the patient. Dissonance in the consultation resulted if patients felt the messages about OA being normal, or 'early onset' failed to validate their symptoms. However, there were examples of consonance where talk about symptoms being normal aligned with patients' beliefs or their need for reassurance.

Some GPs believe that OA is a normal change, or a normal part of ageing and this viewpoint may be incongruous with the notion that patient education is important or necessary.

9.4 Personalised talk

Throughout the GP interviews and consultations there was a distinction evident between talk and language that was personalised and relevant to the patient, and the use of 'scripts', or standardised spiel that GPs may use routinely. This theme explores this with reference to diagnosis, explanations about OA and management advice.

9.4.1 Personalised vs indiscriminate diagnostic labels

A number of GPs talked in interviews about tailoring their diagnostic labels to be personal to the patient. For example, variables such as perceived social class, knowledge and age of the patient, distribution of joints affected, severity and occupation were all described as influences on their choice of terminology ('wear and tear' or arthritis). For example, 'wear and tear' was described by some as less relevant or applicable for hand symptoms and better suited to weight bearing joints due to the association with overuse. Not all GPs applied the same 'rules' when choosing terms, and patient age was an example where GPs described differing logic as to why osteoarthritis would be a more appropriate term for older or younger patients. Although GPs often described choosing terminology based on patient characteristics, there was some evidence from a number of interviews and consultations that GPs used the diagnostic label 'wear and tear' subconsciously, and that the term may be ingrained in doctor's patter or 'scripts'. For example, one GP felt 'wear and tear' had negative connotations and stated in interview they preferred to use the term 'wear and repair'; this GP worked in a research active practice and mentioned that their colleagues had criticised the use of the term

'wear and tear'. However, when viewing their consultation video, this GP observed their use of the term 'wear and tear'. This was attributed to the patient having had difficult-to-manage joint problems for a long time:

Perhaps it's because she saw me and, and, and trotted out all these problems and therefore I entered my pessimistic mode and called it (laughs) 'wear and tear' rather than 'wear and repair'. GP B

General practitioner E, who had described not having any standard phrases or patten for OA, also observed their use of the phrase with surprise, when watching Case 7, noting that:

I don't think it....particularly trips off my tongue. GP E

During the post-consultation interview, GP E was shown a second clip where they had used the phrase 'wear and tear' with another patient (Patient 6); they explained the use of the term, on this occasion, by stating they were echoing the patient's words. However, in Case 6, the doctor had used the term first.

In Case 9, with GP G, the patient first used the term osteoarthritis but the doctor subsequently used 'wear and tear'. In Table 38 the order of patient and doctor utterances of the diagnostic label in the consultation is described, alongside the patients' understanding of the cause of their joint problem and the entry on the medical record. Other GPs spoke about the need to echo the patient's language but interestingly no patient in this study used the term 'wear and tear' prior to the doctor using the term.

'Wear and tear': personal relevance

Most patients described feeling that 'wear and tear' was an acceptable term, relevant to them and something they could relate to from their personal experience:

I mean, you put a pair of shoes on and you keep using them all the time and they get worn, don't they? So, it's the same with anything, I suppose, like that. Patient 19

I just think its wear and tear. I mean that's what that doctor said to me a long time ago and I've just always said that, you know, if ever I get any problems I always go oh, its wear and tear, its abuse over the years.

Patient 14

The last quote here uses the term 'abuse', implying the problem was self-inflicted. Others took the meaning still further; their literal interpretation of the relevance of their personal history implied they were to blame for their symptoms:

Well, it's when you've asked your knees to do a lot in your life.

Patient 11

I just thought well it's just all what I've done, you know, the way my life is sort of bending down, like out in the garden on my knees. I get on my hands and knees to do floors. You know, I don't really have to, but I do. Patient 16

One GP also spontaneously reflected on this; as the interview progressed, and they had witnessed two clips where they had used the term, they subsequently expressed concern that overuse of the term 'wear and tear' implied the patient was to blame for their symptoms:

Because I think I probably do use 'wear and tear', and I think it's probably right in a lot of people, say 'look there is a degree here that's been caused by the fact that you've been fairly active on your knees and now you've got bad knee pain and now you've got to manage it.' But actually making sure that I don't overuse it, put all the illness blame onto the patient, having caused this pain that they've got now. GP L

'Wear and tear' was considered by one patient as a term that lacked specificity and could be used almost too easily. This patient rolled their eyes in the interview when 'wear and tear' was discussed. They explained why the term made them 'not very happy':

I mean some doctors I've seen, I've never seen them before and they've said wear and tear, wear and tear, but they don't know what I've, what I've done in my job you know that's where I think it comes from, your job.... because when they say 'oh it's wear and tear' that is, you know, carry on, it's wear and tear it just sounds, you know, it doesn't sound very, I don't know, what's the word, it's like impersonal is it or, it's just a word they've made up about it. Patient 2

Other patients talked about how 'wear and tear' related to overuse rather than age. Thus, a patient holding this view, who did not perceive they had overused their joints, may find the term impersonal, as in the quotation from Patient 2. Like GPs, patients felt 'wear and tear' suited some situations better than others; one patient commented on how 'wear and tear' couldn't apply to hands, thinking of a relative's 'lumps and bumps' and another patient spoke of uncertainty around the phrase, wondering why it only affected one knee.

9.4.2 Personalised talk vs 'scripts' in explanations

General practitioners described the use of scripts more in explanations, although there were few examples of explanations about the nature of OA in the index consultations. The described scripts sometimes included reference to their self or other patients:

I tend to sometimes quote my man who's running a marathon, whose x-ray looks like he shouldn't be able to walk. GP L

In other examples the script might include a mechanical or other metaphor:

That, sort of, lubricated coating gone, so you've got bone grating on bone. And, and so, and that's where nerve endings are, so once you've lost that coating, that slippery silicone or Teflon'y coating, you get down to the grindy bone and that's when the nerve endings, that's why you feel the pain. So it's as simple as that really. GP C

I mean often I'll, I'll say that, you know, 'When you do have arthritis it's a little bit like having the Tin Man out of the Wizard of Oz, and your joints are already, you've got, your shock absorbers are starting to rub away, so you're starting to get some wear and tear, and the bones are, sort of, rubbing against each other ... you don't expect a car that's 10 year old, still to have, you know, their shock absorbers in the condition they were when you bought them, or their brake pads to be in that condition. Things wear down, and that's when sometimes they cause a few problems. Although it's easy to repair things on a car, it's not quite so easy on humans, so we have to use other ways of trying to minimise the pain. GP A

General practitioner J mentioned how wear and tear lent itself to mechanical metaphors, but also stated that they tend to avoid using these for fear of 'patronising' the patient.

Patient 2, who was the only patient to take issue with 'wear and tear' also mentioned annoyance at having heard a similar explanation previously:

It's like a car breaks down because it's old, its wear and tear ... they're classing you as something that's worn out, a machine. You know you're not a machine. Patient 2

When asked about the origin of their explanations, GP C cited colleagues, who were active in musculoskeletal research. Others did not feel they had changed their 'patter' since medical school:

I suspect it was something I picked up when I was a student. GP A

In Cases 8 and 12, models were used to demonstrate the joint. General practitioner F described how he typically used the knee model, and described a typical 'script' during their interview, before watching the video clip:

'...Wear and tear. That's another term for osteoarthritis'. And then I take a model which I've got here, I show them where the cartilage is and the bone and over time it wears out and that's what you're going through and that's why your knee is getting more deformed and you're not able to move it as much as you could, and that's why you've got the pain. GP F

In the video recorded consultation, the model was used only to point at the affected side of the joint, and the explanation was much more succinct:

[GP F] Wear and tear in the joints space. Right? I'll show you the model. That's your knee there, and you've got a bit of arthritis here, in these joints here. More on the inner side. Sorry, this is the inner side. Alright. Now you said your knee is in constant pain isn't it? Extract from Case 8

Thus, in this case, the observed explanation did not follow the model script suggested in interview. In the three index cases that contained explanation regarding the nature of OA (Cases 1, 8 and 12), the presence of 'scripts' was not obvious; however it was clear that the X-ray report was being 'sampled' for the explanation to the patient, using words such as degenerative, 'early onset', mild, moderate and severe. In Case 8, the GP starts with 'a bit of arthritis', which could be the GP's lay translation of the X-Ray; however, when the patient questions this, the GP answers with more technical language from the X-Ray report:

[GP F] Degenerative change, that's what it says. Extract from Case 8

Another GP mentioned how the X-Ray report provided an opportunity for explanation:

Because I'll talk about it as 'wear and tear' until we get the x-ray results I'll look at the results of the x-ray and use them more sort of scientific or medical terminology of what's going on and explain what that means. GP L

As mentioned in the previous section, a common discussion point in interview and consultation was explanation that served to distinguish OA from other, usually inflammatory conditions. In Case 18, the patient had presented for the first time with joint pain, and GP M asked the patient what they thought the problem was. They answered 'osteoporosis' and GP M responded with an explanation of the difference between the terms osteoarthritis, rheumatoid arthritis, and osteoporosis. No diagnosis was given to the patient in this consultation, pending X-Rays. During the consultation, the patient was seen to be fiddling with their hands during the explanation of the three conditions. When watching this explanation during the video playback, the patient looked out of the window and waved at passers-by. When later asked about what they took from this explanation they commented:

I would still feel at that stage that I was slightly unclear, that I hadn't taken it all on board. Mainly, because I didn't really think it applied to me. I felt the bit about the different types of arthritis went over my head a bit because that one hadn't occurred to me and I didn't, I don't think I've got it. Well, we'll see, but, you know, that sort of just went over a bit. In fact, it did the same when I was watching it. Patient 18

The GP in this example also checked for understanding of this explanation and the patient answered they understood 'absolutely'. This example illustrates how patients may filter the information they receive based on the perceived relevance and how checking for understanding may not always be effective.

9.4.3 Personalised talk vs scripts in OA management

In the management of OA, the use of 'scripts' was particularly evident in talk about exercise or activity and medication. General practitioners often gave exercise advice, promoted an active lifestyle and in some cases demonstrated exercise. Strategies to emphasise the importance of exercise included use of self (with the GP explaining how the exercise helps them) and summarising the importance of exercise at the end of the consultation:

[GP K] The main thing is to keep exercising it, keep using it, build up the muscles round it as much as you can and doing the exercises. Extract from Case 16

Some GPs also took the opportunity to recommend exercise in consultation fragments where only a small amount of time had been devoted to talk about OA. The need to exercise was often not appreciated by patients, as this extract demonstrates:

[GP K, examining the patient] One of the things I would suggest is you're quite – your muscles are quite weak there in that part and that often does relate with knee problems. A couple of exercises that you could benefit from doing is um, just the easiest exercise, in fact I'll show you, you can do them in bed, alright?

[Patient 16] I wouldn't have thought – but I do so much walking.

[GP K] But it's – you often aren't flexing it er, and flexing those muscles up to the full amount. And the other exercise you can do is, is... Extract from Case 16

I couldn't understand that all the up and down I do and the walking. Patient 16, in interview

Despite the GP using the examination findings (suggesting muscle weakness) to illustrate the importance of exercise, the patient still did not appreciate the reasoning behind the recommendation to exercise, even after the doctor had answered their question; this recommendation was not followed.

In the following extract, the GP was giving lifestyle advice in the context of the finding of borderline diabetes; the patients had visited the GP for knee X-ray results, was given the diagnosis of arthritis, and then the topic of conversation had been steered (by the GP) to discussion of a recent diabetes blood test and the patient's weight:

[GP F] What they say is exercise three times a week, 45 minutes and workout until you sweat. That's what erm...

[Patient 8] Yeah, I've got quite a physical job.

[GP F] But add it on to that. This is dedicated...I know...

[Patient 8] I know, I know.

[GP F] You can do it at the weekends. Do you have a dog at home?

[Patient 8] No, not any more, we used to.

[GP F] The dog, walking the dog for an hour or so is good. If it's jogging...

[Patient 8] I can't jog with my knees.

[GP F] No, no, not on the...not on tarmac, okay. Extract from Case 8

In this example, the GP's 'script' continues, despite the fact the patient doesn't have a dog, and that they are unable to jog due to knee OA. General practitioner F also chose not to join up lifestyle advice for diabetes with advice for OA; the two issues were dealt with separately, which further supports the notion that 'scripts'

were being used. Another GP was insistent about the value of having a dog, in interview:

Those kinds of things like, you know, 'If you've got a dog, you, you know, walk the dog more. If you haven't, maybe think of one.' GP J

Further examples of unwavering scripts were in Case 5, where the GP kept going with a recommendation for tubi-grips, despite the patient commenting they had tried them and found them uncomfortable. In Case 1, the following exchange occurred, following the recommendation to increase paracetamol frequency:

[GP A] See how you're going. It's worth keeping a pain diary. So, at the end of the day, before you go to bed, just reflect back on the day, you know, what pain have you had. How bad on a scale of nought to ten, if ten - do you have children? [No] Okay. Childbirth labour is one, is what's compared as really bad pain, but if you imagine the worst pain that, that you can imagine, is a ten. Extract from Case 1

The pain diary was a common tool suggested by this GP. The GP continued with the childbirth analogy despite the patient saying she didn't have any children. The patient did not understand the reasoning behind the pain diary suggestion and hadn't actioned this:

I haven't got as far as the scoring chart yet, but I can, I can remember in my own mind. I don't think I need to do it on a daily basis. I might make a note at the end of the week. Patient 1

The lack of adherence was in part due to the lack of perceived importance and relevance by the patient, although the impersonal nature of the 'script' may also have contributed.

9.4.4 Personalised talk: summary

General practitioners reported using both personalised talk and 'scripts' in interview. However observational findings suggest that there was indiscriminate, even subconscious use of diagnostic labels and that the model 'scripts' regarding explanations were shortened in practice. 'Wear and tear' was largely an acceptable term to patients although the association with overuse may result in patients accepting 'blame' for their symptoms. The use of the term was associated with dissonance with one patient who found it impersonal.

Observed explanations concerning the nature of OA appeared to be sampled from the content of the X-Ray report rather than following a set spiel; however, conclusions about these explanations are limited as there were few observed examples of these. The use of scripts was particularly evident when GPs were giving management advice. When dissonance was observed between patient and doctor, this was often related to patients feeling that explanations and advice were impersonal and lacked relevance for them. Dissonance may contribute to reduced adherence with the suggested advice. Exercise advice was a particular example where scripts failed to take into account patients' physical ability to adhere or to patients' underlying beliefs about levels of activity and benefits of exercise. There are examples of patients challenging 'scripted' talk from doctors, but also examples where patients chose not to vocalise disagreements and filtered explanations which they perceived as lacking relevance.

9.5 'Doing something'

'Doing something' was the phrase used by some GPs when talking about the management of OA. In this theme, the doctor and patient agendas around management of OA are contrasted and compared.

9.5.1 General practitioners' perceptions about OA management: the biomedical model

General practitioners expressed different views in their attitudes to OA management. Some GPs held a biomedical or surgical viewpoint, and described management as a definite action or intervention, usually targeted at pain relief:

I mean the treatment options are 1 - medication, 2 - physiotherapy, 3 - a combination of medicine and physiotherapy and 4 - surgery, so those are the options. GP D

General practitioners holding this view of management often talked about 'doing something' when referring to interventions for OA in consultations:

[GP E] When is it at a level where we ought to be doing something about it. What are your thoughts? Extract from Case 6

Those GPs holding this biomedical view on management sometimes expressed the view that little could be done, or talked about frustration with management:

There's a big gulf between the fairly straightforward treatments and joint replacement, which tends to be the sort of ultimate weapon. Um, and so there are a lot of people that are progressing along that road and finding the simple treatments less and less adequate um, that are um, frustrated with their degree of disability. GP I

This GP also felt that little could be done:

It will very often be, you know, people with osteoarthritic knees that, that I can't do anything else for, so they said no, they're not gonna operate cause of this, that or the other, and they're still unhappy um, just as an example.

GP I

Although this quote related to OA patients with end stage disease, this view was evident in their consultation with a patient with OA who had not had any previous management:

[GP I] then I wouldn't interfere, I wouldn't suggest we start doing things to your knees err, cause I can't see that - that we'll make them any better than they actually are. Extract from Case 14

General practitioners holding these views were more commonly observed to use language that normalised symptoms; similarly, they did not perceive OA as an area where a lot of explanation or patient information was required:

I think most people probably have quite a good idea of what is wrong with them when they, when they present. GP A

The GPs who described the management of OA in biomedical or surgical terms when describing a 'model' OA consultation were unlikely to perceive a need to read the latest guidance, due to the large amounts of other guidance they needed to read, and the perception that there was 'nothing new' in pain relief.

Functional thresholds

General practitioners who held a biomedical view of management described being holistic by placing importance on the functional status of the patient, and on the impact of symptoms on the patient's activities of daily living. A threshold of functional ability was used to influence their decision making, which may not exclusively relate to treatment, but whether or not to continue discussion on joints, and elicit further information from the patient. On some occasions this was explicit, and the GP used the patient's responses to questions in deciding if a nominal threshold or level of impaired function had been reached:

[GP E] Okay, does it limit you at all? Extract from Case 6

And in others it was apparent from the post consultation interview that the GP had made a more dogmatic value judgement about the level of functional ability, and the patient's expectations around management:

I don't think he's got significant osteoarthritis, that's how – how I would see it, from my perspective. His knee's functionally..., and he's 64 I think err, and his knee is at least as good as it should be, or better, in terms of what he does with it. GP I

They perceive actually getting something done about it, worse than putting up with it. GP E

The 'threshold technique' was also used as a means of directing further consultation. In this example, the threshold was used as a gatekeeping tool:

[GP E] If it ever comes to the stage where it stops you doing what you want to do, that's the time to say to me, let's have a look a bit further. Extract from Case 7

In this example, the GP appears to be using their authority to inform the patient of the circumstances when they might be 'permitted' to mention their joints again. The patient took a passive role in the consultation, indicating they were 'quite happy'. However, in the post consultation interview the patient expressed dissatisfaction with the consultation and interpreted the perceived lack of action as rationalisation of resources:

I mean, I'm, sort of, thinking, {the GP's} thinking, 'Oh, crikey, here we go, another cost to the NHS,' you know, 'we might need a knee replacement or a hip,' or whatever, erm, 'so we'll just wait till you start shouting a bit louder, that we'll actually do something about it or explore about it.' Patient 7

In the example above, the GP had said 'look a bit further'. In some instances, it was clear that the functional or symptom threshold was being described in the context of surgical referral:

[GP H] when it gets to a point where you're struggling, either with pain or with mobility or what, then we ask the orthopaedic surgeons to have a look to see what they can do. Extract from Case 12

In this example, the patient clearly thought they were at the threshold for surgery before they attended the GP. Patient 12 felt it was the GP's role to tell them when they would be ready for joint replacement, but the GP was waiting for the patient to indicate their readiness. Other patients felt they understood the level of 'threshold' and stated being clear that they would return to the GP if pain was interfering with daily life.

9.5.2 General practitioners' perceptions about OA management: the chronic disease model

In contrast to the GPs who talked about OA exclusively in biomedical terms, other GPs talked about OA management in the context of other chronic diseases, and stated the importance of patient education and self-management. For example, when asked about the GPs role in OA management, GP A answered:

Education, helping manage patients' expectations, er, and coordination of care. GP A

General practitioner M believed prevention and health promotion was important and expressed a wider approach to management than just symptom control:

So I think we need to promote more things like looking after yourself and getting exercise and keeping moving and going swimming. GP M

However, in consultation mode, GP M assumed a symptom-orientated approach based on a history of limited function; painkillers were offered to Patient 19, who actually wanted reassurance. The GP reflected on this in the post consultation interview:

I'm a fairly definite person you see, I always think okay, we've got a problem here, we've got to get a solution, how can we make things better for you? And I think maybe sometimes what I think they need is perhaps not what they need, or what they want. GP M

The implication from this quote is that GPs feel they need to 'do' something, or take action and perhaps don't value the giving of information as an equally important consultation intervention. General practitioner B talked about the 'typical' presentation of OA being someone who had reached a 'limit' of acceptable pain or restricted function, and wanted 'something done'. This therefore may not be an

uncommon assumption on the part of the GP that if patients present, they expect symptom relief. Furthermore, GP E acknowledged the importance of preventative medicine but spoke of how time in the consultation limited their ability to tackle anything else other than symptom management.

As previously stated, GPs' beliefs about their role in OA influenced their engagement with guidelines. Those who talked about a chronic disease model sometimes cited the NICE guidance, in which patient education is a core treatment. Some GPs (including GP F and H who gave explanations about OA) reported giving out information leaflets from 'patient.co.uk', but none were observed to do so in the consultations. One GP (B) offered a leaflet on joint replacement, but then was unable to locate one.

Follow up

A further example of the influence of the GP perception of their role in management was on patient follow-up. General practitioners who had a chronic disease model of management placed more importance on follow up, with GPs with a biomedical approach to management were more comfortable with the idea of follow-up being exclusively patient led. However, barriers to patient follow-up were identified. General practitioner A assumed that Patient 1 would come back for their X-Ray results when asked in interview. In the consultation, which contained talk about multiple items with frequent interruptions from the patient, follow up had not been explicitly mentioned. The patient assumed the GP had 'nothing more to say' and stated they had no intention of going back. Patient 2, who was offered follow up by GP B, talked about the practical difficulty of

organising a follow up in advance, as their practice appointment system was geared to offering same day appointments:

It's like getting past the Gestapo to see a doctor. It isn't the doctors, it's the receptionists, they're terrible, really are, yeah. Patient 2

9.5.3 Patient expectations of OA management

Patients differed in their expectations of the consultation and frequently found it hard to express what they wanted. One patient reported frequently mentioning neck and joint pain to doctors. In the video recorded consultation they received reassurance which they reported being happy with. When the patient was asked about their expectations during the interview, they eventually revealed:

You know I was asking him really is there anything I can do to sort of help me but I don't know, you know, I have to rely on what the doctor sort of comes up with and I'm not making an issue of it. Patient 6

The patient had not revealed this during the consultation, despite being asked open questions about their expectations.

Other patients described unmet information needs regarding prevention:

But I know I want my joints sorting...I suppose there's a bit of me that was thinking, 'Well, would the HRT...' because people say it's supposed to help the joints as well and maybe have another stab at, you know, whether that could be a preventative, you know, degeneration of your, your joints and that, but I don't know. Patient 7

Again, this patient did not express this in the consultation. Other patients also spoke about the need to know more about their outlook. In Case 8, the patient asked about how the new diagnosis of arthritis would affect their employment:

[Patient 8] Yeah, I'm sort of worried long term, with me continually standing and working on my feet all day.

[GP F] I can't give you a timeframe.

[Patient 8] No, I know, I'm not asking for time off or anything like that.

[GP F] No, no, not time off, a timeframe. Extract from Case 8

Some GPs stated they were uncertain about the trajectory in OA:

So I haven't got any particular knowledge to say oh this will happen, in two years' time you'll need a replacement or whatever. GP H

These examples may suggest that GPs may not feel they have the knowledge to address some patient needs regarding prognosis.

Patients differed in their need or want for information with some patients clearly prioritising symptom control over information:

It may not sound quite right this but I don't really want to know a lot - I just want to get rid of it. Patient 5

Patient 1 wanted active symptom treatment and was frustrated by an apparent lack of progress:

I suspect that Dr. {name} will send me for some more physio. In a way, I've gone round the circle, because that's where I started ... but actually it would be nice to move on and say, 'Yes, but what are you going to do about it?'

Patient 1

This patient also spoke of the frustration with further recommendations for paracetamol when they had been expecting stronger analgesia. The patient identified that they were not at the threshold for joint replacement, but were hoping for a more active approach to management. Interestingly, GP A who consulted

with patient 1 spoke in interview about how pain management could be improved with OA patients:

You can talk about what step they are on the pain ladder, like you would with asthma management, 'are they step one, two, three, whatever?' And, and having, I, I still think that's probably quite badly taught, the pain ladder. So, so, having a very clear stepwise approach, a very clear pain ladder approach, so you say, 'Yeah, they're on step three,' and everybody know what step three means, because it means different things to different people. GP A

In the consultation between GP A and Patient 1, four different issues or complaints were discussed. For each new topic, the patient changed the subject while the GP was still attending to the previous issue. General practitioner A reflected on this video consultation and the number of problems addressed:

No, I think it's pretty normal...it's quite often quite complicated...And you, kind of, almost feel like you're firefighting to balance it all. GP A

These examples demonstrate that although GPs may have a vision of 'ideal' care for OA patients, this may be difficult in practice due to either failure to elicit patient expectations, or the complexity of primary care consultations.

9.5.4 'Doing something': summary

A number of GPs held a biomedical view of management that consisted of definite actions for pain relief, which was driven by the functional status of the patient.

Some GPs holding this view described being frustrated about lack of treatment options and felt that not much could be offered. Some GPs who described placing more emphasis on patient education and self-management in interview were still

observed to assume an active, biomedical, interventionist approach to managing symptoms in consultations. Dissonance resulted when patients held un-elicited and unmet information needs, although patients were often not forthcoming about these needs in the consultation, even when asked. General practitioners may not value information giving equally with active approaches to management, such as giving prescriptions or referrals. Furthermore, GP knowledge and the complexity of the consultation may be barriers to addressing patient information needs.

Dissonance in the consultation also resulted however, when management was not perceived to be active enough.

9.6 Summary: dissonance in the osteoarthritis consultation

The methodology used in this study, incorporating study of the consultations in conjunction with patient and doctor reflections using VSR, has facilitated seeing the consultation from both patient and doctor perspectives. The sources of dissonance between patient and doctor perspectives can be summarised by looking at doctor and patient agendas in terms of *information* and *action*.

Dissonance in the consultation may be seen to result in three broad situations, and this is summarised in the schemata in Figure 11.

Figure 11: Typology of dissonance in the consultation

		Patient agenda		
		Information/ Reassurance		Action: symptom management
Doctor Agenda	Information/ Reassurance	Consonance Dissonance	potential overlap	Dissonance
		potential overlap		potential overlap
	Action: symptom management	Dissonance		Consonance Dissonance

Firstly, *lack of alignment between the GP and patient agenda* resulted in dissonance (shaded green in Figure 11). Patient expectations of the OA consultation varied significantly, with some wanting information, some being exclusively focused on symptom relief, and others desiring a combination of information and active management and so ‘one size does not fit all’.

Many GPs in interview talked about the importance of checking the patients' understanding and establishing the patients' expectations, and these are strategies that underpin GPs' training in consultation skills. In this study, GPs frequently did not elicit patients' expectations or check their understanding and sometimes followed scripts or formulaic approaches that did not enable the patient to express their needs. This phenomenon is well described in the consultation literature. A large body of research in the doctor patient consultation identifies that doctors seldom elicit patient agendas and preferences (Pollock, 2005). However, patients themselves were often not explicit about their expectations and sometimes took a passive role in the consultation. Even when GPs did elicit patient expectations, patients were not forthcoming; in interview they had sometimes been talking a while before they were able to articulate their wants or needs, suggesting that they may not have had a clear pre-consultation agenda. In consultations where consonance between GP and patient was observed, the patient was often assertive about their needs and expectations, suggesting that the directedness of the patient has a clear influence on dissonance. Patient participation in the consultation is an integral component of patient centred care and has been particularly promoted over the last two to three decades as, in part, a mechanism by which the patient may be more able to share their concerns (Little et al., 2001). Consultation interventions designed to improve doctors' elicitation of patient concerns have been shown to improve patient outcomes (anxiety and symptom resolution) suggesting a therapeutic role for the consultation itself (Stewart, 1995).

In the absence of a clear patient agenda, GPs sometimes assumed patients wanted symptom relief. Interestingly, this data also suggests GPs may feel

compelled to offer solutions and 'active' management plans and may not either recognise patient education as important, or value information giving equally to other more active interventions.

The second situation in which dissonance occurred (shaded blue), was when GP and patients agendas were broadly aligned i.e. information sought and given, but the *patient felt their symptoms were not validated*, and this might occur when the patient was reassured (when not seeking reassurance) or when symptoms were played down or normalised. General practitioners may have done this with the best of intentions, with efforts to be patient centred by avoiding use of jargon or trying to avoid upsetting the patient; lack of validation was therefore observed as an unintended consequence of reassurance. Reassurance and normalisation may also have occurred in part as attempts by a GP to 'bridge a gap' when they perceived little could be done.

Thirdly, dissonance resulted from a *lack of personalisation of advice and talk*, and this occurred most often in the context of symptom management (shaded orange). In addition to feeling advice or explanations lacked relevance, patients often failed to appreciate the reasons why they should adhere to advice, such as exercise. Patient passivity was not observed in management exchanges; on the contrary, patients often articulated doubts or queries with suggested advice during the consultation and there were episodes where these queries were incompletely addressed by the GPs who swiftly returned to their 'scripts'.

9.7 Discussion

The typology of dissonance described in 9.7 illustrates three scenarios where dissonance occurs. In this discussion, the four themes of the chapter are recapped and explored with reference to wider literature and to establish their role in the typology of dissonance.

9.7.1 Reassurance

Reassurance featured high on GPs' agendas, may have underpinned the avoidance of using the term 'osteoarthritis' and was used to account for the GPs' preference for explaining what OA isn't (inflammatory arthritis), as opposed to what it is.

Reassurance is a core component of medical practice; the intention is usually to provide a therapeutic intervention that reduces patient anxiety and restores autonomy (Buchsbaum, 1986). Donovan and Blake (2000) highlighted how reassurance is often ineffective for patients with arthritis, in their study of rheumatology consultations in secondary care. Donovan and Blake reported patients did not feel their symptoms had been adequately acknowledged, and how doctors use of terms 'mild' or 'early onset' could be problematic, misinterpreted and discordant with patients' experience. This study differs from the study reported in this thesis in that it was performed in secondary care and the consultations were broadly following a 'typical' medical model (Donovan, 1991). However, it is one of a number of studies in a range of painful conditions that report that such reassurance is ineffective (Linton et al., 2008). Donovan and Blake's study was reported in the national press at the time, with a BMA GP representative

commenting how important it is for doctors not to have a 'global, cover-all patter'⁶², suggesting that reassurance may fail, in part, because of the use of scripts. The findings in this chapter and the work by Donovan and others suggest that a key factor in the downfall of reassurance is the lack of empathy, lack of acknowledgement or validation of symptoms, and failure to elicit the patients concerns (Donovan & Blake, 2000, Dowrick et al., 2004). A blanket approach to reassurance does not connect with individual's needs and uncertainties. The importance of symptoms being validated or legitimised has been demonstrated by Ong and Hooper (2006) in their work interviewing patients and their matched health professionals; validation of symptoms emerged as central to the 'therapeutic alliance'.

The avoidance of medical labels in preference to using lay labels in gastroenteritis and tonsillitis has shown to be associated with significantly reduced perceived validation of symptoms (Ogden et al., 2003), which may contribute to negative perceptions associated with the use of 'wear and tear'. In this chapter, reasons for the possible avoidance of using the term osteoarthritis have been discussed, such as wishing to avoid distress, diagnostic uncertainty and the desire to avoid the patient adopting a 'sick role'. However, it is worthy of note that a literature concerning the sociology of diagnosis has observed a general tendency in primary care to move away from disease based codes and labels to those describing symptoms (Armstrong, 2011).

A further issue with reassurance that the findings in this chapter raise is the timing of reassurance: reassurance given too early blocks further communication and may compound a feeling of not being understood (Lau, 1989). This empirical data

⁶² <http://news.bbc.co.uk/1/hi/health/655141.stm>

also illustrates the consequences of patients receiving reassurance that has been ineffective: the patient may feel they have raised inappropriate concerns which in turn could have a negative effect on their future health seeking behaviour, be a barrier to engagement with self-management and damage the doctor patient relationship. Patients are aware of the stereotype of the patient who consults inappropriately with 'trivia' and may strive hard to be seen as a 'good' patient (Pollock, 2005).

The thin evidence base for reassurance in the management of painful conditions is recognised in addition to a need for research that distinguishes methods of reassurance from possible outcomes (Linton et al., 2008). Pincus et al (2013) recently published a review of the effect of reassurance on patient outcomes. For this systematic review, reassurance was categorised into affective reassurance, concerned with reducing worry and building rapport, and cognitive reassurance, based on changing patients' beliefs and perceptions, using a model originally described by Coia and Morley (1998). The model of affective vs cognitive reassurance suggests the two types are mutually exclusive, i.e. if a patient receives affective reassurance, they will no longer have the motivation to engage with cognitive reassurance and any necessary behaviour change.

The findings of the systematic review suggest that cognitive reassurance has a greater effect on patient outcomes, with affective reassurance associating with short term effects (and in some instances negative effects on symptom burden) (Pincus et al., 2013). Furthermore, some important components of cognitive reassurance which appear to have a beneficial effect on outcomes are outlined, including clear information on diagnosis and prognosis. However, this review does not provide sufficient evidence to substantiate the argument that affective and

cognitive reassurance are mutually exclusive; over two thirds of the identified relevant studies could not be included in the review as it was not possible to distinguish affective from cognitive components of reassurance and the authors acknowledge the possibility that the model may not represent clinical practice. Furthermore, the suggestion that affective reassurance is ineffective is not particularly in keeping with the findings in this chapter and work by others (Nelson et al., 2013a) which appear to highlight the importance of an empathetic approach. Perhaps, the step before considering the method and process of reassurance is to first identify in what circumstances reassurance is appropriate. Hitherto, the literature described in this discussion has predominantly made the assumption that the purpose of reassurance is to reduce perceived anxiety. In this study, however, patient fears were often not apparent when reassurance was given. There may be other motivations behind GPs providing reassurance. Reassurance may serve to reduce discomfort in the comforter, rather than the sufferer, by avoiding 'difficult' areas (Lau, 1989).

Reassurance may not always be targeted at reducing anxiety, and 'reassurance' that aims to change patient beliefs (cognitive) may overlap with aspects of self-management advice. Pincus et al (2013) included studies that incorporated aspects of health promotion in their review. In this instance 'reassurance' might not be the most appropriate descriptor to best reflect the intention of the therapeutic intervention.

9.7.2 Symptom normalisation

In the data presented in this chapter, both GPs and patients used language that served to normalise or play down the significance of symptoms. Normalisation was

a frequently adopted method of reassuring and this might be described as a 'no-disease' explanation (Coia & Morley, 1998). A potential problem with reassurance about the absence of a disease is that patients are left without a credible explanation for their symptoms, which in turn can lead to emotional distress (Coia & Morley, 1998). Parallels exist here in research with patients who have medically unexplained symptoms. Dowrick et al (2004) provide a typology of normalisation, whereby normalising statements are made in the absence of explanation, with ineffective explanation or with effective explanation. The typology was derived from study of audiotaped consultations, and only normalisation with effective explanation was deemed, by the researchers, to be accepted by patients. Interestingly, further quantitative research by the same group using 420 recorded consultations with patients who had unexplained symptoms, indicated that failure of the GP to show empathy (verbally) was actually much more common than normalisation of symptoms (84% and 50% respectively) (Ring et al., 2005). However, it is possible that the two behaviours are related, and normalising talk may reinforce a less empathetic style.

Salmon et al (1999) reported patients' perceptions of doctor explanations regarding medically unexplained symptoms. They classified patient responses into feelings of rejection, collusion or empowerment (Salmon et al., 1999). The patients feeling rejected reported receiving explanations about 'no disease' explanations, and this is synonymous with experiences described by participants in this study who had had normal investigation results.

Literature concerning the process of normalising symptoms also demonstrates purposes other than reassurance. Normalising statements may also serve the purpose of 'disposal', permitting the doctor to move onto another problem or end

the consultation. Interestingly, May et al (2004) differentiated between 'simple', 'chronic' and 'contained' disposal, which varied according to the nature of the chronic disease. Menorrhagia was felt to have a 'simple' biomedical endpoint to the consultation, whereas in chronic low back pain a simple outcome was not possible, resulting in 'containment' rather than disposal. The authors conclude that the doctor's capacity for empathy associates with the doctor's perception of a successful exit point in the consultation. The findings in this chapter would support this conclusion: a within case example of marked empathy with the impact of urinary incontinence on a patient (associated with simple disposal) which contrasted with little empathy for the incapacity caused to the same patient by joint pain (associated with 'containment').

Importantly, 'normalising' talk originates from both patients and doctors in the findings in this chapter and in research in depression (Burroughs et al., 2006). A further concept often associated with the process of normalising is 'collusion'. Chew-Graham et al (2004) suggest that the clinician may feel compelled to collude with the patient, for example, by reinforcing patient beliefs about absence of disease, when doctors feel ill-equipped to deal with complex medical problems, and with the aim of preserving the doctor-patient relationship at all costs. Burroughs et al (2006) describe how, in depression, both patients and doctors collude in de-medicalising symptoms of depression and favour a societal explanation that depression in later life is 'justifiable'. General practitioners are reported as constructing reasons for their avoidance of using biomedical terms around the diagnosis of depression and use of anti-depressants based on perceived (negative) patient reactions; however there is a suggestion in this paper that clinicians normalise in this way due to lack of knowledge and confidence in

managing depression. Furthermore, doctors who 'collude' with patients' own explanations of events may cause the patient to question the doctor's openness and competence (Salmon et al., 1999). Thus, collusion is an example where despite apparent consonance existing between the patient and doctor, outcomes of the consultation, including patient satisfaction and relief of symptoms, may not be optimal.

9.7.3 Personalised talk

The third circumstance in which dissonance was observed to occur, involved lack of personalisation of doctor's talk and advice. In this study, doctors were observed to be using terms subconsciously and to be following scripts or formulaic approaches to the consultation. Donovan (1991) also noted that doctors tended to use similar explanations for patients with arthritis that failed to take into account patients', often complex, lay beliefs. Other observational work has also commented on the 'standardised' nature of consultations (Sanders et al., 2008). The term 'personalised medicine' is used to describe customised healthcare and usually refers to therapeutics; however in this theme, 'personalised' has been used with reference to communication, and specifically the giving of information. Personalised communication could be considered a component of 'patient centred care'. Patient-centredness is described as a poorly understood concept but usually encompasses some attempt to 'seek an integrated understanding of the patient's world' (Stewart, 2001).

Explanations that fail to take into account lay beliefs are unlikely to result in patients adopting or adhering to recommendations or behaviour change. Exercise was a particular area where patients did not engage with standard advice to

encourage activity. General practitioners, although largely positive about promoting exercise, (contrary to other published work (Cottrell et al., 2010)) were not observed to be explaining the specific benefits of exercise or *why* exercise is important which is likely to be an important component of motivating patients to adopt a more active lifestyle. Secondly, the scripts used to promote activity failed to take into account the patient's existing levels of activity or personal attitudes and beliefs regarding exercise. Furthermore, in this study, the observed use of scripts did not facilitate joining up advice for OA with lifestyle advice for other long term conditions, which has been described as the use of 'synergies' (Bower et al., 2011); thus, comorbidity becomes a further barrier to adherence when advice for multiple conditions is not integrated. Time in the consultation may certainly be a barrier to addressing some of these issues. However, knowledge deficits may also contribute to some of the observed findings, and particularly the observation that the GPs were relying on X-Ray reports to populate their explanations. The ability to tailor a 'script' to the needs of an individual patient is likely to necessitate not only advanced consultation skills but also an in-depth understanding and knowledge of the very thing that is being explained.

The use of 'scripts' in medical consultations is not necessarily a bad thing; one might expect to find some consistencies in communication, particularly around the communication of the diagnosis. However, the findings discussed within this theme, 'reassurance' and 'symptom normalisation', highlight the lack of an agreed terminology for OA, reminiscent of a time when other common conditions were described by euphemisms, such as 'a touch of sugar' for diabetes. Cancer, heart failure and diabetes are all examples of conditions where, over the years, doctors have been observed to withhold the formal diagnostic label to avoid patient

distress. Some argue this withholding of information is interpreted as deceitful by patients, may lead to complaints about misdiagnosis and is unethical (Dunn et al., 1993). At the very least, the absence of a clear diagnostic term appears to lead to confusion and ambiguity.

9.7.4 'Doing something'

Even GPs who described a 'chronic disease' model of management were observed to be following an interventional biomedical approach to OA management in the consultation, mostly based on symptom palliation.

In the absence of a clearly defined patient agenda, doctors tended to assume patients wanted active symptom management in preference to information.

Doctors and patients have described psoriasis as another long term condition where aspects of chronic disease management such as providing information and support for self-care are lacking (Nelson et al., 2013b). Nelson et al (2013b) attribute this deficit in management to lack of knowledge and training, in addition to the absence of psoriasis indicators in the QOF. The results in this chapter which have utilised consultation observation in addition to participant interviews demonstrate that patients are also not forthcoming in their desire for self-management approaches and information.

Wagner and Groves (2002) describe chronic illness as conditions which are prevalent, degenerative and chronic; they also go on to add that any condition that results in continued healthcare encounters over time and the need to take medication and which has influence on physical and emotional health and alters behaviour, constitutes chronic illness. Osteoarthritis fits both of these descriptions of a chronic illness and yet debate exists in the literature regarding to what extent

OA constitutes 'disease'; the high prevalence of mild osteoarthritic symptoms which may not progress to a more severe condition has led to calls to avoid over-medicalising the 'so-called' disease (Dieppe & Lohmander, 2005). This view, coupled with the societal view that OA constitutes normal ageing, is inconsistent with the alternative viewpoint publicised by national guidelines that OA should be managed as a chronic disease with emphasis on prevention, information and self-management approaches. Many barriers to adoption of a chronic disease model of management have been identified, but the first, often unacknowledged barrier is recognising the condition in question as a chronic disease.

9.7.5 A biomedical model for OA

One undercutting explanation for many of the findings in this chapter is the lack of a solid biomedical model for OA in primary care. General practitioners may not have confidence in an in-depth understanding of OA that easily translates into explanations for patients; this may result in either no explanation being given or a heavy reliance on the X-Ray report for explanation content, with the X-Ray report engendering GPs' confidence. Furthermore, the observed emphasis in explanations on what OA isn't (inflammatory arthritis) may be a result of GPs naturally moving conversation to subjects they are more confident in. Similarly, lack of radiological knowledge in OA may be a simple explanation behind apparent 'down-playing' of X-Ray reports. General practitioners sometimes indicated they did not feel equipped to answer questions that touched on prognosis and outcome, so it is perhaps not surprising that there was a lack of elicitation of patients' information needs, and this may have been a subconscious or conscious move to avoid areas of uncertainty. It is interesting to note that GPs did cite diagnostic

uncertainty as the reason behind avoidance of the term 'osteoarthritis', yet most of the patients in the sample had been attributed an OA code in the medical record (Table 38). Thus, the avoidance may have been attributed not to diagnostic uncertainty, but lack of confidence in what OA means, in terms of biomedical explanations and outlook. A lack of knowledge underpinning 'normalisation' and collusion have been reported in depression, psoriasis and chronic illness generally (May et al., 2004, Burroughs et al., 2006, Nelson et al., 2013b). One GP identified knowledge needs through the course of the interview; they indicated they felt a little 'shaky' on what they hoped patients would take from their explanations. Interestingly, some GPs were clear that they did not have any knowledge needs in OA. The validity of GP's self-assessment of their own knowledge is known to be poor: they don't necessarily know what they don't know (Tracey et al., 1997).

9.8 Conclusion

Messages of reassurance and about absence of disease are often ineffective and the findings discussed illustrate how the absence of empathy and validation of symptoms are central in the resulting dissonance. Doctors may construct explanations for their behaviour, around reducing patient anxiety and managing time, but the observational findings suggest the lack of a solid biomedical model for OA (including agreed terminology to describe it) underpins the observed normalisation of symptoms and giving of reassurance. This lack of confidence in the construct of OA may also contribute to lack of empathy when the doctor feels ill-equipped and unable to reach satisfactory 'disposal'.

Dissonance often resulted from unmet educational needs. The societal view that OA is a normal change and previous writing from experts in the field suggesting avoidance of over-medicalisation acts as a barrier to OA being considered as a long term condition and to the provision and valuing of patient information.

Furthermore, patients were often not forthcoming about their consultation expectations, particularly information needs. Ironically, GP's behaviours such as offering reassurance and colluding about absence of disease, may have the intention of preserving the doctor-patient relationship, yet may exert the opposite effect. The findings also suggest that, following consultations where dissonance exists, patients may alter their future health seeking behaviour as a result (choosing not to consult regarding OA again) and be less inclined to engage in behaviour change such as increasing activity.

The difference between GP rhetoric and observed practice has significantly shaped these conclusions, and this is discussed further in the next chapter: evaluating the use of VSR methodology.

Chapter 10: Evaluation of Methods

10.1 Introduction

In this chapter, the methodology is critically reviewed to understand firstly, the limitations of the study and secondly, to establish if there are broader lessons that might further understanding of the role and utility of video-stimulated recall (VSR) as method. In discussing the role, utility and acceptability of VSR, this chapter seeks to address the second of the two research aims outlined in Chapter 1. Firstly, the influence and impact of all aspects of the research process are considered in terms of any 'Hawthorn effect': in other words, to what extent the change in environment created by the study may have altered the observed behaviours. There did appear to be a clear influence of the method on behaviours and the extent to which this effect impacts on the study conclusions is discussed. Secondly, the acceptability of the method and emergent ethical issues are discussed; although VSR was broadly acceptable, it was undoubtedly intrusive in some instances and this is explored in 10.3 and 10.4. Finally, the utility of the method is reviewed in 10.5, including the extent to which VSR was successful at eliciting multiple realities of the consultation. The VSR method resulted in subtly different added value with respect to patients and doctors. With patients, it enabled exploration of more in depth emotions and perceptions as well as empowering patients to express their views. With GPs, it allowed discussion of behaviours of which the GP had been unaware. It also moved discussion of the management of patients with OA from the abstract to the actual. For both patients and doctors, the method was useful to aid greater understanding of details of the consultation.

The findings in this chapter are based on observation, field notes, consultation and interview transcripts, and empirical quotes are used to illustrate the points within each section.

10.2 Influence of the research on the consultation

10.2.1 Influence of research on the consultation: introduction

In this section, the possible influence of the research process in altering the observed behaviours is considered; the design of the study is firstly considered, followed by a discussion of the possible influence of the video camera itself.

10.2.2 Influence of the research process on the conduct of daily surgery

10.2.2.1 Patient selection: influence of video surgery arrangements on patient booking

Patients were told on the telephone when booking appointments that it was a video recorded surgery. Receptionists also tried to, where possible, reduce the number of patients aged under 45 booked onto video recorded lists as they were ineligible for the study. In one general practice, it was apparent that a patient had been preferentially booked onto the video recorded list by a practice nurse who knew the patient wanted to consult about a musculoskeletal problem, although this booking practice was not apparent in any other practices.

Appointment slots in general practice may be 'same day', i.e. the appointment is only opened on the day so that patients ringing with acute problems can be seen quickly. Alternatively, the appointments may be booked in advance. The practices were asked to limit the number of 'same day' appointments available in each video surgery, to reduce the amount of acute illnesses and potentially increase the likelihood of chronic problems such as joint pain presenting. Most practices

accommodated this request although one kept a number of slots as 'same day', and this surgery had a number of unfilled appointment slots.

A requirement of the ethical approval was that patients should be posted a patient information sheet if their appointment was booked 48 hours in advance. One practice did not release any appointments for booking, until 48 hours prior to the day of video recorded surgery, to avoid mailing patient information sheets.

The changes to appointment booking were intended to change the make-up of a 'normal' surgery, and to increase the consultation frequency of OA, and in one example the GP reported that the surgery felt different (in this case due to the 48 hour embargo):

That's why I haven't got such a big list 'cause it's not the usual people I see at {this practice}. Probably only the lady with the – with the knee, I'm reasonably familiar with her, and it would have been a very different list, had the appointments been open longer in advance, I'm sure. GP I

However, another GP felt their practice was fairly typical:

Well, you deliberately skewed it so that I only got patients over the age of 45, didn't I? But as I'm the doctor who's been here the longest, as I'm the eldest doctor I tend to see lots of the elderly, so that was fairly typical of what I see now. GP B

10.2.2.2 Patient Behaviour: Influence of the pre-consultation questionnaire and patient information sheet.

One patient who had received the patient information sheet did report being a little confused by the information leaflet which bore the logo of Arthritis Research UK (ARUK):

Well because it had got arthritis on this letter. So I got totally confused then because I didn't know if I was going to see him ... to do with my knee or the other. Patient 11

The patient had booked an appointment for a medication review but the letter (which contained no mention of what the consultation would be about) had caused them to question this in view of the ARUK logo. This patient went on to raise OA as a fragment midway through the consultation, although she mentioned in the post-consultation interview she had intended to raise this concern anyway.

There were two instances when it was apparent that the pre-consultation questionnaire had, or may have influenced proceedings. In the first example (Case 15) the patient participant commented to ZP when completing the questionnaire that the question about joint pain had reminded them to bring up a joint-related concern they had. This patient went on to raise OA as a fragment. In the second example, Case 7, the patient stated in the opening of the consultation that they had put two problems 'on their sheet': the sheet being the pre-consultation questionnaire. After viewing the recorded consultation, the GP was asked what he thought the patient meant by this and indicated they had 'no idea'. Both Patients 7 and 15 were asked about their pre-consultation intentions in the post-consultation interview. Patient 15 confirmed the questionnaire had provoked them to raise a concern they may not have otherwise raised. Patient 7 maintained they would have discussed both issues anyway.

10.2.2.3 General practitioner behaviour: influence of length of appointment

Surgeries were booked with 'buffer' vacant slots to allow for the extra time of consenting patients and to therefore avoid delays. The total number of patients

seen per list was therefore between one and four fewer than usual. As a consequence of this, some appointments took longer than they possibly would have in a usual surgery. The mean length of consultation was 13 minutes. Case 8 was one example where the GP appeared to have a lot of time and was actively bringing up new topics for discussion. The consultation lasted 20 minutes 23 seconds. The GP reflected on this in the interview:

I may not have spent so much time on his knee maybe. Or the other way round. I would have said 'this is your cholesterol, you need to sort this out'. [ZP - so you were perhaps aware that you had slightly more time than you..?] Yeah, I was aware, yeah. This is not - I wouldn't drag on everyone like this. Especially in the fit person. GP F

This was the only example where the GP admitted taking longer than they might have done normally. There were six consultations that took fewer than ten minutes; often when watching longer consultations GPs stated they would have taken the same time in a 'normal' surgery due to the complexity of the patient's problems.

10.2.2.4 General practitioner behaviour: effect of study aim

There was one example in which the nature of the study may have influenced doctor behaviour. General practitioners were informed the focus of the study was chronic musculoskeletal problems. General practitioner K was coming to the end of his second day of video recording and expressed disappointment that there had been few musculoskeletal problems presenting in the consultations that had been video recorded. General practitioner K's last video-recorded patient presented with urinary symptoms but mentioned knee pain in their opening statement:

[Patient 16] Well I was here the other day about my knee and she gave me these {painkillers} because she said if they upset my stomach...And I don't know if it's got anything to do with it but I've been getting water infections the last couple of months and I can feel it this morning.

[GP K] You're getting it again?

[Patient 16] Yeah, I don't know if it's them or if it is a water infection.

[GP K] I'll check in a minute. Okay, how's the knee?

[Patient 16] That's not too bad. Extract from Case 16

The GP then pursued the knee pain, despite the patient subsequently indicating they did not want to discuss this further:

[GP K] Do you want to do anything about it {the knee} now or just see how it goes?

[Patient 16] No, just see how it goes.

...[GP K] I'll have a quick look at it if that's alright? Extract from Case 16

The patient thought this was odd and commented in the post-consultation interview:

Because I hadn't gone for me knee and he's, you know, he sort of went off on my water infection and onto my knee and then he was showing me the exercises and things and I thought well, I haven't come about my knee, you know, I just want to get me prescription for me antibiotics, if I need them. ...And to suddenly have someone go into all that detail and that, for something that you've not even gone for, you know, it just seemed a bit funny. Patient 16

The GP reflected, after viewing the video:

I think people see me limp and when I'm limping all the time, and I think they probably do think I've got musculoskeletal expertise. GP K

General practitioner K felt the patient's reason for attendance was 'problems with the tablets' and did not acknowledge the possible dissonance between patient and doctor agenda. General practitioner K also stated they were particularly interested in MSK problems and that they were the only doctor in the practice to offer joint injections. Thus, the focus on knee pain in this consultation may have been influenced by the doctor's natural tendency to move towards topics they were more interested in, a simple misunderstanding, or by the doctor wishing to increase the MSK content of their video recorded consultations for the benefit of the researcher.

10.2.3 Influence of video camera

The video was set up on a tripod in the corner of the room, except in two practices (with GPs A, B and C) where existing equipment meant the camera was mounted on a ceiling bracket, or on top of a tall cupboard. The field of view showed both doctor and patient, although in one instance, due to the size and shape of the room, the doctor's back faced the camera (GP F).

10.2.3.1 Influence of video camera on doctor behaviour

Patients and doctors were asked about the influence of the camera on their behaviour. General practitioners mostly reported little or no effect of the camera. Two GPs commented that they were either 'aware' or 'uncomfortable' initially, but that this wore off after '30 seconds' or the first few patients respectively (GPs J

and F). Others (GPs B, G, K and M) spoke about being aware of having to turn the video on and off:

I wasn't aware of it at all. Just the need that I needed to turn it on and turn it off at the beginning and end of the consultations. GP B

General practitioner K went further to describe how the video 'broke the entrance' of the patient:

It broke the entrance and the, because there's no way around that, we've given the card and switching it on. ... it breaks that first sort of uh sort of the first edict of sort of communicating. GP K

This was evident in some of the (non-index) video recorded consultations when GP K was seen to introduce himself more than once.

Ten GPs described little or no effect. However, three GPs did describe specific examples of how they thought their behaviour may have been different (GPs H, I and L). General practitioner L commented:

It's funny because I think it does change not necessarily what you do but perhaps how you do it.... I think because the video was on perhaps, perhaps I asked more questions....more in terms of the fact that you know you're being watched and you know there are certain sort of consultation styles and you're trying to elicit ideas and concerns, because the video's on, you kind of slip back into your GP registrar year. GP L

Other GPs were noted to be particularly eliciting ideas, concerns and expectations from patients, including GP H, who admitted:

I was perhaps trying to be a little bit more professional today. GP H

General practitioners L and H may have particularly been mindful of being 'professional' and of performing a 'model consultation': one was a GP trainer and

one divulged a bad experience with the video component of their professional exams.

General practitioner H went on to add how the video may have affected their use of time:

I was only aware of it particularly when in the first chap - he went for 20 minutes and once he'd brought something else up and I had to say look, I'm going to have to stop you there. So I would have perhaps interrupted him a little bit sooner if it was not for the video. GP H

General practitioner I mentioned during video playback that they had performed a more detailed examination (off camera) than they would have normally done.

In addition to the behaviour changes described by these three doctors, there was other evidence to suggest that behaviour may have been altered. Firstly, within the doctor post-consultation interviews there were sometimes comments which implied an effect.

General practitioner A was asked about the effect of the video and commented:

I didn't really notice it being on, to be honest, and patients didn't either, I don't think. GP A

Later on in their interview they were reflecting on a video recorded consultation (Case 1) that was disordered, with a number of topic shifts. The GP recognised the disorder:

I remember, sort of, thinking, 'Oh, no, the video's on and I've not got all these results back and I can't remember what we did', and just talking. And I want to listen, I want to be seen to listen, but I want to know what stage we're, we're coming from, and so I was, kind of, kicking myself about that.

GP A

This quote implies that the GP was perhaps more aware of the video than they had revealed or realised, and that the process of video recording was resulting in a level of anxiety or pressure during the consultation that may have altered their behaviour.

The second source of evidence to suggest that doctors' behaviour was altered was the patient interviews. Patient participants were asked if they felt their consultation would have been different without the video. Their responses are listed in Table 39, alongside the GP they consulted with, and the GPs self-reported behaviour change.

Table 39: Patient perceptions of influence of video on doctors' and their own behaviour

Doctor	Self-reported effect of video on behaviour	Patient's perceived effect of video on GP behaviour (Patient/ Case number)
A	None	None (1)
B	None - aware of turning on and off only	GP 'was more accommodating' (2)
C	None	None (4)
D	None	None (5)
E	None	More 'prepared to listen' (6) Spouse felt they may have been 'nicer', patient thought no effect (7)
F	Initially 'uncomfortable', then forgot	Possibly more 'thorough' (8)
G	None – aware of turning on and off only	None (9)(11)
H	Trying to be more professional	'Probably more time taken' (12)
I	Changed 'a bit'	None (13) 'Perhaps more obliging' (14)
J	None – initially 'aware', then forgot	None (15)
K	'Slightly' – broke entrance and exit	Felt more time given and reason for focus on joints instead of urinary symptoms (16)
L	Asked more questions, reverted to 'registrar' mode	None (17)
M	None – aware of turning on and off only	None (18)

From Table 39, it is noticeable that patients have commented on altered behaviour more frequently than doctors. Three patients were speculative about possible altered behaviour (Patients 8, 12 and 14). Patients consulting with GPs B and E reported being more convinced of a link between the video and perceived altered GP behaviour:

*He was more, he was more accommodating sort of you know, in what I wanted .You know, 'can I have these, yeah, two weeks in Jamaica or Barbados? Yes, righty-oh', you know...When I came out I did mention it to the wife how different it was. [ZP - And what did you say to your wife?]
Yeah, I said if I had asked him for a ticket to the moon he would have said first class or second class! Patient 2*

Similarly, Patient 6 was clear their consultation would have been different:

Well the answer to that is yes... because he was quite relaxed and he was quite prepared to listen to what I said...so yeah, it was probably the best sort of consultation I had with a doctor, ever. Patient 6

These examples are interesting because both doctors were quite emphatic the video had not changed their practice:

Not at all. I think, I think the published evidence is that it doesn't alter behaviour. GP E

Patient 5 thought everything was so natural that the video may not actually be on:

In fact it did cross my mind a couple of times that maybe he'd forgotten about it and it wasn't - it wasn't in fact being videoed. Patient 5

However, earlier on in the interview, the patient was comparing their visit to the same GP six weeks previously when they first presented with joint pain. When describing the second (video recorded) visit they commented:

Then on the second visit he, he actually had me up on the examination table. Patient 5

This comment implied there had been a different approach to examination in the video recorded consultation. One interpretation is that the GP performed a more thorough examination while being video recorded. However, it is also possible that

the GP moved the patient to the examination couch to avoid any examination being on camera.

Finally, there were some instances in the consultations themselves in which GPs referred to the video or the study midway through the consultation, from which one would infer those GPs were mindful of the presence of the camera. In some cases, the suggestion was that their conduct was under scrutiny:

[GP G] So, I'm being videoed, so this has got to be - have we covered everything?

[Patient 10] I think so, yes. Yes.

[GP G] I've got to get a big tick and a gold star you see. Extract from Case

10

10.2.3.2 Influence of video camera on patient behaviour

When patients were asked about the influence of the camera they tended to talk about their feelings or the GP's behaviour. Most patients said they were either unaware or had forgotten it was there, while two patients indicated they were 'aware' of it during the consultation. Three patients remarked they were conscious of not saying something 'silly' or 'stupid', suggesting their behaviour may have been modified in some way:

I just didn't want to use the wrong words or anything. Patient 13

Most of the GPs reported the patients to be unaffected by the presence of a camera:

In fact I think one guy the other morning said, 'Well, when are we starting the video?' And that was the end of the conversation. So, you know, that probably took away that bias altogether. GP C

When GPs talked about an effect on patients' behaviour⁶³, the most common observation was that patients were 'performing':

I mean you'll see one - the - the last gentleman who came in he made a joke about so right 'now, am I supposed to do a song and dance routine now?' GP D

General practitioner K felt that patients might be 'more formal':

We would have had a bit more of an informal chat and they may have led that as well because they know me and I might have said, 'how are the kids?' Some of those would have done, like that lady would have said, oh, I know you've got your back, she'll say 'how's your back?' and 'how are the kids?', because I know she's got kids the same age, but she didn't do that. GP K

General practitioner J thought the patients would be careful about their choice of language:

Maybe sometimes they'll change their language. They use better language. More...they try to be more medical. GP J

There was some evidence to support this from the patient interviews where patients reported being more careful about the words they chose.

Finally, GP I observed, in contrast to others, that video recorded consultations may be shorter in duration. They attributed this to patients raising fewer concerns in one consultation:

⁶³ The examples referred to in the GP quotes that follow were non-index cases so it was not possible to compare the patients' perceptions directly with the doctors' in these instances.

I think it affects the patients more than it affects me. I know my consultations are much quicker with the video in the room and I think mostly, people don't bring as many problems to me... 'cause they're embarrassed to trot out so many different things. No there were – there was scarcely anybody with more than two problems there this morning I wouldn't have thought. And that's really unusual. Whereas they're trotting out five or six different things very often. GP 1

10.2.4 Influence of the research process and video camera on the consultation: summary

Several aspects of the study may have influenced GPs' or patients' behaviour. The changes to the appointment and booking system led some GPs to feel that their surgeries were different and may have had a small effect on their behaviour. Study procedures such as the patient information sheet containing the ARUK logo and the patient questionnaire may have resulted in joint pain being raised more frequently, and similarly, GPs may have been more keen to pursue joint pain within the consultation. The pre-consultation questionnaire may have resulted in more items being raised, although one GP thought the effect of the video on patients resulted in fewer items being raised. Finally, longer appointments, in some instances, may have not been entirely representative of usual practice. Evidence on the effect of the camera suggests that both GPs and patients may strive to be 'better behaved', with patients reporting GPs to listen more, and be more accommodating. Both GPs and patients may have been attempting to model perceived desirable behaviour, and for GPs, this may be heavily based on criteria which are used for evaluation in GP assessments.

Despite the apparent modification in behaviour, this does not appear to have overly influenced the study findings. For instance, some GPs reported being more likely to elicit ideas and expectations, yet the findings from the study demonstrate that patient expectations were often not elicited. General practitioners expressed surprise at their behaviours indicating that they were unaware of their actions. Furthermore, GPs were frequently critical of their actions suggesting that they were not exclusively modelling 'desirable' behaviours.

10.3 Acceptability of video-stimulated recall

10.3.1 Acceptability of VSR: introduction

In Chapter 3, some of the issues that may influence consent to being video recorded and participating in the study were discussed. In this review of the acceptability of the method, the emphasis is on the experiences of those who did participate, with a particular focus on participants' responses to the video playback (VSR) component. Patient participants were shown the whole consultation, whereas GPs were sometimes shown clips if there was more than one consultation to view or if the consultation contained large chunks of talk on other subjects. Towards the end of the post-consultation interview, participants were asked about how they felt viewing the video, and about their experiences of participating. The data presented here consists mostly of the responses to these interview questions, with some additional observations or quotes from the interviews.

10.3.2 Acceptability of VSR to patients

Patients' expressed views about the acceptability of the VSR process fell under three main themes: comments concerning their portrayed image, comments about the purpose of the VSR and comments relating to affirmation. These are discussed under these subheadings below.

10.3.2.1 Portrayed image

In general, patients were positive about participating in the study, particularly when asked directly about their experience. Most patients appeared to be comfortable with viewing themselves. Some were even enthusiastic:

Oh yes, I'd love to see it. Patient 19

Many commented on their appearance, voice or mannerisms:

It reminded me of a friend that I think is a bit eccentric, and, I think I'm getting just like her! Patient 1

It was, you know, you think, 'Ooh, what, how did I sound, what did I look like?' But, yeah, it was not a problem at all, no. Patient 7

Although most appeared comfortable with viewing themselves, one patient participant subsequently reported discomfort:

Slightly embarrassed. I don't really like seeing it. I thought I wish I'd worn some better clothes, rather than just my old jeans. It was alright. Patient 18

Others were more concerned about what they had said rather than appearance. Patient 15 revealed that, although they did not feel unduly affected by the video on the day of recording, they did worry about it afterwards:

I didn't like it... The whole experience. I don't like to think that, you know, my words are taped and things, because I might say something stupid or foolish - or personal. Patient 15

This patient did, however, recognise the utility of the video; without it they commented they would not have 'recalled it at all'. A second patient also indicated they had had some anxiety between the consultation and the video, remarking straight after the video had finished:

That's all right, there's nothing in that. ... [ZP – Pardon?] There's nothing in that I would cover up is there? Patient 13

The immediacy with which the patient announced this suggested that this patient, like Patient 15, may have been left wondering, after the consultation and with the video in mind, just what they had said in the consultation.

10.3.2.2 Questioning the purpose

A number of participants considered and questioned the purpose of viewing the video. Some patients felt it was not necessary if they perceived they had good recall. Others wondered more generally about the need:

When you first said you were going to show it to me, I was thinking, oh, you know, why do you need to do that, but I had forgotten parts of it. Patient 18

Expressing uncertainty about the purpose may have been underpinned by a reluctance to view the video for other reasons, and this participant later revealed their discomfort, as evidenced by the quote in the previous section.

Two other patients asked if the video could be turned off part way through viewing their consultation:

*Is this getting us anywhere, getting me anywhere me watching this now?
[ZP Yeah, why do you say that?] Well, I know what's coming next and how long it takes and it doesn't seem important that we watch it now. Patient 2*

The second patient (17) suggested they would make a hot drink after just a few minutes of viewing. Both these patients stated that they hadn't minded being video recorded. However, one has to consider the possibility that the request to turn it off may have been due to distress watching it. Alternatively, the patients may have

found it uninteresting or been wary of time. Two other patients expressed non-interest outright:

That was boring wasn't it? Patient 14

10.3.2.3 Affirmation

Although some felt it had not contributed to their recall, there were instances where patients appeared to appreciate the confirmation that they had remembered the consultation accurately:

I listened to him more {during the video}, you know, the taking of the tablets, although I've done exactly what he did say, so I'd remembered it, so that was just confirming I was doing right. Patient 13

Patients appeared to find this confirmation encouraging, and the process of viewing the video resulted in affirmation of their ideas or beliefs. Some patients found the process of viewing the video useful to develop their thoughts on their objectives for the consultation:

I think sometimes...I think it's been good for me as well, ...I mean, watching that, watching myself, you're realising that, yes, there are certain, I have got a certain agenda, er, that I hadn't realised was there really. Patient 7

The usefulness to patients is expanded on further below in 10.5.4.

10.3.3 Acceptability of VSR to GPs

General practitioners broadly reported finding the method acceptable, although there was variation in how comfortable GPs felt in viewing their consultations. Two GPs who reported feeling embarrassed or uncomfortable did so because they

were not entirely happy with their consultation skills and possibly felt vulnerable about their practice:

Well, I felt slightly embarrassed, really. I thought...because I'm concentrating on the medical thing, and blah, blah, blah and then she's added on...{her joints} so yeah. I haven't really explored it. GP J

Ooh, it's horrible watching yourself on video, isn't it? I used a lot more medical jargon than I realised I did. GP A

The background of the interviewer was acknowledged as important in the video playback with one GP commenting that they would have felt more uncomfortable if the interviewer had had a social science background:

You're a professional, so it doesn't matter. If it's a stranger, then you worry... A social scientist would look at behavioural patterns and all that isn't it? So that would make me uncomfortable. GP F

Some GPs expressed surprise that patients were viewing the video, discussed further under 'ethical considerations', below. However, they did not consider this a bad thing:

I mean that's gotta be okay really, if I can view the video of them, they can view the video of me. They're sitting there anyway, so they should only hear and see the same things that they can see in the consultation, as long as I'm not pulling faces behind their back or anything like that. ... but I've – I've not seen that in – in practice before. GP I

Unlike patients, the GPs did not express non-interest or question the purpose of the video playback. Many acknowledged that the video was useful because it was not entirely concordant with either their described 'typical OA consultation' or their described typical behaviour:

Yeah, I completely contradicted myself. GP B

However, one GP felt the use of the video was in confirming their practice was exactly as they had described:

It would not have been as easy for me to critique my approach as decidedly as I have been able to do so because the evidence in there. So I'm telling you what I've actually done rather than what I think I've done. GP D

Two described having enjoyed the process or found it 'fun':

I think if it helps, I quite enjoyed it, it was fun. GP H

Others commented on finding the process useful and had reflected on either their practice or their management of OA, and this is discussed further in 10.5.4.

Finally, a number of GPs were planning to quote participation in the study as evidence of reflection on their practice in their appraisals.

10.3.4 Acceptability of VSR: summary

In general, the method was acceptable to participants. However, both patients and GPs reported feeling uncomfortable at times due to concern over their perceived image or behaviour. Patients reported a range of reactions to the video, including non-interest and boredom. Both GPs and patients also reported participation as useful and this is expanded on in 10.5.

10.4 Ethical considerations

10.4.1 Ethical considerations: introduction

A number of ethical issues arose over the course of the study. Some of these have already been discussed, such as the discomfort experienced by participants viewing the video, and the experience of patients having consultations that were different to usual, possibly as a result of the video. Three further areas relating to ethical considerations are explored further in this section: ethical issues arising around consent, patient and doctor distress.

10.4.2 Consent issues

Three significant issues arose within the consent process that had not been anticipated in the original study protocol. The first concerned the presence of third parties within the consultation. The consent form did not include any area for third parties to indicate their agreement, and so they were consented in the same way as patients and asked to countersign the bottom of the form, both before and after the consultation. Their consent, however, was not verified in the same way as the patient by telephone. An assumption was made that the patient participant confirmed consent for both parties in the third consent phone call. Third parties also became an issue when conducting the patient interviews in their homes. Often a spouse or partner wanted to contribute, but was asked not to as there was no provision to consent a third party for this interaction. On one occasion, a spouse wanted to view the video as they had been unable to attend the consultation. From an ethical viewpoint, the GP information did not state that the video may be viewed by the patient's spouse; however, a more pragmatic

viewpoint might be that the spouse could have easily attended the consultation and the important consent to seek would be that of the patient participant. This issue is not covered in existing GMC guidance on making recordings of patients (General Medical Council, 2002).

The second issue concerned the participating doctors' requests to have a copy of the videos. As this was not described in the study participation information leaflet, patients were asked to sign an additional standard Royal College of General Practitioners (RCGP) consent form that covered personal use by the doctor⁶⁴.

The third issue concerned the GP consent process and their awareness of the study for which they were giving consent. With patients, the consent process took between five and ten minutes and this time was necessary to verbally communicate all the aspects of study information, data storage etc. However, GPs often chose not to have this level of verbal information, stating they were aware of the study from previous presentations in practice. This appeared to reflect a pressure on time; GPs did not appear to want to waste time hearing a repeat of information they had previously heard. General practitioners who expressed this wish were clearly asked if they understood the study and had any questions. However, GPs demonstrated they were not fully aware of the study when two expressed marked surprise, in the post consultation interview, that the patients would be viewing the video. This suggests in their haste to sign up, GPs were not fully aware of the study details and illustrates the difficulties with gaining informed consent from time-pressed health professionals.

⁶⁴ Available at <http://www.rcgp.org.uk/gp-training-and-exams/mrcgp-workplace-based-assessment-wpba/~media/Files/GP-training-and-exams/WPBA/Patient-Consent-Form-for-Video-Digital-Recording.ashx>

10.4.3 Patient distress

Patient distress has been touched on in the section on acceptability, above. Some patients talked about feeling uncomfortable watching their video, during the consultation, and there was a suggestion that two participants had some anxiety between the consultation and interview about the content of what they had said on tape. In the original study ethics application, one of the questions related to the possible risks or burdens to participants. It was envisaged in the application, 'it is possible that watching the video may cause some distress for the participants'. Distress was evident in more than one patient interview. The first comment Patient 16 made after viewing was:

No, that worried me a bit, you know, when he was saying about those painkillers rot your stomach. Patient 16

It appeared that the video had prompted distress, although it was unclear whether this was due to recall of a statement the GP had made or whether the patient had not heard this statement during the consultation.

The most evident case of distress arose in the interview with Patient 19. The patient released a loud long sigh during the consultation, and commented on how they 'sometimes do this'. The GP acknowledged the remark and moved on. The patient commented on the sigh during video playback. Following the consultation, since they had commented on it, they were asked to elaborate on this. The patient indicated they sighed when they felt everything was too much and it transpired they had been feeling this way since being widowed two years previously. The participant then became very distressed over the bereavement of their spouse and the interview was terminated early as a result. Distress of this magnitude had not been anticipated prior to the study. One other patient (who declined to be

interviewed) also mentioned distress relating to bereavement, in a consultation about OA.

It is, of course, quite possible that this distress may have arisen in a non-VSR interview so it is difficult to make confident conclusions about the significance of the VSR. However, these two examples highlight how closely entwined psychological issues may be with presentations of OA, and the need for caution and sensitivity when interviewing patients, with or without VSR.

10.4.4 Doctor distress

General practitioner distress had not been particularly anticipated prior to the study. It was evident that some GPs were uncomfortable with watching themselves, but occasionally, there was other evidence of distress.

The fact that the researcher is a rheumatologist may have contributed to some distress in GPs who felt they were being tested. One GP commented they had meant to 'revise' prior to their interview aspects of rheumatology. Another hovered over ZP when the medical record review was being conducted, asking on more than once occasion if everything was alright. A further GP seemed to appear challenged in the interview; when the GP was asked if the process had facilitated any reflection they answered:

*Much more on this interaction. [ZP - Right. Can you say more about that?]
I'm, I'm trying, you know, I'm trying to understand why you're asking some of the questions. GP E*

General practitioner K talked about the potential for video to cause distress, in GPs who are already over self-critical:

I think there's a lot of pressure put on and will be put on I think with representation and revalidation...I think we all tend to think we're terrible. Well I do, perhaps it's an esteem problem ...Yeah we all feel that we've got huge gaps in our knowledge and we all fear of being exposed. I think that's it. GP K

General practitioners were observed to be criticising themselves, almost excessively. The researcher was often in the position whereby they were privy to the patient's view of the consultation and occasionally felt the need to reassure the GP by describing the patient's satisfaction with the consultation. On one occasion, an awkward situation arose when the GP then asked what the patient had said in the post consultation interview. The researcher's (ZP) experience of using VSR in an educational setting and of facilitating feedback was felt to be useful in these difficult situations with GPs, in order to refocus discussion and hopefully avoid distress.

10.4.5 Ethical issues: summary

Video-stimulated recall is an intrusive methodology and the extent to which participants may experience distress as a result of participating should not be underestimated. In particular, the potential for the method to result in distress and anxiety amongst health professionals is significant. This further underlines the need for in depth informed consent with participants, particularly with doctors who may try and rush this process.

10.5 Utility of method

10.5.1 Utility of VSR: introduction

The utility of VSR can be divided into three areas: the extent to which VSR facilitated recall, the comments made during playback and the observed change in perceptions or rhetoric after playback. These three areas are discussed individually for both doctors and patients below. Finally, in section 10.5.4 the tension between the use of VSR as an observational tool and as an interventional educational tool is discussed.

10.5.2 Video-stimulated recall with patients

Recall

Patients generally recalled the consultation very well, remembering, on some occasions, doctors' comments verbatim:

Really it's all I'm sitting here saying to you actually. Patient 11

Only two patients struggled to recall aspects of the consultation that were related to OA.

Following video playback, the immediacy of the stimulus (video recorded consultation) was useful for 'micro-recall'; in other words, enlarging on a specific part of dialogue where the patient's intentions or thoughts were not altogether clear. For example, Patient 1 was asked why they were silent after a suggestion by the GP to pursue physiotherapy. The patient answered they were thinking about a previous experience with physiotherapy they had had at a local hospital. This experience of previous healthcare encounters for arthritis was very significant

for this patient who really felt they had to fight to have their OA addressed. Other examples included asking patients what they had meant by a certain phrase, or what they were going to say when they had tailed off half way through a sentence. Thus, this 'micro recall', which is unlikely to have been possible without the video stimulus, helped to 'fill in the gaps' of the consultation and facilitated a greater understanding of events.

Comments made during playback

Patients were asked to state what they were thinking, state anything they think ZP, as researcher may not know, and make any other general comments as they wished. Patients were encouraged to stop the recording but none actually did so, preferring to comment over the top of the video. Patients commented a mean of 3.1 times during playback (with two patients not commenting). The comments have been categorised, with examples and frequencies displayed in Table 40. The most common comments were directed to the patient's appearance on video ('responding to appearance') or statements that confirmed or reiterated points that had been made in the consultation ('confirming'). Other frequent comments included 'explaining' to the researcher why something had happened, which often entailed previous medical history, and 'updating', or letting the researcher know what had happened since the consultation. Some 'updates' were not particularly significant to the study and referred to other medical problems or consultations. However, some updates did 'add value', for example by revealing the degree of concordance with recommended measures. For example, Patient 16 talked about how they had no intention of buying the glucosamine that had been recommended as it was considered too expensive.

Particularly useful comments were 'highlighting significant events' and 'reinforcing' areas of previous discussion in the consultation. These interjections allowed the patient participant to demonstrate what was important to them. On two occasions ('highlighting significant events') patients recognised a key event in the consultation that was then further explored in the interview, and may have been otherwise overlooked. The first example was of a psychological concern the patient had raised during the consultation that the GP had not responded to. In the second, the patient described not understanding the GP's continued efforts to encourage the patient to exercise. 'Reinforcing' comments were used to demonstrate or strengthen an argument or comment that had been made previously in the interview. The least frequent types of comments were patients who sought confirmation from the researcher about a statement the GP had made, and one further example where a patient expanded on an explanation they had received about causes of flares.

Occasionally the patient's behaviour, rather than verbal comments was of interest during video playback. For example, Patient 18, waved at passers-by during a long explanation provided by the GP that the patient later revealed they perceived as 'not relevant'.

Table 40: Types and frequency of comments made by patient participants during VSR

Nature of comment	Example (case number)	Case number: Frequency count of comments																			
		1	2	4	5	6	7	8	9	11	12	13	14	15	16	17	18	19	Total		
Responding to appearance on video	'I need to lose weight' (5)	1		1	1			3	2		1		1	1	1					12	
Confirming	'The exercises do help' (9)	1				1	1	1	1	1			1		1	2				2	12
Explaining and expanding	'I had this {blood pressure} done because I've had a bypass' (6)			1		1			1				2							2	7
Updating on events since the consultation	'I did as advised' (5)				1						1	3		2	1					1	9
Reinforcing an area of previous discussion in the interview	"wear and tear" – there you go!' (7)						3													1	4
Highlighting a significant event	'You can see my hesitation there' (19)														2					3	5
Seeking confirmation	'Is that right?' (6)					1						1									2
Interpreting explanations	'I think I've got bits floating around' (11)									1											1

No Comments made

No Comments made

Comments made after playback

Perhaps the most obvious influence of VSR on the interview was the observed change in narrative that patients took after the video had been watched. When patients were initially asked about the consultation, most tended to report factual events, in addition to a general level of satisfaction with the consultation. However, following video playback, some participants seemed to discuss other viewpoints. In the first example, Patient 7 initially remembered events clearly and talked about the consultation very favourably, and in a matter of fact manner:

He didn't offer anything, 'Is it, is it stopping you from doing anything?' And I said, 'No.' He said, 'Well, carry on then,' er, because maybe if they start doing any intervention it might, sort of, start affecting, what I can do, or could do, so, yeah ... it {the consultation} was very good actually. Patient 7, pre-video playback

However, following viewing the video they talked about feeling dismissed:

I mean it seemed okay, yeah. I just wished I could have been taken a bit more, erm, gone into what was the problem with my knee. Patient 7, post video playback

Patient 7 appeared to discuss the consultation in terms of concrete events prior to video playback; however, the process of viewing the video enabled the participant to view the consultation through a different lens, and comment in more depth about feelings and emotions.

In the second example, Patient 15 was very positive about their experience with the GP, and talked about how 'reassuring' they were. During video playback, when the patient raised OA as a fragment they commented:

The joints, yes. No, he didn't pick up on that, did he? Patient 15

In this example, the patient appeared to be guarded during the interview and had made comments about how they had also been careful about what they had said during the consultation. The comment about the GP's apparent failure to pick up on the joints was out of character with all other statements made about the GP which were extremely complimentary, and appeared to be said in a moment when the patient had 'let their guard down'.

Not all the patients became more critical of the doctor post VSR. In one further example, Patient 1 talked less favourably about the doctor before watching the video. Afterwards they commented:

But it did remind me that, {they} had mentioned really, an explanation, which I'd obviously dismissed at that point. Patient 1

This example suggests this patient adopted a more critical stance to their own evaluation of the consultation after viewing the video.

Patients may have multiple views or multiple perspectives on one consultation, and in addition to reporting positive views such as satisfaction with the consultation and liking the doctor, they may also equally experience other more negative emotions such as confusion, disappointment and frustration with the consultation. The patients appeared to be reluctant to criticise their GP with an 'outsider' and the video may have given them 'permission' to comment directly on observed events. There is, of course, more than one interpretation of the observed difference in views elicited after video recall. The expressed views may not have reflected what the patient thought or felt at the time of the consultation, and there was some evidence the video permitted a more critical stance on events; a more realist stance might propose that the patient had changed their viewpoints as a

result of watching the video. It is also possible the participants felt the researcher wanted to hear a more critical view of events, and altered their narrative accordingly. However, the patients were not observed to abandon the views expressed before the video; moreover, the discussion following video-playback was more layered, with multiple perspectives on the consultation being expressed.

10.5.3 Video-stimulated recall with GPs

Recall

General practitioners were not asked to recall individual consultations in the same way that patients were prior to viewing the video and frequently commented that they would be unable to remember details. As with patients, the video was used to ask about specific sections of talk ('micro-recall), for example to ask what the GP thought the patient had meant by a certain phrase etc. In Case 14, the patient said, when talking about their knee:

[Patient 14] No, I speak to people and they say 'oh, no, start messing around and things might get worse mate'. Extract from Case 14

The GP was asked what the patient meant:

He's referring to people having some sort of intervention, medical intervention. GP I

Although there was marked variation in the timing of the GP interviews, the recall and response to VSR was not seen to vary between the interviews performed on the same day and those up to a month later. The advantage of performing the interviews later was that the researcher could incorporate aspects of interest from the patient interview into discussion.

Comments made during playback

For the GPs, the format of the playback of the video during the interview varied dependent on the number of relevant patients the GPs had seen and the proportion of the consultation that was of interest. Whereas the patients were shown the whole consultation, GP video playback often was edited to skip over long sections of talk about other things, in view of the restriction on GPs' available time for interview. In contrast to patients who were asked to recall the consultation, GPs were asked to describe a 'typical' OA consultation prior to video playback. Like patients, GPs were asked to comment on anything of importance, or anything that the researcher may not know.

General practitioners commented with the same frequency as patients (mean 3 per interview) and the comments have been categorised in Table 41. Like patients, GPs responded to their appearance, although less frequently. Most frequently, they commented on events in a confirmatory manner, or explained their own behaviour. In the former category, comments were mostly identifying events as they happened, or repeating statements made by either doctor or patient. The 'explaining' statements often set the context for the consultation by either explaining the background of the patient, or the way in which the GP usually conducts a consultation. On some occasions the GPs almost appeared to be defending their conduct and were sometimes even explicit about this:

It's still quite difficult when someone comes in and sees you and you haven't seen them before, looking after this patient. So, that's my excuse for this consultation. GP B, during playback

In one interview, GP D talked at length on top of the video. Their explaining comments bordered on the instructional and may have been similar to how the GP might have guided a medical student through a video:

So what I'm trying to do here is while he is getting himself into position and - I'm continuing to do a - what I call a functional assessment, so after having got the information about his presenting symptoms I'm now trying to understand how it is impacting on his activities and daily living. GP D, during playback

Four GPs commented on their consultation skills during the video (with the remainder commenting after playback). In all but one, GPs were largely critical of their behaviour:

I should have referred her for some physio... I'm not looking for what I did well because I probably know what I do well. GP M

I mean as you can see I'm giving him plenty of space and opportunity to express himself and I haven't done this just for the video, that's my usual approach. GP D, during playback

The fifth type of comment related to the GP expressing uncertainty or doubt. This uncertainty related to the patient; local systems; their own conduct or their knowledge about osteoarthritis. The latter two were particularly of interest for the interview. For example, GP H commented on their explanation about the cause of a flare of OA:

I don't know if that's still true, but that's what we used to think. GP H

This was the only inference made in the interview that the GP made to suggest their knowledge may not be up to date; as observed with the patients, this quote

suggests the GPs were more candid and less guarded when commenting during playback.

Table 41: General practitioners comments during video playback

Nature of comment	Examples (GP)	GP: Frequency count of comments													
		A	B	C	D	E	F	G	H	I	J	K	L	M	Total
Responding to appearance on video	'I need a haircut' (I)	No Comments made		No Comments made			1			1	No Comments made				2
Interpreting or confirming events	'He's tried all the self-help things' (D)		1		5	1		1	2	2			12		
Explaining behaviour	'While he was doing all that I was reviewing his previous records to see if he had had any x-rays' (D)		2		6	2		1	1			1	13		
Commenting on consultation skills	'Putting words into her mouth there aren't I?' (L)				3	1	2						7		
Expressing doubt or uncertainty	'I don't think I really said to her that she's got arthritis' (K) 'I've no idea what that was' (H)									4		1	6		

Comments made after playback

As with patients, the influence of the video was most evident in the talk after playback. The video consultation provided a gentle way of challenging some of the comments that GPs had made in the first half of the interview. For example, two GPs who stated that they did not use the phrase 'wear and tear', then had to reflect on why they might have used the terms in the video recorded consultation. General practitioner K was observed to not give diagnoses in MSK consultations. The video clips of more than one MSK consultation were shown to evidence this, but without comment from the researcher. The GP then identified that they were not giving a diagnosis and reflected on reasons for this. They stated they were unaware of this tendency, and therefore questioning on this behaviour without the video may have been unfruitful. Sometimes difference in rhetoric and practice was apparent but not reflected on, for example the 'model scripts' for explanations of OA that were shortened in practice.

When GPs were asked to describe a typical OA presentation, all but one described a full consultation about OA. The notions of complexity and multiple problems being addressed in one consultation were largely not described in their reflections of 'typical' OA. This was another area in which discussion was enriched with examples from the video recorded consultations. Many GPs recognised the added value the VSR brought to the interview:

If you talked to any, any doctor and they'll tell you what the ideal situation is in an ideal day with no interruptions and no this and that... to have an example in real life, as in this lady here at the end, because that's, you know, that's, that's kind of more of a true reflection of what happens in a practice. GP J

Without the video, GPs often could not recall the specific patients that were being discussed and thus the video enabled a transition from talk in generic terms, to critique of specific cases. In general, GPs also talked more about events prior to playback, and offered opinions more after playback. Although GPs did proffer opinions prior to the showing of the video, these were usually on their terms, with discussion of areas of interest to them; in contrast, the subtle challenge of the video pushed them to give opinions and views on other aspects of the OA consultation. In some instances, it was clear they were forming opinions and views on aspects of OA they had not given prior consideration, for example the significance of not giving a diagnosis. This also unearthed areas where uncertainty was expressed, which was not evident in the 'standard' pre-playback phase of the interview.

10.5.4 Observation or intervention?

In Chapter 4, the method of VSR was reviewed with respect to research, as a tool to supplement other qualitative methods such as observation or (non-VSR) interviews. The method of VSR is also extensively used in education as *an interventional tool* to aid reflective practice. However, the literature on the two aspects of the use of VSR is quite separate.

In this study, there were multiple sources of evidence to suggest the method was more than observation. General practitioners and patients reported changed attitudes and planned behaviour change throughout the interviews performed after the video playback.

Firstly, GPs were often reflecting on their consultation skills:

Certainly that chap left me thinking, you know, I need to be a bit more controlling 'cause we start going over the same ground ... and giving him the same reassurance again. GP I

Yeah, for one I might slow my speed sometimes. Try to listen better. GP F

So I should video this afternoon's surgery to see whether I do things differently! ...I would be looking for those things to make sure I'm giving the patient more time to tell me actually what they're concerned about, you know, because that's because I think I'm leaping in too much. GP M

Secondly, GPs were reflecting on issues specifically to do with arthritis. Some of these were evidently a result of watching the videos; GP B reflected on their use of 'wear and tear', feeling that it may confer an element of blame. General practitioner K reflected on their explanations and diagnosis:

I didn't think I used the term arthritis, but I obviously do. I didn't use 'wear and tear' but I thought I did. Um, and I don't think I've been forceful or given them a diagnosis. I gave treatment options and trials, but not diagnosis. I didn't even discuss that with them really, which I don't know if it's right or wrong. GP K

Some reflections may have been a result of the interview process as opposed to the video component. For example, GP I commented on their need to consider the content of their explanations for OA:

Perhaps, to consider what the patient's thinking of my explanation, because I seem a little shaky as to what I think they should understand of it. GP I

It is perhaps unsurprising that GPs reflected on their consultation skills to this extent, as they are used to watching videos of their performance for this purpose. However, patients were observed to adopt a similar critical stance to their own consultation skills. A number commented that they had considered, following the interview, questions they were going to raise at their next appointment:

Probably ask, as I said, when I came out there thinking, you know, is there anything, exercise, specific exercises, for the knee that could help?

Patient 8

Some described that they would make a list in order to be better organised.

Others reflected on their role in possible disorder in the consultation. Patient 15, who raised OA as a fragment, commented:

I was taking two strands really, instead of focusing on one, wasn't I? Yeah. Perhaps I should just focus on the one. Patient 15

10.5.6 Utility of method: summary

The VSR method resulted in subtly different added value with respect to patients and doctors. With patients, the video enabled them to identify important events that the researcher may have overlooked. Their reports on the consultation moved from more factual responses to more in depth emotions and perceptions following viewing and the video may empower patients to express their views. With GPs, there were several examples when the GPs found themselves viewing behaviour which they had not reported and were unaware of, and which could then be explored. Furthermore, the videos grounded the discussions of hypothetical cases in 'real life' terms, allowing exploration of topics such as complexity in the consultation.

For both patients and doctors, the method was useful for 'micro-recall', to further understand details of talk or behaviour in the consultation. There was some evidence that patients and doctors were slightly less guarded in comments during playback than they may have been in interview. Finally, both doctors and patients adopted a more critical stance to their own narratives following viewing; as such they almost act as co-researchers as well as participants, and contribute to the interpretation and analysis of accounts.

10.6 Discussion

In this discussion, the summary points from this chapter are joined together under three headings. Firstly, is a discussion of the influence of the research process on the observed behaviours, as relevant to this study and to the use of VSR generally ('VSR: Validity'). Secondly, the acceptability and ethical issues of the method together are considered, as there is some overlap in these areas. Finally, a discussion on the utility and role of VSR is considered, particularly in how this adds to existing literature concerning the role of VSR.

10.6.1 Video-stimulated recall: validity

In this study, attempts to increase the likelihood of OA presenting (by booking patients over the age of 45 and changing the accessibility rules to appointments) may have affected the 'feel' of a normal surgery for some GPs. Patients may have mentioned joint pain with higher frequency than in 'normal' practice due to study procedures, but as the study did not set out to measure the frequency of OA consultations, this is considered a benefit, rather than a source of bias. It is possible that patients raised more items in the consultation than they might have normally done; however, evidence against this comes from the GPs in the study who confirmed that the consultations reflected usual general practice (and the GP who felt that fewer items were being raised). Furthermore, evidence from a trial that compared the number of items discussed in patients who were either asked or not asked their agenda prior to the consultation, found only a small increase in number of items discussed in the former group (mean 0.2 items more in group completing agenda form) (Middleton et al., 2006).

The effect of video on doctors' performance is difficult to establish in the absence of covert recording, although most studies that comment on this report little or no effect (Coleman, 2000). Interestingly, Arborelius et al (1990) reported that doctors were less likely to report the video had affected their behaviour after they had viewed the video.

The results in this chapter provide more robust evidence to suggest there is an influence of video on behaviour, with doctors (and patients) making efforts to adopt a 'moral code' and 'behave better', consciously or otherwise. However, an important question is to what extent this made a difference to the findings. If GPs were actively aspiring to perform exemplary consultations, based on current models of good practice used in RCGP assessments, then during analysis one might expect to see high frequencies of behaviours which feature in assessments, such as seeking patient's ideas, concerns and expectations. In fact, two GPs commented specifically on having changed this specific behaviour and the researcher observed questions regarding ideas, concerns and expectations frequently occurred. Whether the frequency of these behaviours was more or less than 'normal' cannot be commented on in the absence of a control group. However, what analysis does show is that patient's ideas, concerns and expectations were frequently not *elicited* even if the questions were more commonly asked. This is evidence that consultations with GPs on their 'best behaviour' may not be that different in content and outcome to standard, non-video recorded consultations.

There were several occasions where GPs expressed surprise at their actions or language and where the observed consultation did not match up to the hypothetical 'ideal' consultation they had described. In all but one of the GP

interviews, GPs were critical of their behaviour in some way. Furthermore, there was great variability in the findings, again evidence that GPs were not following a 'model' consultation.

These findings suggest the method was successful in unearthing subconscious behaviour, and demonstrating 'real life' and that the influence of performing for the purposes of the video was insignificant.

Influence of the researcher on findings

The influence of the characteristics of the researcher raises important methodological issues and is likely to shape the content of the responses that health professionals give, when they are interviewed by their peers (Coar & Sim, 2006). Coar and Sim (2006) and Blakeman et al (2010) also discuss the notion of 'conceptual blindness', whereby the researcher findings are dominated by their own insider view of the field. In this study, the researcher, although a doctor, was unfamiliar with primary care. Furthermore, efforts were made to overcome this risk by a reflexive stance to analysis and by involving a social scientist in this process.

10.6.2 Video-stimulated recall: acceptability and ethical considerations

Although in general, both patients and doctors reported the method to be acceptable, the idea that patients may find viewing their consultation distressing or even boring, has not been previously reported. Patients in other research in paediatrics and cancer report having an audio copy of the consultation as positive and useful (Rylance, 1992, Bruera et al., 1999).

Guillemin and Gillam (2004) draw the helpful distinction between 'procedural ethics', the ethical considerations considered for example, during an ethics

application, and 'ethics in practice', the 'ethically important moments' that emerge during the course of research. They argue that these 'ethically important moments' are unavoidable in the course of research, and what is important is the response of the researcher to both identify and respond appropriately as and when these events occur.

In this study, there was evidence that the fact that the researcher is a health professional put GP participants at ease, but also may have resulted in some of them feeling challenged. Coar and Sim (2006) suggest that a social scientist interviewer may have the advantage of not making a doctor feel they are giving the 'right or wrong' answer in an interview; however, the findings in this study suggest that GPs may prefer to conduct VSR with a peer. The relationship between GPs and researcher may be affected by characteristics other than profession, including age and gender. In this study, the researcher's background in education was felt to be beneficial for the conduct of the interview with VSR in order to respond and deal with potentially sensitive situations. However, it is not clear how successful this was. Questions by the researcher on the acceptability of the method may not have unearthed the level of true feeling about the study as participants may have been reluctant to disclose this. Future studies using this methodology may find it useful to build in an evaluation of the VSR process by a third party to evaluate the level of distress, if any, that arises as a result of participation.

In the same way as potential harm from the study may have been underestimated, so too were the potential benefits that participants might experience. The notion that doctor participants may find qualitative inquiry an educational process has been reported previously (Coar & Sim, 2006), although the ability for patients to reflect on their own consultation skills has not been previously reported.

10.6.3 Video-stimulated recall: utility

In the systematic review of the use of the method of VSR in Chapter 4, studies were generally found to lack evaluation of the method, i.e. to consider what 'added value' had been derived from using VSR as opposed to either interview or video alone. The findings from the systematic review suggested that VSR may be more beneficial in interviews with health professionals than patients. However, the findings in this chapter identify that VSR had clear advantages for enhancing understanding of both patients' and doctors' perspectives, although the 'added value' appeared to be subtly different in both groups.

In doctors, the method enabled exploration of the difference between narrative and practice, whereas with patients, the video appeared to empower patients to divulge more emotional responses to the consultation, and to facilitate elicitation of multiple perspectives on the consultation. The data collection in this study was carefully designed in order to capture multiple realities, or multiple perspectives on one consultation, from the GP and patient participants and the researcher.

However, this data demonstrated that VSR can also facilitate elicitation of multiple layers of reality within individuals. Although the elicitation of multiple individual perspectives on one consultation has been achieved without the use of VSR in a study using multiple sources of data (Barry, 2002), the findings in this chapter suggest that VSR further enables this.

Considering multiple realities using narrative analysis

The nature of the multiple realities uncovered can be considered further using the prism of narrative analysis. Narrative approaches to analysis are more commonly considered in the accounts of patients (and less so with doctors or health

professionals). Bury (2001) describes a framework for studying narratives in the context of chronic illness, whereby illness narratives fall into three types:

contingent; core and *moral* narratives. 'Contingent' narratives describe events, possibly in a temporal sequence, and consider causal explanations and 'core' narratives relate to deeper cultural meaning. 'Moral' narratives relate to how individuals place value on events within their social identity and refers to how individuals may account for, or justify, their behaviours (Bury, 2001).

In this study, one could argue that the VSR component facilitated a greater range of narratives from patients, particularly moving from 'contingent' narratives to 'core' and 'moral' accounts. Although this narrative framework was described solely in relation to patient accounts of chronic illness, the notion of the 'moral narrative' particularly fits with the responses that GPs gave in interview, justifying their actions in relation to their views of professional norms. General practitioners sometimes gave a 'moral' narrative in response to the video; however, the video also sometimes challenged previously voiced moral narrative accounts, and this contributed to a greater critical reflection by doctors on their actions, motives and beliefs.

The GP's role during video playback

In the VSR interviews with GPs, GPs appeared to default to 'education mode', and be acting as if they were being asked to either critique their own performance, or to 'educate' the researcher. This observation is likely to be due to GPs' experience with using video consultations, which will be either for teaching purposes, or experience of reflecting on their own practice, or being taught themselves. In order to elicit more information relevant to the research question, more explicit

instructions may be needed prior to video playback, with a reminder of study purpose, in order that the GP can be clear of their role.

10.7 Conclusion

In summary, the findings in this chapter suggest that both the research process and the video camera did influence proceedings, with doctors and patients possibly aspiring to demonstrate desirable behaviours. However, any influence exerted was not felt to significantly impact on the conclusions drawn about doctor and patient behaviour.

The study adds to the existing literature on VSR by describing specifically how this method enables a more critical, more specific and more in-depth response from participants to events of interest, and in doing so, generates multiple perspectives and layers of narrative. The benefits of VSR need to be considered in conjunction with the important ethical considerations and the potential for this method to be intrusive; characteristics of the researcher are likely to be important in managing this careful balance.

Chapter 11: Discussion and Conclusion

11.1 Introduction

The primary aim of the work presented in this thesis was to discover what happens in the consultation when patients present to their GP with joint pain related to OA. Furthermore, this study aimed to explore to what extent events in the consultation may influence, shape or account for the apparent variation between the 'positive' views and perspectives of OA promoted by experts and national guidelines and the more 'negative' perceptions of OA reported by patients living with the condition. The study sits within a programme of translational research, with a goal of translating best practice from research into the care of patients with OA in primary care settings. Therefore, implicit within the study aims was a need to identify the nature and characteristics of any unmet need apparent within the consultation, to which interventions could be targeted.

In this final chapter, the findings relating to the content of the OA consultation are summarised and drawn together under some key overarching themes followed by a discussion of the implications for research and practice.

11.2 Overarching themes and issues

11.2.1 One size does not fit all

Heterogeneity and complexity were strong themes throughout the analysis and these are explored in relation to the influences on consulting, the context of the consultation and the nature of the interaction.

11.2.1.1 Influences on consulting with OA

The literature review regarding influences on consulting with OA illustrated how 'influences' are complex, overlapping and interactional, and not easy to classify into any particular model. However, disrupted function and severity of pain did emerge as important triggers of consulting in patients with OA. The literature review findings also suggest that a large proportion of patients with OA do not consult GPs about their joints, but do consult frequently regarding their comorbidities.

In this study, whether OA was discussed (or pursued) did appear to be influenced in part by how doctors and patients give OA a lower priority compared to other conditions. Joint pain complaints were not uncommonly withheld by the patient during the consultation, with 5.6% of all 195 patients not disclosing joint pain after expressing intention to do so.

There was evidence to support the findings from the literature review about the importance of health beliefs; for example, holding views that OA was part of normal ageing, or perceiving a negative response from the GP were clear disincentives to consulting (in the literature review), and to pursuing further conversation on the topic (in the empirical findings).

A further influence evident from the empirical data was the consultation style of the patient and the extent to which patients were active participants in the consultation. Patients varied in the extent to which they were active in the consultation, with a spectrum of behaviours observed from down playing and normalising OA symptoms, to actively steering the topic of discussion and working hard to get their OA addressed. The variation in patient participation in the consultation appeared to be influenced in part by patient's prioritisation of their joint pain, but also by inherent consulting styles and person specific characteristics.

11.2.1.2 How osteoarthritis arises in the consultation: the context

Osteoarthritis arises in the primary care consultation in complex contexts of multi-morbidity, multiple patient agendas which are often not explicit, and against a background of GP agendas including time pressures, multiple guidelines and service requirements, including the Quality Outcomes Framework (QOF).

Patients varied enormously in their consultation preferences and their expectations of the consultation. Patients' expectations varied from specific information needs around reassurance or self-management, to expectations around active symptom management, and preferences for pharmacological or non-pharmacological treatment options. Furthermore, variation existed in the extent to which patients had crystallised their expectations and preferences prior to the consultation, with many being unsure of their wants or needs.

The extent of patient multi-morbidity was discussed in Chapter 8. In part, this contributes to multiple items being discussed in one consultation. The discussion

of multiple items is also associated with the occurrence of multiple ‘topic-shifts’ in which consultations sometimes appeared disordered.

The findings clearly paint a picture of the nature of general practice in current times: complexity, multi-morbidity, QOF targets, multiple guidelines and pressure of time all operate to make the ten minute consultation extremely challenging. The findings are consistent with another study of video recorded consultations examining content of consultations that reported multiple problems being dealt with, across a wide range of disease areas in a short time (Salisbury et al., 2013). Within this complexity, GPs need to reach a simple endpoint, or ‘disposal’; thus the GP’s agenda has to influence the shape and course of the consultation.

11.2.1.3 The nature of osteoarthritis interactions

Osteoarthritis rarely occurs as a ‘typical medical model’ consultation and most frequently presents as part of fragmented discussion about multiple topics. This is influenced both by the high prevalence of multi-morbidity and by patient expectations of being able to raise multiple items in one consultation.

The typology of OA consultations presented in Chapter 8, used two dimensions of heterogeneity (experience of OA and time spent in the consultation) to group the index cases and highlighted the occurrence of the ‘OA fragment’, a brief discussion regarding OA in a consultation about other topics. The occurrence of ‘fragments’ was shaped in part, by both doctors and patients placing a low priority on OA, and the findings in this chapter demonstrated the potential negative consequences of OA being discussed in this way; new symptoms of joint pain raised late in the consultation were unlikely to be pursued which in turn led the patient to question the value of raising OA related concerns again.

11.2.2 General practitioner and the patient: parallel universes

11.2.2.1 Dissonance and discordance

Dissonance was a strong feature of the consultations and was both observed and reported by participants. Dissonance has been used to mean a lack of alignment between GP and doctor: the 'parallel universes'. Reported dissonance needs to be treated with some caution as retrospective reports of dissonance prompted by VSR may not truly reflect participants' thoughts at the time of the consultation. However, observed dissonance was frequently supported by patient accounts. Dissonance does not translate to discordance (an active disagreement) or, necessarily, dissatisfaction, and further work is necessary to explore the impact of dissonance on consultation outcomes.

11.2.2.2 Dissonance and heterogeneity

Heterogeneity was evident in the typology of dissonance presented in Chapter 9, which demonstrated that dissonance could occur in a range of different circumstances dependent on the patient expectations of the consultation. Thus, the variation in patient wants and needs (one size not fitting all) was a key factor in resulting dissonance.

Dissonance was associated with the choice of language used by GPs. Patients varied in their preferences for explanations and choice of language; with a wide range of perceptions and meanings associated with terms such as 'wear and tear'. The heterogeneity in patients' preferences and behaviours was not apparent in the literature review of patient experiences. The variety in patients' preferences for explanations and choice of language was a key example of this; the findings from the literature review reported more negative perceptions associated with 'wear and

tear' and descriptions related to age, whereas the findings presented in this thesis reflect a wider spectrum of views, including broad acceptance of these terms. This difference may be due to the sampling methods of this study; patients volunteering to participate in research regarding OA may not be entirely representative of the population with OA as a whole, and the sampling approach used in this study may therefore have been a methodological strength in eliciting a broader range of views. Alternatively, the more negative views in the published literature may reflect publication or researcher bias.

Some of the observed dissonance was associated with normalisation of symptoms. Normalisation was associated with a lack of perceived empathy or validation, which further underpinned dissonance. A tension between 'over medicalising' OA and normalising OA exists; the tendency for symptoms to be normalised by both patients and doctors appeared to result in a lack of recognition of OA, and lack of formal diagnosis and management being given. Again, there was variation in the extent to which patients wanted a label or wanted their condition medicalised. The notion that a lack of a clear or well defined biomedical construct for OA in primary care may underpin some of this observed 'normalising' behaviour was discussed in Chapter 9.

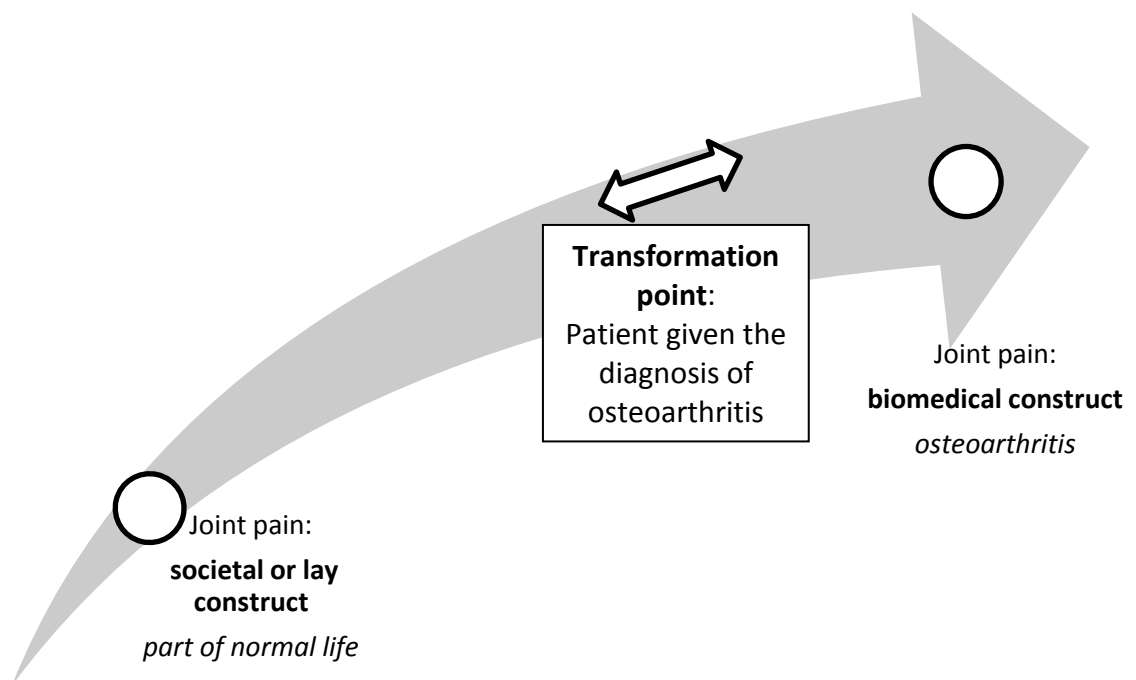
11.2.3 The identify crisis of osteoarthritis

Osteoarthritis appears to be experiencing an identity crisis, with doctors and patients uncertain, (and subconsciously so) of what constitutes OA and when to use the term 'osteoarthritis'. A spectrum of meanings attributable to osteoarthritis has been identified. At one end of the spectrum, a construct of osteoarthritis exists that is biomedical, and characterised by a defined condition or illness that results

in significant pain and disability. At the other end of the spectrum sits a syndrome of joint pain that may be considered by society, individual patients and doctors as part of normal life. Individuals who consider OA as a lay construct may also hold the more 'negative' views about OA, that few or no available treatments exist and that the condition is not modifiable.

One important challenge that this data identifies is the uncertainty amongst doctors particularly, in where to draw a metaphorical line on this spectrum and call the syndrome of joint pain 'osteoarthritis', shown as the 'transformation point' in Figure 12.

Figure 12: From joint pain to osteoarthritis: a spectrum of lay to biomedical constructs



When asked in the post-consultation interviews, GPs agreed the patients were likely to have osteoarthritis, but often had not made an explicit diagnosis or used the diagnostic term during the consultation; this appeared to be a significant barrier to instigating management. For this study, the inclusion criteria were based

on the 'working diagnosis of OA' suggested in the NICE guidance (National Institute for Health and Clinical Excellence, 2008). Although the GPs *accepted* this working diagnosis in interview, the findings suggest they were perhaps not *using* this working diagnosis themselves and possibly favouring the societal or lay construct; thus, in this study the 'transformation point' was observed to be to the right of the spectrum in Figure 12. Furthermore, a temporal dimension to the adoption of the biomedical model may exist with GPs delaying use of the label 'osteoarthritis' until the condition is more advanced and marked functional impairment exists.

The concept of OA in primary care therefore appears to be rather nebulous, and not clearly defined. In the discussion of normalisation of symptoms in Chapter 9, the notion that GPs hold the belief that OA is a normal change was discussed. However, the absence of clarity about what constitutes a clear diagnosis may also result in GPs favouring the societal or lay construct of OA. The lack of a clear biomedical construct about what OA is was also evidenced by GPs preferring to talk about absence of other conditions and sampling X-ray reports during explanations.

Arguments for and against a biomedical model of OA

Bedson et al (2004) described the arguments for and against labelling chronic knee pain 'osteoarthritis' and concluded that 'chronic knee pain' was a more desirable label, a simple model for primary care that focuses on individual pain and disability. The arguments presented *against* adopting a biomedical model include the notion that a diagnosis is not necessary to proceed to management, the difficulty with correlating the diagnostic test (X-Ray) to symptoms, diagnosis

and outcome and the potential for harm from a label that may 'misdirect patient perceptions'. Some GPs in this study, expressed the view that not medicalising OA is desirable in order to avoid disability. A further lack of incentive to medicalise the condition might be the lack of perceived effective interventions; although this view is disputed by many OA academics, the effect sizes⁶⁵ for commonly recommended treatments such as paracetamol and weight reduction are known to be low (Zhang et al., 2010). General practitioners may feel that the 'burden of treatment' is more significant than the burden of disease; May et al (2009) have described this and called for 'minimally disruptive medicine'.

This study however, raises new arguments for the adoption of a biomedical model, although further work may be needed to validate these issues. Failure to adopt a biomedical model of OA, in favour of the societal lay model may well contribute to OA being given a low priority when other multi-morbidity is being addressed, particularly if other multi-morbid conditions have clearer diagnostic criteria, clear outcomes for treatment, and if treatment is incentivised. The combination of the vagueness around what is OA and the heterogeneity in patient beliefs and expectations is likely to result in dissonance, as has been shown in this study. Furthermore, in this study, GPs who did not formally recognise the condition did not proceed to offer further management and thus the lay construct may be a barrier to interventions being offered, particularly those around patient education. This is in direct opposition to the view proposed by Bedson et al (2004) that a biomedical diagnosis was perceived unnecessary to proceed with management.

⁶⁵ Effect size refers to a measure that describes the magnitude of difference between two groups i.e. a control group and intervention group.

11.2.4 Are the findings OA specific?

Some prominent themes in the consultation analysis are unlikely to be issues with OA exclusively. Examples of these include the perceived lack of empathy, validation and personalisation in explanations, the use of scripts, and the practice of normalisation of symptoms by both GPs and patients. Literature from other Long Term Conditions (LTCs) such as psoriasis and depression has found similar issues in primary care consultations.

However, the extent to which some of the broader issues discussed in this chapter relate to other LTCs is unknown. Specifically, whether any other conditions are suffering from a lack of a clear identity is unknown and unfortunately beyond the scope of the aims of this thesis.

11.3 Comparison of findings with the literature review

Many of the specific findings in the literature review in section 2.4 have been identified in the empirical findings, such as the normalisation of symptoms, the importance of patient symptoms being validated and possible knowledge deficits among both GPs and patients. However, in the discussion and drawing together of the literature findings, the concept of 'negative attitudes' now appears overly simplistic in light of the results presented in this thesis. The findings presented highlight the important context of complexity, heterogeneity and the role of both parties in shaping consultation events, and, as previously stated, these are not evident in the literature review. In considering the limitations of the literature review, two considerations will be discussed: firstly, limitations of qualitative methodology that is based on interviews alone, and secondly, issues associated with analysis and reporting of results.

This thesis adds further weight to the well versed argument against adopting single method approaches, particularly using interviews, in qualitative research. This argument, proposed by Checkland et al (2007) and Pope and Mays (2009) among others, suggests that health professionals, in particular, may construct explanations for their behaviours during interviews which do not chime with findings from observations. The findings presented in the thesis illustrate the importance of triangulation of different data sources, in this case patient and doctor interviews with observation, to gain a full understanding of relationships between themes and to unlock the chain of events. The process of observation enables experiences to be situated in terms of context and interactions. Furthermore, the VSR component of interviews in this study appeared to enable elicitation of multiple layers of narrative in interview.

Secondly, many papers reporting qualitative research in the literature review do appear to distil findings into one or few key message(s) which may fail to take into account the complexity and multi-layer nature of the 'real world'. This may be considered desirable by authors and researchers seeking to publish in what may be viewed as biomedical journals who may have more of a positivist orientation. In the two literature reviews in Chapter 2, the process of a descriptive narrative review may have over simplified the findings. Narrative synthesis may have been a more appropriate approach to robustly integrate study findings to increase the cumulative knowledge base (Pope and Mays, 2009). However, any qualitative synthesis of literature is limited by the depth of analysis of the original studies; some qualitative research which employs thematic analysis may fail to take opportunities to look for explanations and relationships between themes (Pope and Mays, 2009).

11.4 Implications for practice

11.4.1 Implications for general practice

The empirical findings demonstrate a number of factors within the OA consultation that contribute to dissonance, including the frequent use of ineffective reassurance, lack of perceived empathy and validation of patients' symptoms, and lack of personalisation in explanations around management, in addition to a general absence of diagnosis and recognition of OA.

However, although many sources of dissonance have been identified, what has not been established is whether dissonance adversely affects patient outcomes, and further work is therefore needed to explore this. For example, would increased use of the label 'osteoarthritis' lead to improved adherence with self-management or greater patient satisfaction? Although there are areas of practice on which GPs may wish to reflect, there is insufficient evidence to identify any clear targets for intervention in individual GP practice on the basis of these findings. Furthermore, the extent of heterogeneity amongst patients highlights 'one size does not fit all'; the degree of variance in patient preferences, consulting styles and patient beliefs reinforces the need for any future interventions that are developed and targeted at consultations to be extremely flexible.

The other findings on which GP trainers and those involved with education may wish to reflect are the more generic findings regarding multi-morbidity and consultation skills. For example, the findings that management of multi-morbidity within the consultation does not appear to be joined up and the frequency with which attempts to elicit expectations or check for understanding are unsuccessful.

Again, this research presents no solutions but does highlight potential targets for further work and challenges for those working in GP education.

11.4.2 Implications for patients

The findings in this thesis do illustrate how it ‘takes two to tango’, and how the outcomes of the consultation are equally shaped by both patients and GPs, a further finding that was more evident in the empirical work than the literature review. As with GPs, there can be no evidence based recommendations for patients based on these findings as this work is not experimental, and identifies issues rather than demonstrating beneficial effects of interventions. However, patients may wish to reflect on some of the observed findings. Specifically, behaviours which serve to prioritise joint pain and clarify expectations of the consultation might be suggested. Arthritis Research UK’s website includes ‘top tips for getting the most out of a consultation’⁶⁶, and this study’s findings would add weight to recommendations such as:

- prioritising joint pain, and not expecting joint pain to be addressed after discussion of other problems
- thinking about questions, concerns and expectations prior to the appointment, and ensure these are voiced during the appointment

In view of the findings relating to multi-morbidity, patients could also be encouraged to ask questions about how any suggested advice or medication would impact on other comorbid conditions or treatment.

⁶⁶ Top tips to get the most out of your consultation. <http://www.arthritisresearchuk.org/arthritis-information/arthritis-today-magazine/143-winter-2009/your-ten-minute-knee-consultation-starts-here.aspx>

11.4.3 Implications for academic osteoarthritis community

Perhaps the clearer implications are for guideline and policy makers, and for the academic OA community. Existing recommendations and practice may not adequately empower GPs to make a clear and confident diagnosis of OA.

Historically, there have been varying messages from those in the OA community about the pros and cons of labelling osteoarthritis or treating the syndrome, and thus favouring the societal lay construct of OA (Dieppe & Lohmander, 2005, Bedson et al., 2004).

More recently, the 'working diagnosis' of osteoarthritis favoured by the NICE guidance has suggested casting a more open net of diagnosis (National Institute for Health and Clinical Excellence, 2008); these diagnostic criteria may be considered pragmatic, and represent a simpler alternative to more detailed region specific diagnostic criteria such as those for the hip and knee. However, three potential barriers to diagnosis have been identified and are discussed below; the first two of which relate to difficulties with the implementation of the 'working diagnosis' recommendation.

Increasing the burden of OA

Firstly, and perhaps most importantly, the nature of the clinical working diagnosis is that a large number of patients will fulfil the working diagnosis. In the spectrum of OA presented in Figure 12, this means that the 'transformation point' from societal construct of OA to biochemical construct is shifted left, with almost all patients meeting the criteria for OA. What are the implications of this? One implication is that patients will be formally diagnosed *earlier*. General practitioners might then adopt more of a health promotion role and identify and treat risk of OA progression rather than disabling symptoms. However, this study suggests GPs

may not have the knowledge about OA outcomes and prognosis to facilitate this. They may also feel that opportunities for health promotion are few in a time pressured consultation.

One part of the GP's role is to act as a gatekeeper for access to further limited resources. There are no apparent incentives (e.g. QOF standards) to increasing identification of the numbers of people diagnosed with OA, particularly if GPs feel the range of treatments is limited. The societal construct of OA is a considerable barrier to GPs medicalising the condition and giving a diagnosis; the findings from this study suggest this relates predominantly to patients' lower prioritisation and late presentation of joint pain although it is also possible they may even challenge a 'medical' diagnosis of osteoarthritis.

Awareness of guidelines

Secondly, awareness of the diagnostic criteria and the guidelines was generally low in this sample. Most GPs reported not looking at the guidelines as they perceived there was little new in OA management. Therefore, where guidelines contain messages about *diagnosis* this may need further publicity. General practitioners also may not feel they need guidance on diagnosis.

Language of X-Ray reports

A further barrier to diagnosis might be the language of X-Ray reports. In this study the use of X-Rays appeared to give GPs more confidence to diagnose OA, yet their use is not routinely recommended in the NICE guidance. When X-Rays are requested, in the UK, X-Ray reports tend not to use the term osteoarthritis, in favour of descriptors about degenerative change. The avoidance of the term osteoarthritis in X-Ray reports reflects current knowledge that X-ray changes of OA do not correlate well with symptoms and thus *clinical*, rather than radiological,

features of osteoarthritis are important in making the diagnosis. However, the use of different terminology in X-ray reports may act as a further barrier to reaching and giving a diagnosis of osteoarthritis, with evidence in this study that 'mild' or 'moderate' degenerative change may not be joined up with clinical findings in reaching a diagnosis.

In summary, a series of factors act as barriers to the *recognition* of OA, including:

- the 'societal construct' of OA, which suggests it is part of normal life
- lack of incentives to diagnose
- limited resources
- perceived lack of benefit from interventions
- lack of awareness of diagnostic criteria
- lack of awareness of prognosis
- interpretation of language in radiology reports

In order to be treated, this study suggests OA needs first to be recognised and diagnosed. If adherence to treatment recommendations is going to be improved, these barriers to diagnosis need to be addressed first. Future work might usefully consider how best to support GPs in making and giving effective diagnoses; suggested interventions are likely to necessitate further research and are discussed in the following section.

11.5 Implications for further research

This thesis raises several issues worthy of further research. Some issues, although significant, are complex to evaluate, for example, the role of empathy and validation of symptoms in patients' pain, and adherence to treatment. Other emergent issues of interest are peripheral to osteoarthritis, such as the extent to which the findings are replicated in other long term conditions.

For this reason, the focus in this section is on four important major research questions which are considered of high impact for patients with OA and for which clear methods could be designed. The first two address the first barrier to OA being diagnosed listed and described in 11.2.3: the dominance of the societal or lay construct of OA. The third issue concerns the complexity of consultations where OA is discussed in the context of other Long Term Conditions (LTCs), and finally optimal methods of health care delivery are considered.

11.5.1 Should primary care adopt a more biomedical model of OA?

This study identified that the diagnosis of osteoarthritis was frequently not given, in favour of adoption of a societal or lay construct of OA. Thus, this first question for further research concerns the spectrum of OA constructs shown in Figure 12, and essentially asks 'does it matter if a large proportion of the population hold a societal view of OA, with the 'transformation point' existing to the right of the scale?'

In order to answer this, firstly, work is needed to demonstrate if holding a 'lay' construct view of OA is associated with poorer outcomes. This could be evaluated by looking at cohorts of patients with osteoarthritis and evaluating to what extent

health beliefs associated with the 'lay construct' predict long term OA outcomes such as pain and disability. Examples of health beliefs related to the lay construct would include believing that OA is part of normal life and a condition for which little can be done. Benhamou et al (2013) have produced and validated a questionnaire (The Knee Osteoarthritis Fears and Beliefs Questionnaire (KOFBeQ)) to evaluate fears and beliefs about knee OA which encompass a number of the beliefs that one might attribute with the lay or societal construct, such as belief that the condition is unmodifiable, that physicians are unlikely to be interested and do not have much to offer. The KOFBeQ has not yet been used in any cohort studies. Hill et al (2007) evaluated illness perceptions of participants with self-diagnosed hand OA, and in this cross-sectional study, holding the belief that treatment could improve the condition was associated with increased medication use and visits to a GP. However, a cohort design is needed to determine causal relationships between health beliefs and outcomes.

Related to this issue is the further question about whether being given a clear diagnosis, explanation and patient information improves outcomes. In order to establish the acceptability and impact on patient outcomes of being given a formal diagnosis, either a pre-post design or a cluster randomised trial methodology could be used. In the latter design, GP practices could be randomised to receive training relating to detection and diagnosis of osteoarthritis, in addition to communication of the diagnosis. Within such a study, a linked qualitative study could explore the acceptability of the term 'osteoarthritis' and impact of receiving a diagnosis. Similar work in the area of depression has demonstrated that a training package for GPs aimed at increasing detection and diagnosis of depression resulted in improved outcomes for patients (Tiemens et al., 1999).

11.5.2 Is there a role for a publicity campaign about OA?

The findings in this thesis, from the literature review to the empirical findings, have demonstrated the dominance of the societal lay construct of OA. In the presence of evidence to suggest that primary care should adopt a more biomedical model of OA to improve outcomes, a multi-media publicity campaign may be called for in order to change both public and healthcare professionals' perceptions of OA. In Australia, a targeted campaign of television advertising designed to modify sufferers and health professionals' beliefs regarding low back pain was found to be successful in both changing beliefs and reducing economic costs associated with medical claims for back pain (Buchbinder et al., 2001). The foundation for this study was evidence that a) negative beliefs regarding back pain were associated with poorer outcomes and b) that information in the form of the 'back book' improved outcomes. Both of these aspects (discussed in 11.4.1) would be necessary to justify a similar campaign in OA. As in the study by Buchbinder et al, effectiveness of any campaign could be evaluated by surveying attitudes and beliefs and economic evaluation might be achieved by work absence figures.

11.5.3 Can patient targeted interventions improve outcomes of complex consultations with patients with OA and other LTCs?

In this study, it was evident that multi-morbidity was extremely common, and that this influenced the consultation. Osteoarthritis was sometimes given less priority than other comorbid conditions and multi-morbid conditions were generally dealt with in isolation rather than in a 'joined up' way. In some consultations where multiple items were discussed, discussion on OA took little time and few consultation interventions occurred. Further work is needed to identify the impact

of the dissonance identified in the consultation outcomes of patients with OA in conjunction with multiple long term conditions.

The problem of multi-morbidity and complexity in primary care is significant and other researchers have considered ways of enhancing the consultation for patients with complex LTCs. One possible solution is relatively simple: giving patients more time, and increased consultation length has been associated with increased levels of patient enablement (Mercer et al., 2007).

This study also raises the question about whether patient-based interventions might enhance consultation outcomes. The surprising finding that patients reflected on their consultation skills during video recall leads one to question whether consultation skills training might be useful for patients with multiple LTCs. In this study, patients frequently had not crystallised their expectations prior to consulting, and therefore the provision of a paper or electronic based decision aid prior to the consultation might be useful in clarifying priorities and expectations. Furthermore, the simple intervention that occurs in many practices of asking patients to only consult on one item at a time has not been formally evaluated and therefore further studies could explore the impact of restricting the number of concerns patients are permitted to raise. Consultation interventions such as these described might be evaluated by measuring outcomes such as satisfaction, enablement and self-efficacy.

11.5.4 What is the best model of care for patients with osteoarthritis presenting in primary care?

Finally, alternative models of delivery of primary care to patients with osteoarthritis need to be considered. The findings in this thesis demonstrate the huge demands

on time facing GPs, and the various challenges primary care faces have led to calls for innovation and new models of care from policy makers (Smith et al., 2013). One reconfiguration might involve the incorporation of OA into the QOF; however, in the absence of clear measurable clinical outcomes and the increasing burden of other long term condition standards, alternative options are desirable. Alternative models of healthcare delivery are already being evaluated, including the use of practice nurses to deliver support for self-management⁶⁷.

Physiotherapists could also be the first line point of contact for patients with OA, in line with recent policy to make access to physiotherapy open (Department of Health, 2008). In order to evaluate the efficacy of such an intervention, a cluster randomised control trial design could be again used, as in the MOSAICS example, and outcome measures could include measures of self-efficacy, satisfaction, pain and disability.

⁶⁷⁶⁷ The MOSAICS trial <http://public.ukcrn.org.uk/Search/StudyDetail.aspx?StudyID=10104>

11.6 Conclusion

This study set out to explore what happens when patients present to their GP with osteoarthritis. The findings have demonstrated considerable heterogeneity among OA patients and the significance of the societal lay construct of OA as a normal part of life which influences doctor and patient behaviour and acts as a significant barrier to formal recognition and subsequent treatment of the condition. Further work is needed to establish whether primary care should adopt a more biomedical construct of OA, the need for public health messages regarding OA and optimal models of primary care for these patients.

References

- Adler, P.A. & Adler, P. (1998). Observational techniques. In: Denzin, N.K. & Lincoln, Y.S. (eds.)
Collecting and interpreting qualitative materials. California: Sage.
- Alami, S., Boutron, I., Desjeux, D., Hirschhorn, M., Meric, G., Rannou, F. & Poiraudou, S. (2011).
Patients' and practitioners' views of knee osteoarthritis and its management: a qualitative
interview study. *Plos One*. 6 (5): e19634.
- Ali, N., Atkin, K. & Neal, R. (2006). The role of culture in the general practice consultation process.
Ethnicity & Health. 11 (4): 389-408.
- Als, A.B. (1997). The desk-top computer as a magic box: patterns of behaviour connected with the
desk-top computer; GPs' and patients' perceptions. *Family Practice*. 14 (1): 17-23.
- Andersen, R. & Newman, J.F. (1973). Societal and individual determinants of medical care
utilization in the United States. *The Milbank Memorial Fund quarterly. Health and Society*. 51
(1): 95-124.
- Arborelius, E. & Bremberg, S. (1992). What does a human relationship with the doctor mean?.
Scandinavian Journal of Primary Health Care. 10 (3): 163-169.
- Arborelius, E. & Bremberg, S. (1994). Prevention in practice - how do general-practitioners discuss
life-style issues with their patients. *Patient Education and Counseling*. 23 (1): 23-31.
- Arborelius, E. & Timpka, T. (1990). In what way may videotapes be used to get significant
information about the patient-physician relationship? *Medical Teacher*. 12 (2): 197-208.
- Arborelius, E. & Timpka, T. (1990a). General practitioners' comments on video recorded
consultations as an aid to understanding the doctor-patient relationship. *Family Practice*. 7 (2):
84.
- Arborelius, E. & Timpka, T. (1990b). In what way may videotapes be used to get significant
information about the patient-physician relationship? *Medical Teacher*. 12 (2): 197-208.
- Arborelius, E. & Timpka, T. (1991). Comparison of patients' and doctors' comments on video-
recorded consultations. *Scandinavian journal of primary health care*. 9 (2): 71-77.
- Arborelius, E., Bremberg, S. & Timpka, T. (1991). What is going on when the general practitioner
doesn't grasp the situation? *Family Practice*. 8 (1): 3.
- Arborelius, E., Timpka, T. & Nyce, J.M. (1992). Patients comment on video-recorded consultations-
-the "good" GP and the "bad". *Scandinavian Journal of Social Medicine*. 20 (4): 213-216.

- Armstrong, D. (2011). Diagnosis and nosology in primary care. *Social Science & Medicine*. 73 (6): 801-807.
- Arthritis Care (2004). *OA Nation*. London: Arthritis Care. Available at: www.arthritiscare.org.uk/OANation. [Accessed: 07/01/2010].
- Arthritis Care (2012). *OA Nation*. London: Arthritis Care.
- Arthritis Research UK, (2013). *Osteoarthritis in general practice: data and perspectives*. Chesterfield: Arthritis Research UK.
- ARUKPCC, (2009). *Musculoskeletal Matters Bulletin No 1: What do general practitioners see?* Keele University.
- Avis, M. (2005). Is there an epistemology for qualitative research? In: Holloway, I. (ed.) *Qualitative research in health care*. Maidenhead: Open University Press.
- Bailey, J.V. (2008). Could patients' coughing have communicative significance? *Communication & Medicine*. 5 (2): 105-115.
- Balint, M. (1957). *The doctor, his patient and the illness*. London: International Universities Press.
- Barnett, K., Mercer, S.W., Norbury, M.I., Watt, G., Wyke, S. & Guthrie, B. (2012). Epidemiology of multi-morbidity and implications for health care, research, and medical education: a cross-sectional study. *The Lancet*. 380 (9836): 37-43.
- Barry, C.A. (2002). Multiple realities in a study of medical consultations. *Qualitative Health Research*. 12 (8): 1093-1111.
- Barry, C.A., Bradley, C.P., Britten, N., Stevenson, F.A. & Barber, N. (2000). Patients' unvoiced agendas in general practice consultations: qualitative study. *British Medical Journal*. 320 (7244): 1246-1250.
- Barry, C.A., Stevenson, F.A., Britten, N., Barber, N. & Bradley, C.P. (2001). Giving voice to the lifeworld. More humane, more effective medical care? A qualitative study of doctor-patient communication in general practice. *Social Science & Medicine*. 53 (4): 487-505.
- Bayliss, E.A., Edwards, A.E., Steiner, J.F. & Main, D.S. (2008). Processes of care desired by elderly patients with multi-morbidities. *Family Practice*. 25 (4): 287-293.
- Bedson, J., Jordan, K. & Croft, P. (2005). The prevalence and history of knee osteoarthritis in general practice: a case-control study. *Family Practice*. 22 (1): 103-108.

- Bedson, J., McCarney, R. & Croft, P. (2004). Labelling chronic illness in primary care: a good or a bad thing? *The British Journal of General Practice*. 54 (509): 932-938.
- Bedson, J., Mottram, S., Thomas, E. & Peat, G. (2007). Knee pain and osteoarthritis in the general population: what influences patients to consult? *Family Practice*. 24 (5): 443-453.
- Benhamou, M., Baron, G., Dalichampt, M., Boutron, I., Alami, S., Rannou, F., Ravaud, P. & Poiraudou, S. (2013). Development and validation of a questionnaire assessing fears and beliefs of patients with knee osteoarthritis: the Knee Osteoarthritis Fears and Beliefs Questionnaire (KOFBeQ). *PloS One*. 8 (1): e53886.
- Bensing, J.M., Tromp, F., van Dulmen, S., van den Brink-Muinen, A., Verheul, W. & Schellevis, F.G. (2006). Shifts in doctor-patient communication between 1986 and 2002: a study of videotaped general practice consultations with hypertension patients. *BMC Family Practice*. 7 (1): 1-7.
- Bickerton, J., Procter, S., Johnson, B. & Medina, A. (2011). Socio-phenomenology and conversation analysis: Interpreting video lifeworld healthcare interactions. *Nursing Philosophy*. 12 (4): 271-281.
- Birmingham Research Unit (2007). *Weekly Returns Service Annual Prevalence Report*. London: Royal College of General Practitioners.
- Birrell, F. et al. (2011). Osteoarthritis: pathogenesis and prospects for treatment. *Arthritis Research UK Topical Reviews*. [Online] 6 (10). 07/07/2014-<http://www.arthritisresearchuk.org/health-professionals-and-students/reports/topical-reviews/topical-reviews-autumn-2011.aspx>.
- Blakeman, T., Bower, P., Reeves, D. & Chew-Graham, C. (2010). Bringing self-management into clinical view: a qualitative study of long-term condition management in primary care consultations. *Chronic Illness*. 6 (2): 136-150.
- Blakeman, T., Chew-Graham, C., Reeves, D., Rogers, A. & Bower, P. (2011). The Quality and Outcomes Framework and self-management dialogue in primary care consultations: a qualitative study. *British Journal of General Practice*. 61 (591): 624-625.
- Block, M.R., Schaffner, K.F. & Coulehan, J.L. (1985). Ethical problems of recording physician-patient interactions in family practice settings. *The Journal of Family Practice*. 21 (6): 467-472.
- Bodenheimer, T., Wagner, E.H. & Grumbach, K. (2002). Improving primary care for patients with chronic illness. *JAMA*. 288 : 1775-1779.

- Bower, P., Macdonald, W., Harkness, E., Gask, L., Kendrick, T., Valderas, J.M., Dickens, C., Blakeman, T. & Sibbald, B. (2011). Multi-morbidity, service organization and clinical decision making in primary care: a qualitative study. *Family Practice*. 28 (5): 579-587.
- Brand, C.A., Ackerman, I.N., Bohensky, M.A. & Bennell, K.L. (2013). Chronic disease management: a review of current performance across quality of care domains and opportunities for improving osteoarthritis care. *Rheumatic Disease Clinics of North America*. 39 (1): 123-143.
- Bruera, E., Pituskin, E., Calder, K., Neumann, C.M. & Hanson, J. (1999). The addition of an audiocassette recording of a consultation to written recommendations for patients with advanced cancer. *Cancer*. 86 (11): 2420-2425.
- Bryman, A. (2001). *Social research methods*. Oxford: Oxford University Press.
- Buchbinder, R., Jolley, D. & Wyatt, M. (2001). Population based intervention to change back pain beliefs and disability: three part evaluation. *British Medical Journal*. 322 (7301): 1516-1520.
- Buchsbaum, D.G. (1986). Reassurance reconsidered. *Social Science & Medicine*. 23 (4): 423-427.
- Bugge, C., Entwistle, V.A. & Watt, I.S. (2006). The significance for decision-making of information that is not exchanged by patients and health professionals during consultations. *Social Science & Medicine*. 63 (8): 2065-2078.
- Burroughs, H., Lovell, K., Morley, M., Baldwin, R., Burns, A. & Chew-Graham, C. (2006). 'Justifiable depression': how primary care professionals and patients view late-life depression? A qualitative study. *Family Practice*. 23 (3): 369-377.
- Bury, M. (2001). Illness narratives: fact or fiction? *Sociology of Health & Illness*. 23 (3): 263-285.
- Busby, H., Williams, G. & Rogers, A. (1997). 3. Bodies of knowledge: lay and biomedical understandings of musculoskeletal disorders. *Sociology of Health & Illness*. 19 (19B): 79-99.
- Byrne, P.S. & Long, P.E.L. (1976). *Doctors talking to Patients*. London: HMSO.
- Campion, P. & Langdon, M. (2004). Achieving multiple topic shifts in primary care medical consultations: a conversation analysis study in UK general practice. *Sociology of Health & Illness*. 26 (1): 81-101.
- Cegala, D.J., McNeilis, K.S., McGee, D.S. & Jonas, A.P. (1995). A study of doctors' and patients' perceptions of information processing and communication competence during the medical interview. *Health Communication*. 7 (3): 179-203.

- Charmaz, K. (2008). Constructionism and the grounded theory method. *Handbook of constructionist research*. London: Sage: 397-412.
- Checkland, K., Harrison, S. & Marshall, M. (2007). Is the metaphor of 'barriers to change' useful in understanding implementation? Evidence from general medical practice. *Journal of Health Services Research Policy*. 12 (2): 95-100.
- Checkland, K., Harrison, S., McDonald, R., Grant, S., Campbell, S. & Guthrie, B. (2008). Biomedicine, holism and general medical practice: responses to the 2004 General Practitioner contract. *Sociology of Health & Illness*. 30 (5): 788-803.
- Checkland, K., McDonald, R. & Harrison, S. (2007). Ticking boxes and changing the social world: Data collection and the new UK general practice contract. *Social Policy & Administration*. 41 (7): 693-710.
- Chevalier, X., Marre, J.P., de Butler, J. & Hercek, A. (2004). Questionnaire survey of management and prescription of general practitioners in knee osteoarthritis: a comparison with 2000 EULAR recommendations. *Clinical and Experimental Rheumatology*. 22 (2): 205-212.
- Chew-Graham, C.A., May, C.R. & Roland, M.O. (2004). The harmful consequences of elevating the doctor-patient relationship to be a primary goal of the general practice consultation. *Family Practice*. 21 (3): 229-231.
- Coar, L. & Sim, J. (2006). Interviewing one's peers: methodological issues in a study of health professionals. *Scandinavian Journal of Primary Health Care*. 24 (4): 251-256.
- Coar, L. 2004. General practitioners' understanding and perceptions of osteoarthritis: an exploratory study, MPhil Thesis. Keele University.
- Coia, P. & Morley, S. (1998). Medical reassurance and patients' responses. *Journal of Psychosomatic Research*. 45 (5): 377-386.
- Coleman, T. & Murphy, E. (1999). Combining qualitative interviews with video-recorded consultations: Gaining insight into GPs' decision-making. *Family Practice*. 16 (2): 173-178.
- Coleman, T. (1996). Sampling for qualitative research using quantitative methods. 2. Characteristics of GPs who agree to video-taping of consultations. *Family Practice*. 13 (6): 531-535.
- Coleman, T. (2000). Using video-recorded consultations for research in primary care: advantages and limitations. *Family Practice*. 17 (5): 422-427.

- Coleman, T., Murphy, E. & Cheater, F. (2000a). Factors influencing discussion of smoking between general practitioners and patients who smoke: a qualitative study. *The British Journal of General Practice*. 50 (452): 207-210.
- Coleman, T., Stevenson, K. & Wilson, A. (2000b). Using content analysis of video-recorded consultations to identify smokers' "readiness" and "resistance" towards stopping smoking. *Patient Education and Counseling*. 41 (3): 305-311.
- Collins, S., Britten, N., Ruusuvuori, J. & Thompson, A. (2007). Understanding the process of patient participation. In *Patient participation in health care consultations: Qualitative perspectives*. Maidenhead: Open University Press : 3-21.
- Cottrell, E., Roddy, E. & Foster, N.E. (2010). The attitudes, beliefs and behaviours of GPs regarding exercise for chronic knee pain: a systematic review. *BMC Family Practice*. 11: 4.
- Coxon, D.E., Frischer, M., Jordan, K.P., Jinks, C. & Peat, G. (2012). Deciding to consult the general practitioner for symptomatic osteoarthritis: A choice based conjoint analysis study. *Rheumatology*. 51 (Suppl 3): ii37.
- Creswell, J. (2007). *Qualitative Inquiry and research design: choosing among five approaches*. 2nd Edn. California: Sage.
- Critical Appraisal Skills Programme Collaboration, (2006). 10 questions to help you make sense of qualitative research. Available from: <http://www.sph.nhs.uk/sph-files/casp-appraisal-tools/Qualitative%20Appraisal%20Tool.pdf/view>.
- Cromarty, I. (1996). What do patients think about during their consultations? A qualitative study. *The British Journal of General Practice*. 46 (410): 525.
- Cronan, T.A., Shaw, W.S., Gallagher, R.A. & Weisman, M. (1995). Predicting health care use among older osteoarthritis patients in an HMO. *Arthritis & Rheumatism*. 8 (2): 66-72.
- Davis, G.C., Hiemenz, M.L. & White, T.L. (2004). Barriers to managing chronic pain of older adults with arthritis. *Journal of Nursing Scholarship*. 34 (2): 121-126.
- De Bock, G.H., Kaptein, A.A. & Mulder, J.D. (1992). Dutch general practitioners' management of patients with distal osteoarthritic symptoms. *Scandinavian Journal of Primary Health Care*. 10 (1): 42-46.
- Department of Health (2008). *Self-referral pilots to musculoskeletal physiotherapy and the implications for improving access to other AHP services*. London: Department of Health.

- Dieppe, P., Basler, H., Chard, J., Croft, P., Dixon, J., Hurley, M., Lohmander, S. & Raspe, H. (1999). Knee replacement surgery for osteoarthritis: effectiveness, practice variations, indications and possible determinants of utilization. *Rheumatology*. 38 (1): 73-83.
- Dieppe, P.A. & Lohmander, L.S. (2005). Pathogenesis and management of pain in osteoarthritis. *The Lancet*. 365 (9463): 965-973.
- Donovan, J. (1991). Patient education and the consultation: the importance of lay beliefs. *Annals of the Rheumatic Diseases*. 50 Suppl 3 : 418-421.
- Donovan, J.L. & Blake, D.R. (2000). Qualitative study of interpretation of reassurance among patients attending rheumatology clinics: "just a touch of arthritis, doctor?". *British Medical Journal*. 320 (7234): 541.
- Dowrick, C.F., Ring, A., Humphris, G.M. & Salmon, P. (2004). Normalisation of unexplained symptoms by general practitioners: a functional typology. *The British Journal Of General Practice: The Journal Of The Royal College Of General Practitioners*. 54 (500): 165-170.
- Dunn, S.M., Patterson, P.U., Butow, P.N., Smartt, H.H., McCarthy, W.H. & Tattersall, M.H. (1993). Cancer by another name: a randomized trial of the effects of euphemism and uncertainty in communicating with cancer patients. *Journal of Clinical Oncology*. 11 (5): 989-996.
- Dziedzic, K.S., Hill, J.C., Porcheret, M. & Croft, P.R. (2009). New models for primary care are needed for osteoarthritis. *Physical Therapy*. 89 (12): 1371-1378.
- Epstein, R.M., Morse, D.S., Frankel, R.M., Freney, L., Anderson, K. & Beckman, H.B. (1998). Awkward moments in patient-physician communication about HIV risk. *Annals of Internal Medicine*. 128 (6): 435-442.
- Ericsson, K.A. & Simon, H.A. (1980). Verbal reports as data. *Psychological Review*. 87 (3): 215-251.
- Eriksen, H.R., Ihlebaek, C. & Ursin, H. (1999). A scoring system for subjective health complaints (SHC). *Scandinavian journal of public health*. 27 (1): 63-72.
- Fischer, M. & Ereaut, G. (2012). *When doctors and patients talk: making sense of the consultation*. London: The Health Foundation.
- Flocke, S.A., Frank, S.H. & Wenger, D.A. (2001). Addressing multiple problems in the family practice office visit. *The Journal of Family Practice*. 50 (3): 211-216.

- Flores, R.H. & Hochberg, M.C. (1998). Definition and classification of osteoarthritis. In: Brandt, K.D. et al. (eds.) *Osteoarthritis*. Oxford: Oxford Medical Publications.
- Fortin, M., Soubhi, H., Hudon, C., Bayliss, E.A. & van den Akker, M. (2007). Multi-morbidity's many challenges. *British Medical Journal*. 334 (7602): 1016-1017.
- Frankel, R.M., Sung, S.H. & Hsu, J.T. (2005). Patients, doctors, and videotape: a prescription for creating optimal healing environments? *Journal of Alternative & Complementary Medicine*. 11 (supplement 1).
- Gafaranga, J. & Britten, N. (2003). "Fire away": the opening sequence in general practice consultations. *Family Practice*. 20 (3): 242-247.
- Gao, G., Burke, N., Somkin, C.P. & Pasick, R. (2009). Considering Culture in Physician—Patient Communication During Colorectal Cancer Screening. *Qualitative Health Research*. 19 (6): 778-789.
- Gass, S.M. & Mackey, A. (2000). *Stimulated recall methodology in second language research*. New Jersey: Lawrence Erlbaum.
- General Medical Council (2002). *Making and using visual and audio recordings of patients - guidance for doctors*. London: General Medical Council. Available at: http://www.gmcuk.org/guidance/ethical_guidance/making_audiovisual.asp#Recordings.
- General Medical Council (2013). *Good Medical Practice*. London: General Medical Council.
- Gignac, M.A.M., Davis, A.M., Hawker, G., Wright, J.G., Mahomed, N., Fortin, P.R. & Badley, E.M. (2006). "What do you expect? You're just getting older": A comparison of perceived osteoarthritis-related and aging-related health experiences in middle-and older-age adults. *Arthritis Care & Research*. 55 (6): 905-912.
- Glaser, B.G., Strauss, A.L. & Strutzel, E. (1968). The discovery of grounded theory; strategies for qualitative research. *Nursing Research*. 17 (4): 364.
- Glauser, T.A., Salinas, G.D., Roepke, N.L., Chad, J., Reese, A., Gutierrez, G. & Abdolrasulnia, M. (2011). Management of mild-to-moderate osteoarthritis: A study of the primary care perspective. *Postgraduate Medicine*. 123 (1): 126-134.
- Glynn, G., Valderas, M., Healy, P., Burke, E., Newell, J., Gillespie, P. & Murphy, W. (2011). The prevalence of multi-morbidity in primary care and its effect on health care utilization and cost. *Family Practice*. 28 (5): 516-525.

- Greenhalgh, T. (2014). *How to read a paper: The basics of evidence-based medicine*. 2nd Edn. London: BMJ Books.
- Grime, J., Richardson, J.C. & Ong, B.N. (2010). Perceptions of joint pain and feeling well in older people who reported being healthy: a qualitative study. *British Journal of General Practice*. 60 (577): 597-603.
- Guba, E.G. & Lincoln, Y.S. (2005). Paradigmatic Controversies, Contradictions and Emerging Confluences. In: Denzin, N.K. & Lincoln, Y.S. (eds.) *The Sage Handbook of Qualitative Research*. 3rd Edn. California: Sage.
- Gubrium, J.F. & Holstein, J.A. (2003). Analyzing interpretive practice. In: Denzin, N.K. & Lincoln, Y.S. (eds.) *Strategies of qualitative inquiry*. 2nd Edn. California: Sage.
- Guillemin, M. & Gillam, L. (2004). Ethics, reflexivity, and "ethically important moments" in research. *Qualitative Inquiry*. 10 (2): 261-280.
- Hammersley, M. & Atkinson, P. (2007). *Ethnography: principles in practice*. 3rd edn. Oxon: Routledge.
- Harper, D. (1988). Visual sociology: Expanding sociological vision. *The American Sociologist*. 19 (1): 54-70.
- Helman, C.G. (1981). Disease versus illness in general practice. *The Journal of the Royal College of General Practitioners*. 31 (230): 548-552.
- Henry, S.G. & Fetters, M.D. (2012). Video elicitation interviews: a qualitative research method for investigating physician-patient interactions. *The Annals of Family Medicine*. 10 (2): 118-125.
- Henry, S.G., Forman, J.H. & Fetters, M.D. (2011). 'How do you know what Aunt Martha looks like?' A video elicitation study exploring tacit clues in doctor-patient interactions. *Journal of Evaluation in Clinical Practice*. 17 (5): 933-9.
- Heron, J. (1976). A six-category intervention analysis. *British Journal of Guidance and Counseling*. 4 (2): 143-155.
- Hill, S., Dziedzic, K., Thomas, E., Baker, S. & Croft, P. (2007). The illness perceptions associated with health and behavioural outcomes in people with musculoskeletal hand problems: findings from the North Staffordshire Osteoarthritis Project (NorStOP). *Rheumatology*. 46 (6): 944-951.

- Hill, S., Dziedzic, K.S. & Ong, B.N. (2011). Patients' perceptions of the treatment and management of hand osteoarthritis: a focus group enquiry. *Disability and Rehabilitation*. 33 (19-20): 1866-1872.
- Holloway, I. & Wheeler, S. (2013). *Qualitative research in nursing and healthcare*. John Wiley & Sons.
- Hoogeboom, T.J., Snijders, G.F., Cats, H.A., de Bie, R.A., RA, Bierma-Zeinstra, S.M.A, van den Hoogen, F.H, van Riel, P.L.C.M., Emans, P.J., Wesseling, J., den Broeder, A.A., van den Ende, C.H.M (2012). Prevalence and predictors of health care use in patients with early hip or knee osteoarthritis: two-year follow-up data from the CHECK cohort. *Osteoarthritis & Cartilage*. 20 (6): 525-31.
- Huntley, A.L., Johnson, R., Purdy, S., Valderas, J.M. & Salisbury, C. (2012). Measures of multi-morbidity and morbidity burden for use in primary care and community settings: a systematic review and guide. *Annals of Family Medicine*. 10 (2): 134-141.
- Janesick, V.J. (2003). The choreography of qualitative research design. In: Denzin, N.K. & Lincoln, Y.S. (eds.) *Strategies of qualitative inquiry*. 2nd Edn. California: Sage.
- Jinks, C., Jordan, K., Ong, B. & Croft, P. (2004). A brief screening tool for knee pain in primary care (KNEST). 2. Results from a survey in the general population aged 50 and over. *Rheumatology*. 43 (1): 55-61.
- Jinks, C., Ong, B.N. & Richardson, J. (2007). A mixed methods study to investigate needs assessment for knee pain and disability: population and individual perspectives. *BMC Musculoskeletal Disorders*. 8 : 59.
- Jones, S.R.G. (1992). Was there a Hawthorne effect? *American Journal of Sociology*. : 451-468.
- Jordan, K., Clarke, A.M., Symmons, D.P.M., Fleming, D., Porcheret, M., Kadam, U.T. & Croft, P. (2007). Measuring disease prevalence: a comparison of musculoskeletal disease using four general practice consultation databases. *The British Journal of General Practice*. 57 (534): 7.
- Jordan, K., Jinks, C. & Croft, P. (2006a). A prospective study of the consulting behaviour of older people with knee pain. *The British Journal of General Practice*. 56 (525): 269.
- Jordan, K., Jinks, C. & Croft, P. (2006b). Health care utilization: measurement using primary care records and patient recall both showed bias. *Journal of Clinical Epidemiology*. 59 : 791-797.

- Kadam, U., Jordan, K. & Croft, P. (2004). Clinical comorbidity in patients with osteoarthritis: a case-control study of general practice consultants in England and Wales. *Annals of the Rheumatic Diseases*. 63 (4): 408-414.
- Katon, W., Lin, E.H.B. & Kroenke, K. (2007). The association of depression and anxiety with medical symptom burden in patients with chronic medical illness. *General Hospital Psychiatry*. 29 (2): 147-155.
- Kee, C.C. (1998). Living with osteoarthritis: Insiders' views. *Applied Nursing Research*. 11 (1): 19-26.
- Kingsbury, S.R. & Conaghan, P.G. (2012). Current osteoarthritis treatment, prescribing influences and barriers to implementation in primary care. *Primary Health Care Research & Development*. 1 (1): 1-9.
- Kurtz, S.M. & Silverman, J.D. (1996). The Calgary—Cambridge Referenced Observation Guides: an aid to defining the curriculum and organizing the teaching in communication training programmes. *Medical Education*. 30 (2): 83-89.
- Lambert, B.L., Butin, D.N., Moran, D., Zhao, S.Z., Carr, B.C., Chen, C. & Kizis, F.J. (2000). Arthritis Care: Comparison of Physicians' and Patient's Views. *Seminars in Arthritis and Rheumatism*. 30 (2): 100--110.
- Lau, B.W. (1989). Reassurance does not always help. *Canadian Family Physician*. 35: 1161-1163.
- Linsell, L., Dawson, J., Zondervan, K., Rose, P., Carr, A., Randall, T. & Fitzpatrick, R. (2005). Population survey comparing older adults with hip versus knee pain in primary care. *British Journal of General Practice*. 55 (512): 192-8.
- Linton, S.J., McCracken, L.M. & Vlaeyen, J.W. (2008). Reassurance: help or hinder in the treatment of pain. *Pain*. 134 (1): 5-8.
- Little, P., Everitt, H., Williamson, I., Warner, G., Moore, M., Gould, C., Ferrier, K. & Payne, S. (2001). Preferences of patients for patient centred approach to consultation in primary care: observational study. *British Medical Journal*. 322 (7284): 468.
- Lomax, H. & Casey, N. (1998). Recording social life: Reflexivity and video methodology. *Sociological Research Online*. 3 (2): U3-U32.
- Lyle, J. (2003). Stimulated recall: a report on its use in naturalistic research. *British Educational Research Journal*. 29 (6): 861-878.

- Mann, C. & Gooberman-Hill, R. (2011). Health care provision for osteoarthritis: concordance between what patients would like and what health professionals think they should have. *Arthritis Care & Research*. 63 (7): 963-72.
- Marvel, M., Epstein, R., Flowers, K. & Beckman, H. (1999). Soliciting the patient's agenda - Have we improved? *Journal of the American Medical Association*. 281 (3): 283-287.
- May, C. (2007). The clinical encounter and the problem of context. *Sociology*. 41 (1): 29-45.
- May, C., Allison, G., Chapple, A., Chew-Graham, C., Dixon, C., Gask, L., Graham, R., Rogers, A. & Roland, M. (2004). Framing the doctor-patient relationship in chronic illness: a comparative study of general practitioners' accounts. *Sociology of Health & Illness*. 26 (2): 135-158.
- May, C., Montori, V.M. & Mair, F.S. (2009). We need minimally disruptive medicine. *British Medical Journal*. 339 : b2803.
- Maynard, D.W. & Heritage, J. (2005). Conversation analysis, doctor-patient interaction and medical communication. *Medical Education*. 39 (4): 428-435.
- Mays, N. & Pope, C. (2006). *Qualitative research in health care*. 3rd Edn. Oxford: British Medical Journal.
- Mazieres, B., Bannwarth, B., Dougados, M. & Lequesne, M. (2001). EULAR recommendations for the management of knee osteoarthritis. Report of a task force of the Standing Committee for International Clinical Studies Including Therapeutic Trials. *Joint Bone Spine*. 68: 231-240.
- McHugh, G.A., Campbell, M. & Luker, K.A. (2011). GP referral of patients with osteoarthritis for consideration of total joint replacement: a longitudinal study. *British Journal of General Practice*. 61 (589): e459-e468.
- McHugh, G.A., Luker, K.A., Campbell, M., Kay, P.R. & Silman, A.J. (2007b). A longitudinal study exploring pain control, treatment and service provision for individuals with end-stage lower limb osteoarthritis. *Rheumatology*. 46 (4): 631-637.
- McHugh, G.A., Silman, A.J. & Luker, K.A. (2007a). Quality of care for people with osteoarthritis: a qualitative study. *Journal of Clinical Nursing*. 16 (7b): 168-176.
- Mead, N. & Bower, P. (2002). Patient-centred consultations and outcomes in primary care: a review of the literature. *Patient Education and Counseling*. 48 (1): 51-61.

- Mercer, S.W., Fitzpatrick, B., Gourlay, G., Vojt, G., McConnachie, A. & Watt, G.C.M. (2007). More time for complex consultations in a high-deprivation practice is associated with increased patient enablement. *British Journal of General Practice*. 57 (545): 960-966.
- Middleton, J.F., McKinley, R.K. & Gillies, C.L. (2006). Effect of patient completed agenda forms and doctors' education about the agenda on the outcome of consultations: randomised controlled trial. *British Medical Journal*. 332 (7552): 1238-1242.
- Mitchell, H., Carr, A. & Scott, D. (2006). The management of knee pain in primary care: factors associated with consulting the GP and referrals to secondary care. *Rheumatology*. 45 (6): 771-776.
- Morgan, M. (1997). The Doctor-Patient Relationship. In: Scambler, G. (ed.) *Sociology as applied to medicine*. 4th Edn. London: W.B. Saunders.
- National Institute for Health and Clinical Excellence (2008). The care and management of osteoarthritis in adults (CG59). London: National Institute for Health and Clinical Excellence. Available at: <http://www.nice.org.uk/CG59>. [Accessed: 11/01/2010].
- National Institute for Health and Clinical Excellence, (2014). Osteoarthritis: care and management in adults. CG177. London: National Institute for Health and Clinical Excellence,.
- Neal, R.D., Ali, N., Atkin, K., Allgar, V.L., Ali, S. & Coleman, T. (2006). Communication between South Asian patients and GPs: comparative study using the Roter Interactional Analysis System. *The British Journal Of General Practice*. 56 (532): 869-875.
- Neighbour, R. (1987). *The inner consultation: how to develop an effective and intuitive consulting style*. Plymouth: Petroc Press.
- Nelson, P., Chew-Graham, C., Griffiths, C. & Cordingley, L. (2013a). Recognition of need in health care consultations: a qualitative study of people with psoriasis. *British Journal of Dermatology*. 168 (2): 354-361.
- Nelson, P.A., Barker, Z., Griffiths, C.E., Cordingley, L. & Chew-Graham, C.A. (2013b). 'On the surface': a qualitative study of GPs' and patients' perspectives on psoriasis. *BMC Family Practice*. 14 (1): 158.
- Newton, B.J., Rothlingova, Z., Gutteridge, R., LeMarchand, K. & Raphael, J.H. (2012). No room for reflexivity? Critical reflections following a systematic review of qualitative research. *Journal of Health Psychology*. 17 (6): 866-885.

NHS Connecting for Health Read Codes. Available from:

<http://www.connectingforhealth.nhs.uk/systemsandservices/data/uktc/readcodes>.

- Nuesch, E., Dieppe, P., Reichenbach, S., Williams, S., Iff, S. & Juni, P. (2011). All cause and disease specific mortality in patients with knee or hip osteoarthritis: population based cohort study. *British Medical Journal*. 342 : d1165.
- O'Cathain, A. & Thomas, K. (2006). Combining qualitative and quantitative methods. In: Mays, N. & Pope, C. (eds.) *Qualitative research in health care*. 3rd Edn. Oxford: BMJ.
- Ogden, J., Branson, R., Bryett, A., Campbell, A., Febles, A., Ferguson, I., Lavender, H., Mizan, J., Simpson, R. & Tayler, M. (2003). What's in a name? An experimental study of patients' views of the impact and function of a diagnosis. *Family Practice*. 20 (3): 248.
- Ong, B.N. & Hooper, H. (2006). Comparing clinical and lay accounts of the diagnosis and treatment of back pain. *Sociology of Health & Illness*. 28 (2): 203-222.
- Ong, B.N., Jinks, C. & Morden, A. (2011). The hard work of self-management: Living with chronic knee pain. *International Journal of Qualitative Studies on Health and Well-being*. 6 (3): 7035.
- Paskins, Z., McHugh, G.A. & Hassell, A.B.H. (2014a). Getting under the skin of the primary care consultation using video stimulated recall: a systematic review. *BMC Medical Research Methodology*. 14: 101
- Paskins, Z., Sanders, T. & Hassell, A.B. (2013). What influences patients with Osteoarthritis to consult their GP about their symptoms? A narrative review. *BMC Family Practice*. 14 (1): 195.
- Paskins, Z., Sanders, T. & Hassell, A.B. (2014b). Comparison of patient experiences of the osteoarthritis consultation with GP attitudes and beliefs to OA: a narrative review. *BMC Family Practice*. 15 (1): 46.
- Peat, G., Greig, J., Wood, L., Wilkie, R., Thomas, E. & Croft, P. (2005). Diagnostic discordance: we cannot agree when to call knee pain 'osteoarthritis'. *Family Practice*. 22 (1): 96.
- Peat, G., McCarney, R. & Croft, P. (2001). Knee pain and osteoarthritis in older adults: a review of community burden and current use of primary health care. *Ann Rheum Dis*. 60 : 91-97.
- Pendleton, D., Schofield, T., Tate, P. & Havelock, P. (1984). *The consultation: an approach to learning and teaching*. Oxford: Oxford Medical Publications.
- Pilnick, A. & Dingwall, R. (2011). On the remarkable persistence of asymmetry in doctor/patient interaction: A critical review. *Social Science & Medicine*. 72 (8): 1374-1382.

- Pincus, T., Holt, N., Vogel, S., Underwood, M., Savage, R., Walsh, D.A. & Taylor, S.J.C. (2013). Cognitive and affective reassurance and patient outcomes in primary care: A systematic review. *Pain*. 154 (11): 2407-2416.
- Pitt, V.J., O'connor, D. & Green, S. (2008). Referral of people with osteoarthritis to self-management programmes: barriers and enablers identified by general practitioners. *Disability & Rehabilitation*. 30 (25): 1938.
- Pollock, K. (2005). *Concordance in medical consultations: a critical review*. Oxford: Radcliffe Publishing.
- Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., Britten, N., Roen, K. & Duffy, S. (2006). *Guidance on the conduct of narrative synthesis in systematic reviews. A product from the ESRC methods programme. Version. 1* .
- Pope, C. & Mays, N. (2009). Critical reflections on the rise of qualitative research. *British Medical Journal*. 339 : 737-739.
- Pope, C., Mays, N. & Popay, J. (2007). *Synthesizing Qualitative and Quantitative Research Evidence: A guide to methods*. Maidenhead: Open University Press.
- Porcheret, M., Jordan, K., Jinks, C. & Croft, P. (2007). Primary care treatment of knee pain--a survey in older adults. *Rheumatology*. 46 (11): 1694-1700.
- Pringle, M. & Stewart-Evans, C. (1990). Does awareness of being video recorded affect doctors' consultation behaviour?. *British Journal of General Practice*. 40 (340): 455-458.
- Rao, J., Callahan, L. & Helmick 3rd, C. (1997). Characteristics of persons with self-reported arthritis and other rheumatic conditions who do not see a doctor. *The Journal of Rheumatology*. 24 (1): 169.
- Ring, A., Dowrick, C.F., Humphris, G.M., Davies, J. & Salmon, P. (2005). The somatising effect of clinical consultation: what patients and doctors say and do not say when patients present medically unexplained physical symptoms. *Social Science & Medicine*. 61 (7): 1505-1515.
- Robinson, J.D. (2001). Closing medical encounters: two physician practices and their implications for the expression of patients' unstated concerns. *Social Science & Medicine* (1982). 53 (5): 639-656.

- Rodondi, P., Maillefer, J., Suardi, F., Rodondi, N., Cornuz, J. & Vannotti, M. (2009). Physician response to “by-the-way” syndrome in primary care. *Journal of General Internal Medicine*. 24 (6): 739-741.
- Rosemann, T., Joos, S., Szecsenyi, J., Laux, G. & Wensing, M. (2007). Health service utilization patterns of primary care patients with osteoarthritis. *BMC Health Services Research*. 7 .
- Rosemann, T., Wensing, M., Joest, K., Backenstrass, M., Mahler, C. & Szecsenyi, J. (2006). Problems and needs for improving primary care of osteoarthritis patients: the views of patients, general practitioners and practice nurses. *BMC Musculoskeletal Disorders*. 7 (1): 48.
- Rosenberg, E., Leanza, Y. & Seller, R. (2007). Doctor-patient communication in primary care with an interpreter: physician perceptions of professional and family interpreters. *Patient Education and Counseling*. 67 (3): 286-292.
- Rosenberg, E., Richard, C., Lussier, M.T. & Abdool, S.N. (2006). Intercultural communication competence in family medicine: lessons from the field. *Patient Education & Counseling*. 61 (2): 236-245.
- Rosenberg, E., Seller, R. & Leanza, Y. (2008). Through interpreters' eyes: comparing roles of professional and family interpreters. *Patient Education and Counseling*. 70 (1): 87-93.
- Royal College of General Practitioners (2011). *The General Practice Consultation: Curriculum Statement 2*. London: Royal College of General Practitioners.
- Rylance, G. (1992). Should audio recordings of outpatient consultations be presented to patients?. *Archives of Disease in Childhood*. 67 (5): 622-624.
- Saba, G.W., Wong, S.T., Schillinger, D., Fernandez, A., Somkin, C.P., Wilson, C.C. & Grumbach, K. (2006). Shared decision making and the experience of partnership in primary care. *Annals of Family Medicine*. 4 (1): 54-62.
- Salisbury, C., Johnson, L., Purdy, S., Valderas, J.M. & Montgomery, A.A. (2011). Epidemiology and impact of multi-morbidity in primary care: a retrospective cohort study. *British Journal of General Practice*. 61 (582): e12-e21.
- Salisbury, C., Procter, S., Stewart, K., Bowen, L., Purdy, S., Ridd, M., Valderas, J., Blakeman, T. & Reeves, D. (2013). The content of general practice consultations: cross-sectional study based on video recordings. *British Journal of General Practice*. 63 (616): e751-e759.

- Salmon, P., Peters, S. & Stanley, I. (1999). Patients' perceptions of medical explanations for somatisation disorders: qualitative analysis. *British Medical Journal*. 318 (7180): 372-376.
- Sanders, C., Donovan, J.L. & Dieppe, P.A. (2002). The significance and consequences of having painful and disabled joints in older age: co-existing accounts of normal and disrupted biographies. *Sociology of Health and Illness*. 24 : 227-253.
- Sanders, C., Donovan, J.L. & Dieppe, P.A. (2004). Unmet need for joint replacement: a qualitative investigation of barriers to treatment among individuals with severe pain and disability of the hip and knee. *Rheumatology*. 43: 353-357.
- Sanders, T., Harrison, S. & Checkland, K. (2008). Evidence-based medicine and patient choice: the case of heart failure care. *Journal of Health Services Research & Policy*. 13 (2): 103-108.
- Savage, J. (2000). Ethnography and health care. *British Medical Journal*. 321 (7273): 1400-1402.
- Schellevis, F., Van de Lisdonk, E., Van der Velden, J., Hoogbergen, S., Van Eijk, J. & Van Weel, C. (1994). Consultation rates and incidence of intercurrent morbidity among patients with chronic disease in general practice. *The British Journal of General Practice*. 44 (383): 259.
- Schensul, J.J., LeCompte, M.D., Nastasi, B.K. & Borgatti, S.P. (1999). *Enhanced ethnographic methods: Audiovisual techniques, focused group interviews, and elicitation techniques*. Altamira Press.
- Silverman, D. (2001). *Interpreting qualitative data*. 2nd Edn. London: Sage.
- Smith, J., Holder, H. & Rosen, R. (2013). *Securing the future of general practice: new models of primary care*. London: The King's Fund.
- Smith, S.M., O'Kelly, S. & O'Dowd, T. (2010). GPs' and pharmacists' experiences of managing multi-morbidity: a 'Pandora's box'. *British Journal of General Practice*. 60 (576): e285-e294.
- Steel, N., Bachmann, M., Maisey, S., Shekelle, P., Breeze, E., Marmot, M. & Melzer, D. (2008). Self-reported receipt of care consistent with 32 quality indicators: national population survey of adults aged 50 or more in England. *British Medical Journal*. 337: a957.
- Stewart, M. (2001). Towards a global definition of patient centred care. *British Medical Journal*. 322 (7284): 444-445.
- Stewart, M.A. (1995). Effective physician-patient communication and health outcomes: a review. *CMAJ : Canadian Medical Association journal*. 152 (9): 1423-1433.

- Stott, N.C. & Davis, R.H. (1979). The exceptional potential in each primary care consultation. *The Journal of the Royal College of General Practitioners*. 29 (201): 201-205.
- Street, R.L., Jr, Gordon, H.S., Ward, M.M., Krupat, E. & Kravitz, R.L. (2005). Patient participation in medical consultations: why some patients are more involved than others. *Medical Care*. 43 (10): 960-969.
- Themessl-Huber, M., Humphris, G., Dowell, J., Macgillivray, S., Rushmer, R. & Williams, B. (2008). Audio-visual recording of patient–GP consultations for research purposes: A literature review on recruiting rates and strategies. *Patient Education and Counseling*. 71 (2): 157-168.
- Thomas, M.J., Moore, A., Roddy, E. & Peat, G. (2013). 'Somebody to say "come on, we can sort this" ': A qualitative study of health-seeking in older adults with symptomatic foot osteoarthritis. *Rheumatology*. 52 : 124.
- Thorstensson, C.A., Gooberman-Hill, R., Adamson, J., Williams, S. & Dieppe, P. (2009). Help-seeking behaviour among people living with chronic hip or knee pain in the community. *BMC Musculoskeletal Disorders*. 10 (1): 153.
- Tiemens, B., Ormel, J., Jenner, J., Van der Meer, K., Van Os, T., Van den Brink, R., Smit, A. & Van den Brink, W. (1999). Training primary-care physicians to recognize, diagnose and manage depression: does it improve patient outcomes? *Psychological Medicine*. 29 (4): 833-845.
- Timpka, T. & Arborelius, E. (1990). The GP's dilemmas: a study of knowledge need and use during health care consultations. *Methods of Information in Medicine*. 29 (1): 23-29.
- Timpka, T. & Arborelius, E. (1991). A method for study of dilemmas during health care consultations. *Medical Informatics*. 16 (1): 55-64.
- Timpka, T. (2000). The patient and the primary care team: a small-scale critical theory. *Journal of advanced nursing*. 31 (3): 558-564.
- Tracey, J.M., Arroll, B., Richmond, D.E. & Barham, P.M. (1997). The validity of general practitioners' self-assessment of knowledge: cross sectional study. *British Medical Journal*. 315 (7120): 1426-1428.
- Treichler, P.A., Frankel, R.M., Kramarae, C., Zoppi, K. & Beckman, H.B. (1984). Problems and problems: Power relationships in a medical encounter. In In Mayor, B. & Pugh, A.K. (Eds) *Language communication and education*. Routledge: 62-88.

- Turner, A., Barlow, J., Buszewicz, M., Atkinson, A. & Rait, G. (2007). Beliefs about the causes of osteoarthritis among primary care patients. *Arthritis Care & Research*. 57 (2): 267-271.
- Urwin, M., Symmons, D., Allison, T., Brammah, T., Busby, H., Roxby, M., Simmons, A. & Williams, G. (1998). Estimating the burden of musculoskeletal disorders in the community: the comparative prevalence of symptoms at different anatomical sites, and the relation to social deprivation. *Annals of the Rheumatic Diseases*. 57 (11): 649-655.
- Ventres, W., Kooienga, S., Marlin, R., Vuckovic, N. & Stewart, V. (2005). Clinician style and examination room computers: a video ethnography. *Family Medicine*. 37 (4): 276-281.
- Ventres, W., Kooienga, S., Vuckovic, N., Marlin, R., Nygren, P. & Stewart, V. (2006). Physicians, patients, and the electronic health record: An ethnographic analysis. *Annals of Family Medicine*. 4 (2): 124-131.
- Victor, C.R., Ross, F. & Axford, J. (2004). Capturing lay perspectives in a randomized control trial of a health promotion intervention for people with osteoarthritis of the knee. *Journal of Evaluation in Clinical Practice*. 10 (1): 63-70.
- Vos, T., Flaxman, A.D., Naghavi, M., Lozano, R., Michaud, C., Ezzati, M., Shibuya, K., Salomon, J.A., Abdalla, S. & Aboyans, V. (2013). Years lived with disability (YLDs) for 1160 sequelae of 289 diseases and injuries 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet*. 380 (9859): 2163-2196.
- Wagner, E.H. & Groves, T. (2002). Care for chronic diseases. *British Medical Journal*. 325 (7370): 913-914.
- Watts, K.M., Richardson, J.C. & Ong, B.N. (2011). Does the site of musculoskeletal pain influence consultation behaviours? In: Annual Scientific Meeting of Society of Academic Primary Care. 6 July.
- Wetherall, M., Taylor, S. & Yates, S.J. (2001). *Discourse theory and practice*. London: Sage.
- White, J., Levinson, W. & Roter, D. (1994). "Oh, by the way ...": the closing moments of the medical visit. *Journal of General Internal Medicine*. 9 (1): 24-28.
- Wileman, L., May, C. & Chew-Graham, C.A. (2002). Medically unexplained symptoms and the problem of power in the primary care consultation: a qualitative study. *Family Practice*. 19 (2): 178-182.

- Wind, G. (2008). Negotiated interactive observation: Doing fieldwork in hospital settings. *Anthropology and Medicine*. 15 (2): 79-89.
- Woods, M.D., Kirk, M.D., Agarwal, M.S., Annandale, E., Arthur, T., Harvey, J., Hsu, R., Katbamna, S., Olsen, R. & Smith, L. (2005). Vulnerable groups and access to health care: a critical interpretive review. 27. Leicester: National Co-ordinating Centre for NHS Service Delivery and Organisation R & D.
- Working Party of the Royal College of General Practitioners (1972). *The Triaxial Model of the Consultation*. London: Royal College of General Practitioners.
- Zhang, W., Doherty, M., Arden, N., Bannwarth, B., Bijlsma, J., Gunther, K.P., Hauselmann, H.J., Herrero-Beaumont, G., Jordan, K., Kaklamanis, P., Leeb, B., Lequesne, M., Lohmander, S., Mazieres, B., Martin-Mola, E., Pavelka, K., Pendleton, A., Punzi, L., Swoboda, B., Varatojo, R., Verbruggen, G., Zimmermann-Gorska, I. & Dougados, M. (2005). EULAR evidence based recommendations for the management of hip osteoarthritis: report of a task force of the EULAR Standing Committee for International Clinical Studies Including Therapeutics (ESCISIT). *Annals of the Rheumatic Diseases*. 64 : 669-681.
- Zhang, W., Doherty, M., Leeb, B., Alekseeva, L., Arden, N., Bijlsma, J., Dinçer, F., Dziedzic, K., Häuselmann, H. & Herrero-Beaumont, G. (2007). EULAR evidence based recommendations for the management of hand osteoarthritis: report of a Task Force of the EULAR Standing Committee for International Clinical Studies Including Therapeutics (ESCISIT). *Annals of the Rheumatic Diseases*. 66 (3): 377-388.
- Zhang, W., Moskowitz, R., Nuki, G., Abramson, S., Altman, R., Arden, N., Bierma-Zeinstra, S., Brandt, K., Croft, P. & Doherty, M. (2008). OARSI recommendations for the management of hip and knee osteoarthritis, Part II: OARSI evidence-based, expert consensus guidelines. *Osteoarthritis and Cartilage*. 16 (2): 137-162.
- Zhang, W., Nuki, G., Moskowitz, R., Abramson, S., Altman, R., Arden, N., Bierma-Zeinstra, S., Brandt, K., Croft, P. & Doherty, M. (2010). OARSI recommendations for the management of hip and knee osteoarthritis: part III: Changes in evidence following systematic cumulative update of research published through January 2009. *Osteoarthritis and Cartilage*. 18 (4): 476-499.

Appendices

Appendix 1: Example search (Medline) for VSR systematic review

1. consult*.ti,ab.
2. "Referral and Consultation"/
3. Communication/
4. Physician-Patient Relations/
5. (doctor adj5 patient).ti,ab.
6. (GP adj5 patient).ti,ab.
7. (physician adj5 patient).ti,ab.
8. (clinician adj5 patient).ti,ab.
9. ("general practitioner" adj5 patient).ti,ab.
10. (talk* or rapport* or relation*).ti,ab.
11. 5 or 6 or 7 or 8 or 9
12. 10 and 11
13. communicat*.ti,ab.
14. 1 or 2 or 3 or 4 or 12 or 13
15. family practice.ti,ab.
16. Family Practice/
17. physicians, family/ or physicians, primary care/
18. Primary Health Care/
19. GP.ti,ab.
20. "family medicine".ti,ab.
21. "family doctor*".ti,ab.
22. "general practi*".ti,ab.
23. "family physician*".ti,ab.
24. 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23
25. videotape recording/ or video recording/ or videodisc recording/
26. video*.af.
27. (digital adj2 record*).ti,ab.
28. (disc adj2 record*).ti,ab.
29. Tape Recording/
30. film*.ti,ab.
31. recording*.ti,ab.
32. Interview/
33. "Attitude of Health Personnel"/ or Attitude to Health/
34. qualitative research/
35. qualitativ*.ti,ab.
36. interview*.ti,ab.
37. experience*.ti,ab.
38. finding*.ti,ab.
39. theme*.ti,ab.
40. account*.ti,ab.
41. 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40
42. 25 or 26 or 27 or 28 or 29 or 30 or 31
43. 14 and 24 and 41 and 42

Appendix 2: Data extraction form

Reference information

1. Reviewer:
2. Date:
3. Paper 1st author:
4. Title:
5. More than one paper for this data set? [drop down] Yes/ no/ don't know
6. If yes, Index paper where data collection fully described (if applicable) [free text]
7. Include: [drop down] yes; no; don't know
8. Reason for exclusion: [drop down] educational research; standardised patients or actors; non English; not primary care; not GPs (other healthcare professional); not observational study; video not shown to research participants; other
9. Study classification: [drop down] Decision making; Doctor-patient relationship; condition specific information; other [free text]

Study information

10. What is the research question? [free text]
11. How were consultations selected? Tick all that apply
[drop down] Screened; consecutive; disease specific; GP provided tapes; researcher consented; other [free text]
12. Who were the population of interest? [free text]
13. How many consultations were videoed? [free text]
14. How many consultations were analysed? [free text]
15. What are the main findings? [free text]
16. What methods have been used for analysis of consultations? [drop down] Not analysed; Conversation analysis; discourse analysis; qualitative; checklist – bespoke; checklist – RIAS; checklist – other; timing of consultation or other timings (give details) [free text]; other [free text]
17. How has the visual data been analysed? [free text]
18. What other data collection was performed? Tick all that apply and give details:
[drop down] Patient questionnaire pre-consultation; Patient questionnaire post-consultation; GP questionnaire pre-consultation; GP questionnaire post-consultation; Patient interview post-consultation; GP interview post-consultation; Patient interview post-consultation with video; GP interview post-consultation with video; focus groups post consultation; other [free text]

19. How many interviews using video were conducted? With GPs [free text], With patients [free text]
20. How were the videotapes selected? [drop down] GP chose; researcher chose
21. What format did the interview take? Tick all that apply and give details [drop down] video shown in entirety first; video shown in clips (researcher paused); video shown in clips (participant paused); unstructured interview; semi structured interview; other [free text]
22. Has the researcher commented on acceptability to participants of viewing video in interview setting? [free text]
23. What are the authors' main conclusions? [free text]
24. What are the reviewer's main conclusions? Include comments on the value of the research [free text]
25. Did each component (interview vs video) contribute to the findings?
26. To what extent did the VSR interview add to the research findings ?

Quality assessment

27. Was the research design appropriate to address the aims of the research? [free text]
28. Was the recruitment strategy appropriate to the aims of the research? [free text]
29. Has the data collection been clearly described? [free text]
30. Was the data collected in an appropriate way to address the research question? [free text]
31. Have ethical issues been taken into consideration? [free text]
32. Has the relationship between researcher and participants been considered? [free text]
33. Has external validity been commented on?
 - a. Characteristics of consenting patients [free text]
 - b. Characteristics of consenting GPs [free text]
34. Has internal validity been commented on?
 - a. Effect of videoing on patients' behaviour [free text]
 - b. Effect of videoing on GPs' behaviour [free text]
35. Was the data analysis sufficiently rigorous? [free text]
36. Is there a clear statement of findings? [free text]

Appendix 3: Pre-consultation questionnaire

Section A. About you

The questions in this section are about **you**.

1. Are you:

Female..... Male.....

2. What is your date of birth? / /

(For example – if you were born on the 5th June 1936, this would be entered as 05/06/36)

3. What is your current employment status?

(Please put a cross in one box only)

Employed

Not working due to ill health

Retired

Unemployed/seeking work

Housewife

Other

4. What is your ethnic origin?

(Please put a cross in one box only)

White UK/ European.....

Afro Caribbean.....

Chinese.....

Asian.....

African.....

Other.....

Study No:

C1: Y/N C2: Y/N C3: Y/N

Section B. Your symptoms and reasons for coming to the doctors today

1. What is the main reason you are seeing your doctor today?

(please give details or tick the box)

I would rather not say

2. Please consider the following **symptoms**. Place a tick in Box A if you have experienced the symptom in the past week, and a tick in Box B, if you are planning to discuss this symptom with the doctor today. **(Tick any that apply).**

I would rather not say

	Box A I have experienced any of these in the past week	Box B I am planning to discuss these symptoms with my GP today	<i>Please leave blank</i>
Cough/ cold or Breathing difficulty....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Joint pain.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skin rash.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chest pain/ dizziness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Headache.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Problems with passing urine.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stress, worries or sadness.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stomach upset.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intimate/ personal....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tiredness/ sleep problems.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Back or neck ache....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please state.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank you very much for your time. Please hand this questionnaire back to the receptionist / researcher who gave it to you.

Appendix 4: Post-consultation interview topic guide for GPs

Questions for interviews with GPs

Opening phase	<i>Could you start by describing a typical osteoarthritis consultation for me?</i>
Video phase	Explain – I am now going to show the video clip. You can pause it at any time by pressing this button so please do so if you want to tell me anything about the consultation (give examples e.g. unspoken information)
Consultation	<p>Clarify any unclear dialogue identified by researcher viewings</p> <p>Was there anything you decided not to mention?</p> <p>Patient factors</p> <p><i>Why do you think had triggered the patients consultation about joint pain?</i></p> <p><i>What do you think the patient wanted from the consultation?</i></p> <p><i>What message do you think the patient took away from the consultation?</i></p> <ul style="list-style-type: none"> • <i>What was the reason you did/ said _____</i> • <i>What do you think the patient understood by _____</i> • Any other points raised from viewing. <p><i>How does this differ from the typical consultation you described before?</i></p> <p>(both in terms of the way the patient presents with joint pain, and the GP response)</p> <ul style="list-style-type: none"> • <i>How is it different?</i> • <i>What other terms do you use/ explanations do you give</i> • <i>What is the purpose of your explanation</i> • Explore contextual factors – including previous consultations, consultations with other doctors (explore differences – whose approach is best, why is it better) <p><i>Is there anything else you would like to achieve in an "ideal" joint pain consultation?</i></p> <ul style="list-style-type: none"> • <i>Is there anything that hinders your ability to do this?</i> • Practice issues/ locality issues • What influences your follow up of OA patients • Do you believe you can make a difference for patients with OA <p><i>How do you think the management of OA compares to other chronic conditions</i></p> <p><i>How does the QOF influence the management of OA. How would things be different if OA was included.</i></p> <p><i>How relevant do you think the guidelines are?</i></p>

Questions for interviews with GPs

<p>Consultation contd</p>	<p><i>Do you feel well informed about causes/prognosis/range of treatments</i> <i>Do you feel self management is relevant to OA</i> <i>Do you feel confident about diagnosing oa</i></p>
<p>Response to video stage</p>	<p>Signpost change in topic.</p> <p><i>What are your views on video recording for training purposes?</i> <i>What do you think of the methodology we have used in this study?</i> <i>How did you feel when it was first suggested?</i> <i>How did you feel being video recorded</i> <i>How aware of the video were you?</i> <i>Do you feel it changed the interaction between this/ other patients?</i> <i>Patient factors/ GP factors Did you use terms any differently? Why is that?</i></p> <p><i>How did you feel watching the video?</i> <i>How would the interview have been different if we had not viewed the video?</i> <i>Has this facilitated any reflections on your practice?</i> <i>Did you find it helpful – what aspects?</i> <i>Is it useful for appraisal?</i> <i>Do you think involvement in this process will result in you doing anything different in the future?</i></p> <p><i>Would you get involved in a similar study in the future?</i></p> <p>I think we have covered all my questions, was there anything else you wanted to say?</p> <p>Remember to thank!</p>

Appendix 5: Post-consultation interview topic guide for patients

Questions for interviews with patients

<p>Opening phase Est 20 – 30 mins</p>	<p><i>For what reason did you decide to see your doctor (on day)?</i></p> <p>Reflect back results of questionnaire – explore decision making behind priorities</p> <p>Explore trigger, expectations</p> <p><i>Is this the first time you have been about x?</i></p> <p><i>What happened during the consultation?</i></p> <p><i>What did your doctor do for you/ suggest/ tell you about what was wrong/ tell you about what to expect in the future?</i></p> <p>If no explanation – what have been told before</p> <p><i>What has happened since the consultation? any behaviour change</i></p>
<p>Video phase</p>	<p>Explain – I am now going to show the video clip. You can pause it at any time by pressing this button so please do so if you want to tell me anything about the consultation (give examples e.g. unspoken information)</p>
<p>Consultation</p>	<p>Clarify any unclear dialogue identified by researcher viewings</p> <ul style="list-style-type: none"> • <i>What was the reason you did/ said _____</i> • <i>What did you understand by that _____</i> • <i>What do you think the GP meant when he/ she said that?</i> <p>• Any other points raised from viewing.</p> <p><i>Was there anything you decided not to mention?</i></p> <ul style="list-style-type: none"> • Explore contextual factors – including previous consultations, consultations with other doctors (explore differences – whose approach is best, why is it better) <p><i>What would have happened in an ideal consultation?</i></p> <p>Explore importance of diagnosis – have they been told they have OA</p> <p>Explore relationship between joint pain and other symptoms</p> <p>Tease out differences in events reported above and events as viewed</p>

Questions for interviews with patients

<p>Response to video stage</p>	<p>Signpost change in topic.</p> <p><i>What are your views on patients being video recorded?</i></p> <p><i>How did you feel when you were asked to be recorded, and told you may be watching the video back?</i></p> <p><i>How did you feel being video recorded?</i></p> <p><i>How aware of the video were you?</i></p> <p><i>Do you feel it changed the interaction between you and your doctor?</i></p> <p><i>Patient factors/ GP factors Did you act any differently? Why is that?</i></p> <p><i>How did you feel watching the video?</i></p> <p><i>How would the interview have been different if we had not viewed the video?</i></p> <p><i>Has this changed your view of the consultation?</i></p> <p><i>Has watching the video changed your view of the doctor?</i></p> <p><i>Did you find it helpful – what aspects/ why?</i></p> <p><i>Do you think involvement in this process will result in you doing anything different in the future?</i></p> <p><i>Would you get involved in a similar study in the future?</i></p> <p>I think we have covered all my questions, was there anything else you wanted to say?</p> <p>Remember to thank!</p>
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Appendix 6: Medical record review proforma

**Appendix 3.4
Medical Record Review Form**

Patient Record Proforma
Reviewer: _____

Study Id No _____

No of GP consultations Last 2 years	Date of entry	Joint Related Disorder (and source) Last 2 years	OA Diagnosis (and source) Ever	X-ray of joint (and source) Last 2 years	Referral to Orthopaedics Last 2 years	Referral to Rheumatology Last 2 years	Referral to Physio Last 2 years	Active co-morbidities
		Insert index joint, problem, source and whether read code (RC) or free text (FT)		Insert index joint and source			List all	
	<i>Example 1 1.1.10</i>	<i>R knee joint pain FT GP</i>		<i>R Knee</i>				
	<i>Example 2 1.2.10</i>		<i>R knee – OA RC GP</i>				<i>R knee</i>	

OA Proforma Data Extraction Protocol

Please ensure you enter your name on the proforma sheet.

Always ensure the patients study identity number is inserted into the correct box in the top right hand side of the proforma sheet.

a. No of GP consultations in last 2 years

b. Date of entry

Record the date of entry relating to data extracted

c. Joint related disorder (and source) – last 2 years only

Any joint problem, other than a diagnosis of OA must be recorded here. The problem itself should be recorded, including which joint, e.g. knee pain, knee swelling, knee crepitus, knee locking or knee giving way. Please record whether problem e. Joint pain appeared in free text (FT) or Read Code (RC). Please record the person recording it e.g. GP, Nurse, Hospital Doctor, or Radiologist.

d. OA Diagnosis (and source) – no time restriction

This must specifically be the DIAGNOSIS only, and as above, who recorded it. It can appear in the notes hand written, a hospital letter or X-ray report – please record source including whether free text (FT) or read code (RC).

e. X-ray of joint (and source) – last 2 years only

Any joint X-rays need to be recorded and where from (GP or Hospital specialist).

f. Referral to Orthopaedics – last 2 years only

ONLY referrals for joint related problems should be recorded here. Record joint referred for only.

g. Referral to Rheumatology – last 2 years only As for 'f' above

h. Referral to Physiotherapy – last 2 years only As for 'f' above

i. Active co-morbidities – list active conditions

Appendix 7: Letter of confirmation of study ethical approval



National Research Ethics Service

North West 8 Research Ethics Committee – Greater Manchester East

3rd Floor, Barlow House
4 Minshull Street
Manchester
M1 3DZ

Telephone: 0161 626 7820

30 March 2011

Dr Z Paskins
Arthritis Research UK Primary Care Centre
Keele University
Staffordshire
ST5 5BG

Dear Dr Paskins

Study title: Using videotaped consultations in primary care to understand the osteoarthritis consultation
REC reference: 11/H1013/3

Thank you for your letter of 10 March 2011, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Vice-Chair.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at <http://www.rdforum.nhs.uk>.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

The Research Ethics Committee is an advisory committee to the North West Strategic Health Authority.
The National Research Ethics Service (NRES) represents the NRES Directorate within
the National Patient Safety Agency and Research Ethics Committees in England.

Appendix 8: Topic shift bar charts

Notes: Case number listed on y axis	
Numbers on x axis illustrate seconds into the consultation	
Abbreviations as shown below	
3RD	Talk about 3rd party
ALC	Alcohol
ANX	Anxiety, depression or stress
CHOL	Cholesterol
CVS	Cardiovascular disease
DM	Diabetes
GI	Gastrointestinal upset
HT	Hypertension
MSK	Soft tissue/ other musculoskeletal problem
OA	Osteoarthritis
OP	Osteoporosis
PMH	GP gathering past medical history
RESP	Chest disease
RPX	Repeat prescription review
SKIN	Skin lesion
SOC	Social e.g. blue badge discussion
SYN	Syncope/dizziness
TIA	Transient Ischaemic Attack (stroke)
THY	Thyroid
URI	Urinary symptoms

