



# BMJ Open How do middle-aged and older adults with chronic hip pain view their health problem and its care? A protocol for a systematic review and qualitative evidence synthesis

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## ABSTRACT

**Introduction** Chronic hip pain in middle-aged and older adults is common and disabling. Patient-centred care of chronic hip pain requires a comprehensive understanding of how people with chronic hip pain view their health problem and its care. This paper outlines a protocol to synthesise qualitative evidence of middle-aged and older adults' views, beliefs, expectations and preferences about their chronic hip pain and its care.

**Methods and analysis** We will perform a qualitative evidence synthesis using a framework approach. We will conduct this study in accord with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement and the Enhancing Transparency in Reporting the synthesis of Qualitative research checklist. We will search MEDLINE, CINAHL, The Cochrane Central Register of Controlled Trials, EMBASE and PsycINFO using a comprehensive search strategy. A priori selection criteria include qualitative studies involving samples with a mean age over 45 and where 80% or more have chronic hip pain. Two or more reviewers will independently screen studies for eligibility, assess methodological strengths and limitations using the Critical Appraisal Skills Programme qualitative studies checklist, perform data extraction and synthesis and determine ratings of confidence in each review finding using the Grading of Recommendations Assessment, Development and Evaluation—Confidence in the Evidence from Reviews of Qualitative research approach. Data extraction and synthesis will be guided by the Common-Sense Model of Self-Regulation. All authors will contribute to interpreting, refining and finalising review findings. This protocol is registered on PROSPERO and reported according to the PRISMA Statement for Protocols (PRISMA-P) checklist.

**Ethics and dissemination** Ethics approval is not required for this systematic review as primary data will not be collected. The findings of the review will be disseminated through publication in an academic journal and scientific conferences.

**PROSPERO registration number** PROSPERO registration number: CRD42021246305.

## Strengths and limitations of this study

- We will use a systematic approach guided by the Cochrane Qualitative and Implementation Methods Group, including search strategies, methods of data extraction and synthesis and choice of tools for quality appraisal (Critical Appraisal Skills Programme; CASP qualitative study checklist) and ratings of confidence (Grading of Recommendations Assessment, Development and Evaluation—Confidence in the Evidence from Reviews of Qualitative research; GRADE-CERQual approach).
- To minimise bias, at least two review authors will independently screen studies against a priori selection criteria, extract data using a custom-developed a priori template, conduct quality appraisal (CASP qualitative study checklist), synthesise data and generate ratings of confidence (GRADE-CERQual approach).
- Our study will be limited by excluding studies not published in English, which precludes transferring our findings to non-English-speaking countries or minorities.
- Our study will be further limited by relying on published data—potentially missing important details or meaning present in the unpublished data and increasing the risk of researcher bias.

## INTRODUCTION

Chronic hip pain is common and disabling,<sup>1–7</sup> particularly in middle age and beyond. The prevalence of chronic hip pain increases with age, affecting 14%–36% of people 56 years or older.<sup>5 7</sup> People with chronic hip pain typically experience reduced physical function, social isolation, emotional distress and reduced quality of life.<sup>1–4 8</sup> Common diagnoses of chronic hip pain in middle-aged or older adults include osteoarthritis, gluteal tendinopathy (also greater trochanter pain syndrome and lateral hip pain) and

femoroacetabular impingement.<sup>2 9 10</sup> Hip conditions often coexist.<sup>11 12</sup> Clinical guidelines recommend education, exercise, weight loss and analgesics as treatments for non-systemic hip pain.<sup>2 10 13–16</sup> However, the use of recommended treatments and satisfaction with care is low among people with chronic hip pain.<sup>8 17–20</sup> Enhancing healthcare through patient-centred approaches is a key priority of the WHO and national health organisations across the world.<sup>21–24</sup>

The WHO defines people-centred care as ‘an approach to care that consciously adopts the perspectives of individuals, families and communities and sees them as participants as well as beneficiaries of trusted health systems that respond to their needs and preferences in humane and holistic ways’.<sup>25</sup> Patient-centred care improves patient satisfaction and adherence to care and treatment outcomes (including pain), while reducing costs, across a range of health settings and conditions, such as hospital care, joint replacements, musculoskeletal pain and osteoarthritis.<sup>26–38</sup> While clinical guidelines for musculoskeletal pain recommend that care is patient centred,<sup>39 40</sup> people with joint pain often receive care that fails to address their beliefs, wants and needs.<sup>18 41–43</sup>

People with joint pain are often dissatisfied with healthcare<sup>18 42</sup>; they believe healthcare fails to address their pain and its psychosocial impact and fails to educate them about their pain and the treatments available to them.<sup>18 42 44–46</sup> Health professionals often inform or fail to address unhelpful patient beliefs, such as attributing pain to wear and tear.<sup>8 45 47</sup> Dissatisfactory healthcare and unhelpful patient beliefs deter people from using, or adhering to, recommended treatments, such as exercise.<sup>8 18 42 48</sup> By better addressing a person’s beliefs, wants and needs, patient-centred care could better guide people with chronic hip pain to helpful coping strategies. However, to deliver patient-centred care, we need a comprehensive understanding of the beliefs, wants and needs among people with chronic hip pain.

We identified four systematic reviews and two scoping reviews exploring peoples’ views, experiences, beliefs and attitudes about osteoarthritis and/or its care—among people with osteoarthritis at different joints, including hip osteoarthritis.<sup>18 41 42 45 46 49</sup> Unhelpful beliefs were identified among people with osteoarthritis who delayed or avoided healthcare and exercised less.<sup>41 45 46 49</sup> People with osteoarthritis were often dissatisfied with how clinicians communicated with them and with the information they provided.<sup>18 42 45</sup>

Although insightful, there are limitations to the reviews conducted to date. The reviews are limited to people with osteoarthritis and predominantly isolated to knee osteoarthritis<sup>18 41 42 45 46 49</sup>; it is, thus, unclear whether, and how, their findings apply to people with hip osteoarthritis, or to people whose hip pain may result from conditions other than osteoarthritis. Five of the six existing reviews did not evaluate how much confidence could be placed in the review findings.<sup>18 41 42 46 49</sup> Without assessing the extent to which review findings reasonably represent

the phenomenon of interest, it is unclear how useful the findings are for decision-making, implementing interventions and/or developing guidelines.<sup>50 51</sup> Finally, only one of the six reviews used social or psychological theory to guide their methods or results.<sup>45</sup> Social and psychological theories provide a lens to extract and interpret data from primary studies and to report review findings—helping to explain patient health behaviours, including healthcare use.<sup>52–56</sup> The Cochrane Qualitative and Implementation Methods Group recommend selecting theories that best capture the phenomenon of interest of the review and are empirically supported.<sup>54</sup>

The Common Sense Model of Self-Regulation (CSM) describes how people form beliefs about their health problems and then draw on these beliefs to choose coping strategies (eg, seeking care or avoiding activities).<sup>57–59</sup> Beliefs about a health problem are informed by one’s own and observed experiences, by what is heard in the wider public discourse (eg, the media), and by discussions with significant others and health professionals.<sup>57–60</sup> People will update their beliefs about their health problem and what they should do about it—whether to maintain or modify their coping strategies—by judging whether their coping strategies are moving them towards or away from their goals.<sup>57–59</sup> The CSM has been used to understand beliefs, coping responses and health outcomes among people with chronic hip pain, hip and knee osteoarthritis and back pain.<sup>8 47 59 61–68</sup> By using the CSM to guide our data synthesis, we can better understand and explain how peoples’ beliefs impact how they cope with hip pain.

This study aims to conduct a synthesis of qualitative evidence, guided by the CSM, to explore middle-aged and older adults’ views, beliefs, expectations and preferences about their chronic hip pain and its care, across different healthcare settings and contexts. We will use the CSM to understand how people with chronic hip pain draw on their beliefs, preferences and expectations to select coping strategies (such as seeking healthcare or choosing treatments), to judge how well their coping strategies address their wants and needs and to decide whether to maintain or modify their coping strategies based on these judgements.

## METHODS

This protocol has been registered on PROSPERO and is available at <http://www.crd.york.ac.uk/PROSPERO>. Any important amendments to this protocol will be updated on PROSPERO. This protocol is reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement for Protocols (PRISMA-P) checklist and where relevant the Enhancing Transparency in Reporting the synthesis of Qualitative research (ENTREQ) checklist (see online supplemental appendix 1).<sup>69 70</sup> Guided by the Cochrane Qualitative and Implementation Methods Group,<sup>51</sup> we plan to perform a qualitative evidence synthesis using a framework synthesis methodology.<sup>71 72</sup> Our qualitative evidence synthesis will

be reported per the PRISMA Statement<sup>73</sup> and ENTREQ<sup>70</sup> guidelines.

### Eligibility criteria

We will include data from primary studies that use qualitative methods for both data collection and data analysis and are published in peer-reviewed journals. We will exclude studies that collect data with qualitative methods but use quantitative methods for analysis. Articles will be included if they describe middle-aged and/or older adults' lived experiences, attitudes, views, beliefs, values, preferences and/or expectations about their chronic hip pain and/or its care. We define chronic hip pain: either osteoarthritis and/or femoroacetabular impingement and/or gluteal tendinopathy (also greater trochanter pain syndrome and lateral hip pain), and/or pain in the hip/groin/buttock region reported for greater than 3 months, and/or any definition of 'chronic hip pain' used by the primary study authors.<sup>74</sup> Studies will be excluded if they describe a sample with a mean age of under 45 years or if 80% of study participants are under the age of 45 years and data about participants older than 45 years of age are not reported separately. We acknowledge there is no accepted age at which middle-age commences; however, 45 years has been used as the lower limit of middle age by the Royal Australia College of General Practitioners in a clinical guideline.<sup>75</sup> Mixed-methods studies will be included if the qualitative data are reported separately. Studies involving participant samples with mixed pain sites, concurrent pain sites and/or other chronic conditions will be included if the data relating to participants with hip pain are reported separately, or if more than 80% of the participants in the study have chronic hip pain. Studies reporting systemic conditions (eg, rheumatoid arthritis, psoriatic arthritis or ankylosing spondylitis) will be excluded as recommended care for these conditions differs from chronic hip pain of non-systemic origin.<sup>76–78</sup> Only English language reports will be included.

### Search strategy

Following recommendations by Cochrane Qualitative and Implementation Methods Group, we will use a comprehensive search strategy—appropriate for our chosen methodology of a framework synthesis.<sup>71 79</sup> To maximise the retrieval of eligible studies, we will adapt a search strategy of patient views and preferences.<sup>80</sup> An academic librarian from The University of Melbourne will assist to search five electronic databases including MEDLINE, CINAHL, The Cochrane Central Register of Controlled Trials, EMBASE and PsycINFO. These databases were selected to ensure a comprehensive retrieval of relevant studies and they are recommended for health topic searches.<sup>79 81</sup> Qualitative search filters will then be applied to improve the specificity of the search strategy.<sup>79 81</sup> The search strategy will combine qualitative search filters, key search terms, and indexed terms with Boolean Operators relating to qualitative research, chronic hip pain, common diagnoses of chronic hip pain and patient perspective

(see online supplemental appendix 2). We will not apply any limits on the publication date to explore potential changes in peoples' views and beliefs about chronic hip pain over time. We will manually check the reference lists of all included studies. We will search the citation lists of eligible studies using Google Scholar and Web of Science and screen these studies per our aforementioned processes.<sup>79 81</sup>

### Data management

One researcher will perform the initial search and upload the search results from all databases to EndNote reference manager (EndnoteX V.9, Clarivate Analytics, Boston; available at <http://endnote.com/>). Search results will then be transferred to Covidence systematic review software (Veritas Health Innovation, Melbourne, Australia; available at [www.covidence.org](http://www.covidence.org)) for study screening and to remove duplicates. Study selection will be completed using Covidence.

### Study selection

Two reviewers will first independently assess the titles and abstracts of all identified studies using a priori inclusion and exclusion criteria to determine their potential eligibility. We will then obtain the full text of studies deemed potentially eligible by at least one reviewer. Two reviewers will then independently apply a priori inclusion and exclusion criteria to the full texts. Studies deemed eligible by both reviewers will be included in the review. Any disagreements between reviewers will be resolved through consensus with a third author. We will use a PRISMA flow diagram to document our searching, screening and selecting of studies for inclusion.<sup>73</sup>

Two reviewers will independently read through the primary studies to immerse themselves in the data and then independently use a prepiloted electronic data collection form to conduct data extraction. Data extracted from the articles will include: (1) location and setting, (2) sample characteristics, (3) research question, aims, sample recruitment, inclusion and exclusion criteria, methods of data collection and analysis, (4) theoretical frameworks used in data collection or analysis and (5) findings (participant quotes, second-order themes or subthemes or authors' analyses and interpretations, conclusions and recommendations).

The domains of the CSM will guide us with extracting study findings relating to middle-aged or older adults' lived experiences, views, beliefs, expectations and preferences about their chronic hip pain and/or its care.<sup>57 58</sup> Data (participant quotes, second-order themes or subthemes or authors' analyses and interpretations, conclusions and recommendations) will be extracted and deductively coded under the CSM domains<sup>57 58</sup>: (1) identity beliefs: a label and/or symptoms of hip pain or experience of care received for hip pain, (2) time-line beliefs: expected duration of hip pain and temporal nature of hip pain, (3) consequence beliefs: what is the physical, psychological, social and cognitive impact, (4)

cause beliefs: what causes the symptoms and flare-ups, (5) control beliefs: how well can one control their hip pain or expectations about care for their hip pain. The CSM was selected using the Behaviour of Interest—Health Condition or Setting—Exclusions—Models or Theories tool, recommended by the Cochrane Qualitative and Implementation Methods Group.<sup>54 82</sup> The CSM is relevant to our review aims, has empirical support,<sup>61–67</sup> and there is experience within our review team with using the CSM in qualitative studies.<sup>8 47 68</sup>

### Data synthesis

We plan to synthesise the extracted data using a framework synthesis methodology guided by the CSM.<sup>71 72</sup> We chose a framework synthesis as this approach allows us to deductively compare our data with an empirically supported framework while enabling us to inductively refine our chosen framework (CSM) to inform clinical practice. A framework synthesis uses an a priori framework to guide a largely deductive and structured approach to data extraction and synthesis.<sup>72</sup> However, further inductive thematic analyses may be appropriate for data that do not map to the domains of the CSM or for generating subthemes within the domains of the CSM.<sup>52 72</sup> We also chose a framework synthesis as it accommodates varying types of qualitative studies and generates review findings that are relevant to clinicians, researchers and policymakers.<sup>71</sup>

On completing data extraction according to the domains of the CSM, two independent reviewers will then compare and discuss their coding of the data, to ensure that their analysis is supported by the findings of the primary studies and is consistent with our review aims. The reviewers will seek to identify and explain consistencies and relationships within and between the domains of the CSM. Attention will also be paid to any inconsistencies in the data that challenge our interpretations.<sup>83</sup> The data synthesis will be an iterative process of moving between the data, the domains of the CSM, emerging subthemes and the original studies.<sup>83</sup> If appropriate, the domains of the CSM or subthemes may be condensed or refined if better supported by the data.

Data synthesis will continue until consensus is reached on which a priori domains of the CSM are supported by the data—potentially including subthemes—and if appropriate, what new themes are generated outside of the CSM. This will be guided by discussions within the review team. The findings of the framework synthesis will be described in text and tables. A diagram may be created mapping the themes, subthemes (if generated) and the relationships between them. If we identify relationships between participant characteristics and differences within, or between, themes, we will report this in our review findings.

### Study quality assessment

Two authors will independently use the Critical Appraisal Skills Programme (CASP) qualitative studies checklist to

assess study methodological strengths and limitations.<sup>84</sup> Disagreements will be resolved through consensus with a third author. The CASP qualitative study checklist consists of 10 questions and maps to recommendations made by the Cochrane Qualitative and Implementation Methods Group for assessing study strengths and limitations.<sup>51</sup> The CASP qualitative study checklist assesses<sup>84</sup>:

- ▶ Was there a clear statement of the aims of the research?
- ▶ Is a qualitative methodology appropriate?
- ▶ Was the research design appropriate to address the aims of the research?
- ▶ Was the recruitment strategy appropriate to the aims of the research?
- ▶ Was the data collected in a way that addressed the research issue?
- ▶ Has the relationship between researcher and participants been adequately considered?
- ▶ Have ethical issues been taken into consideration?
- ▶ Was the data analysis sufficiently rigorous?
- ▶ Is there a clear statement of findings?
- ▶ How valuable is the research?

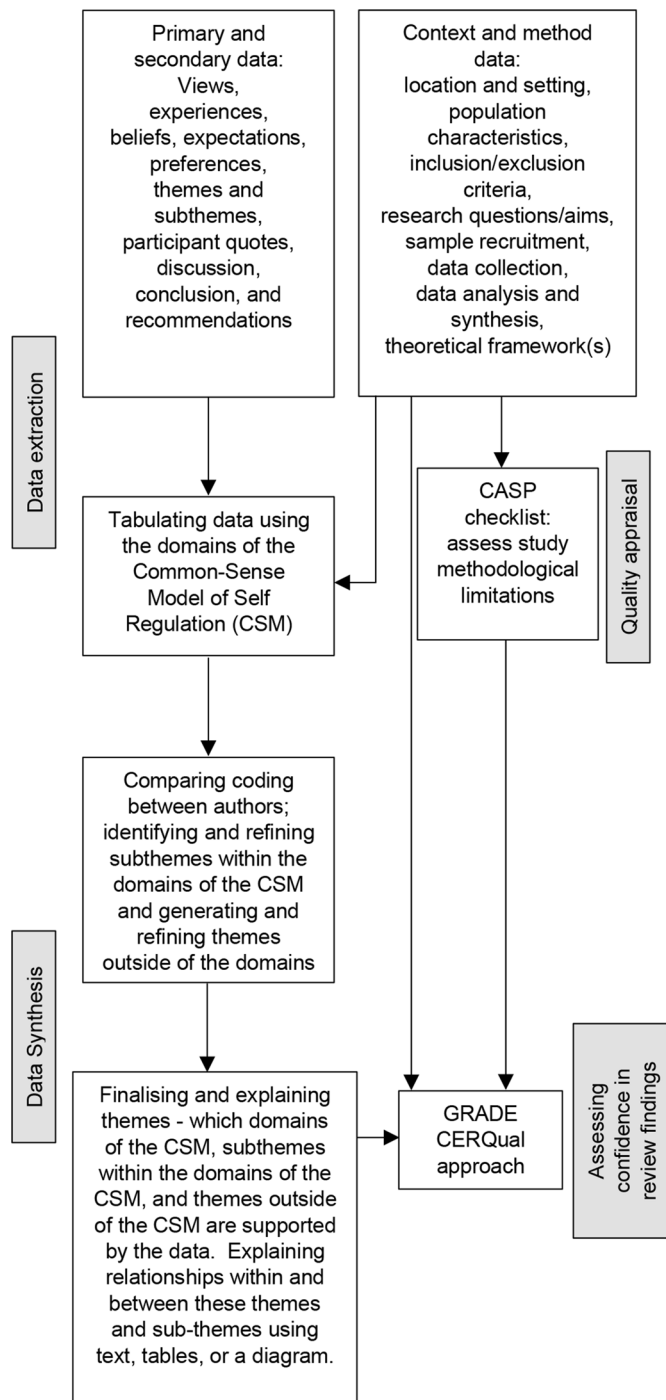
We will create a summary table detailing all findings relating to each question of the CASP qualitative studies checklist as listed above. A narrative summary of the methodological strengths and limitations of each study will be produced. Consistent with recommendations, neither total quality scores nor cut-off points for study inclusion or exclusion will be used.<sup>51</sup>

### Evidence quality assessment

At least two reviewers will use the Grading of Recommendations Assessment, Development and Evaluation—Confidence in the Evidence from Reviews of Qualitative research (GRADE-CERQual), as recommended by the Cochrane Qualitative and Implementation Methods Group,<sup>51</sup> to assess our confidence in our individual review findings.<sup>51 85</sup> Individual review findings are the output of qualitative evidence synthesis (eg, themes and subthemes).<sup>50</sup> The GRADE-CERQual approach has four components:

1. Methodological limitations: Are there problems in the design or conduct in the primary studies contributing evidence to a review finding?
2. Relevance: Do the primary studies contributing evidence to a review finding apply to the context specified in the review question (eg, population, review question and setting)?
3. Coherence: Is a review finding well supported by data from the contributing primary studies; are the patterns identified across the data from the primary studies clearly and convincingly explained by the review finding?
4. Adequacy: The degree of quantity and richness (do the data inform our understanding of the phenomenon of interest) of the data supporting a review finding.

To determine the final level of confidence for a review finding, we will first assess the extent to which each GRADE-CERQual component applies to the finding and



**Figure 1** Flow diagram of the processes for our planned qualitative evidence synthesis using a framework approach. Methods were informed by the Cochrane Review Methods and GRADE CERQual approach. CASP, Critical Appraisal Skills Programme; GRADE CERQual, Grading of Recommendations Assessment, Development and Evaluation—Confidence in the Evidence from Reviews of Qualitative research.

then judge across all four components.<sup>50</sup> This will be an iterative process facilitated by discussions within the review team. Confidence will be rated as high, moderate, low or very low.<sup>50</sup> Review findings will be rated down from

an initial rating of high confidence based on concerns regarding the GRADE-CERQual components.<sup>50</sup>

We will report our review findings and our GRADE-CERQual assessments in tables for clarity and transparency.<sup>50 85</sup> A GRADE-CERQual Evidence Profile table will include summaries of the review findings, our judgements for each of the GRADE-CERQual components, our overall assessments of confidence for each review finding, our explanations for the overall GRADE-CERQual assessment and references of each of the studies contributing to a review finding.<sup>85</sup> A Summary of Qualitative Findings table will be used to summarise review findings, the overall GRADE-CERQual assessment, explanations for each GRADE-CERQual assessment and references contributing to each review finding.<sup>50 85</sup> Our planned procedure for data extraction through to evidence quality assessment is shown in figure 1.

### Patient and public involvement

Patients and the public will not be directly involved in the design or the conduct of the review. We have discussed our study aims with people with chronic hip pain to ensure that our study is relevant to people who live with chronic hip pain.

### Ethics and dissemination

Ethical approval is not required for this systematic review as primary data will not be collected. The findings of the review will be disseminated through publication in an academic journal and scientific conferences.

## DISCUSSION

A shift to patient-centred care for people with musculoskeletal pain is needed.<sup>39 40 86</sup> People with chronic hip pain experience considerable physical and social disability<sup>1-4</sup>; their use of, and adherence to, recommended treatments are low, such as exercise and weight loss, and dissatisfaction with care is common.<sup>8 17-20 42</sup> This is influenced by people's views, beliefs and expectations about their joint pain and its care.<sup>8 18 43 45 47 48 68</sup>

People draw on their beliefs about joint pain when choosing coping strategies, such as seeking healthcare or selecting treatments.<sup>8 45 47 68</sup> Unhelpful beliefs about joint pain (eg, expecting little benefit from treatments) can deter people from using recommended treatments such as exercise.<sup>8 45 47 48</sup> Dissatisfactory healthcare—healthcare failing to address patient expectations, wants and/or needs—reinforces unhelpful beliefs about joint pain, further deterring people from using recommended treatments.<sup>8 18 42 45</sup> To improve healthcare use, treatment adherence and patient satisfaction for people with chronic hip pain, we need a comprehensive understanding of how people with hip pain view their health problem and its care.

To our knowledge, our study will be the first qualitative evidence synthesis of middle-aged and older adults' views, beliefs, expectations and preferences about their

chronic hip pain and its care. Qualitative methods best explore consumer views and experiences; qualitative evidence synthesis brings together evidence about consumer views to inform the design and delivery of healthcare.<sup>71–87</sup> Our qualitative evidence synthesis will use a framework approach,<sup>72</sup> guided by the CSM for data extraction and synthesis.<sup>57–58</sup> The CSM provides a framework to understand how people's beliefs influence their choice of, and adherence to, treatments and coping strategies.<sup>57–59</sup>

A strength of our review will be its systematic approach informed by the Cochrane Qualitative and Implementation Methods Group,<sup>51–79</sup> including our plan to report methodological strengths and limitations of each included study<sup>84</sup> and to provide ratings of confidence for each review finding.<sup>50</sup> Our review will be limited by excluding studies published in languages other than English, which may limit the transferability of our findings to non-English-speaking countries, high-income countries or minorities. To help the reader interpret the transferability of our findings, where possible, we will report the location, race, culture, language and ethnicity of the study participants informing our review findings. Our study is further limited by only extracting published data. Hence, we may miss details or meaning present in the unpublished data and we acknowledge that the data we extract for synthesis have already been interpreted by the authors of the primary studies.

We anticipate that our review findings will enhance our understanding of middle-aged and older adults' views, beliefs, expectations, and preferences about their chronic hip pain and its care, across different healthcare settings and contexts. By using the CSM, we will explore how people with chronic hip pain draw on their beliefs, preferences and expectations to choose coping strategies, to judge how well their coping strategies address their wants and needs and to decide whether to maintain or modify their coping strategies based on these judgements. These findings, by informing patient-centred approaches to care, can drive better healthcare use, adherence to treatments, patient satisfaction and clinical outcomes for middle-aged and older adults with chronic hip pain.

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**Contributors** TH, MH, RSH, FD and SB planned and designed the study and protocol. TH and MH drafted the protocol manuscript with input from RSH, FD and SB. All authors have read and approved the final manuscript. TH and MH guarantee the paper and that the authorship statement is correct.

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