PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Patient and proxy perspectives in decision-making for geriatric hip fracture management in the Netherlands, a qualitative study
AUTHORS	Laane, Duco; Kroes, Thamar; van den Berg, Arda; Jongh, Mariska A C; The, Regina; Van der Velde, Detlef; Nijdam, Thomas

VERSION 1 – REVIEW

REVIEWER	Haber, Travis The University of Melbourne, Physiotherapy
REVIEW RETURNED	28-Dec-2023

GENERAL COMMENTS	Thank you for the chance to review this insightful study on an important research area. Please see my comments below for your consideration: 1) Research design: I would consider using a different verb to evaluate - I believe this sounds more quantitative. Perhaps a verb like explore or understand is more appropriate. 2) Abstract: - Design: consider describing the actual qualitative method - i.e reflexive thematic analysis - Results: perhaps consider clarifying this "Patients and proxies underscored the importance of achieving optimal quality of life and aligning expectations regarding various outcomes." Do you mean aligning outcomes of care with their expectations? - I believe this should say 4 patients and 12 proxies representing patients Discussion: I touch on this again at the end. I think this discussion could draw on your final paragraph in your discussion section more. See my last point. (Minor comment.) Strengths/limitations - Be useful to explicit what is a limitation(s) of the study Introduction: - just note, that there are quite a few typos. Consider having someone proofread this again and/or using some type of software to assist - I would highly recommend re-structuring the introduction. This is very difficult for the reader. 2-3 small paragraphs would be useful to build and transition ideas. The actual introduction was otherwise written quite well. - as another overall point concerning the introduction, I would better establish the gap in the current literature. I understand why the study is important, but why is this study needed? I am

	assuming perspectives regarding this have not been explored before. very minor point, but I would rewrite this and there is a typo with be be "which entails that not all verbally explained information will be be retained.(10,13,18)" - e.g. which makes it difficult for patient to retain information - The idea of patient goals and preferences becomes a little repetitive in your idea - which is another reason for adding some more structure. Perhaps add some detail about why patients' goals/preferences could be. If this is unknown, state this. "For hip fracture patients, the patient's goals of care serve as the cornerstone in selecting the most suitable course of action, emphasizing the vital role of the patient's perspective in SDM." Methods: Just as an overall point, I think it would have been helpful to set up the different cohorts before stating it in Table 1. I find this a little confusing until I read about in Table 1. Data collection: I would add this here. "Patient recruitment started with patients who were presented at the emergency department at 24-11-2022 and was continued further into the past, ensuring no omissions. - was an interview guide used? Data analysis: it is worth mentioning what type of thematic analysis you used. Perhaps see some more recent work from Braune and Clarke. I suspect will likely be reflexive thematic analysis. - "Patient recruitment ended when four patients per cohort were included." - I would clarify this. It's a little unclear what you mean here. - This section needs a comprehensive revision. Again, best if possible to use some more recent literature and/or textbooks regarding reflexive thematic analysis. This does not follow a contemporary thematic analysis approach, and perhaps more importantly, it is not entirely clear (i.e. what did you actually do). E.g. I am assuming you first coded the transcripts?! Results: As an overall point, where possible, the authors should try to add some analysis to the findings. It is currently quite descriptive. It would help the reader if the authors could sometimes think about the context of what they are describing or the key underpinning ideas running through the themes. I.e. bring it back to the RQ, how does the information described directly relate to answering the RQ. Theme 1: Underlying patient values - just an overall point regarding this theme. Perhaps it would be useful to explicitly frame this theme in direct relation to your research question. It is not always completely care how it relates to SDM for surgery/non-operative. The provision of information: - it would be helpful for the reader if you can provide some context as to why you think provisional information differed between the cohorts - i.e. going beyond describing the needs to analyse this more deeply.

	"For two of the twelve proxies questions remained about the details of P-NOM, such as “how to proceed” and “who ultimately arranges for the patient to be comfortable and how that will happen”. These two proxies consulted the internet for additional information. The desired level of details in the provision of information varied. Two of the four patients in cohort D indicated they would have liked information about the specific surgical techniques and prospects regarding the rehabilitation process. In contrast, all four patients in cohort D stated that there was no necessity to discuss complications, since they “wanted surgery anyway” and “would only get nervous about possible omplications”" Theme 3: Reasons to consider either P-NOM or OM: - line one, envolves should be involves - is it possible to mention what patients thought about risk when considering the surgery? Were these taken seriously/considered deeply? Theme 4: "Personal experiences of healthcare professionals with hip fracture treatment were preferred over the presentation of plain statistical data." - this could be clarified. You mean, consultations with over information sheets/brochures? "in particular engagement in multiple SDM dialogues was deemed valuable" - not sure what you mean here? theme 5: "outcomes was connected to a negative connotation regarding the overall experience, hence this is elaborated further. - again, this is a little unclear. Connotation is unlikely to be the best choice of word here - relating to above, I think this theme needs to be set up better - from my understanding, it is really about the meeting or not meeting of expectations of the chosen pathway. Discussion: Again, I think this would benefit from a clearer structure. It starts well by summarising the key findings but then becomes a little hard to follow, going between your past research, current findings, and other literature. I think your second paragraph needs to be broken up. It's quite hard to follow at the moment. Can you group some of your key ideas together? For example, patient values and expectations - how could these themes inform SDM? How do they compare to previous literature? conclusion -"using a personalized communication style" -minor point. But I think some of your recommendations in the paragraph before this were more specific and informative. Such as "addressing the emotional and psychological challenges faced by patients and proxies" Patients and proxies indicated that the PENG block provided less pain relief than expected. In previous studies a satisfaction rate of 83% with PENG block was reported, which is higher than this

	study, were 3 out of 4 patients reported full satisfaction with PENG block.(27) - I would avoid making quantitative comparisons - your study isn't set up for this. "Realization of expectations and Underlying patient values, which is consistent with previous research that emphasizes the importance of pain management.(6)? - this is not entirely clear. Perhaps say how it is consistent. i.e. do they both emphasise the importance of pain management (i.e. past research and your them patient values)?

REVIEWER	Emmelot-Vonk, Marielle University Medical Centre Utrecht, Department of Geriatrics
REVIEW RETURNED	27-Feb-2024

GENERAL COMMENTS	The objective of the study was to explore the perspectives of older patients and their proxies with the decision-making process between surgery and palliative, non-operative management. This is an important issue given the increasing number of geriatric patients with a hip fracture and it gives new insights for clinical practice. However, there are some comments: Introduction: - The authors should give some information about the high morbidity and mortality after a hip fracture Methods - Page 9, line 30: In what period were the patients diagnosed with a hip fracture? - Page 10, line 8: Why were the interviews conducted via telephone? is it possible to perform a qualitative good interview by telephone without seeing the reactions and emotions of the patients or proxies? - Page 10, line 8: The authors should add the topic list of the semi-structured interview as an attachment - Page 10, line 47:Why did the authors include four patients per cohort? Was data satisfaction reached with this number of patients? The authors should give some more information about this subject Results/discussion: - Page 11, line 8: how are the 4 patients interviews and 12 proxy interviews divided over the 4 cohorts? This is not visible in figure 2 as the authors suggested. - Page 11, line 17: How many patients who received OM were deceased at the time of the interview? - Figure 2: What was the total number of patients with or without dementia in the four cohorts? - What did the authors mean with time to interview in table 1? Is this the time between hospital admission and interview? Why are the differences so large (320 days for cohort C and 5 days for cohort D)? Are the results comparable when the differences are so large? The authors should discuss this topic in their limitations. - page 15, line 12-15: 14 out of 16 participants reported disparity between expected and actual treatment outcomes and this was connected to a negative connotation regarding the overall

	experience. This is a really important finding and therefore this topic should be more highlighted in the discussion section. The provision of information during the SDM process should be optimized, not only for the patients with P-NOM but also for the patients with OM (rehabilitation, cognitive decline in patients with dementia). - page 15, line 28-32: Do I understand well that 3 out of 4 patients with a PENG block were not pain free? However, in the discussion section (page 17, line 45) is mentioned that 3 out of 4 patients reported full satisfaction with PENG block. This is confusing.

VERSION 1 – AUTHOR RESPONSE

Reviewer 1
Mr. Travis Haber, The University of Melbourne

Thank you for the chance to review this insightful study on an important research area. Please see my comments below for your consideration:

The authors would like to thank the reviewer for the compliment. It's reassuring that the reviewer highlighted the study as an insightful study in an important research area.

1) Research design: I would consider using a different verb to evaluate - I believe this sounds more quantitative. Perhaps a verb like explore or understand is more appropriate.

The authors agree that a verb like 'explore' is more appropriate, given the qualitative nature of the study. Therefore, this term was already used at the end of the introduction. In line with the reviewer's comment the term 'to evaluate; was altered to 'to explore' in the "Objective" section of the abstract.

2) Abstract:

- Design: consider describing the actual qualitative method - i.e reflexive thematic analysis

In line with the reviewer's remark, the last sentence of the 'Design section of the abstract was changed to: "The data were analysed using reflexive thematic analysis according to Braun and Clarke's six-step guide."

3. Results: perhaps consider clarifying this "Patients and proxies underscored the importance of achieving optimal quality of life and aligning expectations regarding various outcomes." Do you mean aligning outcomes of care with their expectations?

The fifth theme, Realization of expectations, shows disparity between expected and actual treatment outcomes was unpleasant and negatively influenced the overall experience. To improve readability the sentence in the "Results" section of the abstract was changed to: "Patients and proxies underscored the importance of achieving optimal quality of life, and the disparity between expected and actual treatment outcomes was unpleasant and negatively influenced the overall experience."

4. I believe this should say 4 patients and 12 proxies representing patients

In line with the remarks of the editor the sentence was changed to: "A total of 16 interviews were conducted, consisting of 4 patient interviews and 12 proxy interviews."

5. Discussion: I touch on this again at the end. I think this discussion could draw on your final paragraph in your discussion section more. See my last point. (Minor comment.)

In line with the reviewer's remark at the end, the conclusion was altered to: "In-depth analysis provided a unique insight into the patient and proxy perspectives in shared decision-making for geriatric hip fracture management in the acute setting. Overall, there were differences between reported experiences and preferences of participants. This heterogeneity stresses the importance of keeping a person-centred approach during shared decision-making. Other key considerations during shared decision-making include physicians informing patients from professional experience and communicating sensitively about both treatment options and prognosis. Physicians should aim to provide realistic, sensitive and timely information to both patients and proxies during the choice between curation and palliation for their hip fracture."

6. Strengths/limitations

- Be useful to explicit what is a limitation(s) of the study

In line with the editor's comments this section was changed to:

- A holistic approach was used, extending beyond mere consideration of the fracture itself.
- Besides interviewing patients, experiences were also obtained by interviewing proxies.
- Although geriatric hip fracture care is an international phenomenon, it was conducted in Dutch trauma geriatric care.
- Face-to-face interviews might have enriched the data for thematic reflexive analysis.
- More homogeneity in time to interview could have provided a clearer view on experiences at a certain moment after treatment.
-

7. Introduction:

- just note, that there are quite a few typos. Consider having someone proofread this again and/or using some type of software to assist

The authors apologize for any spelling and grammar errors that occurred during the writing of this article. A thorough proofread was conducted, and necessary corrections were made.

8. I would highly recommend re-structuring the introduction. This is very difficult for the reader. 2-3 small paragraphs would be useful to build and transition ideas. The actual introduction was otherwise written quite well.

In line with the reviewer's remark the introduction was divided in four paragraphs.

9. as another overall point concerning the introduction, I would better establish the gap in the current literature. I understand why the study is important, but why is this study needed? I am assuming perspectives regarding this have not been explored before.

The reviewer is correct that these experiences have not been previously explored. Therefore, in line with the reviewer's remark, the following sentence was added to the end of the introduction: "To the authors' knowledge, these perspectives have not been documented in scientific literature before."

10. very minor point, but I would rewrite this and there is a typo with be be "which entails that not all verbally explained information will be be retained.(10,13,18)" - e.g. which makes it difficult for patient to retain information

In line with the reviewer's remark the sentence was changed to: "which makes it difficult for patients and proxies to retain information."

10. The idea of patient goals and preferences becomes a little repetitive in your idea - which is another reason for adding some more structure. Perhaps add some detail about why patients' goals/preferences could be. If this is unknown, state this. "For hip fracture patients, the patient's goals of care serve as the cornerstone in selecting the most suitable course of action, emphasizing the vital role of the patient's perspective in SDM."

In line with the reviewer's remark, the following section was added to the introduction: "In an acute setting, the treating physician can initiate a Shared Decision-Making (SDM) process to determine the course of treatment based on the patient's GOC. For hip fracture patients, these GOC serve as the cornerstone in selecting the most suitable course of action, emphasizing the vital role of the patient's perspective in SDM. Recent work into the most important GOC for geriatric patients in the case of hip fracture has shown heterogeneity between patients' and proxies most important GOC."

11. Methods:

Just as an overall point, I think it would have been helpful to set up the different cohorts before stating it in Table 1. I find this a little confusing until I read about in Table 1.

In line with the reviewer's remark, the different cohorts were set up in the 'Participants' section of the Methods: "Patients were allocated between four cohorts according to the type of treatment (OM or P-NOM) and the presence of a pre-existing dementia diagnosis. Cohort A contained patients with dementia who opted for OM, cohort B contained patients without dementia who opted for OM, cohort C contained patients with dementia who opted for P-NOM, and cohort D contained patients without dementia who opted for P-NOM (Figure 1)."

12. Data collection: I would add this here. "Patient recruitment started with patients who were presented at the emergency department at 24-11-2022 and was continued further into the past, ensuring no omissions.

In line with the reviewer's remark the quoted sentence was moved from the 'Data analysis' section of the Methods to the 'Data collection' section of the Methods.

13. was an interview guide used?

Indeed, an interview guide was used. The semi-structured interview guide for patients and proxies are attached in appendix 2.

14. Data analysis: it is worth mentioning what type of thematic analysis you used. Perhaps see some more recent work from Braune and Clarke. I suspect will likely be reflexive thematic analysis.

The thematic analysis used follows reflexive thematic analysis, as described in this paper: https://doi.org/10.1007/s11135-021-01182-y. In line with the reviewer's remark the type of thematic analysis used was added to the Methods section of this paper.

15."Patient recruitment ended when four patients per cohort were included." - I would clarify this. It's a little unclear what you mean here.

The initial choice for including four patients per cohort was a pragmatic choice. Following conducting and transcribing 4 patients or proxies per cohort, two researchers familiarised themselves with the data during both transcription and repetitive reading of the transcripts. Hereafter, they established data saturation within the context of the 16 interviews as a whole. The researchers did not aim to reach data saturation within each cohort.

In line with reviewer's remark, the following was clarified in the methods:

"-To the 'Data collection' part of the methods, the following was added: "Prior to conducting the interviews, the pragmatic choice was made to initially include four patients or proxies per cohort."

-To the 'Thematic analysis' part of the methods, the following was added: "The interview recordings were transcribed ad verbatim by DL and AvdB. DL and AvdB familiarised with the data during both transcription and repetitive reading of the transcripts. Hereafter, DL and AvdB established data saturation and proceeded to formulate preliminary themes."

16.This section needs a comprehensive revision. Again, best if possible to use some more recent literature and/or textbooks regarding reflexive thematic analysis. This does not follow a contemporary thematic analysis approach, and perhaps more importantly, it is not entirely clear (i.e. what did you actually do). E.g. I am assuming you first coded the transcripts?!

In line with the reviewer's remark, the authors comprehensively revised this section to provide clarification on the research process. More recent literature was reviewed and added as needed. For this purpose, the authors changed the section titled 'Data analysis' into 'Qualitative analysis' in the following manner:

"Qualitative analysis

A reflexive thematic analysis was performed following Braun and Clarke's six-step guide. The interview recordings were transcribed ad verbatim by DL and AvdB. DL and AvdB familiarised with the data during both transcription and repetitive reading of the transcripts. Hereafter, DL and AvdB established data saturation and proceeded to formulate preliminary themes. The transcripts were then coded by DL and an independent researcher (TK) using ATLAS.ti (version 23.1.1.0). In the analytic process several theoretical assumptions were made. A constructionist epistemology was chosen to acknowledge the significance of recurrence while prioritising meaning and meaningfulness as central criteria. An experiential orientation was chosen to acknowledge the subjective reproduction of thoughts, feelings, and experiences. A combination of inductive and deductive analysis was employed, inductive to generate themes based on the data and deductive based on the predetermined topics as provided in the interview guide. Semantic and latent coding was used, switching between techniques based on the properties of the data analysed.

Based on assigned codes, the themes were repeatedly compared and redefined as needed in intercoder meetings between DL and TK, with approval of AvdB and TN. When comparing codes and thematic analysis, a collaborative and reflexive approach was used to enrich the themes rather than

achieve consensus. Themes were connected logically and meaningfully and placed in the appropriate context, as reported in the Results section of this article."

Results:

17 .As an overall point, where possible, the authors should try to add some analysis to the findings. It is currently quite descriptive. It would help the reader if the authors could sometimes think about the context of what they are describing or the key underpinning ideas running through the themes. I.e. bring it back to the RQ, how does the information described directly relate to answering the RQ.

In line with the reviewer's remark, the Results section was thoroughly reviewed, and analysis was added to the findings.

Theme 1: Underlying patient values

18. just an overall point regarding this theme. Perhaps it would be useful to explicitly frame this theme in direct relation to your research question. It is not always completely care how it relates to SDM for surgery/non-operative.

In line with the reviewer's comments, more depth was provided to this theme.

The provision of information:

19. it would be helpful for the reader if you can provide some context as to why you think provisional information differed between the cohorts - i.e. going beyond describing the needs to analyse this more deeply.

In line with the reviewer's comments, more depth was provided to this theme.

"For two of the twelve proxies questions remained about the details of P-NOM,
such as "how to proceed" and "who ultimately arranges for the patient to be comfortable and how that will happen". These two proxies consulted the internet for additional information. The desired level of details in the provisionv of information varied. Two of the four patients in cohort D indicated they would have liked information about the specific surgical techniques and prospects regarding the rehabilitation process. In contrast, all four patients in cohort D stated that there was no necessity to discuss complications, since they "wanted surgery anyway" and "would only get nervous about possible complications""

To improve readability, this section was altered to: "The desired level of detail in the provision of information varied. For two proxies, questions remained about the details of P-NOM, such as "how to proceed" and "who ultimately arranges for the patient to be comfortable and how that will happen". These two proxies consulted the internet for additional information. Regarding the patients in cohort D, two of the four patients indicated they would have liked information about the specific surgical techniques and prospects regarding the rehabilitation process. In contrast, all four patients in cohort D stated that there was no necessity to discuss complications since they "wanted surgery anyway" and "would only get nervous about possible complications"."

Theme 3: Reasons to consider either P-NOM or OM:

20. line one, envolves should be involves

The spelling-error was changed according to the reviewer's remark.

21. is it possible to mention what patients thought about risk when considering the surgery? Were these taken seriously/considered deeply?

When the change of these risks (i.e. complications) occurring was high, this contributed to patients opting for P-NOM. This was added to the theme, in line with the reviewer's remark. Furthermore, to improve readability, the term risk was changed to complication.

Theme 4:

22."Personal experiences of healthcare professionals with hip fracture treatment were preferred over the presentation of plain statistical data." - this could be clarified. You mean, consultations with over information sheets/brochures?

In line with the reviewer's remark, in order to clarify this section, it was altered to:
"Consultations with healthcare professionals regarding their personal experiences with hip fracture treatment were preferred over the presentation of plain statistical data or information sheets/brochures."

"in particular engagement in multiple SDM dialogues was deemed valuable"

23. not sure what you mean here?

This statement refers to the value placed on engaging in multiple Shared Decision Making (SDM) dialogues. Shared Decision Making is a collaborative approach where patients and healthcare professionals make decisions together, considering the best available evidence and the patient's preferences and values. So, "engagement in multiple SDM dialogues" means participating in several conversations where decisions about healthcare are made collaboratively between the patient and healthcare provider. In order to improve readability, the sentence was changed to: “Time and space with opportunity for reflection were considered essential for SDM; in particular, participating in several conversations, instead of only one, where healthcare decisions were made collaboratively with the physician, was deemed valuable. First SDM dialogue was performed at the ED where the GOC were gathered and both options (OM and P-NOM) presented. In some cases, patients and families opted for a particular treatment in the acute setting. However, a time-out was preferred, followed by a second or sometimes even a third SDM dialogue. This allowed patients and proxies to reflect if the provided information was comprehensible and if they had any remaining questions.”

theme 5:

"outcomes was connected to a negative connotation regarding the overall experience, hence this is elaborated further.

24. again, this is a little unclear. Connotation is unlikely to be the best choice of word here

In line with the reviewer’s remark this sentence was changed to: “disparity between expected and actual treatment outcomes was unpleasant and negatively influenced the overall experience, hence this is elaborated further.”.

25. relating to above, I think this theme needs to be set up better - from my understanding, it is really about the meeting or not meeting of expectations of the chosen pathway.

It is true that this theme is about meeting or not meeting expectations of the chosen pathway. Five aspects were distilled: the rehabilitation process, pain management, cognitive decline, longevity, and P-NOM, each described in the respective order. In order to set up this theme better, and in line with the reviewer’s remark, more depth was provided to this theme.

Discussion:

26. Again, I think this would benefit from a clearer structure. It starts well by summarising the key findings but then becomes a little hard to follow, going between your past research, current findings, and other literature. I think your second paragraph needs to be broken up. It's quite hard to follow at the moment. Can you group some of your key ideas together? For example, patient values and expectations - how could these themes inform SDM? How do they compare to previous literature?

In order to provide a clearer structure to the discussion, headings were added (i.e. red line, comparing with previous literature, strengths & limitations, clinical implications). Furthermore, the second paragraph was broken up into four sub-sections (i.e. reasons to opt for P-NOM, pain management, shared decision-making, and uncertainty with decision-making), since those aspects were deemed most interesting to compare with previous literature.

conclusion

27."using a personalized communication style" -minor point. But I think some of your recommendations in the paragraph before this were more specific and informative. Such as "addressing the emotional and psychological
challenges faced by patients and proxies"

In order to make the conclusion more specific and informative, and in line with the reviewer’s remark, the conclusion was altered to: “In-depth analysis provided a unique insight into the patient and proxy perspectives in shared decision-making for geriatric hip fracture management in the acute setting. Overall, there were differences between reported experiences and preferences of participants. This heterogeneity stresses the importance of keeping a person-centred approach during shared decision-making. Other key considerations during shared decision-making include physicians informing patients from professional experience and communicating sensitively about both treatment options and prognosis. Physicians should aim to provide realistic, sensitive and timely information to both patients and proxies during the choice between curation and palliation for their hip fracture.”

Patients and proxies indicated that the PENG block provided less pain relief than expected. In previous studies a satisfaction rate of 83% with PENG block was reported, which is higher than this study, were 3 out of 4 patients reported full satisfaction with PENG block.(27)

28. I would avoid making quantitative comparisons - your study isn't set up for this.

The authors agree that this qualitative study is not set up for quantitative comparisons, therefore, in line with the reviewer's remark, the following sentence was removed: "In previous studies a satisfaction rate of 83% with PENG block was reported, which is higher than this study, were 3 out of 4 patients reported full satisfaction with PENG block."

"Realization of expectations and Underlying patient values, which is
consistent with previous research that emphasizes the importance of pain management.(6)?

29. this is not entirely clear. Perhaps say how it is consistent. i.e. do they both emphasise the importance of pain management (i.e. past research and your them patient values)?

The study that was referred to is a qualitative study into the experiences with P-NOM which was previously executed by the authors. In that study, we identified pain as the most important factor influencing comfort of the patient and their environment after hip fracture. In order to improve readability, and in line with the reviewer's remark, the following changes were made to this section: "Previous qualitative research also identified pain management as an essential factor for geriatric hip fracture patients who opted for P-NOM. A Pericapsular Nerve Group (PENG) block for local hip pain management was used in four of eight P-NOM patients and scientifically showed promise in providing long-term pain relief in P-NOM. Patients and proxies indicated that the PENG block provided less pain relief than expected. This stresses the importance of optimizing the provision of information during shared decision-making. The importance of pain management in hip fracture patients is underlined by its emergence in both themes Realisation of expectations and Underlying patient values."

Reviewer: 2
Prof. Marielle Emmelot-Vonk, University Medical Centre Utrecht

The objective of the study was to explore the perspectives of older patients and their proxies with the decision-making process between surgery and palliative, non-operative management. This is an important issue given the increasing number of geriatric patients with a hip fracture and it gives new insights for clinical practice.

The authors would like to thank the reviewer for the compliment. It's reassuring that the reviewer highlighted the studied issue as important and noticed the new insights the study provides for clinical practice.

Introduction:

1. The authors should give some information about the high morbidity and mortality after a hip fracture

In line with the reviewer's remark, the following information on morbidity and mortality was added to the introduction: "OM provides quick analgesia and allows patients to start rehabilitation but is associated with high morbidity and mortality. Common post-operative complications include urinary tract infections, pneumonia, and delirium, and the 1-year mortality following OM is ~25-35%"

Methods

2. Page 9, line 30: In what period were the patients diagnosed with a hip fracture?

Prior to including patients, no set period was formulated where patients would have to be diagnosed with a hip fracture, since it was unknown at the time how many patients would be included for each cohort. It was, however, formulated in the 'Data collection' section of the methods that patient recruitment started with patients who were presented at the emergency department at 24-11-2022 and was continued further into the past, ensuring no omissions. The most recent patient that was included was diagnosed with a hip fracture on 19-11-2024 and the patient included furthest back in history was diagnosed with a hip fracture on 02-02-2022. This was added to the Results.

3. Page 10, line 8: Why were the interviews conducted via telephone? is it possible to perform a qualitative good interview by telephone without seeing the reactions and emotions of the patients or proxies?

Conducting interviews via telephone has several strengths. Telephone interviews offer a convenient and accessible means of reaching participants who may be geographically dispersed or have mobility constraints, thus widening the pool of potential participants. Therefore, the interviews were conducted via telephone as this increased the accessibility of participants and there widened the pool of potential participants. Furthermore, telephone interviews were more cost-effective and time-efficient compared to in-person interviews, as they eliminate the need for travel and accommodation expenses. One of the primary limitations of telephone interviews is the absence of visual cues, such as facial expressions and body language, which can provide valuable context to participants' responses. This may impede the researcher's ability to fully interpret the nuances of participants' emotions and reactions. In line with the reviewer's remark this was added to the "Strengths and limitation" section after the abstract and the discussion.

4. Page 10, line 8: The authors should add the topic list of the semi-structured interview as an attachment

The interview guide for patients and proxies of cohort A, B, C and D, are attached at appendix 2, 3, 4 and 4, respectively.

5. Page 10, line 47:Why did the authors include four patients per cohort? Was data satisfaction reached with this number of patients? The authors should give some more information about this subject

The initial choice for including four patients per cohort was a pragmatic choice. Following conducting and transcribing 4 patients or proxies per cohort, two researchers familiarised themselves with the data during both transcription and repetitive reading of the transcripts. Hereafter, they established data saturation within the context of the 16 interviews as a whole. The researchers did not aim to reach data saturation within each cohort.

In line with reviewer 1's remark, and in line with the reviewer's remark, the following was clarified in the methods:

"-To the 'Data collection' part of the methods, the following was added: "Prior to conducting the interviews, the pragmatic choice was made to initially include four patients or proxies per cohort."

-To the 'Thematic analysis' part of the methods, the following was added: "The interview recordings were transcribed ad verbatim by DL and AvdB. DL and AvdB familiarised with the data during both transcription and repetitive reading of the transcripts. Hereafter, DL and AvdB established data saturation and proceeded to formulate preliminary themes."

Results/discussion:

6. Page 11, line 8: how are the 4 patients interviews and 12 proxy interviews divided over the 4 cohorts? This is not visible in figure 2 as the authors suggested.

Figure 2 shows the flowchart of the selection process of included patients and proxies. Below cohort A, C, and D, it was stated that proxies were included. For each patient in this cohort, 1 proxy was included. To clarify that this refers to 4 proxies per cohort A, C, and D, the number of proxies per cohort has been added to this figure.

7. Page 11, line 17: How many patients who received OM were deceased at the time of the interview?

As was shown in Table 1, 1 patient who received OM was deceased at the time of the interview. In line with the reviewer's remark, this was added to the Results.

8. Figure 2: What was the total number of patients with or without dementia in the four cohorts?

As was shown in Table 1, 8 patients (50%) had dementia, and 8 patients did not have dementia.

9. What did the authors mean with time to interview in table 1? Is this the time between hospital admission and interview? Why are the differences so large (320 days for cohort C and 5 days for cohort D)? Are the results comparable when the differences are so large? The authors should discuss this topic in their limitations.

The time to interview is the time between presentation at the ED and the interview. There appeared to have been made a typo, as for cohort D the 'length of stay' and 'time to interview' were switched. However, there are differences between cohorts in time to interview. Most of the hip fracture patients are treated with surgery, and most of those patients do not have dementia. When patients opt for P-NOM, most of them have dementia. These differences in demographics explain why it took longer for certain cohorts to find 4 inclusions. These differences in time to interview therefore highlight the diversity within the patient population. However, in line with the reviewer's remark, this was added as a limitation.

10. page 15, line 12-15: 14 out of 16 participants reported disparity between expected and actual treatment outcomes and this was connected to a negative connotation regarding the overall experience. This is a really important finding and therefore this topic should be more highlighted in the discussion section. The provision of information during the SDM process should be optimized, not only for the patients with P-NOM but also for the patients with OM (rehabilitation, cognitive decline in patients with dementia).

The authors agree that this is an important finding. Therefore, in line with the reviewer's remark, the following was added to the discussion: "Patients and proxies indicated that the PENG block provided less pain relief than expected. This stresses the importance of optimizing the provision of information during shared decision-making." and the following was added to the conclusion of the paper: "Future research should focus optimizing the provision of information during shared decision-making, not only for patients opting for palliative, non-operative management, but also for patients receiving operative management. "

11. page 15, line 28-32: Do I understand well that 3 out of 4 patients with a PENG block were not pain free? However, in the discussion section (page 17, line 45) is mentioned that 3 out of 4 patients reported full satisfaction with PENG block. This is confusing.

To improve readability, this section in the discussion was altered to: "Previous qualitative research also identified pain management as an essential factor for geriatric hip fracture patients who opted for P-NOM. A Pericapsular Nerve Group (PENG) block for local hip pain management was used in four of eight P-NOM patients and has shown promise for long-term pain relief in P-NOM. Patients and proxies indicated that mono treatment with PENG block provided less pain relief than expected. This stresses the importance of optimizing provision of realistic information during SDM. The importance of pain management in hip fracture patients is underlined by its emergence in both themes Realisation of expectations and Underlying patient values.

VERSION 2 – REVIEW

REVIEWER	Emmelot-Vonk, Marielle University Medical Centre Utrecht, Department of Geriatrics
REVIEW RETURNED	29-Apr-2024

GENERAL COMMENTS	The authors have addressed all of my comments.