

Physiotherapy management of knee and hip osteoarthritis: a survey of patient and medical practitioners' expectations, experiences and perceptions of effectiveness of treatment

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ABSTRACT

Osteoarthritis (OA) is a common cause of hip and knee pain. Current research advocates physiotherapy as an effective form of treatment to help manage OA. The aim of the study was to investigate the self-reported behaviour, experiences, expectations, and perceptions of general practitioners (GPs), orthopaedic surgeons, and patients with regard to physiotherapy referral and management of individuals with OA of the hip and knee. A survey questionnaire was designed to gather this information. A total of 98/320 (30% response rate) participants with hip or knee OA responded. Twenty four GPs from a pool of 52 (46%), and 20/76 orthopaedic surgeons (26%) responded. Fifty-one percent of participants with OA had received physiotherapy with the majority being referred by their GP or surgeon. Common interventions applied by physiotherapists appeared to be in keeping with best practice evidence. The 49% of participants who did not receive physiotherapy were not given an indication of the benefits of treatment from physiotherapists. Those participants with OA of the hip and knee who had good access to physiotherapy services, were receiving treatment in keeping with current best practice. GPs do regularly refer patients to physiotherapy but less so orthopaedic surgeons. Further improvements in referral patterns may be possible by increasing awareness of the benefits of exercise and physiotherapy management for OA.

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INTRODUCTION

Osteoarthritis (OA) is the most common type of arthritis in Western society (Jordan et al., 2004) and a leading cause of disability (Juby et al 2005). Its prevalence increases with age and affects 70% of individuals over the age of 65 years (Glazier et al, 2003). Due to increasing life expectancies (Bopf et al 2010), and a significant rise in the prevalence of obesity (Hunter, 2010), an increase in the prevalence of OA is to be expected. A projected estimate taken from the 2006-07 New Zealand Health Survey, shows that 8.8% of New Zealanders over the age of 15 years old were affected by OA in 2010. This figure is expected to rise to 9.9% by 2020 (Arthritis New Zealand 2010).

Osteoarthritis is a progressive disease of the synovial joints commonly affecting the hip and knee (De Bock et al 1992), and is characterised by hyaline cartilage degeneration, sub-chondral bone thickening, and novel bone formation (Peat et al 2001). Symptoms of OA typically include insidious onset of joint pain, swelling, stiffness, limited range of movement and muscle weakness (Williams and Spector 2006). Ten percent of people over 55 who have OA of the knee in particular will be significantly disabled by these symptoms (Peat et al 2001).

A number of evidence-based Clinical Practice Guidelines (CPGs) have been published to guide physicians, patients and allied health professionals in the management of hip and knee OA. The common theme throughout these guidelines is to apply non-pharmacological and pharmacological interventions until such time as surgery may be required (Aso OA, 2000, Jordan et al 2003, National Institute for Health and Care Excellence 2014, Zhang et al 2008).

One type of conservative non-pharmacological treatment is physiotherapy. Interventions such as supervised exercise programmes, acupuncture, bracing, taping, manual therapy, hydrotherapy and patient education have all been proven to be effective in the management of knee OA (Thomas et al 2009, Jansen et al 2011). A recent randomised controlled trial by Abbott et al, (2013) demonstrated that manual therapy and exercise are effective at improving pain and physical function in people with OA of the hip or knee and are more effective than usual care from a GP or other health care providers, with benefits lasting for at least one year. A follow on study by Pinto et al (2013) also demonstrated this type of approach has significant economic benefits in comparison to usual care.

Despite this positive evidence, there continues to be significant underutilisation of physiotherapy in the management of hip and knee OA in some countries (Linsell et al 2005). Other studies have demonstrated a heavy reliance on the early prescription of non-steroidal anti-inflammatory drugs (NSAIDs) (Jordan et al., 2004, Juby et al 2005) and referral of patients to an orthopaedic surgeon before more conservative treatments have been tried (Porcheret et al 2007).

Currently no research has been undertaken in New Zealand to determine if people with OA of the hip and knee are consistently being referred to physiotherapy, and whether the physiotherapy interventions they are receiving are in keeping with best practice. Additionally, little research has been completed examining the behaviour of GPs and orthopaedic surgeons with regard to their referral patterns to physiotherapy for OA of the hip and knee. Therefore, the aim of the study was to investigate self-reported behaviour, experiences, expectations and perceptions of individuals with OA of the hip and knee GPs, and orthopaedic surgeons with regards to physiotherapy referral and management.

METHODS

A questionnaire survey design was utilised to achieve the study aims. The Auckland University of Technology Ethics Committee granted ethical approval for this research project (AUTEC Approval number 12/103).

Questionnaire development

Following a review of literature pertaining to the expectations and experiences of people receiving physiotherapy for OA of the hip or knee, three questionnaires were developed; one each for people with OA of the hip or knee joints, one for GPs, and one for orthopaedic surgeons. The questions to the patient group covered such topics as common physiotherapy treatment options, access and barriers to physiotherapy and onward referral from GPs and orthopaedic surgeons. These were based on surveys used by Mitchell and Hurley (2008) and Juby et al (2005). The questions to the GPs and orthopaedic surgeons were aimed to ascertain their knowledge of the non-surgical management of OA and addressed topics including the utilisation of physiotherapy and medications, referral patterns to physiotherapists and their perceptions of the effectiveness of physiotherapy interventions. These were based on a similar survey questionnaire developed by Chevalier et al (2004). Questions in all surveys were structured using a closed format as either yes, no, multiple-choice or Likert-type responses. After the first draft of the questionnaire was completed, the research team assessed the content before sending the draft out for expert review.

Face validity was undertaken through expert review and was performed by a small group of patients with OA of the hip or knee, GPs and orthopaedic surgeons (Babbie 2011). Readability, time required to fill out the questionnaires along with the preferred method of delivery (hard copy or an online version) were considered. On receiving feedback from the reviewers, several small changes were made to improve the clarity of some questions. The final versions of questionnaires for those people with OA of the hip and knee comprised 15 questions while a set 14 questions was provided for the GPs and orthopaedic surgeons.

An online version of each questionnaire was constructed using software from the web-based survey development company Survey Monkey® (www.surveymonkey.com). This online survey tool allowed participants to access and complete the questionnaires via a web link sent to their email address.

Participants

Potential participants living on the North Shore and West Auckland with OA of the hip or knee were recruited from the Arthritis New Zealand members' database. General practitioners were identified as currently practising within the North Shore City region and orthopaedic surgeons from the national membership list of the New Zealand Orthopaedic Knee Society. Participants were excluded if they could not understand English sufficiently to complete the required questionnaires. All participants provided written informed consent to participate in the survey and were given two weeks to consider their participation following which a further two weeks was allowed to complete the survey. Hard copy versions of the questionnaire were mailed out, along with a self-addressed return envelope, to those who requested this method. The link to SurveyMonkey® was emailed to those who preferred the online version. Within one month of the completion date a follow up phone call was made to those who had agreed to participate but had not replied. Following a review of the initial responses attempts were made to increase the response rate of all three questionnaires through phone calls and emails to the groups outlined above.

SurveyMonkey® and hard copy responses from each completed participant form were directly inputted into an excel spreadsheet. The data were then analysed using descriptive statistics via SPSS (IBM SPSS Inc, Chicago, Version 19).

RESULTS

OA participant responses

Demographics of OA participants

A total of 98 participants with hip or knee OA completed the survey from a total pool of 320 (30% response rate). The demographics of the participants are presented in Table 1. See Figure 1 for flow of participant recruitment.

Figure 1: Flow diagram of recruitment of participants with OA knee or hip

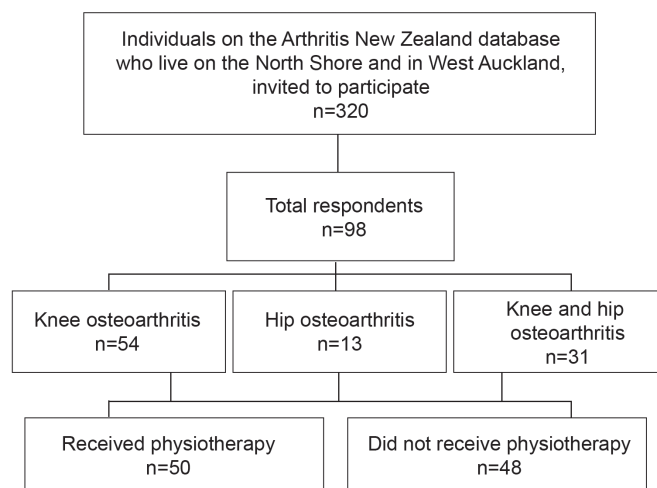


Table 1: Demographics of participants surveyed (n=98)

Age	67.6 (11.1) years		
Gender	Male: 26%	Female: 74%	
Length of time affected by OA	8.1 (6.5) years		
Location of OA	Hip and knee: 35%	Knee: 52%	Hip: 13%
Received physiotherapy for OA	Yes: 51%	No: 49%	

Data are means and standard deviations unless otherwise indicated.

Abbreviations: OA, osteoarthritis

Participants who received physiotherapy (n=50)

Of patients who had received physiotherapy for their hip or knee OA, 86% believed physiotherapy to be an important part of their management, with 80% reporting that it helped improve their condition with respect to range of motion and strength. Seventy percent of this group stated that they would like to keep using physiotherapy as long as possible, while 15% preferred to have joint replacement surgery.

(i) Perceptions of the effectiveness of physiotherapy: Responses to the question 'was physiotherapy helpful in managing your OA and if so what helped?' are displayed in Table 2. A combination of range of motion (ROM) exercises; strengthening exercises, joint mobilisations, and management advice were the most helpful interventions reported for hip or knee OA.

Table 2: Participant responses to perceived effectiveness of physiotherapy (n=50)

Response	Percentage
Physiotherapy helpful	63%
Physiotherapy not helpful	20%
Uncertain	17%
Would continue to use physiotherapy in future	51%
Would continue only if did exercises	39%
Uncertain	8%

(ii) Referral to physiotherapy: The methods of referral to physiotherapy are shown in Table 3.

(iii) Access and barriers to attending physiotherapy: Access was defined as the ability to be within close proximity of a physiotherapy clinic as well as the ability to have funding for their physiotherapy treatment. The majority of respondents reported physical access to physiotherapy in their area as being good (90%). However, 56% of respondents indicated that from a funding perspective current Accident Compensation Corporation (ACC) legislation not covering conditions like OA, was the main barrier to attending physiotherapy. Overall

Table 3: Referral patterns of patients with osteoarthritis of the hip and knee to physiotherapists (n=50)

Method of Referral	Percentage
GP	53%
Orthopaedic surgeon	18%
Self-referral	29%
Immediate referral from GP	49%
Delayed referral as last resort	20%
Advice from other sources (Arthritis New Zealand or friends)	20%

Abbreviations: GP, general practitioner

cost (59%) and high pain levels (24%) were the most commonly selected barriers preventing patients from attending physiotherapy treatment. Sixty-four percent of those who had received physiotherapy were aware that a referral from a medical practitioner was not required to access physiotherapy.

(iv) Orthopaedic referral: Of the respondents who had previously undertaken physiotherapy treatment, 61% reported their surgeon suggested physiotherapy could provide advice, exercise, joint mobilisations and pain relief strategies including acupuncture, TENS and hot or cold therapy, until such a time when joint replacement may be required. Of the participants who had not responded well to physiotherapy treatment in the past, 71% reported that their surgeon still suggested the above interventions.

Participants who did not receive physiotherapy (n=48)

Forty-nine percent of respondents reported they had not received physiotherapy as a treatment for their hip or knee OA. Of these, 86% were unaware of the different interventions that physiotherapy could provide. Despite this, the majority of these patients (93%) stated that they would consider seeing a physiotherapist if they had known the benefits. Cost and the thought that physiotherapy would increase their pain were reasons why 43% of this group of participants did not want treatment. The majority of respondents (94%) stated that their

GP or orthopaedic surgeon had not discussed physiotherapy as a possible option to treat their hip or knee OA.

Medical Practitioner Responses

Demographics

A total of 24 GPs completed the survey from a pool of 52 (46% response rate), and a total of 20 orthopaedic surgeons from a pool of 76 responded (26% response rate).

Table 4: Demographic of medical practitioners surveyed (n=24)

Type of Practitioner	GP: 54%	Orthopaedic surgeon: 46%
Age years	52.2 (8.5)	
Gender	Male: 66%	Female: 34%
Number of years qualified as a medical practitioner	22.6 (8.5)	

Data are means and standard deviations unless indicated otherwise.

Abbreviations: GP: general practitioner

GP and orthopaedic surgeon management (n=44)

(i) Knowledge and management of OA: Seventy-seven percent of GPs and orthopaedic surgeons surveyed reported they gathered their information on general OA management from a combination of formal training sources (undergraduate and residency training, professional development workshops and conferences), literary resources (medical journals, clinical guidelines and internet resources), and their colleagues. Just over half of the respondents (52%) referred their patients to physiotherapy if; they had high levels of pain and disability, were of a younger age, and where radiographic evidence of OA was present. Twenty-five percent referred if they found muscle weakness or wasting, joint stiffness and preceding or following joint replacement surgery.

(ii) Criteria for surgery: With respect to referring a patient for joint replacement surgery, 18% of GPs and orthopaedic surgeons indicated that they take into account pain levels and amount of disability as their only criteria, while 25% stated using those same criteria as well as getting to the point where all other conservative options have been exhausted. A further 57% reported that a combination of the above criteria along with the patient being at the end-stage of the condition, having radiographic evidence present, and the patients request for request for surgery were important to consider.

GP management (n=24)

When treating hip or knee OA, all GPs (100%) surveyed indicated that they commonly recommended a combination of two or more management strategies including education, exercise prescription, mobilisation, walking aids, weight reduction, knee brace, orthotics, heat/ice, transcutaneous electrical nerve stimulation, acupuncture, analgesics, NSAIDs, rest, surgery, cortisone injection and physiotherapy. With respect to whether or not co-morbidities such as hypertension, diabetes and obesity influenced their referral to an exercise-based therapy

such as physiotherapy, 92% stated these were not factors that prevented referral. Ninety six percent of GPs stated they had good access to physiotherapy in their area.

(i) Prescription of medication: When asked about their prescription of NSAIDs and analgesic medications, 29% of respondents indicated that they prescribe NSAIDs and analgesic medications to their OA patients before and during physiotherapy. Eighty-eight percent of respondents indicated that they prescribe NSAIDs and/or analgesic medication to patients with moderately severe OA as opposed to mild or severe OA.

Orthopaedic surgeon management (n=20)

(i) Pre-operative and post-operative referral: The recommendations for pre- and post-operative physiotherapy referral are presented in Table 5. Of the respondents who stated that they did not refer to physiotherapy preoperatively, 57% indicated that a lack of availability of physiotherapy, and a poor rate of previous success were barriers to referral. Forty-six percent of respondents indicated that if a patient was not going to have surgery on their hip or knee for years to come, they would implement a management strategy combining a range of conservative interventions. The main reason for post-operative physiotherapy referral (95%) was to provide management advice, joint mobilisations, range of motion exercises and strengthening exercises.

Table 5: Surgeon referral pre- and post-operatively (n=20)

Referral	Pre-operative percentage	Post-operative percentage
Physiotherapy required	15%	65%
Physiotherapy not required	30%	
Sometimes required	55%	35%

(ii) Perceptions of the effectiveness of physiotherapy: With respect to questions relating to the helpfulness of physiotherapy in the management of hip or knee OA, 72% of orthopaedic surgeons agreed, or strongly agreed that "there is a paucity of evidence in regards to the effectiveness of physiotherapy treatment for OA hip and/or knee". Seventy two percent disagreed or strongly disagreed that "physiotherapists lack expertise in OA management." Eighty-six percent disagreed or strongly disagreed that "conservative treatment is not an important part of OA management". Seventy-five percent of respondents agreed or strongly agreed that "past experience has shown physiotherapy to be ineffective".

DISCUSSION

The aim of the study was to investigate the self-reported behaviour, experiences, expectations, and perceptions of patients GPs, and orthopaedic surgeons with regard to physiotherapy referral and management of individuals with OA of the hip and knee. To our knowledge this was the first survey of its kind in New Zealand to gather such information.

The response rate for the OA participants was 30%, which is consistent with other research using a questionnaire survey (Reid et al 2002, Larmer et al 2002). The response rate was higher (46%) for the GPs and lower for the orthopaedic surgeon participants (26%).

Physiotherapy utilisation and perceptions of effectiveness

The current study found that approximately half of the patient population surveyed had received physiotherapy treatment for their hip or knee OA. The majority of participants with OA of the hip or knee (80%) stated physiotherapy was an important part of their management and that the benefits of physiotherapy continued after the conclusion of treatment. Some reported that these benefits depended on their continued performance of prescribed exercises. These findings support the work of Thomas et al. (2009), who demonstrated that these particular physiotherapy interventions are effective for the purpose of reducing pain and increasing function in OA patients. The results are also consistent with similar surveys of patient preferences whereby medications and physiotherapy were the most requested interventions by patients with OA of knee when consulting their GP (Mitchell and Hurley 2008). Recent findings from Abbott et al (2013) are also consistent with respect to the use of exercise and mobilisation in particular. Furthermore, recommendations made in the OARSI guidelines support referral to physiotherapy, along with patient education and self-management, aerobic and muscle strengthening exercises, thermal modalities, and acupuncture (Zhang et al 2008).

The strong support for physiotherapy from those people with OA of the knee and hip was not mirrored in the responses from the orthopaedic surgeons. This raises some concern given the amount of positive evidence available in current guidelines (Zhang et al 2008), systematic reviews (Jansen et al, 2011) and randomised controlled trials (Abbott et al, 2013). It is also in contrast to a study by De Bock et al (1992) that indicated 62% of patients were referred to physiotherapy by their doctors as part of their normal practice policy. It may also be possible that orthopaedic surgeons see patients more often at the stage where surgery is appropriate as all other conservative measures have failed to reduce the pain and disability associated with OA and hence see little need to refer on. The reasons for the reluctance to refer to physiotherapy based on a lack of evidence for effectiveness remains unclear given this evidence is widely available and accessible in electronic form. However, this may present a good opportunity for physiotherapists to apply the current strong evidence base in their treatments and strengthen the relationships with surgeons in order to increase their awareness of the effectiveness of physiotherapy.

Access and barriers to physiotherapy

Access to physiotherapy services in the current study was reported to be very good by nearly all respondents in all groups, including patients who do and do not attend physiotherapy. Of those who had previously attended physiotherapy most were aware that a doctors referral was not required to attend, however of those who have never accessed physiotherapy, a significant proportion (86%) were not aware they could attend therapy without a medical referral. This finding supports previous research by Jordan et al (2006), and Clemence and Seamark (2003), who demonstrated that previous experience and knowledge of the healthcare system can predict future

consultations among patients with knee pain, and influence patient expectations of what healthcare services such as physiotherapy have to offer. Raising awareness of health system protocols, specifically that a medical referral is not needed in order to attend physiotherapy for OA, may be a key factor in improving physiotherapy utilisation. There were still a high percentage of respondents who had not received physiotherapy and were unaware of what it could offer. What is clear from this study is that more information regarding physiotherapy treatment of OA, and how to access it, needs to be delivered to patients in an effective and credible manner.

The most significant barrier noted which prevented attendance was cost (59%), followed by the belief that physiotherapy interventions may increase pain and symptoms (43%). The costs associated with accessing health care services for physiotherapy are clearly different for individuals who meet the ACC's criteria for treatment cover (personal injury by a physical event such as an accident), compared to those with a chronic long term illness or condition such as OA. These costs are relevant to both physiotherapy and medical consultations and are seen as problematic by the majority of participant responses in the current study. This disparity in health funding may also be a result of the fact that arthritis and musculoskeletal pain are not listed as priorities in the New Zealand Health Strategy and therefore do not attract the same levels of government funding as other chronic and costly diseases such as diabetes and cardiovascular disease (King 2000). This disparity in funding may require health professional groups to lobby the government to alter these current funding provisions given the future projections of those who will be living with OA (Arthritis New Zealand 2010).

Referral to physiotherapy

Fifty three percent of respondents in this survey were referred to physiotherapy by their GP. Approximately half reported immediate referral, while one fifth were referred as a last resort. Of the half that had not received physiotherapy, the majority stated that their GP or orthopaedic surgeon had not discussed physiotherapy as a possible option for them. Previous research by Linsell et al (2005) in a similar patient population in the United Kingdom found that just 2.4% of patients were referred to physiotherapy from their GP on the first consultation, with this figure increasing to 17.7% if they again consulted within 36 months. While the current study displays improved referral statistics compared to the study by Linsell et al (2005) referral patterns still remain low.

With respect to pre-operative referral to physiotherapy for knee or hip replacement surgery, the majority of respondent orthopaedic surgeons (55%) believed physiotherapy to be 'sometimes' worthwhile before surgery, but almost one third did not. Current evidence from a recent systematic review and meta-analysis by Wallis and Taylor (2011) indicates that there is low to moderate strength evidence that pre-operative physiotherapy is useful to improve pain and function, and that these improvements are not carried over to the post-operative phase. Further research into the effectiveness of pre-operative physiotherapy will be required if these views are going to change.

With respect to the utilisation of post-operative physiotherapy, 65% of surgeons stated they would refer to physiotherapy

following a joint replacement. This is in keeping with a recent RCT by Bade and Stevens-Lapsley (2011), who found that high intensity rehabilitation after total knee joint replacement provided lasting benefits with respect to quadriceps strength and function at three, 12 and 52 weeks post-operatively when compared to a low intensity exercise control group.

Implementation of Clinical Practice Guidelines

The current study found that the most common management strategy suggested by GPs and orthopaedic surgeons to patients with hip or knee OA was to use a combination of pharmacological and non-pharmacological interventions. These modalities would continue to be recommended by surgeons if the patient was not going to have surgery for some time. These approaches are consistent with current OARSI guidelines (Zhang et al 2008). However given that 94% of the participants in the current study who had not attended physiotherapy stated that their GP or orthopaedic surgeon had not discussed physiotherapy with them, there would seem to be a lag between the use of the guidelines and current practice. Further research into the uptake of guideline based care for the management of OA hip and knee is required.

Prescriptions

The prescription of NSAIDs and analgesic medications by GPs in the current study was found to occur most often when OA was perceived to be moderately severe, as opposed to mildly or very severe. A number of studies have commented that pharmacological treatments in general are being overused while non-pharmacological treatments such as physiotherapy are being underutilised (Chevalier et al 2004, Glazier et al 2003, Jordan et al 2004, Mitchell and Hurley 2008). However, other research has found that patients are often more satisfied with medications and surgery rather than other conservative measures (Juby et al 2005). Many participants in the current study seem more satisfied with conservative measures such as physiotherapy.

Referrals for surgery

All respondent GPs and orthopaedic surgeons were found to use pain and disability as criteria for surgical referral. Most exhausted all other conservative treatment options first, and the majority also took into account the patient being at the end-stage of their condition, radiographic evidence, and/or patient request. These results are in contrast to other studies. Bedson et al (2003) demonstrated that the presence of radiographic OA caused a marked increase in orthopaedic referrals, while Porcheret et al (2007) observed that surgical referral was initiated before more conservative interventions had been tried. Glazier et al (1998) also found that a quarter of physicians referred patients with knee OA inappropriately, typically on to receive orthopaedic surgery. These types of referral were not evident in the participants of the current study.

Limitations

There are a number of limitations in this study. Surveys of this type are affected by the response rate and the population of interest. The patient response rate in the current study was low but an alternative to this method would have been individual in-depth interviews with participants who have OA and the medical professionals who treat these people.

The participants with OA in this study were recruited from the Arthritis NZ database. This may have biased the sample as they have already demonstrated an interest in the management of OA by joining Arthritis NZ. There may be other potential participants in the community who have a different level of knowledge and experience with physiotherapy. The sample population was chosen to try and give a good spread of socioeconomic participants by including the North Shore and West Auckland. Therefore these results are not generalisable to all people suffering from OA of the hip and knee in New Zealand. However, it should be acknowledged that in other parts of Auckland city, there are areas of greater socioeconomic hardship that may prevent these people accessing or seeking medical or physiotherapy care. These participants' information may well have altered the results, should they have been surveyed.

The survey questionnaires did not include questions that would have differentiated between services delivered in the public or private sectors nor were there questions on the severity of the disease or the length of time determined as the pre-operative period.

Future research

Broadening the scope of this survey to other parts of Auckland City and New Zealand in general, would be of interest. The survey could also be repeated in years to come to see if the referral patterns and access to therapy have changed following future promotional campaigns by physiotherapists. Combining this type of survey with focus groups or qualitative interviews to expand on the experiences of these participants and to see how access and services might be better delivered in future, would also be helpful. This study has shown there are a group of patients who are consulting their GPs about their knee and hip OA, but are not being referred onto physiotherapy, the reasons for non-referral warrants further examination.

CONCLUSIONS

The current study investigated the self-reported behaviour, experiences, expectations, and perceptions of general practitioners (GPs), orthopaedic surgeons, and patients with regard to physiotherapy referral and management of individuals with OA of the hip and knee. It found that physiotherapy interventions such as ROM exercises, strengthening exercises, joint mobilisations and management advice, which are strongly recommended by CPGs and current research, are valued by OA patients who have received them, and are the interventions that GPs and orthopaedic surgeons commonly request when referring to physiotherapy. The referrals for physiotherapy-led treatment are not as strongly supported by orthopaedic surgeons. A balanced mixture of pharmacological and non-pharmacological interventions are currently utilised by GPs when treating OA hip and knee, which reflects CPGs. However referral patterns are not in keeping with current evidence supporting the efficacy of physiotherapy in the management of OA of the knee and hip. This may change with improved funding support to GPs and physiotherapists which in turn may improve access. Further awareness of health system protocols specifically that a medical referral is not needed in order to attend physiotherapy for OA, may be a key factor in improving physiotherapy utilisation.

KEY POINTS

- Physiotherapy treatment is perceived by patients with hip and knee OA to be effective in the management of their condition
- Patients who are receiving physiotherapy are provided management consistent with current best practice guidelines
- GPs do regularly refer patients to physiotherapy but further improvements may be possible from other groups such as orthopaedic surgeons
- Based on the responses of orthopaedic surgeons further research is required to determine the effectiveness and utilisation of physiotherapy pre-operatively for joint replacement

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CONFLICT OF INTEREST

The authors hereby declare there is no conflict of interest with this submission.

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