Views of general practitioners toward physiotherapy management of osteoarthritis—a qualitative study

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Abstract

Background Osteoarthritis (OA) is a major cause of pain and physical disability and General Practitioners (GPs) are usually the first point of contact for patients. Physiotherapy has been shown as effective in the management of lower limb OA. To explore the beliefs of GPs on the physiotherapy management of lower limb OA in primary care.

Methods A qualitative study evaluating GP views about physiotherapy in Sheffield, South Yorkshire, UK. Participating GPs were recruited by systematic sampling and invitation to GPs in 10 practices in the four localities in Sheffield. Semi-structured interviews were completed and framework analysis was used to analyse the data.

Results Eight GPs were interviewed and six themes emerged from analysis of the data: Perspective on OA, management strategy, views on patients, views on physiotherapy, working collaboratively and suggestions for service improvements. GPs had a positive impression and knowledge of physiotherapy, but lacked understanding of the processes involved in treatment and limited awareness of clinical guidelines regarding the management of OA. Improvements in communication and collaborative working were critical issues suggested by the participants.

Conclusion

This study found that GPs who were interviewed had a limited understanding on the role of physiotherapists and of clinical guidelines. Inter-professional communication was not as good as it should have been. A reconfiguration of the Sheffield musculoskeletal pathway may help achieve more effective collaborative working and a better outcome for patients.

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Introduction

Osteoarthritis (OA) is a major cause of severe long-term pain and physical disability worldwide, and in the UK is responsible for over 1 million general practitioner (GP) consultations each year (RCGP, 2006; Woolf and Pfleger, 2003). Symptoms include joint pain, stiffness and movement loss (Litwic, Edwards, Dennison, and Cooper, 2013). The prevalence of OA increases with age and the most commonly affected sites are the hip and the knee joints (Crosset al., 2014). The need to prevent the burden of lower limb OA through primary and secondary interventions is thus an important healthcare objective (Holdsworth, Webster, and McFadyen, 2014).

GPs are often the first point of contact into musculoskeletal services in the National Health Service (NHS) in the UK and in other countries, and there are guidelines published aimed at improving the standards of management and care for adults with OA (Dzieddzic et al., 2014). However recommended interventions are underused by medical professionals, and patients with OA feel that their main concerns of pain and increasing disability are not fully addressed, with an assumption that treatment is ineffective because of the incurable nature of OA (Porcheret, Jordan, Jinks, and Croft, 2007; Rosemann et al., 2006; Jinks, Ong, and Richardson, 2007).

The National Institute for Health and Clinical Excellence (NICE) has published national guidelines on the management of osteoarthritis in older adults (Conaghan, Dickson, and Grant, 2008). Core treatments were recommended on presentation to primary care:

- Education, advice and access to information
- Advice on strengthening exercises and aerobic fitness
- Advice on weight loss if appropriate.

Exercise, manual therapy, electrotherapy, advice on thermal applications, braces and insoles were also suggested. These interventions form a fundamental part of the treatments provided by musculoskeletal physiotherapists and there is a solid evidence base for their clinical effectiveness (Jamtvedt et al., 2008). Exercise and manual therapy, used by physiotherapists and other healthcare professionals has been found to be effective for the treatment of hip and knee OA and has been endorsed for the management of lower limb OA (Abbott et al., 2013; Bennell, 2013; Jamtvedt et al., 2008). Despite this the literature suggests that GPs do not acknowledge this, and patients feel they are not receiving the care they require (Alami et al., 2011; Burn, May, and Edwards, 2014).

Most of the studies on perceptions of OA management have been completed with patients (Fullen et al., 2011). There are a limited number of studies looking specifically at GPs' perceptions, which suggested shortcomings in OA management and a lack of collaboration with and awareness of physiotherapists (Alami et al., 2011; Burn, May, Edwards, 2014; Fullen et al., 2011; Paz-Lourido, and Kuisma, 2013). This research was conducted in Sheffield, which is a city with a population of over half a million, and home to five hospitals, two general and three specialist NHS hospitals. As well there are 112 medical centres, health centres and GP surgeries. Physiotherapists work in all the hospitals, but also are based in the community, some work in GP surgeries, but most are now based in two main centres. This has meant that communication between GPs and physiotherapists has become less direct.

Thus two key problems: the role of GPs in referring patients with OA to physiotherapy, and in acknowledging the evidence regarding the role of exercise and physiotherapy for patients with OA prompted further investigation. The aim of this research was to explore the beliefs of GPs on physiotherapy management of lower limb OA in primary care, establish if there was an awareness of physiotherapy in this field, investigate whether national/local guidelines are being adhered to, ascertain if GPs refer to the local independent sector and seek suggestions to improve the physiotherapy service locally.

Methods

The sample frame were GPs working in NHS Sheffield's Clinical Commissioning Group (CCG), comprising 87 GP practices providing healthcare services for a population of approximately 580,000 people (SCCG, 2014). Sheffield has a diverse population, with variable socio-economic circumstances and wide-ranging health problems. Thus it has a reasonably representative sample to be used as a population for this study.

Systematic sampling was used to randomly select 10 practices from each of Sheffield's CCGs four regions. Each practice had GPs with a range of backgrounds, experiences and genders. All the GPs in each of the 40 practices were invited to take part; 211 GPs were identified and following invitation by mail and reminder by email and telephone, eight GPs agreed to take part in the study, and were interviewed in their practice.

A qualitative design was deemed most suitable for gaining clinicians' perspectives on the topic. Because the study sought an understanding of the constructs and perspectives of the participants on this particular subject a qualitative perspective, with content analysis to organise the data, was used (Snape and Spencer, 2003). Interview questions were

developed following a review of relevant research and the aims of the evaluation, keeping with recommended qualitative research practice (Kvale and Brickmann, 2009; Silverman, 2013). A topic guide was used (table 1) to allow a degree of flexibility between participants whilst investigating key issues. Semi-structured interviews were completed in the GPs own practice by the lead researcher, they were audio-taped, transcribed and data were promptly analysed in order to develop themes that emerged, but were not validated by the participants. The lead researcher was a private physiotherapist not involved in any of the practices that participated, with no *a priori* beliefs affecting data analysis. Interpretation of the data was confirmed by colleagues and the second researcher, who both conducted an independent data analysis. Data collection continued to a point where no new themes emerged, after which two more interviews were completed to confirm this amongst the eight participating GPs (Corbin and Strauss, 2008), but obviously the opinions of 203 non-participating GPs were not known.

To further add transparency and rigour 'Framework analysis' was used, which is a well-used approach in healthcare research (Ritchie et al., 2014). The five stages (familiarisation, identification of themes, indexing, charting, mapping and interpretation) were used to analyse the data. Interviews were transcribed by the investigator and transcripts were anonymised. Themes or codes were developed by the lead author, and also by a colleague independently, with final themes being confirmed in conference (Pope, van Royen, and Baker, 2002). An audit trail and reflective diary was kept by the lead researcher to document the emergent and final themes. A computer programme NVivo (version10) was used to

organise and code transcripts and help visualise and analyse the data and their relationships (Bazeley and Jackson, 2013).

Results

Eight GPs volunteered to be interviewed for the study and had their interviews transcribed and analysed. Their demographic details are in table 2.

Six themes were identified: perspective on OA, management strategy, views on patients, views on physiotherapy, working collaboratively and suggestions for service improvements. All themes were discussed by all participants except 'views on patients' that was discussed by five of the eight participants. Definitions of these themes are given in table 3 and examples of key items will be provided as results are discussed.

1. Perspective on OA: Estimates of patients reporting with OA related problems to the GPs clinic ranged from 5% to 50% of their patient population. All were in agreement that OA was more prevalent in the lower limb with estimates of 50% to 85%. With regards their perspectives on OA, comments were made about the incurable nature of the disease, about the negative prognosis of OA, and the fact that medical professionals saw it as a low priority with respect to managing their workload.

'As someone once called it a terminal disease of the joints which is cured by joint replacement and that's sort of what it is!' [GP2]

'Like a lot of health care professionals we want to make people better and we are not very good at dealing with conditions that are not curable...that are chronic.' [GP4]

2. Management strategy: The clinical reasoning used by all the GPs was closely matched, with initial assessment of pain and function, and of treatment goals all being seen as important. Management strategies were varied.

'It is very much within the person what they want, what they can cope with and how bad the knee is.' [GP7]

When asked to deliberate between the uses of self management programmes, physiotherapy and orthopaedic consultants there was a general consensus that there is a place for each.

'It is a step-wise thing to be honest. So, I would probably go through the whole gambit with most patients eventually.' [GP5]

Frustrations were expressed about restrictive referral pathways by some and the lack of autonomy with decision making.

'We are always encouraged not to refer unless absolutely necessary.' [GP4]

Hence, self management was the most used approach in the management of OA. Positivity was expressed towards the private sector with all GPs advocating its use by their patients if available, as well as the NHS.

'We all said we didn't believe in private medicine but now a lot of people have...err...well, Westfield [insurance] is the commonest. Quite a lot of people have BUPA [insurance] and if people have got that, I would encourage them to use it. Because, there is no point paying for it and not using it.' [GP2]

'If patients can afford it and they will get seen a lot quicker, I think it is necessary to have it privately as well. There is too much demand in the NHS isn't there?' [GP3]

Clinical guidelines on OA were discussed, but only two GPs had a clear understanding of them. There was negativity towards guidelines by some with comments suggesting that clinical reasoning was more important than following guidelines.

'Guidelines are guidelines and nothing more than that. You have got to use your, your clinical sense.' [GP1]

'I think they are just that, guidelines. And if I think, I am not sure what to do with you I might look at them, but for that to dictate how you treat each and every patient I don't think that is right.' [GP5]

3. Views on patients: Five of the eight GPs felt that patients tended to prefer treatment administered to them and that a lack of compliance with home exercise regimes and advice given to them either by the GP or the physiotherapist was common.

'A lot of people are quite passive about their health, they want something to be done to them, and they don't necessarily want to do anything.' [GP6]

'You get your assessment, you get your advice, you are supposed to go home and do the regular exercises and things that you have been taught to do. And my experience is that a lot of patients don't do that stuff at home in between, so then they don't get the benefit from it.' [GP8]

4. Views on physiotherapy: All the GPs had a reasonable understanding of the role physiotherapy plays in the management of lower limb OA. Few voiced specific knowledge of

techniques but there was recognition of physiotherapy assessments of goals, function, gait and posture. Treatments mentioned included strengthening and movement exercise, stretches, massage, ultrasound, acupuncture and injection therapy. Most participants lacked confidence in their views on the clinical effectiveness of these treatments.

'Giving the patient an exercise programme to develop muscle mass; some physio's will be able to do things like acupuncture which can help reduce pain; heat, massage, ultrasound, but I don't know how effective these things are.' [GP4]

All the GPs had an overall positive experience of the physiotherapy service and commented on the therapist's knowledge of anatomy, their efficiency, detailed report giving and positive patient feedback.

'I do think it is useful, and certainly I have had quite a few patients with kind of knee pain that have really benefited from it.' [GP6]

There were negative comments about patient reports of a lack of 'hands on' physiotherapy and two GPs criticised the decision to centralise Sheffield's musculoskeletal physiotherapy service.

'It was useful to have somebody in the team. And you would bump into them having a coffee and you would be able to talk about a case and say is it something that you feel is worth you seeing? ' [GP4]

Some clinics have a service provided by a team of physiotherapists and frustrations were expressed about the lack of continuity and contact.

'We have different physios on three days; you know it would be better if we had one physio who had some sort of sense of belonging to the practice.' [GP2]

The most discussed problem was communication, namely the communication involved in the referral and discharge process. Some GPs felt the referral process was convoluted and at times irrelevant and there was a lack of detail provided on discharge and sometimes no correspondence at all.

'We don't really have any contact other than the referral process.' [GP5]

'When we get the discharge summary we do get brief summary of what's gone on. But in terms of my learning, it would be helpful to get a bit of a, not massively detailed but just a statement of what the physio thought was wrong in a little more detail than a brief description.' [GP8]

Self referral to NHS physiotherapy is not available in Sheffield but was asked about by the interviewer and there were conflicting views on its usefulness. Some GPs remained impartial to the application of it in practice.

'I think it is great in theory but actually it is a service that is rationed. And ideally, the gatekeepers, whether they will be other physios or GPs or other health professionals, ideally should have a role there. Because it is not an infinite resource. [GP7]

Some had a positive attitude towards its usefulness.

'I don't have a problem with self referral. Many patients see physiotherapists for example in private, and that's self referral. And they come to us with a summary of what the

physiotherapist has done and in some cases recommendations. Which I think is valuable.' [GP1]

'Hopefully it is only the motivated patients that are going to go, that isn't going to miss their appointments and not get involved and engaged. And so from that point of view it is helpful' [GP8]

5. Working collaboratively: None of the GPs reported working closely with physiotherapists in their career. One GP recognised a physiotherapist in their clinic but still expressed frustrations to the working relationship.

'The physios work upstairs; we have not much contact with them.' [GP3]

Sheffield's musculoskeletal physiotherapy service has changed over the past few years to a more centralised service with physiotherapists taken out of GP clinics. Dissatisfaction was expressed about the loss of communication and coherent working since.

'I am a great believer in face to face. A few years ago before the re-jigging we had a physio who was attached to the practice and I used to have a meeting with her on a Monday to discuss different cases. And I think that was very good in terms of education.' [GP2]

6. Suggestions for service improvements: When participants were asked for suggestions to improve the service provided by the Sheffield primary care physiotherapy team several were suggested. These included improved communication, in-house physiotherapy, streamlining the referral process, training sessions, triage service, private healthcare supplementation, a web based service and reduced waiting times.

The most discussed point was improving communication from nearly all the GPs. As well as improving collaborative working between GPs and physiotherapists it was suggested that the GPs needed to improve the quality of their referrals to give the physiotherapist more information.

'I think you as a physiotherapist will value a referral which states that the patient was seen a few weeks ago, on two occasions by the GP and we've done a, b, c or d. These are the things we've tried; they've been on the website and so forth.' [GP1]

In addition, some GPs felt that more information from the physiotherapists at discharge would be useful for their own learning, managing the patient appropriately and giving a consistent message.

'It would be nice to have just a brief feedback in terms of what the working diagnosis was, what treatment or advice was given to the patient, what the expectations of that treatment were.' [GP4]

Discussion

The results from this study suggest that the GPs exhibited an awareness of the physiotherapeutic approach but lacked an understanding of the specific interventions used in the management of OA. Positivity was shown towards the role of physiotherapists but criticism was aimed at Sheffield's centralised musculoskeletal service which was disconnected, lacked continuity and impaired collaborative working. Participants were aware of the strain on NHS services and some felt referral pathways were restrictive. In addition, the GPs felt that the independent sector was a useful adjunct to the NHS. There was a distinct lack of awareness and application of clinical guidelines on the management of

OA and negative feelings were expressed towards their use. Several suggestions were proposed to improve Sheffield's physiotherapy service with improvements in communication seen as the most important issue, especially to develop collaborative working and the referral and discharge processes.

Studying GPs comes with its challenges, poor response rates by GPs partaking in research has been attributed to high workloads and unease about professional scrutiny (Coar and Sim, 2006; Rosemann and Szecenyi, 2004). No studies have reported prevalence of OA in GP clinics, and this was not the aim of the study, but it clearly is seen by GPs as a common clinical problem. Participants reported the hip and knee as the most commonly affected joints, as found previously (Woolf and Pfleger, 2003). Evidence based clinical guidelines have been published to improve clinical decision making by healthcare professionals managing lower limb osteoarthritis (Larmer, Reay, Aubert, and Kersten, 2014). Similar guidelines have been adopted and supported by GPs in the Netherlands (Smink et al., 2013), but for the GPs in this study they appear to be underutilised and to be seen to act as a brake on clinical autonomy.

The participants exhibited an awareness of the benefit physiotherapy has in the management of osteoarthritis, but lacked specific treatment knowledge (Abbott et al., 2013). GPs have been found to struggle with the application of physiotherapy, but they feel confident and comfortable with physiotherapists managing their patients (Burn, May, and Edwards 2014; Holdsworth, Webster, and McFadyen, 2008; Paz-Lourido and Kuisma, 2013).

Communication and collaborative working between GPs and physiotherapists has been

identified as important for providing optimal care to patients (Hansson et al., 2008; Hayward and Willcock, 2015). This is a noteworthy point to take forward from this study as the participants felt there was poor communication in this present NHS service. Indeed there were underlying issues regarding the potential breakdown in inter-professional communication. Organisational changes appear to have led to a physical distance and a deterioration in relationships between GPs and physiotherapists, which was not to the GPs liking and an antithesis to good patient care. The GPs had a number of ideas about collaborative working, service improvements, and how communication could be improved, to which physiotherapy managers ought to respond. In deed the physiotherapy service had appeared singularly unsuccessful at listening to GPs concerns or at 'marketing' itself to them.

The study involved GPs based in Sheffield on a topic on which there have been few previous accounts. Systematic sampling was used in order to gain a level of randomisation and try to form a representative sample. Participants were equally split between genders, with varying levels of experience and ages. Unfortunately only three of Sheffield's four regions were represented with no volunteers from the north of Sheffield. As participants volunteered themselves to a study about physiotherapy preconceived perceptions of physiotherapy may have existed. As the researcher was a physiotherapist this may have created a positive response bias. Unfortunately a response rate of only eight GPs from the 211 invited was achieved, and seen as disappointing, but coercive research is impractical as well as unethical. Although impossible to avoid, this degree of selection bias was unfortunate and limited the number of perspectives that were heard, but it is impossible to know if more participants would have added more themes. Semi-structured interviews were used to allow for a more adaptive evaluative process and one-to-one interviews allowed for a more personal account

from the participant unhindered by the presence of others. As the investigators main area of work is not within the NHS hopefully this facilitated an unbiased, objective approach and the subsequent responses from participants were candid and forthright.

This research was conducted in the UK within the context of the NHS, but nonetheless some of the findings might be relevant in other settings. In other countries, as in the UK, patients can have direct access to physiotherapy or physical therapy services, but they may also be referred by GPs or physicians. Thus the issues of inter-professional knowledge base and communication are just as relevant. Extremely pertinent in any setting are the factors that practical and organisational issues can be negative or positive factors in communication between the professions. Targeted 'marketing' might be required to highlight areas of application of therapeutic skills that the GPs might not be aware of.

In a climate of tightened budgets and an ageing population it is important that various agencies in healthcare work together to provide a clinically and cost-effective service. Integrated referral and care pathways have been seen as more efficient and optimal to care for patients with musculoskeletal problems (Speed and Crisp, 2005). In order to achieve this it is important to have knowledge of professional roles, and be aware that the beliefs of health practitioners can influence their behaviour (Akbari et al., 2008; Daykin and Richardson, 2004). The results of this study suggest that further education on the role of physiotherapy and a drive towards collaborative working are required. The GPs all mentioned that close communication with physiotherapists had deteriorated with the new centralised service, and those who had experienced in-house physiotherapy would have

preferred to return to this service.

Conclusion

Eight GPs were interviewed about their perspectives on physiotherapy management for patients with OA. GPs had a positive impression of physiotherapy, but lacked knowledge about the specifics of treatment and considered that increased communication and collaboration would improve the service. In order for integrated pathways to work effectively, knowledge of professional roles and responsibilities is important.

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Ethical approval

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Provenance

Freely submitted; externally peer reviewed.

Conflicting interests

The authors have declared no conflicting interests.

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References

Abbott JH, Robertson MC, Chapple C, Pinto D, Wright AA, Leon de la Barra S, Baxter GD, Theis J, Campbell AJ 2013 Manual therapy, exercise therapy, or both, in addition to usual care, for osteoarthritis of the hip or knee: a randomized controlled trial. 1: clinical effectiveness. Osteoarthritis and Cartilage 21: 525-534.

Akbari A, Mayhew A, Al-Alawi M, Grimshaw J, Winkens R, Glidewell E, Pritchard C, Thomas R, Fraser C 2008 Interventions to improve outpatient referrals from primary care to secondary care. Cochrane 4: CD005471.

Alami S, Boutron I, Desjeux D, Hirschhorn M, Meric G, Rannou F, Poiraudeau S 2011 Patients' and practitioners' views of knee osteoarthritis and its management: a qualitative interview study. Plos One 6: 19634.

Bazeley P, Jackson K 2013 Qualitative data analysis with NVivo. London, SAGE.

Bennell K 2013 Physiotherapy management of hip osteoarthritis. Journal of Physiotherapy 59: 145-157.

Burn D, May S, Edwards L 2014 General Practitioner's views about an orthopaedic clinical assessment service. Physiotherapy Research International 19: 176-185.

Coar L, Sim J 2006 Interviewing one's peers: methodological issues in a study of health professionals. Scandinavian Journal Primary Health Care 24: 251-256.

Conaghan PG, Dickson J, Grant RL 2008 Care and management of osteoarthritis in adults: summary of NICE guidance. British Medical Journal 336: 502-503.

Corbin JM, Strauss AL 2008 Basics of qualitative research: techniques and procedures for developing grounded theory. London: SAGE.

Cross M, Smith E, Hoy D, Nolte S, Ackerman I, Fransen M, Bridgett L, Williams S, Guillemin F, Hill CL, Laslett LL, Jones G, Cicuttini F, Osborne R, Vos T, Buchbinder R, Woolf A, March L 2014 The global burden of hip and knee osteoarthritis: estimates from the Global Burden of Disease 2010 study. Annals Rheumatic Disease 73:1323-1330.

Dzieddzic KS, Healey EL, Porcheret M, Ong BN, Main CJ, Jordan KP, Lewis M, Edwards JJ, Jinks C, Morden A, McHugh GA, Ryan S, Finney A, Croft PR, Hay EM 2014 Implementing the NICE osteoarthritis guidelines: a mixed methods study and cluster

randomised trial of a model osteoarthritis consultation in primary care - the management of osteoarthritis in consultations. Implementing Science 9: 95.

Fullen BM, Baxter GD, Doody C, Daly LE, Hurley DA 2011 General practitioners' attitudes and beliefs regarding the management of chronic low back pain in Ireland: a cross-sectional national survey. Clinical Journal Pain 27: 542-549.

Hansson A, Friberg F, Segesten K, Gedda B, Mattsson B 2008 Two sides of the coin – general practitioners' experience of working in multidisciplinary teams. Journal Interprofessional Care 22: 5-16.

Hayward C, Willcock S. 2015 General practitioner and physiotherapist communication: how to improve this vital interaction. Primary Health Care Research Development 16: 304-308.

Holdsworth LK, Webster VS, McFadyen AK 2008 Physiotherapists' and general practitioners' views of self-referral and physiotherapy scope of practice: results from a national trial. Physiotherapy 96: 236-243.

Jamtvedt G, Dahm KT, Christie A, Moe RH, Havardsholm E, Holm I, Hagen KB 2008 Physical therapy Interventions for patients with osteoarthritis of the knee: An overview of systematic reviews. Physical Therapy 88: 123-136.

Jinks C, Ong BN, 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.

Kvale S, Brinkmann S 2009 Interviews: learning the craft of qualitative research Interviewing. London: SAGE.

Larmer PJ, Reay ND, Aubert ER, Kersten P 2014 Systemic review of guidelines for the physical management of osteoarthritis. Archives Physical Medicine Rehabilitation 95: 375-389.

Litwic A, Edwards MH, Dennison EM, Cooper C 2013 Epidemiology and burden of osteoarthritis. British Medical Bulletin 105: 185-199.

Paz-Lourido B, Kuisma RME 2013 General practitioners' perspectives of education and collaboration with physiotherapists in Primary Health Care: A discourse analysis. Journal Interprofessional Care 27: 254-260.

Pope C, Van Royen P, Baker R 2002 Qualitative methods in research on healthcare quality. Quality and Safety in Health Care 11:148-152.

Porcheret M, Jordan K, Jinks C, Croft P 2007 Primary care treatment of knee pain-a survey in older adults. Rheumatology 46: 1694-1700.

RCGP 2006 Royal College of General Practitioners-Birmingham Research Unit. Annual prevalence report.

Ritchie J, Lewis J, McNaughton N, Nicholls C, Ormstron R 2014 Qualitative research practice: a guide for social science students and researchers. London: SAGE.

Rosemann TJ, Joest K, Wensing MJP, Szecsenyi J, Backenstrass M, Mahler C 2006 Problems and needs for improving primary care of osteoarthritis patients: the views of patients, general practitioners and practice nurses. BMC Musculoskeletal Disorders 7: 48.

Rosemann T, Szecsenyi J 2004 General practitioners' attitudes towards research in primary care: qualitative results of a cross sectional study. BMC Family Practice 5: 31.

SCCG 2014 Sheffield Clinical Commissioning Group. Annual Report 2013/14 [online]. SCCG, 2014. http://www.sheffieldccg.nhs.uk/our-information/annual- report-2013- 14.htm [accessed 23 September 2014]

Silverman, D 2013 Doing qualitative research: A practical handbook. London: SAGE.

Smink AJ, Bierma-Zeinstra SMA, Dekker J, Vieland VTPM, Bijlsma JWJ, Swierstra BA, Kortland JH, Voorn TB, van den Ende CHM, Schers HJ 2013 Agreement of general practitioners with the guideline-based stepped-care strategy for patients with osteoarthritis of the hip or knee: a cross-sectional study. BMC Family Practice 14: 33.

Snape D, Spencer L 2003 The foundations of qualitative research. In: Ritchie J, Lewis J (Eds). Qualitative Research Practice. A Guide for Social Science Students and Researchers. London, SAGE.

Speed CA, Crisp AJ 2005 Referrals to hospital-based rheumatology and orthopaedic services: seeking direction. Rheumatology 44: 469-471.

Woolf, AD, Pfleger B 2003 Burden of major musculoskeletal conditions. Bulletins WHO 81: 646-656.

Table 1. Topic guide

Background and experience of OA:

- How many years have you practised as a GP?
- How many patients do you estimate you see with problems related to OA?
- How many of these patients do you think have problems of the hip and/or knee?

Experience of the management of OA:

- How would you decide whether to refer the patient to the following…?
  - … A self-management programme?
  - … A musculoskeletal physiotherapist?
  - … An orthopaedic consultant?
- Are you aware of any local and/or national guidelines for the management of OA?

Awareness of the role of Physiotherapy:

- Have you had experience of working with a musculoskeletal physiotherapist?
- Are you aware of the role physiotherapy plays in the management of OA, particular to the lower limb?

Future service improvements:

- Do you have any suggestions to improve the service currently provided by physiotherapists?
- Do you feel there is a place for the private sector in the management of OA?

Table 2. Demographic information of participants

Participant	Gender	Age	Years as GP	Large (5+), small (<5) practice	Region
GP1	Male	52	8	Large	Central
GP2	Male	52	19	Large	Hallam & South
GP3	Female	32	4	Large	Central
GP4	Male	41	11	Large	West
GP5	Male	60	32	Small	Hallam & South
GP6	Female	43	13	Small	Hallam & South
GP7	Female	45	11	Large	Hallam & South
GP8	Female	31	4	Large	West

Table 3. Definitions of themes

Theme	Definition
1. Perspective on OA	GPs perspective of OA and prevalence of problem in practice
2. Management strategy	Approach used by GPs managing patients with OA. Views on self-management, physiotherapy, orthopaedic consultants, the private sector and clinical guidelines
3. Views on patients	GPs perspective on patients attitudes to health and willingness to self-manage
4. Views on physiotherapy	GPs awareness of physiotherapy, physiotherapy for lower limb OA and self-referral to physiotherapy
5. Working collaboratively	GPs experience working with physiotherapists and their impressions on the relationship
6. Suggestions for service improvements	Suggestions to improve the service provided in Sheffield Primary Care NHS physiotherapy