## QUALITATIVE META SYNTHESIS

# The real experience with women's hysterectomy: A meta-synthesis of qualitative research evidence

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#### Abstract

Aim: The aim of this meta-synthesis was to identify and synthesize qualitative research evaluating the real feelings, inner needs and emotional experience of women undergoing hysterectomy.

Design: Meta-synthesis.

Methods: The PubMed, Web of Science, Cochrane Library, CINAHL, Embase, Ovid Medline and Sino Med were systematically searched until November 2021 and updated until June 2022. Two reviewers independently extracted data into a Microsoft Excel sheet. Qualitative meta-synthesis was performed by coding relevant citations, organizing codes into descriptive themes and developing analytical themes.

**Results:** Qualitative meta-synthesis yielded three themes and nine sub-themes: comprehensive consideration before hysterectomy (a. disease factors; b. fertility factors; c. opinions of others); emotions and experience after hysterectomy (a. postoperative physical condition; b. psychological resilience to the loss of the uterus; c. changes in the couple's relationship); coping strategies (a. self-denial and avoidance; b. change of perception and self-adjustment; c. seek help from others).

#### KEYWORDS

hysterectomy, meta-synthesis, qualitative research, real experience, women

# 1 | INTRODUCTION

Hysterectomy is the most common gynaecological surgery in the world (Barker, 2016; Hammer et al., 2015), which is an important treatment for benign gynaecological diseases such as fibroids, endometriosis and uterine prolapse (Lundholm et al., 2009; Whiteman et al., 2008). When non-operative treatment cannot solve the pain of common gynaecological benign diseases, hysterectomy to relieve symptoms and improve women's quality of life has become a possible choice (Rannestad, 2005). However, several studies have reported that patients experience varying degrees of anxiety and

depression before and after hysterectomy due to multiple factors such as individual personality traits, fear of surgery, concerns about altered self-image and the strength of family support (Donoghue et al., 2003; Thornton et al., 1997; Wilson et al., 2018). Studies have also reported potentially important associations between age and disease progression and the mental health status of women undergoing hysterectomy, particularly before the age of 40 and in the case of more severe disease, which can increase the psychological burden of women (Cooper et al., 2009). Therefore, fully understanding and exploring the real experience of hysterectomy patients can promptly identify the possible psychological and spiritual needs of patients

Na Li and Chen Shen contributed equally to this work

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during the whole process of hysterectomy according to their physical and behavioural manifestations, which is conducive to guiding and providing targeted medical interventions in conjunction with patients' families to help them recover better and return to normal life. To date, research on the real-life experience of women who have undergone hysterectomy is limited, and this experience may also be influenced by differences in country, race, religion and values (Mahardika et al., 2021).

## 2 | BACKGROUND

Hysterectomy is mainly an operation for the treatment of benign diseases in women. Most of these benign gynaecological diseases are not life-threatening, but they can seriously affect the quality of life of women. Common hysterectomy includes vaginal hysterectomy, abdominal hysterectomy and laparoscopic hysterectomy (Clarke-Pearson & Geller, 2013). Studies have shown that vaginal hysterectomy is superior to abdominal hysterectomy, and laparoscopic hysterectomy is superior to abdominal hysterectomy when vaginal hysterectomy is not possible (Johnson et al., 2005). Apart from this, the choice of surgical procedure depends mainly on the indications for the procedure. Abdominal hysterectomy is mainly used to treat hysteromyoma, vaginal hysterectomy is mainly used to treat prolapse, and abnormal bleeding is mainly treated by laparoscopic hysterectomy (Jacoby et al., 2009). In recent years, with the rapid development of artificial intelligence technology. robotic hysterectomy (Dahm-Kähler et al., 2021), Gasless Total Laparoscopic Hysterectomy with New Abdominal-Wall Retraction System (Kim et al., 2020) and other new surgical options are constantly evaluated and improved. The new operation method has the advantage of reducing postoperative complications such as bleeding, infection.

Despite the positive therapeutic benefits of hysterectomy, researchers have ignored the psychological trauma that hysterectomy may cause to patients while continuously improving and reducing their physical trauma. As an invasive wound surgery, patients may experience a series of postoperative complications such as incision bleeding, infection, pain, sexual dysfunction, urinary incontinence. (Ramdhan et al., 2017). These complications not only affect the rehabilitation of physical function of patients to a certain extent but also bring challenges to the rehabilitation of psychological function of patients. For example, postoperative pain and infection negatively affect energy and positive well-being (Theunissen et al., 2017), and postoperative scar tissue and hormonal changes that negatively affect women's perceptions of their body image (Erdoğan et al., 2020). Of course, there are some patients who can cope with the postoperative complications and changes in their appearance that come with hysterectomy, as these patients suffer from chronic pain, irregular menstruation, fatigue and other gynaecological problems caused by uterine problems (Rannestad, 2005), and hysterectomy greatly alleviates these symptoms. In addition, the importance of the uterus for women is also undeniable. The

womb is culturally a symbol of femininity and fertility, especially for women who are still of childbearing age and want to have children; the uterus is not only an organ for women but also a symbol of beauty, youth, strength and health (Mahardika et al., 2021). So hysterectomy can also cause complex emotional changes, including depression, anxiety, and guilt (Ewalds-Kvist et al., 2005). Of course, the negative psychological impact of hysterectomy is relatively weak for women whose lives are not defined by their role in child-birth and motherhood.

Consequently, by understanding the real therapeutic and psychological experience of patients throughout the hysterectomy process, it can help healthcare professionals provide targeted and personalized medical care interventions to patients, which in turn better facilitate physical and psychological therapeutic recovery of patients. What's more, the process of understanding the real experience of patients also increases communication between patients and nurses, promoting the patient's medical satisfaction and mental recovery.

Most of the previous studies used quantitative methods to explore the psychological status of women after hysterectomy (Darwish et al., 2014; Raza et al., 2015). However, quantitative studies lack subjective hidden information to analyse the acceptability and feasibility of interventions. The advantage of qualitative research over quantitative research is that it allows researchers to think from the participant's perspective to better understand the patient's experience and to identify new topics, concepts and theories relevant to the experience (Guilfoyle et al., 2021). Due to the differences in race, situation, research methods and so on, the conclusions are focused on. The synthesis of multiple qualitative studies can bring together data from different contexts to generate new theoretical or conceptual models that provide evidence for the development, implementation and evaluation of health interventions (Tong et al., 2012). Therefore, this study used a meta-synthesis approach to integrate qualitative research findings related to hysterectomy patient experience to better understand their true feelings and needs and to provide clinical caregivers and patients' families with references for improving patients' mental health status and quality of life.

## 3 | METHODS

## 3.1 | Design

We used a meta-synthesis approach for systematic evaluation, as it allows for in-depth exploration of the results of multiple studies to understand the true feelings, internal needs and emotional experiences of patients undergoing hysterectomy. In this meta-synthesis, we carried out a thematic synthesis (Thomas & Harden, 2008) and followed steps outlined by Sandelowski and Barroso (Sandelowski & Barroso, 2006). This review was registered on the international prospective register of systematic reviews (PROSPERO ID: CRD42022319477).

## 3.2 | Search strategy

We searched the literature in the following seven electronic data: PubMed, web of science, CINAHL, Cochrane Library, Embase, Ovid MEDLINE and Sino Med in November 2021. We continued to update the search results according to our inclusion and exclusion criteria until June 2022. We included qualitative studies published in peer-reviewed journals in this study (Appendix S1).

## 3.3 | Inclusion and exclusion criteria

We formulated a sensitive and comprehensive search strategy according to the SPIDER tool (sample, phenomenon of interest, design, evaluation, research type) (Methley et al., 2014).

Inclusion criteria: the samples were women with hysterectomy; the phenomenon of interest was the real feelings, inner needs and emotional experience of patients undergoing hysterectomy; primary research that used qualitative methods (phenomenology, grounded theory, ethnography, narrative and other qualitative research methods) for data collection; journal articles; original research published in English, languages which were then read and understood by the authors.

Exclusion criteria: using mixed methods were excluded, exploring the patient-family interaction experience.

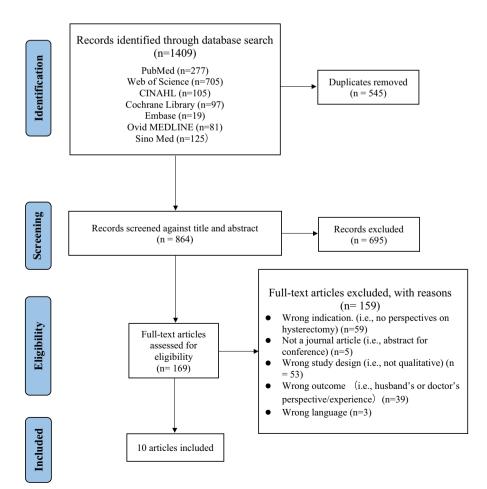
## 3.4 | Study selection

Search results were imported into Endnote X9, and duplicates were removed. Three reviewers independently screened titles and abstracts and read the full text (LN, SC and WR); when there was any doubt about whether a publication should be included or not, a third reviewer (ZPC) independently assessed the publication. We eventually included 10 studies in the PRISMA. Flow charts are shown in Figure 1.

## 3.5 | Quality appraisal

To ensure the quality of the findings in the study, all selected papers were screened on the methodological quality using the Critical Appraisal Skills Programme (CASP) (O'Connell et al., 2021).

The 10 appraisal items of the CASP allow researchers to detect the logical and rational flow of the research process, how ethical issues are addressed and the value of the research contributions. Critical appraisal was performed by two independent reviewers (LN and SC) to determine the eligibility of each study and to ensure methodological validity. Two reviewers then compared the assessments and eventually decided which studies should be included. Disagreement was resolved by discussion, and a third reviewer (WR) was available for arbitration. At the end of the evaluation process,



**FIGURE 1** PRISMA flow chart of search strategy results.

the score is one of three options, Yes (1 point), Unclear (0.5 points) and No (0 points), resulting in a maximum score of 10 points, with higher scores suggesting a higher study quality. The evaluation of study quality was judged as high, medium or low according to the scores obtained by each study. The quality appraisal process is shown in Table 1.

# 3.6 | Data extraction

At first, all the relevant studies were read and reviewed. These studies revealed experiences of women who had attended hysterectomy for various factors. The ten papers (Alshawish et al., 2020; Augustus, 2002; Bossick et al., 2018; Goudarzi et al., 2021; Linenberger & Cohen, 2004; Pearce et al., 2014; Pilli et al., 2020; Reis et al., 2008; Solbrække & Bondevik, 2015; Williams & Clark, 2000) which met the inclusion criteria after quality appraisal was published between 2000–2021. Microsoft Excel was used to extract the key concepts, and a research team examined the information. In case of inconsistency, a third party negotiates the solution. Data collection forms include author, country and year of publication, purpose, sample size and characteristics, design and methodology and main findings. In addition, key citations were extracted from the findings of the included papers for qualitative thematic analysis.

## 3.7 | Data synthesis

We used Thomas and Hardens' three-stage thematic synthesis approach: (a) line by line coding of relevant texts; (b) organization of codes into descriptive themes; (c) development of analytical theme (Thomas & Harden, 2008). Nvivo software was used for data management and coding. Two reviewers (LN and SC) independently coded data according to its meaning and content. Similar codes were then grouped into a hierarchical tree structure. Finally, descriptive themes were developed and then further interpreted to yield analytical themes. Throughout the process, disagreements are resolved through discussion and evaluation by a third reviewer (ZPC), if needed.

# 3.8 | Assessment of confidence in review findings

The authors (LN and SC) have assessment of confidence in review findings using the "Confidence in the Evidence from Reviews of Qualitative research" (GRADE-CERQual) approach (Lewin et al., 2015). Four key elements were assessed: (1) methodological limitations of the included study; (2) adequacy of the audit results data; (3) coherence of the review finding; (4) relevance of the included studies to the review question. The confidence in findings was rated as high, moderate, low or very low. The assessment of confidence in review findings is shown in Appendix S2.

## 3.9 | Rigour, trustworthiness, and reflexivity

Our study illuminated different themes by analysing participants' quotes. Panellists included nurses, research assistants and university librarians, and participants shared expertise in research, hysterectomy care and other fields. All team members were trained in qualitative research methods before conducting the study. Team members communicated regularly through group meeting during the conduct of the study. Disagreements were resolved through discussion, and, if necessary, a third reviewer was asked to evaluate. We presented the results of the study to six women who had undergone hysterectomy and incorporated their recommendations into the final results.

## 4 | RESULTS

## 4.1 | Characteristics of the included studies

We included 10 studies from 7 countries in Asia, Europe and North America. In the included studies, a total of 259 women participated in the study. Five studies used phenomenological analysis methods. Detailed information about these studies is shown in Table 2.

## 4.2 Meta-synthesis of qualitative date

A total of 26 findings were extracted from the 10 included studies and were classified as unequivocal or credible. These findings were then aggregated into 9 categories based on the similarity of meanings (See Table 3). Three synthesized findings were developed from the 9 categories: (1) comprehensive consideration before hysterectomy; (2) emotions and experience after hysterectomy; (3) coping strategies. The themes with all key exemplary quotations are shown in Appendix S3.

# 4.2.1 | Theme 1 comprehensive consideration before hysterectomy

The importance of the womb to every woman cannot be overemphasized. Therefore, before hysterectomy, a variety of factors will affect women's preoperative decision-making and emotional status. Some factors will have negative effects, leading to women's rejection and panic about surgery, while some factors will have positive effects, which will help to reduce women's preoperative anxiety, enhance women's postoperative psychological endurance and promote the progress of rehabilitation. Women usually compare the advantages and disadvantages of different influencing factors before surgery in order to make the best surgical choice. The main considerations for women before surgery can be summarized as disease factors, fertility factors and the opinions of others.

TABLE 1 Appraisal of studies.

	William (2000)	Solbrække (2015)	Reis et al. (2008)	Pilli et al. (2020)	Pearce et al. (2014)	Linenberger (2004)	Goudarzi et al. (2021)	Bossick et al. (2018)	Augustus (2002)	Alshawish et al. (2020)
Item 1.	>	>	>	>	>	>	>	>	>	>-
Item 2.	>	>-	>	>	>	>	>	>-	>-	>
Item 3.	>	>	>	>	>	>	<b>&gt;</b>	>	<b>&gt;</b>	>
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Item 5.	>	>	>	>	>	>	>	>	<b>&gt;</b>	>-
Item 6.	z	ס	D	n	D	z	z	n	z	z
Item 7.	>	>	>	>	>	>	n	>	<b>&gt;</b>	n
Item 8.	D	>-	>	>	>	>	>	>-	D	>
Item 9.	>	>	>	>	>	>	<b>&gt;</b>	>	<b>&gt;</b>	>
Item 10.	>	>	>	>	>	>	>	>-	>	>-
Overall scores	8.5	6	8.5	9.5	9.5	6	8.5	9.5	8.5	8.5
Quality	Moderate to High	High	Moderate to high	High	High	High	Moderate to High	High	Moderate to High	Moderate to High

Note: Y = Yes (1 point); N = No (0 points); U = Unclear (0.5 points).

participants been adequately considered? Item7: Have ethical issues been taken into consideration? Item8: Was the data analysis sufficiently rigorous? Item9: Is there a clear statement of findings? Item10: Item1: Was there a clear statement of the aims of the research? Item2: Is a qualitative methodology appropriate? Item3: Was the research design appropriate to address the aims of the research? Item4: Was the recruitment strategy appropriate to the aims of the research? Item 5: Was the data collected in a way that addressed the research issue? Item 6: Has the relationship between researcher and Was this research valuable?

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Authors, year, country	Sample	Methods	Study aims	Main findings
Williams et al., 2000, USA	N = 38, Women, Aged 30-76 years	Purposive sampling; focus group and individual interviews; thematic analysis.	Learn about women's perceptions of hysterectomy, oophorectomy, and surgical menopause.	Theme 1: The patterns were decision-making. Theme 2: A continuum of responses. Theme 3: Perceptions of male response.
Solbrække et al., 2015, Norway	N = 8, Women, Aged 25–43 years	Semi-structured interviews; narrative analysis.	Explore embodiment and gender identity in young Norwegian women's accounts of hysterectomy.	One main theme: body and gender identity. Case oriented. Theme 1: Sandra: They have removed what made me a woman. Theme 2: Karen: Without a uterus, I feel more like a woman.
Reis et al., 2008, Turkey	N = 31, women, Aged 31–57 years	Purposive sampling; semi-structured indepth interviews; grounded theory techniques.	Beliefs and attitudes of women undergoing abdominal hysterectomy.	Theme 1: Beliefs and attitudes regarding the possibility of bearing children.  Theme 2: Beliefs and attitudes of husbands.  Theme 3: Beliefs and attitudes about the importance of sexual life for marital relations.  Theme 4: Beliefs and attitudes about menopause.  Theme 5: Relatives' beliefs and opinions (friends, neighbours, relatives, etc.).
Pearce et al., 2014, England	N = 7, women, Aged 47-59 years	Purposive sampling; face-to-face focus group interview; Phenomenological Analysis: double hermeneutics.	Life experiences of surgically postmenopausal women undergoing hysterectomy.	Theme 1: The internal body. Theme 2: The meaning of bodily change. Theme 3: The externally judged body.
Linenberger et al., 2004, USA	N = 58, women, Aged 23-70 years	Purposive sampling; Semi-structured interview; phenomenological method.	Learn about recovery after hysterectomy.	Theme 1: Measuring healing. Theme 2: Comparing past to present. Theme 3: Renewal. Theme 4: Growth through healing.
Goudarzi et al., 2021, Iran	N = 30, Women, Aged 27-68 years	Purposive sampling; semi-structured indepth interviews; thematic analysis.	Understanding of self-concept after hysterectomy.	Main theme: Incoherent cognition of self-concept.  Theme 1: Heterogeneous feelings toward and imaginations of the body: Paradoxical feeling of physical.  Theme 2: Changed self-perception: Body image from destruction to restoration, Change in self-consistency, Regret for loss of abilities Spiritualism.
Bossick et al., 2018, USA	N = 24, Women, Aged 18-65 years	Purposive sampling; Focus group interviews; Framework method.	Identify factors important to hysterectomy patients: postoperative cognition, beliefs, and experience.	Theme 1: Decision-making: personal factors, social support, personal goals of surgery.  Theme 2: The procedure: surgical experience.  Theme 3: The postsurgical experience: physical recovery, recovery expectations.  Theme 4: Information all women should know: advice for "past self" recommendations to other women.
Augustus et al., 2002, USA	N = 30, Women, Aged unclear	Snowball sampling; Focus group interviews and individual interviews; ethnographic analysis: themes identification and thematic analysis.	Beliefs and perceptions of women undergoing hysterectomy.	Theme 1: Myths, fears, and sexual symbolism related to hysterectomy. Theme 2: Freedom from pain and embarrassment. Theme 3: Improved sexuality and self-esteem.

# TABLE 2 (Continued)

Authors, year, country	Sample	Methods	Study aims	Main findings
Alshawish et al., 2020, Pakistan	N = 15, Women, Aged 18-50 years	Purposive sampling; semi-structured in- depth interviews; phenomenological hysterectomy and identify their method.  method.  mechanisms do they adopt to improve their quality of life.	Describe women's experiences of hysterectomy and identify their fears, concerns, and what coping mechanisms do they adopt to improve their quality of life.	Theme 1: Physical changes. Theme 2: Psychological changes. Theme 3: Defence mechanisms. Theme 4: Self-esteem & Body image. Theme 5: Sexuality themes.
Pilli et al., 2020, Uganda	N = 18, Women, Aged 25-45 years	Purposive sampling; Face to face interviews; thematic analysis.	The emotional experience of women after emergency hysterectomy.	Theme 1: Loss of womanhood. Theme 2: Joy for being alive. Theme 3: Loss of safety.

## 4.2.2 | Subtheme 1 disease factors

The main reason why women choose hysterectomy is to thoroughly treat gynaecological diseases related to uterus. These women often suffer from frequent bleeding or severe pain, which affects the couple's life and social activities. They cannot stand the pain of gynaecological diseases related to uterus and hope that hysterectomy can help them return to normal life.

I just want to have a better quality of life. I don't want to have to keep having this issue. I don't want to have to keep having this pain during sex. I don't want to keep having this discussion with my husband like, 'no, I don't want to do it tonight because it hurts sometimes'

(Bossick et al., 2018).

Some women cannot stand the appearance changes caused by gynaecological diseases related to uterus. They often have abdominal bulge due to uterine fibroids and are left out by their peers. They are eager to help them recover their appearance and integrate into social groups through hysterectomy.

I have never liked being unfit. I felt like a fat lump and I resented not being able to spend so much time with my friends, as I felt left out to a certain degree.

(Pearce et al., 2014).

Some women's symptoms are not very serious. Instead of immediate surgery, they continue to observe the development of the disease. However, with the gradual deterioration of the disease and its impact on daily life, they had to choose surgery.

My problems weren't really bad. I had just had the fibroid for a long time and he [the doctor] had been watching it for a long time and it just kept getting bigger and bigger and it was sort a pressing on my bladder and I was having to go to the bathroom more often

(Williams & Clark, 2000).

## 4.2.3 | Subtheme 2 fertility factors

Fertility factor is an important consideration for women before hysterectomy. For young women and those who want children in particular, hysterectomies can deprive them of their right to motherhood. These women should carefully consider the negative impact of infertility caused by hysterectomy.

> No. Not when I'm the age I am now. Because, how shall I put it: a potential partner for me may possibly have children, or he won't be interested in having

TABLE 3 Key supporting quotes per theme

Theme	Subtheme	Article
Comprehensive consideration before hysterectomy	Disease Factors	1,2,4,5,7
	Fertility factors	1,2,3,5
	Opinions of others	3,5,6,7,8
Emotions and experience after hysterectomy	Postoperative physical condition	1,2,4,5,6,7,9
	Psychological resilience to the loss of the uterus	2,3,4,5,6,9,10
	Changes in the couple's relationship	1,2,3,4,8,9,10
Coping strategies	Self-denial and avoidance	1,2,3,4,6,7,8,9,10
	Change of perception and self-adjustment	1,2,3,4,6,8,9,10
	Seek help from others	1,3,4,6,8,10

Note: Key articles numbered. 1 = William (2000), 2 = Solbrække (2015), 3 = Reis et al. (2008), 4 = Pearce et al. (2014), 5 = Linenberger (2004), 6 = Goudarzi et al. (2021), 7 = Bossick et al. (2018), 8 = Augustus (2002), 9 = Alshawish et al. (2020), 10 = Pilli et al. (2020).

children. If I'd been younger, it might have been a problem if I'd had it removed too early

(Solbrække & Bondevik, 2015).

For some women, fertility factors play an important role in the harmony of family factors. They may be left out or even abandoned by their husbands because they cannot have children.

I will not have any child. I was already being humiliated by my husband and his sisters because I couldn't give birth. My husband does not love me; he is getting angry with me, calling me 'little bug'. These are all due to my inability to give birth

(Reis et al., 2008).

It is worth mentioning that for women who already have children, fertility is not their primary consideration, because they have already felt the happiness of being a mother and received family support for the operation. Therefore, the main problem they face is to solve the gynaecological diseases related to uterus and restore their health.

Well, I knew that I did not want any more children, and I was just tired physically and mentally. I was tired. As far as my personal life, I didn't really have one. I think that this had affected the mood that I was in all the time. I was hurting all the time. I just did not want to be bothered with anything or anybody.

(Williams & Clark, 2000).

# 4.2.4 | Subtheme 3 opinions of others

First of all, women will communicate with their doctors before surgery to fully understand their condition and consult with their doctors about treatment options. Generally speaking, the doctor's advice is an important factor in a woman's preoperative decision-making.

I don't know that I was prepared at all, only because again, it was an immediate type thing ... his [the doctor's] advice was, 'You're not going to get any better. It's not going to get any different. This is just the route you have to go. Um, and this is what you can expect.' And the whole time he's holding my hand ... so I didn't need any more preparation to – to go through with this. I just needed to know that I was confident in his decision

(Bossick et al., 2018).

At the same time, other people's ideas and ideas are also important factors that influence women's preoperative decision-making, especially the attitude of women's husbands. Generally speaking, women communicate with their husbands before surgery and get their husbands' consent or support, which is an important emotional support for their firm determination to operate.

I had serious conversations with my husband. He wanted to let me know that he was supportive and whatever I decided, he was with me. But, you know, in having a conversation with him, I was kind of convinced that I really needed to have it done because of the growth

(Bossick et al., 2018).

However, not all husbands can understand and support their wives. These women will hesitate and give full consideration to their husbands' thoughts before surgery, because they are worried that hysterectomy will affect family harmony and even break up the family.

I investigated a great deal before the operation. The vast majority of the women who have been abandoned or betrayed by their husbands are the ones who have had a hysterectomy. To their bad luck, they are no more women at all. Even the patients'

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visitors are saying to me that I am young, and then asking in pity what will happen now. They state that my husband will divorce me and marry someone else....

(Reis et al., 2008).

It should be noted that the important role played by cultural and social background in the thoughts of husbands and friends cannot be ignored, as traditional attitudes and preconceptions can change these people's attitudes and views on hysterectomy, and affect the final decision of women to undergo surgery.

you know our cultural if a man has any problem, the women support him, and it is not polit to ask for divorce but for us, they throw us away without thinking when we have a reproductive problem

(Alshawish et al., 2020).

# 4.2.5 | Theme 2 emotions and experience after hysterectomy

After the hysterectomy, different women will have different changes in appearance, physical function and lifestyle, which can affect their emotional and internal reactions after surgery. Understanding the factors that influence women's mood changes after hysterectomy and adopting targeted interventions can help women reduce negative postoperative emotions and speed up the recovery process. The factors of emotions and experience after hysterectomy can be broadly categorized into postoperative physical condition, psychological resilience to the loss of the uterus and changes in the couple's relationship.

# 4.2.6 | Subtheme 4 postoperative physical condition

Women experience different emotions and experience at different times in the postoperative period. In the early postoperative period, patients experience negative emotional experiences due to postoperative complications such as incisional bleeding and pain. These complications may also lead to loss of appetite, insomnia and weakness, which exacerbate the negative emotional experience of women.

Tired, sore, and pain. The first three days are hell. It's harder than a C-section. The incision hurt and was swollen

(Linenberger & Cohen, 2004).

My sleep pattern disrupted. I lost my desire to eat anything, I cannot even swallow the food

(Alshawish et al., 2020).

When the postoperative complications are gradually eliminated, along with the remarkable therapeutic results of the hysterectomy, women will feel satisfied with the operation and look forward to a new life.

I have no problems after the surgery, because I no longer have to sleep for 2 days because of bleeding. These two days have been added to my life. I got out of that sick status and became a healthy person who could easily do any task

(Goudarzi et al., 2021).

I have a sense of feeling free – freedom from monthly hassles and feeling rotten anymore. I feel like I was freed from bondage

(Linenberger & Cohen, 2004).

In addition, the recurrence of postoperative disease will lead to greater mood swings in women. Their positive emotional experience may disappear instantly, which is a great blow to women's hearts.

We'd been told that next time, if all the tests were fine, we'd get the thumbs up to try for children again. .... Then I got a letter in the post in May, in the middle of May, that I had had a relapse. And that was tough. Yes, tough....

(Solbrække & Bondevik, 2015).

# 4.2.7 | Subtheme 5 psychological resilience to the loss of the uterus

For women who do not yet have children, although hysterectomy helps them to get rid of the disease, the loss of the uterus also means that they will probably not be able to have children, and they cannot accept this fact, so they will have negative emotions.

Everything is off for me now. My life...my future... they mean nothing to me today. Maybe I won't get married and I am not going to have any child by any means (she cried while saying this). I am nothing but an empty sack. What am I of use for? I can't feel like a woman any longer...look, now ...look at me, what am I of use for?

(Reis et al., 2008).

For women who already have children, their reproductive needs have been met. After hysterectomy, the pain from gynaecological diseases disappears and the appearance improves, and this group of women will more often show a positive emotional response to the loss of their uterus.

All my issues that were related to my menstruating and everything have gone away. And I just feel like a different person now. I am so blessed

(Bossick et al., 2018).

In the cultural background of some countries and regions, the uterus is a symbol of female charm and temperament. Therefore, for these women, the importance of the uterus to them is self-evident, and the loss of the uterus will make them feel inferior and avoid social interaction.

I said to my husband before the operation that I would be like a man, nothing less or nothing more. Aren't I right? Isn't that true? They left nothing inside me. Of course, I am now like a man

(Reis et al., 2008).

# 4.2.8 | Subtheme 6 changes in the couple's relationship

After the hysterectomy, the sexual life of the couple is inevitably affected. At this time, the understanding and support of the partner not only helps the patient to recover quickly but also helps the patient to obtain a positive emotional response.

He's said that children are not really the most important thing for him. The most important thing for him is that I'm healthy, and that's very true.

(Solbrække & Bondevik, 2015).

However, not all husbands are able to understand and tolerate their wives, they may be prejudiced and indifferent because of the loss of their wombs, and the patients may be in deep sorrow and pain because of the disharmony in family relations.

It seems to me that he will get married anew. He has already altered the way he treats me. He has changed his perception of me. When she was asked how she realized the changes in her husband's attitudes or how he changed, she replied, He treats me coldly and indifferently

(Reis et al., 2008).

## 4.2.9 | Theme 3 coping strategies

After hysterectomy, different women have different coping strategies for different emotions and experiences. Generally speaking, the emotions and experience of women after operation are relatively uncontrollable factors, while female coping strategies are relatively controllable factors. Positive and effective coping style can slow down the negative emotion of women and improve the ability of psychological adjustment. In the qualitative articles

we have included, some women choose Self-denial and avoidance while some patients choose aggressive self-adjustment or Seek help from others.

## 4.2.10 | Subtheme 7 self-denial and avoidance

Firstly, these women may feel guilty for not being able to have children and for not being able to satisfy their husbands' sexual needs, and they may feel that they are not fulfilling their responsibilities as wives. Such negative emotions will gradually reduce their intimacy with their husbands.

I can't think of sexual matters with my husband. Can he be as happy again as we were beforehand? Can I satisfy him as in the previous days? I'm asking myself how it will be from now on. Will I feel any pain or ache? Will I manage to satisfy my husband sexually? Will he enjoy doing it with me as he did in the past?

(Reis et al., 2008).

Secondly, women also suffer from low self-esteem because of the loss of their uterus, and they believe they have lost their femininity. They adapt to the physical changes by avoiding friends and refusing to participate in social activities.

Removing the uterus affects women's morale. I think a woman whose uterus is removed loses her femininity. I told my husband that I had become like a male person. Well, a feminine organ has been removed. I have become a sad and Irritable person. I like to be alone. I have become more isolated. I do not like attend family gatherings. I feel Impatient

(Goudarzi et al., 2021).

Finally, some women may give themselves negative psychological cues that they are unhealthy because they have lost their uterus, and they become anxious and irritable. This may be related to these women's lack of knowledge related to hysterectomy and inadequate post-operative education by healthcare providers.

In fact, I was in a lot of pain after the removal of the uterus. I was like a sick person for a long time. It took me a long time to get my physical health back. Now, I cannot say that I consider myself a very healthy person. I feel that my health has decreased

(Goudarzi et al., 2021).

# 4.2.11 | Subtheme 8 change of perception and self-adjustment

Of course, some women also choose positive coping strategies. Although hysterectomy may have had a negative impact on them, however, they found more benefits of hysterectomy with positive treatment outcomes by comparing the quality of life before and after surgery.

> I actually feel a lot more feminine now, a bit more of a free woman, a bit more liberated. I'm not so tied to those cycles as I was before. So as far as I'm concerned, I'm a lot freer now. now since I can now wear what I want, and I don't have to run around with an extra bag of clothes to drag along; I just don't have to plan so much around myself

> > (Solbrække & Bondevik, 2015).

After the operation she felt "younger, with a sense of new life. I seem to want to take better care of my skin. I have changed the way I wear makeup. I think it is because I feel reborn: different clothes"

(Pearce et al., 2014).

In addition, some women also use spiritual solace to help them cope with their bad moods, and religious faith plays an important role in this, which helps them to strengthen their hearts and find spiritual support.

Well, I prayed a lot about it [the hysterectomy], and I really had talked to the Lord about it and I was just so comfortable with that spiritually – about what I was going to do and it was right. Because I really had prayed at first when we had put the surgery off, and I had prayed and asked the Lord to really guide me

(Williams & Clark, 2000).

I have always trusted in God and asked God to help me. This surgery was like a scary movie. I always asked God to help me. I wanted to have my uterus as before, but when it is not possible right now, I cannot fight God. I am submitting to God's will

(Goudarzi et al., 2021).

# 4.2.12 | Subtheme 9 seek help from others

Patients also actively seek help from healthcare workers and friends when they are unable to deal with their emotions alone, which plays an important role in relieving their emotions.

Initially I was very depressed, stopped working and kept away from people. One day my good friend came to visit me and she told me to count myself lucky for being alive because two of her other friends didn't make it after going through such a similar operation ...

from that day forward she said her life changed, she learnt to appreciate life and be grateful God

(Pilli et al., 2020).

She found it useful to 'turn to others for support from partners, friends, and other women with similar experiences'

(Pearce et al., 2014).

Of course, effective communication with the husband and get his understanding and help is undoubtedly a very effective coping strategy. The slightest change in the husband's behaviour and mood may affect the woman's mood changes. Husbands are not only able to provide material help for women but also a strong spiritual support for women to overcome difficulties and setbacks.

I lost my morale after the surgery, but one must be satisfied with one's fate. Now, I give myself morale. My husband gave me a lot of encouragement. He said that now that I am healthy, he is happy. When I see that I am no longer sick and I do not have pain or bleeding, my mood is improved

(Goudarzi et al., 2021).

## 5 | DISCUSSION

From 10 qualitative studies, we systematically reviewed the complex emotional experiences and coping strategies experienced by different women during the entire hysterectomy process according to the preoperative and postoperative timeline. We found that most women experience physical discomfort and negative emotions when undergoing a hysterectomy. However, we have also seen the strong mental resilience and self-adjustment of women in dealing with negative emotions. Of course, the support and assistance from family, friends and healthcare providers are also very important, especially in the early postoperative period. Meanwhile, it is also important to eliminate prejudice against women who have undergone hysterectomy in countries and regions with different cultural beliefs, which helps women to develop a positive emotional experience and better integrate into society.

Due to cultural and social perception factors, women, family members and society have irrational cognition of infertile women, which is a great pressure for postoperative infertile women (Ariho & Nzabona, 2019). Therefore, how to guide the public's rational cognition of infertility and alleviate women's family and social pressure is very important. The female trail should be distinguished from reproductive organs and the ability to bear children, and because of the feeling of illness stigmata, many women will choose to hide the condition from their surroundings and refuse to seek help from their surroundings (Lewis et al., 2000)and live continuously in the fear of abandonment and loneliness, and face large family and social

pressures. Medical staff should guide women's rational cognition of fertility and encourage communication between patients and peers by establishing multiple information channels. At the same time, the role of new media should be brought into play to guide families and the public to correctly view fertility issues, so as to reduce women's emotional pressure. By reducing the stigma associated with infertility, women can reduce the family and social pressure faced by infertility.

More importantly, the understanding and help of the husband is undoubtedly the most important of all the support that a female patient needs. In the qualitative studies included in this review, we found that husbands' attitudes and thoughts were present throughout women's real experience of hysterectomy, including influencing women's decision-making judgements about hysterectomy preoperatively and women's physical and psychological recovery progress postoperatively. Fear of losing their significant other, losing their relationship and losing the charm of attracting their husband after hysterectomy are real concerns for these women. The husband's attentive care and support help female patients make the right decision for surgery and is a strong support to help female patients accept physical changes, strengthen positive beliefs and overcome psychological concerns. Previous studies have also shown that the buffering effect of the marital relationship has been demonstrated in the adjustment process of women with breast cancer, and the caring, loving, helpful and sensitive relationship displayed by the couple seems to provide a buffer against each other's emotional pain (Pinar et al., 2012).

Many women worry that their partners will see them differently after a hysterectomy (Vomvolaki et al., 2006). Therefore, support and comfort from their partner are very important for women preparing for hysterectomy. However, numerous studies (Gutiérrez et al., 2012; Hoga et al., 2012; Richter et al., 2000) have shown that most husbands lack basic knowledge or even have negative perceptions of female hysterectomy, which leads them to be unable to provide effective emotional support to their wives. It is worth noting that women had received inadequate information about hysterectomy during our integration process. While women want their partners to know more about women's health and hysterectomy, women also have limited knowledge (Williams & Clark, 2000). Therefore, on the one hand, we should popularize the knowledge of hysterectomy, improve the public awareness rate and guide the public to view the hysterectomy rationally and objectively. On the other hand, we can develop personalized health education based on women's own needs and concerns. It is recommended that future studies develop partner-centred educational programmes that include both husband and wife in preoperative counselling and postoperative health education, which can eliminate negative perceptions of hysterectomy in couples, especially in husbands, and provide strong material and spiritual support for women to overcome the disease.

Apart from this, the results of our systematic review show that hysterectomy has different effects on the emotional changes of female patients in different reproductive stages. Women who have already had children are relatively more accepting of hysterectomy, and they are tired of the pain and suffering caused by their uterus(Reis et al., 2008; Williams & Clark, 2000). After hysterectomy, they are more likely to feel a high quality of life and a pleasant emotional experience. In contrast, women who have not had children are more resistant and reluctant to hysterectomy, desiring to preserve their uterus and fulfil their experience of motherhood, despite the fact that uterus-related diseases have severely affected their quality of life and even threatened their lives (Solbrække & Bondevik, 2015). After the surgery, these women suffer from low self-esteem and fear of losing their femininity and charm in front of their husbands due to the loss of fertility (Pilli et al., 2020). The results of our review show that patients often continue to have such negative emotions for many years after discharge from the hospital. Therefore, clinical care providers should carefully consider the choice of hysterectomy treatment modality for young nulliparous women, as the hysterectomy can have a long-lasting impact on the lives and emotions of this group of patients. Based on this, clinical practitioners are also trying to explore the possibility of implementing the treatment modality of uterus-preserving therapy in clinical practice. Studies have shown that progestin-based conservative treatment is feasible for women with well-differentiated, clinically staged 1A, endometrial-like endometrial cancer who wish to preserve their fertility. And when progestins are combined with hysterectomy or with metformin, women have a higher chance of having children and a lower recurrence rate (Chae-Kim et al., 2021; Herrera Cappelletti et al., 2022). However, although this treatment preserves female fertility, the live birth rate is low and is only indicated for female patients in the early stages of the disease. Future studies with large samples are still needed to validate the short-term and long-term treatment effects. In the meantime, further optimization of drug combination therapy is needed to improve the live birth rate of conservative treatment. Of course, for women who must undergo hysterectomy treatment, clinical nurses should implement targeted psychological care guidance for these women and work with their families to help them change their mindset and discover new values in life, so that they can realize the possibility of living a meaningful or better life without a uterus.

## 5.1 | Implications for practice

This study analysed the real experience of patients during the whole process of hysterectomy through a systematic review and fully helped clinical nurses understand the real emotional and psychological needs of patients at each stage of surgery. This is an important reference and guidance for clinical nurses to provide targeted and personalized medical care services to patients. In clinical practice, in addition to fully understanding the patient's condition at the time of admission, nurses should also fully assess general basic information such as the patient's age, childbearing status, cultural beliefs and family attitudes and perceptions. These factors are also important in assisting physicians in making the right treatment choices and in understanding the impact of the patient's true internal psychological

experience. Before operation, clinical nurses should work with doctors to help patients and their families fully consider and understand the advantages and disadvantages of hysterectomy and make correct surgical decisions. In the postoperative period, the incidence of postoperative complications is reduced through active therapeutic care to alleviate patients' negative emotional experiences. More importantly, positive psychological counselling is used to change the misconceptions of patients and their families about hysterectomy and to provide patients with correct information and psychological support so that they can face their bodies and establish correct cultural values. Ultimately, the aim is to help patients adapt to the changes in their lives after hysterectomy from the physical, psychological and social aspects and to improve their physical and mental health and quality of life.

## 5.2 | Strengths and limitations

This meta-synthesis has several strengths, such as the fact that we employ a rigorous and comprehensive search strategy. The data retrieval and synthesis phase use systematic approach. The details of the data analysis are transparent, enhancing the credibility of the results. The findings were derived from quotes from women, ensuring that our results were rooted in the original research and guaranteeing the authenticity of the source. Our study included female participants from different countries and regions, which helped us to a gain comprehensive and in-depth understanding of women's real feelings and needs. However, limitations should also be taken into account. Firstly, our search for literature was limited to English publications, and for the 10 qualitative research articles included in this study. we did not contact the authors for additional original information, which may lead to incomplete integration of the results. Secondly, although we use a professional literature quality evaluation tool and conduct a rigorous quality assessment by two independent reviewers, the subjective shortcomings of literature quality evaluation are still unavoidable. Lastly, when integrating the literature, this study did not focus on the researcher's context; thus, the results in this review should be interpreted with some caution and might have limited transferability.

## 6 | CONCLUSION

This study systematically evaluated qualitative research on the real experiences of women undergoing hysterectomy, identifying three themes: comprehensive consideration before hysterectomy, emotions and experience after hysterectomy, and coping strategies. Within each topic, the true psychological feelings of the patient also vary. By and large, before operation, women will consider hysterectomy based on physical disease and fertility factors after consulting doctors and nurses. When women have difficulties in making choices, the suggestions of relatives and friends, especially husbands, play an important role and may eventually affect women's surgical choices.

After surgery, women may regain hope for life after getting rid of the pain of uterine disease; of course, more women show negative emotions due to surgical complications, physical changes and loss of fertility. In this regard, clinical nurses should carry out targeted psychological nursing intervention measures to help women get rid of the negative emotion. More importantly, the husband's understanding and support play a vital role in the woman's physical and psychological recovery, and the potential influence of different cultural and traditional beliefs cannot be ignored. In the future, couples' misconceptions and perceptions about hysterectomy can be transformed by conducting a couple-centred nursing health education curriculum programme before and after surgery to strengthen the strong belief of both spouses to overcome the disease together.

#### **AUTHOR CONTRIBUTIONS**

Na Li, Chen Shen, Rao Wang, Zhiping Chu: conceptualization. Na Li, Chen Shen, Rao Wang: methodology. Na Li, Chen Shen, Rao Wang: statistical analysis. Na Li, Chen Shen, Rao Wang: data extraction and management. Na Li, Chen Shen, Rao Wang, Zhiping Chu: writing-original draft preparation. Na Li, Chen Shen, Rao Wang, Zhiping Chu: writing-review and editing. Zhiping Chu: supervision. All authors contributed to the article and approved the submitted version.

All authors have agreed on the final version and meet at least one of the following criteria [recommended bythe ICMJE (http://www.icmje.org/recommendations/)]:

- substantial contributions to conception and design, acquisition of data or analysis and interpretation of data;
- drafting the article or revising it critically for important intellectual content.

## **ACKNOWLEDGEMENT**

Not applicable.

## **FUNDING INFORMATION**

The authors declare that there has been no funding support in this study.

## **CONFLICTS OF INTEREST**

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## DATA AVAILABILITY STATEMENT

The data used to support the results of the analysis of this study can be obtained from the corresponding authors in the references of this study.

## **ETHICS STATEMENT**

The study does not require ethical approval because the metaanalysis is based on published research.

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#### SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Li, N., Shen, C., Wang, R., & Chu, Z. (2023). The real experience with women's hysterectomy: A meta-synthesis of qualitative research evidence. *Nursing Open*, 10, 435–449. https://doi.org/10.1002/nop2.1348