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DOCTORAL THESIS

FACTORS RENDERING PATIENT DECISION-MAKING FOR TREATMENT OF PELVIC ORGAN PROLAPSE

ABSTRACT

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OUTLINE

Keywords: prolapse, nulliparous women, postmenopausal women, interview, treatment.

ABBREVIATIONS USED IN THE TEXT

AI=anal incontinence
BMI= body mass index
NP= nulliparous
PFM=pelvic floor muscle
POP=pelvic organ prolapse
SUI=stress urinary incontinence
UI=urinary incontinence

GENERAL PART

INTRODUCTION

The term pelvic floor disorders typically refer at pelvic organ prolapse (POP), urinary incontinence (UI), anal incontinence (AI), and pelvic floor muscle (PFM) dysfunction, all of which arise from alterations or pathologies affecting the pelvic floor anatomy. Appling surgical treatments for such conditions, may affect other conditions, unmasking different symptoms. The complex origin of POP showed an interaction between different environmental factors in a women's life. Further, known risk factors which are involved besides POP, are UI and AI along with childbirth trauma, menopause, aging, obesity and pelvic surgery. Other known factors are smoking, physical labor, connective tissue disorders, chronic constipation, and genetic factors. POP has common repercussion which can be seen in daily life, social interactions, personal hygiene, sexuality, and mental wellbeing. Taken together, all these repercussions have implications in women's quality of life.

For women who undergo at least one reconstructive pelvic floor surgery the assessed risk is approximately 20%. Therefore, women with POP may thus be considered a public health problem and the significant annual costs for pelvic reconstructive surgery will most likely double in the next decades.

POP is represented by the prolapsed of the pelvic organs through the vaginal wall due to loss of their structure support. POP has an incidence of approximately 50% especially on multiparous women. The diagnosis of POP is clinical in which the main symptoms reported by women are a feeling of vaginal pressure, a vaginal bubble, or a feeling of sitting on a ball, including associated symptoms like urinary or fecal disorders and sexual dysfunction.

Treatment for POP can be conservative or surgical in which the indicator of the choice are represented by age, the degree of prolapse, comorbidities and, more recently, the patient's preferences. Surgical treatment is used more in advanced degrees of prolapse and has the vaginal and abdominal approaches available. The vaginal approach is used especially for elderly patients who are no longer sexually active or who present important comorbidities that cannot tolerate long-term anesthesia. Different procedures that use the abdominal approach are reserved for young, sexually active patients, without comorbidities and with advanced degrees of prolapse.

The aim of the thesis was to determine by using qualitative methods, the decision-making factors and preference for treatments for POP in different age groups of patients (i.e., nulliparous, postpartum and postmenopausal). Therefore, this study try to evidence more the nursing, healthcare research and medical studies role for women's counseling and prevention of different POP conditions, in order to recognized it and make a quick choice on available treatments.

In this way, I would like to especially thank my supervisor and mentor, Professor Vlad Tica, for his guidance, advice and expertise, as well as for his professionalism and dedication, which have left a profound mark on this work.

CURRENT STATE OF KNOWLEDGE

The POP shows to be a chronic condition affecting many women. This condition negatively impacts quality of life of women with POP till the bordering symptoms [1]. When the condition is advanced, women of all ages start to seek medical help at physicians [2].

Interestingly, more important nowadays is to investigate women's knowledge of seeking advice on those treatment conditions and also on healthcare providers. Nevertheless, there has been little data in literature on how women choose different treatments and what women want to achieve from these treatments. Until present, the decision-making processes of women with POP on current treatments are still not very well understood. And more, we know only a few things about what women accept in terms of success or complication rates [3].

Therefore, the importance of qualitative approach for such understanding can be unraveling by subtle factors affecting women's perception on different conservative or surgical treatments [4].

Studies have tried to explain in the past what women with POP hope to achieve from treatments, which can be regarded as a further deep step in our context. However, it will be difficult to generalize to each individual, since all these studies adopted a quantitative approach. Most of the questionnaire-based studies ask women to categorize their responses. A qualitative experience of women with POP shows that women are most disturbed by their symptoms and its effect on daily activities, with their expectations of treatment being to return to normal in terms of their family, social, and professional activities [5].

In the case that no symptom is present, surgical treatment may be not necessary. That's why the clinical examination become important [6].

Newer, it seems that women with POP had little or no access to the existing information from the public health domain [7]. In general, the mass media have helped to publicize UI, especially through anti-cholinergic medication [8], while others shows that POP does not have similar publicity or corresponding medication. In the meantime, healthcare providers come to represent approximately 50% of the information sources, whereas information brochures, internet-based tools, and public media are less common [9].

Therefore, the existing studies have focused on women's general aspiration when undergoing different option treatments, but have not yet explored the most important factors that render their decision-making process about all these treatments. Clearly, there is still much to work in improving patient information's knowledge [10].

The rapid introduction of new treatments and devices for POP makes the assessment of different treatments in patient preferences of great importance. By unraveling the subtle factors affecting women's perceptions on different conservative and surgical treatments, it can therefore be helpful in counseling women concerning planning care pathways in healthcare research [11].

PERSONAL CONTRIBUTION

OBJECTIVES OF THE DOCTORAL THESIS

The objectives of the doctoral thesis were to find:

- the decision-making factors in the choices of different POP treatments in women of different ages (young nulliparous, postpartum and postmenopausal);
- the correlations between demographic characteristics (i.e., age, BMI, physical exercises, education, parity, abortions, comorbidities, previous surgical interventions, and smoking status) and the choices of women's different POP treatments;
- the preference of all women on different POP treatments before starting them;
- the common patterns in women's decision process on POP treatments.

All data presented in the thesis were collected from:

- clinical examinations;
- individual patient's electronic records;
- multidisciplinary consultations.

The data collected were processed and included the following parameters:

- personal data: name, surname;
- epidemiology elements: age, environment of origin, occupation;
- etiopathogenesis data:
    - significant family history antecedents;
    - personal physiological antecedents;
    - obstetrical and/or gynecological pathology history;
    - life style, as alcohol, tobacco, coffee intake;
- clinical diagnostic elements: duration of symptoms, subjective and main objective signs.

The propose of this thesis was to establish available evidence in the field, which could potentially drive the research agenda through women's interactions with both available online websites and health professionals will shape their experience of care.

GENERAL METHODOLOGY

Study Design

This thesis employed a qualitative descriptive design, collecting data through one-on-one, in-depth interviews with carefully chosen participants. The study aimed to explore the perceptions of young NP women, the perspective of postpartum women after vaginal birth, and the decision-making processes of postmenopausal women. This qualitative approach offered detailed insights into the participants' identities, their experiences, and the contexts in which these experiences occurred, as partially described by Doyle et al. [12].

Participants

The study included the following groups:

-Thirteen young NP women without POP, all in their final year of medical studies at the Faculty of Medicine, 'Ovidius' University of Constanța, Romania. Inclusion criteria**:** women of reproductive age, nulligravida, asymptomatic for POP, fluent in Romanian, and willing to participate voluntarily.

-Twelve postpartum women with POP stages II or III, assessed after vaginal delivery (with or without episiotomy and no perineal lacerations) in our university hospital, both immediately postpartum and again at 6 months. Inclusion criteria: women with clean lochia who voluntarily agreed to participate. Exclusion criteria: absence of vaginal delivery, perineal lacerations, delivery before 37 or after 42 weeks of gestation, previous urogenital surgeries, mental illness, or inability to speak Romanian.

-Twelve postmenopausal women with POP stages II, III, or IV, evaluated prior to surgical treatment at the University Emergency County Hospital Constanța, Romania. Exclusion criteria: prior urogenital surgeries, hysterectomy, or inability to speak Romanian.

The diagnosis and staging of prolapse were initially conducted by the clinical team upon admission and subsequently independently verified by the research team using the POP classification system [13]. All interviews took place between January 2022 and September 2024 at our University Hospital.

Data Collection

The interviews took place in a private, designated room within the hospital, with the date and time scheduled by mutual agreement between the participant and the researcher. Demographic information collected included age, BMI, physical activity, education level, parity, history of abortions, comorbidities, previous surgeries, and smoking status. The interviews consisted of open-ended questions addressing various treatment options for POP. An interview guide, developed by the authors and customized for the three groups, featured exploratory and open-ended questions designed to encourage participants to freely express their perspectives. Each interview lasted between 30 and 40 minutes, was audio-recorded, transcribed verbatim, and analyzed using content analysis.

Data Analysis

A qualitative content analysis approach was applied to examine the data, following different steps outlined by Graneheim & Lundman [14]. Each interview was transcribed verbatim, after which the transcripts were thoroughly reviewed to ensure that no relevant information was overlooked. Recurring words, phrases, and sentences were identified and highlighted, leading to the extraction of meaningful codes. These codes were then organized into categories from which overarching themes were developed. In the final stage, the identified themes were shared with the participants to validate and confirm their perspectives.

Ethical Consideration

The ethical approval for this study was granted by our Institutional Ethics Committee (Ref. No. 4604 and 4605/21.01.2022). Participation was entirely voluntary, with each woman having the right to decline or withdraw from the study at any time. Prior to the interviews, all participants were thoroughly informed about the study's purpose and procedures. Written informed consent was obtained only after they confirmed their understanding of the study's objectives. Confidentiality was strictly upheld, with all personal data, audio recordings, and interview transcripts. The study prioritized participants' autonomy, ensuring that their involvement was free of coercion and that they could withdraw without any negative consequences.

STUDY I.
PERCEPTIONS OF PELVIC ORGAN PROLAPSE TREATMENTS AMONG NULLIPAROUS WOMEN: A QUALITATIVE APPROACH TO ADVANCED NURSING CARE IN ROMANIA

1.1. Objectives

This research examined how young nulliparous women perceive the available treatment options for POP and identified their treatment preferences.

1.2. Results

1.2.1. Demographics

The mean age of the thirteen young NP women was 24.23, (range 20-29 years old), the majority of NP women had a BMI ≥ 30, and all were enrolled in university studies. Eight participants (61.53%) reported doing physical exercise, while two women (15.38%) presented with comorbidities such as anxious depression and chronic gastritis (Table 1).

Table 1. Demographic data of young NP women.

Variable	Total (%)
BMI (kg/m2)	
≥ 30 (obesity)	8 (61.53)
< 30	5 (38.46)
Physical activity	
None	5 (38.46)
≥ 3	8 (61.53)
Comorbidities	
None	11 (84.61)
≥ 1	2 (15.38)
Previous surgical intervention	
None	4 (30.76)
≥ 1	9 (69.23)
Smokers	5 (38.46)
Non-smokers	8 (61.53)

From the interviews, four main themes appear:

1. The Internet emerged as the primary source of information on POP treatments;
2. Knowledge about POP symptoms was generally limited;
3. PFM training was strongly preferred;
4. There was a strong inclination toward vaginal surgical options, with a priority placed on preserving the uterus.

1.2.2. Themes

Theme 1: The Internet emerged as the primary source of information on POP treatments

This theme highlights the sources of information about POP treatments and the need for increased awareness. All NP women appeared to lack precise knowledge about available treatments.

"[The treatment for POP is] the surgical treatment and I assume the same is the non-surgical one. No, I didn't receive any information, but I got it from the Internet" (participant no. 2, aged 26)

"[The treatments are] surgical and non-surgical. I received information, I documented myself on the Internet for uterine prolapse" (participant no. 10, aged 24)

"*Of course there is surgical [treatment]*, *so probably non-surgical as well. Honestly, I personally haven't heard from anyone, but I looked it up on the Internet, it seemed interesting to me, so I heard it in passing and said I'd take a look"* (participant no.12, aged 24)

Theme 2: Knowledge about POP symptoms was generally limited

This theme examines awareness of recognizing POP symptoms. Seven young NP women (53.84%) linked these symptoms to feelings of pressure and heaviness.

"No, I have not personally faced this condition, but at work, where I work in the kitchen, my older colleagues are used to lifting a lot of weights and they told me that they started to feel a kind of pressure that pression and some of them even said that they felt as if they had passed out" (participant no. 3, aged 24)

"I didn't suffer personally, but my best friend told me that she has this problem and, from what I understood, she had pain while lifting weights and tightness in the abdomen" (participant no. 5, aged 29)

Four NP women (30.76%) reported experiencing a sensation of something protruding.

"Yes, my cousin actually has uterine prolapse and she told me that she feels a strange sensation down there and feels like something is coming out, that's what she told me" (participant no. 7, aged 24)

Two NP women (15.38%) could not recall or articulate any symptoms.

"No, I personally do not face this condition, but I know women who are affected by uterine prolapse" (participant no. 4, aged 24)

Theme 3: PFM training was strongly preferred

Interestingly, all participants (n = 13, 100%) selected vaginal pessaries as their second choice, while none opted for hormone replacement therapy as a POP treatment.

"I think it is better to train the pelvic muscles because it strengthens the muscles and it seems to me that there is a massive implication there. I would [also] prefer vaginal pessary because I would not want to take hormones, hormones have many adverse effects from what I have seen" (participant no. 6, aged 24)

"I would choose the training of the pelvic muscles, considering that it is much more suitable for prolapse conditions. I would choose [also] the pessary […], without having to take hormones" (participant no. 11, aged 24)

Only one NP woman (7.69%) considered lifestyle and behavioral changes.

"I believe that both [supervised PFM training and lifestyle] are very good as they go hand in hand, if the exercises are performed correctly and, clearly, the lifestyle is very important to be adapted. I would choose lifestyle change as a first step. I clearly consider that this option [vaginal pessaries] is much more advantageous, I am not a fan of estrogens and I would rely more on the first option" (participant no. 3, aged 24)

Theme 4: There was a strong inclination toward vaginal surgical options, with a priority placed on preserving the uterus

This theme reflects their perspectives on surgical treatments performed through vaginal or abdominal approaches, with or without hysterectomy. All the young NP women interviewed (n = 13, 100%) expressed a preference for vaginal surgery.

"I would prefer to keep my uterus, because I would like to start a family in the future, as I am a young woman" (participant no. 4, aged 24)

"I personally would prefer to keep my uterus, I believe that all organs have a certain role" (participant no. 6, aged 24)

"With the preservation of the uterus, considering that every organ has a role" (participant no. 10, aged 24)

1.3. Discussions

Collaborating with healthcare institutions or schools to address these topics appears to be a more effective strategy. Such initiatives can help raise awareness and promote treatment options for POP, especially among young women [15]. The selected study design was suitable as it allowed for a precise description and a deeper understanding of the phenomenon under investigation [16]. Our study confirms that young NP women have limited awareness of POP treatments and the role of nursing care in its management [17, 18]. Notably, POP-related symptoms often act as barriers to physical activity. Previous studies suggest that anxiety may aggravate POP symptoms and increase women's sense of vulnerability [19]. In our study, anxious depression was identified as one of the comorbidities, potentially influencing the way participants conveyed their perceptions and experiences. An essential component that should be included into a healthcare program is the provision of clear information about available treatment options for POP. Studies show that many women have limited awareness of these treatment possibilities [20]. Consequently, conservative approaches, such as supervised PFM training with the support of a pelvic physiotherapist, should be more actively promoted as a first-line option, ideally before women resort to surgical interventions.

1.4. Conclusions

This study emphasizes the need to improve knowledge and awareness of POP treatments among young NP women. The findings reveal a clear preference for conservative approaches, particularly supervised PFM training. Encouraging the inclusion of supervised PFM exercises in their routines may potentially lower the risk of developing POP. Creating open conversations about POP can empower young women to seek timely medical care.

STUDY II.
UNDERSTANDING TREATMENT APPROACHES TO PELVIC ORGAN PROLAPSE AFTER VAGINAL BIRTH: A QUALITATIVE STUDY

2.1. Objectives

The objective of our study was to conduct a qualitative analysis of postpartum women, focusing on their perspectives regarding POP treatment, with the aim of providing insights that could support the development and implementation of optimal therapeutic strategies.

2.2. Results

2.2.1. Demographics

The mean age of the twelve postpartum women was 29.05 years, (range 18–38 years) and all participants were diagnosed with POP stages II or III (Table 2). Women with stage II POP had vaginal deliveries without episiotomy. In the stage III POP group, four women had vaginal deliveries with episiotomy, while one woman (the fifth participant) delivered vaginally without episiotomy.

Table 2. Participants' demographic characteristics.

Variable	N (%)
POP stage	
II	7 (58.33)
III	5(41.66)
BMI (kg/m^2)	
≥ 30 (obesity)	4 (33.33)
< 30	8 (66.66)
Education	
Eight years or less	2 (16.66)
High school	7 (58.33)
University	3 (25)
Parity	
Primiparous (1st birth)	6 (50)
Secundipara (2nd birth)	4 (33.33)
Multiparous (≥ 3rd birth)	2 (16.66)
Comorbidities	2 (16.66)
Previous surgical intervention	
None	5 (41.66)
≥ 1	7 (58.33)
Smokers	5 (41.66)
Non-smokers	7 (58.33)

Our analysis identified six main themes, categorized according to the postpartum period:
Immediately after vaginal birth:

1. The urgency in making treatment decisions for POP due to the presence of symptoms;

2. The influence of friends, and to a lesser extent family or online sources, in treatment choice;

3. A general preference for conservative treatment options;

4. Supervised PFM training and other conservative approaches regarded as the most appropriate treatments during the immediate postpartum period.

At 6 months after vaginal birth:

5. A desire to proceed with treatment promptly, even when POP symptoms showed improvement at 6 months;

6. Preference for simple treatment options aimed at enhancing quality of life.

2.2.2. Themes

Immediately after vaginal birth

Theme 1: The urgency in making treatment decisions for POP due to the presence of symptoms

Approximately 76% of postpartum women (n = 8) expressed a desire to accelerate the decision to begin POP treatment following their first vaginal birth.

> *"I felt something coming out [...] after the first birth"* (participant no.1, 2nd birth, vaginal)
>
> *"After the first pregnancy [...] I felt something pressing on my bladder and decided together with the family [the moment of decision on POP treatment]*" (participant no. 2, 1st birth, vaginal)
>
> *"After birth, [I decided] due to the symptomatology that got worse"* (participant no. 9, 1st birth, vaginal birth)

Only two postpartum women (16.66%) wished to begin treatment after their second birth, while another two (16.66%) preferred to start after their third or subsequent births.

> *"From the second pregnancy [...] after I found out immediately, I made up my mind"* (participant no. 4, 2nd birth, vaginal, episiotomy)
>
> *"After the last pregnancy [...] [because of the] symptoms"* (participant no. 3, 5th birth, vaginal)
>
> *"After the third birth [...] [I wanted to do the treatment]"* (participant no. 12, 3th birth, vaginal)

Theme 2: The influence of friends, and to a lesser extent family or online sources, in treatment choice

Half of the postpartum women (n = 6, 50%) reported that their friends influenced their choice of POP treatments.

> *"[I found out] from friends [...] family"* (participant no 4, 2nd birth, vaginal, episiotomy)
>
> *"[I found out] from friends"* (participant no. 7, 1st birth, vaginal, episiotomy)

Only three postpartum women (25%) identified family as an influencing factor, while another three (25%) cited the Internet.

"[I discussed] with the family [...] relatives, friends and grandparents" (participant no. 2, 1st birth, vaginal)

"[I discussed] with my family" (participant no. 10, 1st birth, vaginal)

"I got information from the Internet [...]" (participant no.11, 2nd birth, vaginal)

Theme 3: A general preference for conservative treatment options

All postpartum women (n = 12, 100%) expressed a preference for conservative treatments (e.g., lifestyle and behavior changes, supervised PFM training, or hormone replacement therapy), and 11 women (91.66%) favored intravaginal devices and pessaries. Only one participant (8.33%) declined both conservative options and surgical procedures. Ultimately, all postpartum women ruled out surgical treatment.

"[I would choose] the first option [lifestyle and behavior changes procedure], with no need for a knife" (participant no 2, 1st birth, vaginal)

"I would choose supervised training, I see it as more effective, compared to the surgical procedure" (participant no. 5, 1st birth, vaginal, episiotomy)

"[I would choose] the first option [hormone replacing therapy], a substitution treatment" (participant no. 12, 3rd birth, vaginal)

Theme 4: Supervised PFM training and other conservative approaches regarded as the most appropriate treatments during the immediate postpartum period

Among postpartum women, half (n = 6, 50%) viewed supervised PFM training as the most effective POP treatment. One woman (8.33%) preferred lifestyle changes, two (16.66%) chose hormone replacement therapy, and three (25%) selected other conservative approaches.

"I think the best would be supervised muscle training" (participant no. 2, 1st birth, vaginal)

"I would choose a conservative treatment, I think that the healing takes longer with the surgical one, while, with the conservative one, would be faster" (participant no. 4, 2nd birth, vaginal, episiotomy)

"Conservative, no way surgical, because I don't want to have any surgery" (participant no. 7, 1st birth, vaginal, episiotomy)

At 6-months after vaginal birth

Theme 5: A desire to proceed with treatment promptly, even when POP symptoms showed improvement at 6 months

All postpartum women (n = 12, 100%) reported an improvement in POP symptoms at six months postpartum; however, 8 women (66.66%) still wished to begin treatment without any delay.

"Yes, I still feel the symptoms [for POP], but they are decreased" (participant no. 2, 1st birth, vaginal)

"It has improved [the symptomatology] […] I had a pressure, but I don't have it like before" (participant no. 4, 2nd birth, vaginal, episiotomy)

"No, especially if you have problems. The more you delay [the treatment], the worse it gets" (participant no. 11, 2nd birth, vaginal)

Theme 6: Preference for simple treatment options aimed at enhancing quality of life

At six months postpartum, all women (n = 12, 100%) opted for a simple and "easy" POP treatment, with none choosing surgical intervention.

"I would choose conservative in principle, and if only it is not possible, I would choose surgery" (participant no. 2, 1st birth, vaginal)

"A simple treatment would seem ok to me, conservative" (participant no. 4, 2nd birth, vaginal, episiotomy)

"Something conservative, I wouldn't want surgery, *[I would choose] something easier"* (participant no. 12, 3rd birth, vaginal)

2.3. Discussions

The impact of vaginal birth on pelvic floor function, particularly in relation to POP, is an increasingly relevant topic among both women and healthcare professionals. Epidemiological data suggest that detectable POP can occur in approximately one-third of all deliveries shortly after birth [20]. Previous research has shown that POP often becomes a clinical condition for many postpartum women, yet it may go undiagnosed for some time; in such cases, pelvic floor rehabilitation can be offered as a first-line treatment [21]. Our findings align with this perspective, as the postpartum women interviewed in our study expressed a preference for conservative treatment options, particularly supervised PFM training. The chosen research design, assessing women's experiences both immediately after vaginal birth and at six months postpartum, proved suitable for this investigation, as it offered valuable insights into the phenomenon of interest, consistent with the principles of qualitative descriptive research [16]. In our study, the second interview was scheduled at 6 months postpartum, aligning with the concept of the "third stage," or delayed postpartum period, during which connective tissues are restored to their pre-pregnancy state [22]. Notably, 4 out of the 5 women diagnosed with stage III postpartum POP (following vaginal delivery with episiotomy) were obese. This finding suggests that weight management and a reduction in the number of episiotomies may be important considerations for this patient group. Therefore, there is limited evidence on the preventive role of supervised PFM training and its overall impact during the postpartum period [23]. Our study offers valuable insights for selecting appropriate POP treatments. The postpartum women included in our research expressed a clear preference for conservative management, with supervised PFM training being the most frequently chosen option.

2.4. Conclusions

Our findings regarding the preference for conservative treatments among postpartum women with POP, particularly the frequent indication of PFM training, may help improve the selection of appropriate therapeutic options, enhance communication between patients and physicians, and ultimately lead to better treatment outcomes.

STUDY III.
EXPLORING TREATMENT DECISION-MAKING AMONG POSTMENOPAUSAL WOMEN WITH PELVIC ORGAN PROLAPSE PRIOR TO GYNECOLOGICAL SURGERY: A QUALITATIVE STUDY FROM ROMANIA

3.1. Objectives

The aim of this study was to explore, through a qualitative approach, the experiences of postmenopausal women in making treatment decisions regarding POP prior to their gynecological surgical interventions.

3.2. Results

3.2.1. Demographics

The twelve postmenopausal women had a mean age of 64.58 years and a median POP stage of III. Most were obese (BMI ≥ 30; n = 8, 66.66%) and 58.33% had comorbidities. Seven women (58.33%) reported participating in physical activity, and seven women (58.33%) were primiparous. Half of the participants (50%) had experienced more than two abortions and were nonsmokers (Table 3).

Table 3. Participants' demographics.

General information	**N (%)**
POP stage	
II	3 (25)
III	8 (66.66)
IV	1 (8.33)
BMI (kg/m^2)	
≥ 30 (obesity)	8 (66.66)
< 30	4 (33.33)
Physical activity	
None	5 (41.66)
≥ 3 times/week	7 (58.33)
Education	
Eight years or less	6 (50)
High school	4 (33.33)
University	2 (16.16)
Parity	
Primipara	7 (58.33)
≥ 3 normal deliveries	5 (41.66)
Abortions	
None	6 (50)
≥ 2 abortions	6 (50)
Comorbidities	
Diabetes	3 (25)
Hypertension	7 (58.33)

Previous surgical intervention	
None	6 (50)
≥ 1	6 (50)
Smokers	6 (50)
Non-smokers	6 (50)

During the interviews, each woman was presented with a series of statements outlining both conservative and surgical approaches to the management of POP. These included recommendations related to lifestyle and behavioral modifications, supervised training of the PFM, the use of intravaginal devices or pessaries, hormone replacement therapy, as well as available surgical procedures.

A total of twelve postmenopausal women were interviewed, with thematic saturation being reached well within this sample. Following data analysis, seven overarching themes emerged:

1. Insufficient knowledge and understanding of prolapse;
2. The pivotal moment influencing treatment choice;
3. The symptoms perceived as most distressing;
4. The main sources of information about prolapse;
5. Factors guiding treatment decisions;
6. A general preference for conservative therapeutic strategies;
7. Feelings of uncertainty when comparing treatment options.

3.2.2. Themes

Theme 1: Insufficient knowledge and understanding of prolapse

The majority of participants (n = 10, 83.33%) struggled to obtain information about prolapse, with physicians being seen as their primary source.

"I found out [about prolapse] during a checkup. I was diagnosed then" (participant no. 7, aged 59)

"I found out [about prolapse] from a physician about 3 years ago and kept reintroducing it in the vagina. I found a physician and decided together what had to be done" (participant no. 4, aged 65)

The other two women (16.66%) were well-informed and aware of their medical condition.

"I realized it because I felt that something fell from me when I picked something up at work […]" (participant no. 9, aged 57)

However, postmenopausal women faced barriers in the treatment decision-making process, often having limited information about the various POP treatment options.

Theme 2: The pivotal moment influencing treatment choice

The worsening of symptoms was the key factor prompting treatment initiation. Most women (n = 7, 58.33%) expressed that they "couldn't take it anymore."

"I decided that I needed treatment when I couldn't take it anymore" (participant no. 1, aged 69)

For two women (16.66%), the decision to begin treatment came when they experienced uterine descent.

"I felt that my uterus was coming out. Anyway, I had to go to a physician" (participant no. 12, aged 67)

Some women (n = 2, 16.66%) feared surgical intervention and consequently postponed the surgery.

"I'm a bit scared of the operation and I kept putting it off for a few years. I wanted treatment, but I postponed it" (participant no. 5, aged 54)

The final woman (8.33%) felt a lack of personal fulfillment, which became the decisive factor in choosing to start treatment.

"I decided that I needed treatment when it became very unpleasant. I didn't feel like a fulfilled person, something wasn't right" (participant no. 7, aged 59)

Although symptoms worsened, most women tended to delay deciding to begin treatment.

Theme 3: The symptoms perceived as most distressing

The majority of participants (n = 5, 41.66%) experienced persistent feelings of fullness.

"[...] that something was coming out of me, fullness, I felt like I couldn't do anything anymore, that a lot was coming out of me" (participant no. 1, aged 69)

Two women (n = 2, 16.66%) were unable to walk.

"I couldn't even walk, I was in pain" (participant no. 3, aged 73)

Two other women (n = 2, 16.66%) reported experiencing pressure and frequent urination.

"I feel pressure, I didn't feel well, I often went to the toilet, also over the night" (participant no. 5, aged 54)

One woman (8.33%) reported difficulty performing daily activities, another (8.33%) sensed that something was wrong, and a third (8.33%) experienced discomfort.

"[...] the descent of the uterus and I felt that there was something there, something was wrong" (participant no. 2, aged 65)

"[...] I felt that I could not walk, could not carry out my daily activities" (participant no. 4, aged 65)

The women delayed making treatment decisions for POP until most symptoms, particularly a sense of fullness, progressed to severe discomfort.

Theme 4: The main sources of information about prolapse

For nearly half of the participants (n = 5, 41.66%), the physician was their sole source of information about treatment options.

"[...] I found out from physicians and that's it. I tried searching the Internet, but it wasn't efficient because I don't know how to search" (participant no. 4, aged 65)

For 4 women (33.33%) the Internet was the main source of information.

"At first, I searched online and then I went to the physician. I had urinary incontinence, prolapse, then perineal tear. I searched for everything, because I didn't know what I was suffering from [...]" (participant no. 5, aged 54)

Three women (25%) stated that their relatives were the only sources of information.

"I talked to my relatives. I have a relative who was a nurse and she told me that I would require surgery" (participant no. 12, aged 67)

Postmenopausal women with POP had limited short-term information sources, relying mainly on physicians, the Internet, or their relatives.

Theme 5: Factors guiding treatment decisions

For the majority of women (n = 7, 58.33%), the physician influenced the decision regarding POP treatment.

"The physician guided me, and I didn't make any decision before that" (participant no. 8, aged 67)

Only 4 women (33.33%) made their own choice on treatment and 1 woman (8.33%) doesn't remember how she decided.

"I looked for the appropriate solution for me over the years, knowing that it would disturb me more if I didn't have surgery. Because it could get worse [...]" (participant no. 9, aged 57)

Most of the interviewed women felt pressured by physicians to choose treatments for POP quickly, without having the opportunity to make their own informed decisions.

Theme 6: A general preference for conservative therapeutic strategies

The women expressed uncertainty about lifestyle and behavior changes, though half of them (6 participants, 50%) viewed this option positively.

"[...] as women, we should stop working so much, stop lifting weights. If we exercised before the prolapse, that might have helped, it would have been a preventive measure. I don't think it's safer. We just don't exercise [...]" (participant no. 9, aged 57)

"There is no problem, you must take care of yourself and avoid lifting certain weights" (participant no. 3, aged 73)

Most participants (n = 7, 58.33%) indicated that they prefer supervised PFM training over surgery.

"If we lived a more organized life, with muscular training, and thought about our health, we could preserve our health, so that we no longer end up having surgery" (participant no. 9, aged 57)

Conversely, the majority of women (n = 9, 75%) did not consider pessary use as a viable alternative.

"I don't think I would choose it. I don't think it's better with a ring, having it all day long, being careful not to let it fall out" (participant no. 1, aged 69)

Some of postmenopausal women do not agree with the use of hormones (n = 7, 58.33%).

Although half of the women disagreed with the idea of lifestyle and behavior changes, most were not in favor of pessary use or hormonal therapy; however, the majority responded positively when offered the alternative of supervised pelvic floor muscle (PFM) training.

Theme 7: Feelings of uncertainty when comparing treatment options

The majority of women were uncertain about choosing between surgery and conservative treatment. Four women (33.33%) favored surgical treatment, while another four (33.33%) preferred conservative options. Only two participants (16.66%) considered vaginal surgery a good choice, and two (16.66%) were unsure about either treatment.

> *"I really don't know what to say [about the best option for me]"* (participant no. 1, aged 69)
>
> *"Of course, conservative treatment and not a surgical one would be better. You remain a whole person, compared to suffering through surgery"* (participant no. 4, aged 65)
>
> *"[...] the surgical treatment - as you don't feel anything during the anesthesia and as it doesn't last long"* (participant no. 10, aged 64)

When presented with both conservative and surgical treatment options, most participants reported feeling uncertain. While some viewed conservative treatments as "better," they also believed that surgery "doesn't last long" and might actually be a preferable alternative.

3.3. Discussions

Although the majority of participants in our study were obese (BMI ≥ 30) and had comorbid hypertension, surgical treatment was still indicated. Although POP is frequently diagnosed in postmenopausal women [24], it was striking to observe the considerable lack of knowledge about the condition among participants in our study. Similar findings have been reported in other studies, but in our case, this knowledge gap seemed to affect the majority of women. This may be attributed to insufficient access to reliable sources of information, whether in hospitals, or social media [25]. This methodological approach proved appropriate, as it offered a comprehensive and accurate understanding of the phenomenon under investigation [16]. The decision to seek treatment was typically triggered by a worsening of symptoms. Although the women experienced multiple distressing symptoms, they often did not perceive them as significant enough to require immediate attention. While surgery is often effective for severe cases, the emergence of new symptoms postoperatively should also be taken into account [26]. A separate study using focus group interviews on women's decision-making around POP treatment revealed that participants frequently reported feeling a lack of options and inadequate support, highlighting the need for a more patient-centered approach [27]. Previous research has explored women's expectations and perceived outcomes following treatment [28], and our study found that less invasive treatment options are generally viewed as more acceptable. While mass media campaigns have contributed to raising awareness about urinary incontinence, often through the promotion of anticholinergic medications, there is currently no comparable effort aimed at increasing public awareness of POP [29].

3.4. Conclusions

It is therefore crucial to provide these women with timely and comprehensive information about the available POP treatment options, enabling them to make informed decisions regarding their preferred course of care.

CONCLUSIONS OF THE DOCTORAL THESIS

- The factors rendering patient decision-making in choosing treatments for POP were represented by the Internet for nulliparous women without POP, friends for postpartum women with POP stages II and III, and physicians for postmenopausal women with POP stages II, III and IV;
- All patients preferred conservative treatment, underling supervised PFM training;
- Women with or without POP preferred different pathways for the treatments and planning care in the long term, with increased quality of life;
- The strength of the study emerges from the fact that in our chosen group of women, in different periods of life, it addresses their perception, perspective and decision-making in relation to newly treatments for POP;
- Our research justifies the efforts invested in evaluation the choice of women on different treatments for POP by using qualitative research.

THE ORIGINALITY OF THE DOCTORAL THESIS

- The originality of the doctoral thesis consists in determining the factors rendering patient decision-making in treatments for POP at different age groups (i.e., nulliparous, postpartum and postmenopausal) – data that we could not find in the literature;
- The present research is the first qualitative study of prolapse which attempts to define how women's perceptions, perspectives and determining decision-making influence the choice of their treatments for POP;
- The decision-making factors in choosing treatments for POP were represented by the Internet for nulliparous women without POP, friends for postpartum women with POP, and physicians for postmenopausal women with POP – data that we could not find in the literature;
- All patients preferred conservative treatment, with an emphasis on supervised PFM training – data that we could not find in the literature;
- The use of qualitative methods for such aims has some advances as individualize patient care, improving patient satisfaction and overall outcome in such group of women.

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