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## Perspectives on health care and self-management of osteoarthritis among patients who desire surgery: A qualitative interview study

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### ABSTRACT

**Background:** Expressing a desire for surgery before participating in first-line osteoarthritis (OA) interventions (patient education and exercise therapy) has been shown to contribute to poorer outcomes from the interventions, but we lack knowledge on how these patients reflect on health care and self-management of OA.

**Objectives:** To explore and describe patients' perspectives of health care and self-management of OA among those expressing a desire for surgery before participating in first-line OA interventions.

**Methods:** Sixteen patients with hip or knee OA referred to participate in a standardized first-line OA intervention program in primary health care in Sweden were included in the study. We used individual semi-structured interviews to collect data, which were analyzed using inductive qualitative content analysis.

**Results:** One theme of meaning "A multifaceted picture of needs, expectations, and individual choices" and five categories were identified as perspectives from the participants regarding health care and self-management of OA: 1) lacking control and needing support; 2) standing alone in an unsupportive environment; 3) going with the flow; 4) having expectations; and 5) taking ownership.

**Conclusion:** Patients who express a desire for surgery before participating in first-line interventions for OA are not a homogeneous group. They describe a broad range of perspectives on how they reason and reflect on health care and self-management of OA based on their own needs, expectations, and choices. Findings from this study strengthen insights on the importance of exploring the patient's perspectives and individualizing OA interventions to achieve the lifestyle changes that first-line interventions strive to accomplish.

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## Introduction

Hip and knee osteoarthritis (OA) often develop slowly over time and cause pain and disability that affect physical function, mental health, the possibility for social participation and sleep (Cross et al., 2014; Roos and Arden, 2016). According to international and national guidelines, and supported by strong evidence, first-line interventions for OA should include: patient education, exercise therapy and weight control (Bannuru et al., 2019; Kolasinski et al., 2020; Socialstyrelsen, 2021; Verhagen et al., 2019); interventions that strive to encourage self-management of OA symptoms (Hunter et al., 2023). As a second step, first-line interventions

can be supplemented with additional interventions if needed (e.g. pain medications). Arthroplasty surgery may then be considered, but only for those with severe radiographic changes, and when their pain is still unacceptable after trying all non-surgical treatments (Culliford et al., 2012; Hunter and Bierma-Zeinstra, 2019; Peat, McCarney, and Croft, 2001).

Despite guidelines, there is a discrepancy between treatment recommendations and daily clinical practice, with less than 50% of patients with OA who seek health care receiving first-line interventions as the first option (Hagen, Smedslund, Osteras, and Jamtvedt, 2016; Osteras et al., 2019; Snijders et al., 2011). Previous research on patients' views of OA and its management

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has revealed negative attitudes toward non-surgical management of the disease (Smith et al., 2014) and approximately 25% of those referred to first-line OA interventions expressed a desire to undergo surgery (Jonsson et al., 2019; Teoh et al., 2017). This is problematic because it has been shown to contribute to poorer outcomes from first-line OA interventions (Dell'Isola et al., 2020).

Self-management is an interactive and daily process of behaviors and decisions made to manage one's health and is central in handling chronic diseases such as OA (Van de Velde et al., 2019). Self-management as a concept has therefore been proposed to be incorporated in the general definition of health as "health is the ability to adapt and self-manage in the face of social, physical, and emotional challenges" (Huber et al., 2011). First-line interventions strive to give patients with OA tools that support them to self-manage the disease by achieving long-lasting lifestyle changes to be able to live a good and active life with OA (Thorstensson, Garellick, Rystedt, and Dahlberg, 2015). However, we lack knowledge about how patients who express a desire for surgery view health care and self-management of OA. Paying attention to patients' perspectives may increase adherence to treatment (Alami et al., 2011) and can contribute to optimizing the way support is provided to patients by physiotherapists. Therefore, the aim of this study was to explore and describe patients' perspectives of health care and self-management of OA among those expressing a desire for surgery before participation in first-line OA interventions in primary health care in Sweden.

## Methods

### Design

In this study, we used a qualitative design with individual interviews to explore patients' perspectives regarding health care and self-management of OA among those who express a desire for surgery. Because there is limited previous literature on this topic, qualitative content analysis with an inductive approach was considered to be a suitable method (Elo and Kyngas, 2008). Qualitative content analysis is a systematic and autonomous method to analyze qualitative data (Graneheim, Lindgren, and Lundman, 2017; Lindgren, Lundman, and Graneheim, 2020) and is often used in caring sciences (Elo and Kyngas, 2008). The method aims to achieve a broad and condensed description of a studied phenomenon by identifying, describing and categorizing patterns detected within the data (Graneheim and Lundman, 2004; Graneheim, Lindgren, and Lundman,

2017). This study followed the ethical guidelines described by the Helsinki Declarations and was reported according to the COREQ checklist (Tong, Sainsbury, and Craig, 2007). The study was approved by the Swedish Ethical Review Authority (entry no. 2020-00757).

### Study participants and recruitment

Participants were recruited from seven rehabilitation units in primary health care in southern Sweden that provide a national standardized first-line intervention program for hip and knee OA. Approval for participation in the recruitment process was obtained from the chief manager at each unit and none of the authors had any previous connection with the patients or the units that recruited participants. The intervention program has been implemented in Sweden since 2008 to improve OA care and ensure that OA care is delivered according to clinical guidelines (Thorstensson, Garellick, Rystedt, and Dahlberg, 2015). The intervention program consists of a mandatory educational part consisting of a minimum of two theoretical group sessions, including education about the pathophysiology of OA, treatment recommendations, self-management of the disease, and the benefits of physical activity and training. The intervention program also consists of an optional but recommended exercise component, where patients are offered a face-to-face session with a physiotherapist to develop an exercise program based on their individual needs and goals. Patients can then choose to perform the exercise program during physiotherapist-supported exercise classes twice a week for 6 to 8 weeks or on their own. Criteria for participation in this intervention program are as follows: a clinically or radiographically confirmed diagnosis of hip and/or knee OA according to the Swedish National Board of Health and Welfare recommendations (Altman et al., 1986, 1991; Socialstyrelsen, 2021); and absence of other diseases that cause more severe problems than OA, such as suspicion of or confirmed tumor, inflammatory joint disease, sequelae of hip fracture or chronic widespread pain. Data on participating patients are reported to and evaluated through the Swedish Osteoarthritis Register formerly known as the Better Management of Patients with Osteoarthritis [BOA] Register, which is a national quality register (Thorstensson, Garellick, Rystedt, and Dahlberg, 2015). To be registered in the Swedish Osteoarthritis Register, no arthroplasty surgery should have been performed within the previous 12 months or other joint surgery within the previous 3 months. These criteria, and three additional

inclusion criteria, determined eligibility for our study: 1) an affirmative answer to the question “Do you have so much trouble from any of your joints that you wish to have surgery?” (this question is included in the standardized questionnaires that are completed before starting the intervention program, and includes the following instruction; “Please note that your answer to this question does not affect your care and is also not read by the doctor”); 2) have not yet started the intervention program (i.e. other previous OA treatments, including pain medication, previous recommendations of weight loss and exercise programs were however allowed); and 3) understanding and speaking Swedish.

Based on these criteria, the physiotherapist in charge of the intervention program at each unit identified potential participants between September 2020 and December 2021. Identified potential participants were given a brief introduction about the study by the physiotherapist. If the patients agreed, their contact information was delivered to the first author (KG), and the patients received information about the study in writing. KG contacted each patient by phone and described the study protocol verbally, including that participation was voluntary. In total, 18 patients received information about the study. Two patients chose not to participate, therefore, the final sample consisted of 16 participants. Informed written consent was obtained from all participants. A purposeful sample method was used with the intent to include a variety of participants from different backgrounds regarding age, sex, working status, and previous experiences of OA treatments, including surgery (Moser and Korstjens, 2018) (Table 1). None of the participants with previous experience of surgery had participated in the intervention program before those surgeries.

## Data collection

Individual semi-structured interviews (Dicicco-Bloom and Crabtree, 2006) were used to collect data. The first author (KG) conducted all the interviews, and only the interviewer and the participant were present. The interviewer is a female physiotherapist with clinical experience of managing patients with OA and a PhD student in the field of OA. The profession of the interviewer was not revealed to the participants.

The interviews were conducted before the participants began the intervention program. The first three interviews were held face-to-face at places selected by the participants (i.e. one in the participant’s home and two at the clinics), but due to the COVID-19 pandemic the remaining interviews were conducted by telephone. One interview per participant was conducted. The interviews were conducted in a conversational style, following an interview guide that had been tested before the start of the study. The interview guide included questions on background information and topics about living with OA and potential lifestyle adjustments, health care provided to date, participants’ knowledge about OA and its treatments, and the participants’ thoughts and expectations of forthcoming treatments (Table 2). The effective interview duration was between 13 and 35 minutes (median, 23.5 minutes). The interviews were audio recorded and transcribed verbatim. At transcription, the identity of the participants was replaced with a serial number, to which only the first author (KG) had access. All data was treated confidentially and stored at secure locations only accessible to the researchers; the key to the serial numbers was stored separately from the other data. Data collection continued until data saturation was reached, with comprehensive and rich data that

**Table 1.** Characteristics of the participants.

Participants	Age (years)	Sex	OA location	Working status	Occupation (white/blue collar worker)	Previous joint surgery
1	48	Male	Both hips	Working	Blue	No
2	52	Female	Knee	Working	Blue	Knee arthroscopy
3	53	Female	Both knees	Work seeking	Blue	No
4	54	Female	Hip	Working	Blue	Hip arthroplasty
5	55	Male	Both knees	Working	White	No
6	57	Male	Knee	On sick leave	Blue	No
7	59	Female	Both knees	Working	White	No
8	60	Female	Knee	On sick leave	Blue	Hip arthroplasty
9	63	Male	Both knees	Working	Blue	Knee arthroscopy
10	65	Female	Both knees	Retired	Blue	No
11	68	Female	Knee	Retired	Blue	No
12	72	Male	Knee	Retired	Blue	No
13	75	Female	Both knees	Retired	Blue	No
14	78	Female	Hip	Retired	Blue	No
15	79	Female	Knee	Retired	Blue	No
16	83	Female	Knee	Retired	White	Hip arthroplasty <sup>a</sup>

Note: OA, osteoarthritis; <sup>a</sup>Bilateral hip arthroplasties.

**Table 2.** Interview guide.

Theme	Questions
Open question	Tell me a little about yourself. What is your age, main employment, and could you describe a little bit about your social support and lifestyle?
Osteoarthritis background	Please, tell me about your joint problems
Living with osteoarthritis and lifestyle changes	How does the condition affect your life? Tell me what you know about the condition and where you got the knowledge from Tell me about what strategies/self-care you have to deal with your joint problems
Health care and health care contacts	What has the treatment for your condition looked like so far? And what treatment is planned for the future? What are your thoughts about joint surgery? How do you experience the contacts you have had in health care for your osteoarthritis?
Future	Tell me what your thoughts are for the future with osteoarthritis
Other things	Is there anything in addition to what we have already talked about that you want to add?

responded to the aim of the study (i.e. when redundancy in the data collection occurred and when data began to be repeated, which was jointly evaluated by the research team) (Hennink, Kaiser, and Marconi, 2017; Moser and Korstjens, 2018; Saunders et al., 2018).

### Data analysis

Data was analyzed using qualitative content analysis, with an inductive approach, as suggested by Graneheim, Lindgren, and Lundman (2017), Graneheim and Lundman (2004), and Lindgren, Lundman, and Graneheim (2020). Content analysis follows a systematic process that can result in sub-categories, categories and/or themes (Graneheim and Lundman, 2004). In inductive content analysis, a category describes similar data and relates to the manifest content of the collected data, with a low degree of interpretation but varying level of abstraction. Categories are often sorted in hierarchies and can consist of several sub-categories. Themes however represent the latent content, involve interpretation of the underlying meaning to the phenomenon of study and give directions and nuance to data. According to Graneheim, Lindgren, and Lundman (2017) a theme can be formulated as a theme of meaning or as a descriptive theme. A theme of meaning illuminates a comprehensive interpretation of the text on a more abstract level and with a higher degree of interpretation, while a descriptive theme usually has a moderate degree of interpretation, describes the unifying red thread that runs through several categories, and does not vary through different parts of the data (Graneheim, Lindgren, and Lundman, 2017; Lindgren, Lundman, and Graneheim, 2020).

In our study, the data analysis was conducted in several steps, as described in detail by Lindgren, Lundman, and Graneheim (2020). First, the first

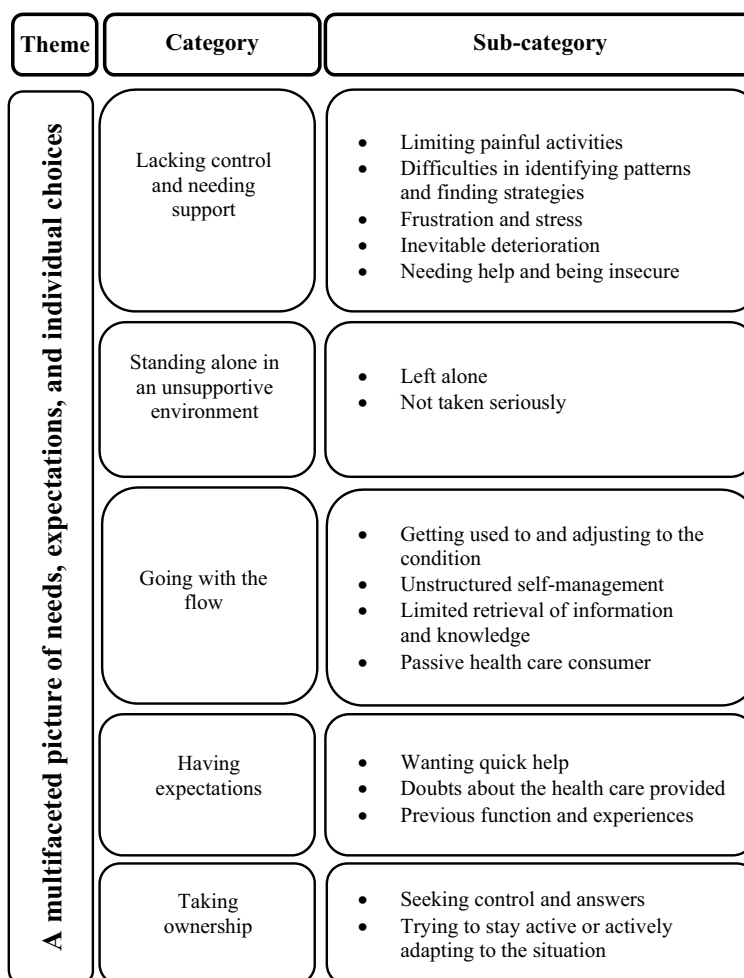
author (KG) listened to and read all interviews as a quality check of the transcriptions and to get a sense of the whole material. Thereafter, the transcribed text was divided into meaning units. These could consist of short or long sentences or paragraphs, and they were related to each other through context or content. The meaning units were first condensed by making the text shorter but still preserving its core meaning. Those were then labeled with an initial code that was close to the original text and with the aim of the study in mind. The codes were on a low level of abstraction and interpretation, so the essential content was not missed. At this point, the first author (KG) collaborated with second author (KAJ) and last author (JK) to discuss the codes and revise if needed. Then they were sorted and abstracted into 16 sub-categories and further on five categories. After reflecting on the categories, a theme of meaning was identified, as an illuminating and comprehensive interpretation of the text. To enhance trustworthiness, codes, sub-categories, and categories were repeatedly compared backwards and forwards in raw data, discussed, and refined throughout the analysis process, resulting in consolidation of the findings (Lindgren, Lundman, and Graneheim, 2020). KAJ and JK are both female physiotherapists and researchers with extensive work experience in rehabilitation of rheumatic diseases and orthopedic rehabilitation, and who also have experience and knowledge of qualitative analysis. To address reflexivity, the three authors who were responsible for the analysis process repeatedly discussed how their previous experiences and knowledge research in the field could influence on their pre-understanding of the studied phenomena (Cope, 2014). After all interviews were analyzed, the sub-categories, categories, and the theme were



**Table 3.** Examples of meaning units and codes underlying the sub-categories and categories.

Meaning units	Codes	Sub-category	Category
No, I have not sought health care, I have been ignoring it until now when I walk up and down the stairs and discover how damned painful it is. (Participant 15)	Seeking health care when OA can no longer be self-managed	Needing help and being insecure	Lacking control and needing support
10–15 years ago, it felt like hell so I called the primary health care center. That doctor sent me for an x-ray, and then he replied that it was osteoarthritis, but not so bad that surgery was relevant or anything else. That was all I got then. (Participant 10)	Left alone after the initial examinations	Left alone	Standing alone in an unsupportive environment
And then the doctor thought I should participate in the first-line intervention program. To have surgery in the future, I have to participate in the program so then I did that. (Participant 3)	Confidence in health care	Passive health care consumer	Going with the flow in trust
It feels like something is physically wrong, you see. There has to be, but then the question is what to do about it? As I see it, no medication helps with what is physically wrong; possibly it relieves the pain but the thing is I would still be left with the problem. (Participant 5)	Search for an explanation of what's wrong	Seeking control and answers	Taking ownership

Note: OA, osteoarthritis.



**Figure 1.** Overview of the theme, categories, and sub-categories describing patients’ perspective of health care and self-management of osteoarthritis.

discussed among all authors until consensus was reached (Table 3).

## Results

The analysis resulted in five descriptive categories: 1) lacking control and needing support; 2) standing alone in an unsupportive environment; 3) going with the flow; 4) having expectations; and 5) taking ownership. From those, one theme of meaning was formulated: “A multifaceted picture of needs, expectations, and individual choices” (Figure 1). The theme illustrates how the participants expressed a broad range of topics in their perspectives on health care and self-management of OA, and are further described below in each category with its sub-categories.

### Lacking Control and Needing Support

This category concerns perspectives on self-management and their relation to health care. The sub-categories together describe a sense of lacking control and needing support. The included sub-categories are: 1) limiting painful activities; 2) having difficulties in identifying patterns and finding strategies; 3) feeling frustration and stress; 4) seeing OA as an inevitable deterioration; and 5) needing help and being insecure.

One perspective of self-management of OA was the need to limit painful activities, activities that previously had been considered joyful and energizing. This approach often affected quality of life and decreased the possibility of social interactions.

*Well, actually I don't do much now since I have so much pain. I avoid going out. There is a resistance against doing everything. That's the way it is. (Participant 14)*

Difficulties in identifying patterns in the symptoms experienced and finding strategies to manage the OA were also expressed, together with the notion that they struggled to understand the disease.

*It is so weird, because sometimes it is good and sometimes it is hell afterward. You do not know how to sit or stand; it is so different (from time to time). (Participant 10)*

Participants described feelings of frustration and stress, mainly due to an inability to accept that the body does not function as before, the risk of not being able to manage their work, but also regarding impatience with treatment.

*I do not have any problems with the way I am being treated in health care; it is more the whole process that*

*this is how it works. I understand that you have to start at one end, that is not strange, but it is just that you get frustrated when you have to live with the pain. (Participant 5)*

OA was seen as a condition with inevitable deterioration, manifesting as a belief that OA was the consequence of wear and tear. Since the disease was only expected to worsen with time, surgery was considered the only reasonable alternative for improvement when living with OA.

*What I have understood is that there are no alternatives. I have no alternatives. I just need to get help that is what I need. (Participant 14)*

Difficulties in managing OA symptoms led to insecurity and a need for help, which the participants described as needing to ask their surrounding social network for help and support, but at the same time, not wanting to disturb them. It was common to turn to health care professionals only when symptoms could no longer be self-managed and when participants felt they had run out of alternatives.

*You learn to live with pain to a certain level and then, when that level has been reached, you cannot do anything. Then you seek help. By then, it has gone on for a long time if you know what I mean. (Participant 4)*

Insecurity was mainly connected to thoughts regarding treatments; for example, having to take painkillers but at the same time considering them not effective enough, feeling resistance against using medications, or wanting to undergo surgery but feeling insecure about the outcome of surgery for OA. Those of working age often expressed insecurity regarding future work capacity.

*Then you probably are a little afraid that it will fail. Your do not want to end up in a wheelchair for life. So it's kind of double. (Participant 3)*

### Standing alone in an unsupportive environment

This category comprises of two sub-categories: 1) being left alone; and 2) not taken seriously by health care professionals or by people in their surroundings.

Being left alone consisted of experiences of having had symptoms for several years before seeking health care but then being left on their own after the initial examination, often without further treatments or recommendations, waiting for the x-ray results to become bad enough to be offered surgery.

*Then nothing really happened. Nothing has happened since then. I went to the doctor and they will not do*

*anything until it is at stage 3 on the x-ray. Then they will replace the joint, but it has not gone that far yet, they say. So they do nothing. (Participant 6)*

This sub-category also includes the sense of being left alone with the responsibility for weight loss or exercise. Participants often found this responsibility challenging.

*Now it is up to me since they say for it to go away, you need to exercise and lose weight. But it is not easy. It is easy to say but it is really not easy for me to lose weight. (Participant 10)*

Participants expressed that they were not being taken seriously by health care and feeling that OA was not a health care priority. The participants also described how they had repeatedly tried to talk with health care professionals about the symptoms they had from OA over the years without being listened to or feeling that they were not important (e.g. due to age).

*For me it felt like; You're fifty years old, it's the slaughterhouse. We do nothing. That was not that positive. (Participants 2)*

They reported a constant struggle to be provided with examinations or to be offered what they considered effective treatments. Feelings that they were not being listened to or receiving mixed messages from different professionals led to confusion or distrust. Participants also indicated that they did not feel that they were taken seriously by people in their social surroundings and that there was limited understanding of what living with OA is like.

*I do not want to jump the queue before anyone else, but I want to be taken seriously and I am not. I am not being taken seriously. (Participant 16)*

### **Going with the flow**

This category encompasses a more reserved approach toward health care and self-management of OA, with the following sub-categories: 1) getting used to and adjusting to the condition; 2) unstructured self-management; 3) limited retrieval of information and knowledge; and 4) passive health care consumer.

The participants described needing to adapt day by day as the OA symptoms slowly became worse. The sub-category getting used to and adjusting to the condition reflects this experience.

*But then, to have pain is part of the condition and you learn to live with it, and you are active in relation to what you can manage. (Participant 4)*

This category was also portrayed by the sub-category unstructured self-management in which participants described perspectives on how they self-managed the

OA sporadically, without a clear view of what they wanted to achieve (e.g. by irregular exercise or by using exercise programs that had been developed for someone else's needs).

Participants expressed limited knowledge about OA and how to manage the disease. At the same time, they did not seek more information on their own, which was explained as not being interested in knowing or limiting their retrieval of information and knowledge to what was provided by health care professionals.

The sub-category passive health care consumer was expressed as a passive and anonymous "someone with knowledge needs to take care of this" or "someone else has to do something to help me."

*I need help, that is what I need. I do not know what help is available, more than to do the exercise program. I have no clue about what can help me. (Participant 13)*

### **Having expectations**

This category captures the participants' expectations on health care in general, and specifically on the desire for surgery, divided into the following sub-categories: 1) wanting quick help; 2) doubts about the health care provided; and 3) expectations based on previous function and experiences.

Wanting quick help was characterized by a wish and appreciation for fast solutions. There was also a search for an explanation of what was wrong with the joint. A perception was that first-line OA intervention was something that just needed to be accomplished to get to surgery.

*It feels like the intervention program is some kind of passage way to real treatment ... to take part in this treatment where I cannot get a real analysis of my problem; it does not feel right. (Participant 5)*

Doubts about the health care provided were reflected in the participants' expectations of the examinations and treatments offered by health care professionals, but also in the absence of health care that they considered necessary, including not feeling properly examined. An x-ray was considered necessary to confirm the diagnosis and to explain the symptoms. In the absence of that examination, doubts about health care were expressed as total mistrust in some cases, regarding the diagnosis and the information provided.

*I don't really get it, what is it that I have to learn? Am I supposed to learn to live with this pain, or what am I supposed to do there? It is like, what I am supposed to*



*do to get rid of it. But perhaps I do not need to participate in a program for that. (Participant 5)*

The category of having expectations also consisted of factors that the participants explained as contributing to them expressing a desire for surgery, such as a wish to get back to normal and restoring what has gone wrong with the joint or restoration of previous function. Those factors were based on their expectations of surgery or their own or others' experiences of OA surgery.

*Hopefully, they put in a steel thing so the pain disappears. That is what I want. Because, I have pain in my joints and I would like it to disappear so that I become, so to say, normal again. (Participant 6)*

### **Taking ownership**

This category is influenced by perspectives of a more active approach toward self-management, where participants strive to take control and to influence their situation. This perspective includes the following sub-categories: 1) seeking control and answers; and 2) trying to stay active or actively adapting to the situation.

This category consists of the perspective of wanting to know more, identified as actively seeking information, explanations, and answers to achieve and take control of the situation.

*I wish I could see an orthopedic and get answers to my questions. What it is and how it acts. Otherwise, I do not know what can give me the correct answers about what this is. I have become a doubter. (Participant 11)*

The approach of trying to stay active or actively adapting to the OA symptoms was manifested by participants pushing themselves to remain active despite the pain. It was also manifested by having insight into their own responsibility regarding maintaining an active lifestyle and physical activities. They refused to allow OA to take over their lives and found new solutions to manage to continue with activities of interest.

*I have figured out that I can take a golf cart and can then continue doing something that I love. I would rather take a golf cart so that I can play and it is working. (Participant 1)*

### **Discussion**

To the best of our knowledge, this is the first study to explore and describe how patients with hip and knee OA who have expressed a desire for surgery before participating in standardized first-line OA interventions view health care and self-management. Findings from the study illuminate that patients' needs, expectations, and individual

choices regarding health care and self-management of OA are multifaceted, which emphasizes that OA is a heterogeneous disease and that individualization of health care, treatments, and recommendations regarding self-management, therefore, is essential (Hunter and Bierma-Zeinstra, 2019; Roos and Arden, 2016).

Findings from our study showed that patients' perspectives toward self-management of OA cover a broad spectrum. At one end, there was a passive approach, typified by a lack of control of their situation, where deterioration of the disease was considered as inevitable, and a limited interest in knowing more about OA and how to self-manage it. At the other end of the spectrum, participants showed a more active approach, wanting to know more and striving to take control and actively adapt to the situation. The different approaches toward self-management of OA may be the consequence of differences in health literacy. Health literacy can be described as the degree to which individuals can obtain, process, and understand the basic health information needed to make appropriate health decisions (Berkman, Davis, and McCormack, 2010). There is increasing understanding today that self-management strategies are connected to the level of health literacy, with less engagement in self-management and less adherence to prescribed treatments among those with lower health literacy (Hunter et al., 2023). Adams et al. (2019) previously showed that poor communication between health care professionals and patients was a limiting factor for engagement in self-management strategies among individuals with lower health literacy, and patients with OA need information throughout the course of the disease. Lack of information may lead to unnecessary misconceptions, whereby uninformed decisions are made or effective treatment options not being tried (Brembo et al., 2016). If patients are not provided with or are not interested in retrieving relevant information about OA, this may affect an individual's approach to handling and understanding the OA (Victor, Ross, and Axford, 2004). Health care professionals, including physiotherapists, are a primary source of health information and have also been shown to be able to support the development of health literacy among many patients. However, health care professionals often need more knowledge about health literacy and need support to increase their understanding and skills in this area (Bird et al., 2022). Developing physiotherapists' ability to identify various needs among patients and tailor OA interventions based on each patient's previous experiences and perceptions and level of health literacy is therefore essential to further improve OA care (Hunter and Bierma-Zeinstra, 2019; Hunter et al., 2023; Roos and Arden, 2016).

Results from our study regarding the patients' perspectives on health care displayed that the participants often had sought health care for their joint problems for several years, struggled to be listened to, and felt they were not taken seriously by health care professionals. A lack of information or having received mixed messages regarding the disease and its treatment options was expressed. The participants also described a sense of being on their own, waiting for symptoms to progress and managing aspects of their health themselves, such as weight loss or exercise, without the involvement of a health professional. Such experiences may have contributed to a belief among the participants that surgery was the only reasonable way to treat and manage the OA (Cronstrom, Dahlberg, Nero, and Hammarlund, 2019; McHugh and Luker, 2009). For physiotherapists in the clinic, patients who desire surgery are often challenging to treat due to dissatisfaction and lower adherence to treatment. Arthroplasty surgery is usually a successful treatment, but an extensive intervention that requires a great effort from the individual and is not always the quick solution that the patient might expect. For example, approximately one-third of knee arthroplasty surgeries are deemed inappropriate (i.e. performed on patients with only mild symptoms) (Riddle, Jiranek, and Hayes, 2014). A significant minority of patients also still have painful joints after surgery (Beswick et al., 2012). However, Cronstrom, Dahlberg, Nero, and Hammarlund (2019) have shown that patients with OA are willing to change their attitudes to surgery after participating in first-line interventions. Following OA guidelines early in the course of the disease is therefore crucial to set reasonable patient expectations toward different treatment options. In that way, the patients are offered first-line interventions and provided with adequate information regarding non-surgical treatments at an early stage.

### Limitations

Findings from this study should be considered in light of the limitations of the study. First, the emergence of the COVID-19 pandemic during the study led to some challenges for us. One effect was less demand on primary health care for joint problems and OA and re-prioritization of health resources, including physiotherapists who were transferred to perform other functions, such as COVID sampling, which prolonged the recruitment period. The social restrictions during the pandemic also forced us to conduct most interviews by phone instead of face-to-face, which may have contributed to the short interviews. Those aspects

may have affected the content of the collected data, but it was still considered sufficient, and that data saturation was reached. Second, even though we were able to include participants from different backgrounds regarding, for example, age, sex, working status, and previous experience of surgery, we decided to exclude non-Swedish-speaking participants. This may affect transferability of the results to patients living in Sweden who do not speak Swedish and should be taken into consideration for future studies since the population in Sweden is becoming increasingly multicultural.

### Clinical implications

First-line interventions, including patient education and exercise therapy, provide strategies for self-management of pain and OA symptoms (Hunter et al., 2023). However results from other researchers, supported by the findings from our study shows that guidelines for OA are seldom followed, and patients are not offered relevant care in reasonable time for the OA (Hagen, Smedslund, Osteras, and Jamtvedt, 2016; Osteras et al., 2019; Snijders et al., 2011). In our study, a lack of knowledge about OA was displayed by patients who reported receiving mixed messages from different health care professionals, which led to confusion and distrust regarding provided information and treatments. In accordance with guidelines, patients with OA should be provided with the same message about OA regardless of which profession they meet or the care they seek, especially early in the course of the disease, why increased effort regarding implementation of OA guidelines is required. Health care professionals, including physiotherapists, should also be supported in developing skills and knowledge to increase their ability to individualize OA treatments and implement strategies appropriate to the patient's experiences, perceptions, and health literacy.

### Conclusion

Patients with OA who express a desire for surgery before participating in first-line interventions described a multifaceted and broad spectrum of perspectives on how they reason and reflect upon health care and self-management of OA. Findings ranged from a passive approach manifested by lack of control, a need to adjust to the condition, a sense of being left alone, doubts or mistrust regarding the health care being provided, to a more active response trying to adapt to the situation and maintain control. Results from this study

strengthen insights into the importance of personal treatment of patients in first-line OA interventions. Physiotherapists need to develop their ability to identify individual needs among patients so that OA interventions can be tailored to achieve the lifestyle changes that first-line interventions strive to accomplish.

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