Assessment of Women's Knowledge and Practices regarding Self-Care post Hysterectomy

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Abstract

Background: Hysterectomy is the removal of the uterus and it is the commonest major surgical procedure after caesarean section performed in gynecology. **Aim:** This study aimed to examine women's knowledge and self-care practices post hysterectomy surgery. **Methodology; Design:** Descriptive study. **Participants:** 60 women undergoing hysterectomy at a hospital in Egypt. **Data Collection:** Three tools: (I) Structured interview questionnaire, (II) Self-reported knowledge questionnaire, and (III) Self-reported practice questionnaire. **Key findings: Knowledge:** 88.3% of women had inadequate knowledge about self-care after hysterectomy. **Practices:** 98.3% of women reported unsatisfactory self-care practices post-surgery. **Demographics:** Average age: 46.4 years, literacy rate: 30%, marital status: 75% married, parity: 71.7% with 4+ children, and reason for surgery: 48.3% abnormal uterine bleeding. **Conclusion:** Most women lacked sufficient knowledge and practiced unsatisfactory self-care after hysterectomy. **Recommendation:** Implement a structured discharge plan with pre- and post-operative education on self-care practices to prevent complications.

***Keywords*:** *Hysterectomy, Self-care, Practices, & knowledge.*

Introduction

A surgery to remove the uterus, possibly including surrounding structures like the cervix, ovaries, and fallopian tubes **(Swenson, et al., 2018)**. It treats various women's health issues, including: uterine fibroids (most common reason), endometriosis, pelvic support problems (e.g., uterine prolapse), abnormal uterine bleeding, chronic pelvic pain, & gynecologic cancer **(American College of Obstetricians and Gynecologists (ACOG, 2021).**

There are different approaches to hysterectomy surgery, depending on women's needs and circumstances. Here are three main types: Total hysterectomy: this removes the entire uterus and cervix, being the most common option. Partial or supracervical hysterectomy: this removes only the upper part of the uterus, leaving the cervix intact. It might be suitable for specific situations. Radical hysterectomy: This is a more extensive procedure, removing the uterus, cervix, fallopian tubes, upper vagina, surrounding tissue, and lymph nodes. It's typically used for certain cancer treatments. Bilateral salpingo-oophorectomy: This involves removing the ovaries and fallopian tubes alongside the uterus and cervix. This could be done alongside some hysterectomy types depending on individual needs **(Mettler & Alkatout, 2018).**

While hysterectomy can be a life-saving and beneficial procedure for some women, it's crucial to understand its potential impact across various aspects of life. Physically, short-term risks include infection, bleeding, and damage to surrounding organs like the bladder or bowel. Long-term consequences can include pelvic prolapse, pain, and scar tissue formation. A recent study published in "JAMA Network

Open, 2023" highlighted the increased risk of pelvic prolapse after hysterectomy, urging proper preoperative counseling and alternative exploration **(Seo & Yuk, 2023).** The complications may include risk of iatrogenic premature menopause, surgical and anaesthetic complications **(Vanithamani, et al., 2018).**

Self-care is all about taking charge of your own well-being through informed choices and proactive actions. It about understands what helps you thrive and then actively seeking out things that support your physical, mental, and emotional health **(Eller, et al., 2018).**

From the moment a woman steps into the hospital for a hysterectomy, gynecological nurses become her guardians of well-being. They take on a comprehensive care role, encompassing every stage of the journey: **Assessment:** They carefully analyze the woman's medical history and individual needs. **Planning:** They collaborate with the doctor to develop a personalized care plan for surgery and recovery. **Implementation:** They provide essential care throughout the hospital stay, including pain management, emotional support, and recovery guidance. **Evaluation:** They closely monitor the woman's progress, adjusting care as needed and ensuring a smooth transition to home. **Post-discharge:** Their support extends beyond the hospital walls, offering guidance and resources for a successful recovery at home **(Elsaied, et al., 2020).**

Before a woman discharges to home after her hysterectomy, nurses will equip her and family with all the knowledge she needs for a smooth recovery. This includes: nutrition tips, wound care guidance, personal

hygiene advice, understanding what activities to avoid and how to gradually return to daily life. Also, medication administration, recognizing infection signs, Follow-up appointments. These instructions will be provided both verbally and in writing, ensuring a woman has a clear reference point at home. She shouldn't hesitate to ask questions and clarify any doubts before discharge (**Adugbire & Aziato, 2018).**

Significance of the study

Hysterectomy rates across the globe paint a diverse picture. The number of hysterectomies performed per year per 1,000 women can range dramatically, from as low as 1.2 in some countries to as high as 4.8 in others. This highlights the significant variations in healthcare practices and access across different parts of the world **(Michael, et al., 2020).**

Over 600,000 women in the US undergo hysterectomy each year, primarily for non-cancerous reasons **(Pollack et al., 2019).**

A 2017 study in the "Gynecological Oncology" journal estimated a rate of 13.1 per 10,000 women in the Gharbiah province, significantly lower than global averages **(Saad, et al., 2021).** An estimated 165,107 women in Egypt undergo hysterectomy each year, highlighting the prevalence of this procedure across all governorates, both in Upper and Lower Egypt **(Health grade, 2016)**.

While self-care after hysterectomy is crucial for physical and mental well-being, many women lack the necessary knowledge, leading to complications that impact their daily lives. These complications can affect their ability to function normally, manage their emotions, return to work, and maintain their overall energies **(Jan, et al., 2020).**

Aim of the study

The aim of the current study was to assess women's knowledge and practices regarding self-care post hysterectomy.

Research questions

1. Do women have adequate knowledge regarding self-care post hysterectomy?

2. Are women practicing satisfactory self-care post hysterectomy?

Subjects and Methods

☒ Research design:

This study adopted a descriptive approach, gathering information about women's knowledge and practices regarding self-care post hysterectomy.

☒ Study setting:

The study took place in the gynecological departments of Minia University Hospital, situated in Egypt.

These departments offer health care services to all women living in Minia districts and its villages who have gynecological problems & problems requiring hysterectomy. Recognized for its excellence and specialization, this hospital in northern Upper Egypt serves as a vital resource for women in need, providing free healthcare services.

The gynecology departments at Minia University Hospital for Gynecology and Obstetrics are situated on the second floor and provide to women coming from the outpatient clinics. These clinics operate six days a week, from 9:00 AM to 1:00 PM. The number of nurses in this setting was 21 nurses and all of them are nursing technicians and the number of beds was 60 beds serving women with gynecological problems.

☒ Sample type and size:

The study recruited participants using a purposive sampling method, focusing on 60

women who had undergone hysterectomies at Minia University Hospital. This approach ensured participants met specific criteria relevant to the research questions. The sample size was calculated according to **(Jaeger, R.M. 1984)** equation as the size of the target population was 61 according to records of Minia University hospital, 2020. The size of the target population was small during the period of covid.19 pandemic because the hospital was operating only critical cases as many departments were turned to isolation area.

$$n = \frac{\left(\frac{z}{d}\right)^2 \times (0.50)^2}{1 + \frac{1}{N}\left[\left(\frac{z}{d}\right)^2 \times (0.50)^2 - 1\right]}$$

N	Study sample
N	Target population (61)
Z	Standard normal variate (at 5% type 1 error (P<0.05) it is 1.96
D	Absolute error or precision (0.05)

Compensation in the above equation was as following:

$n=(1.96\div0.05)^2\times(0.50)^2\div(1+1/61[(1.96/0.05)^2\times(0.50)^2-1]) = 52.7 = 53$

The target sample size based on the equation was 53, but the study ultimately included 60 women for improved data reliability.

Inclusion criteria:

- Women aged between 25 - 60 years.
- Women who underwent abdominal hysterectomy.

Exclusion criteria:

- Women who underwent vaginal or laparoscopic hysterectomy.
- Women who were unwilling to contribute in the research.

☒ Tools of data collection:

Tool I: Structured interview questionnaire:

This questionnaire was divided into two sections and consisted of 9 questions.

- **Section (1):** focused on gathering basic information about the participants, including: age, level of

education, occupation, residence, marital status, parity if married (No. 6 questions).

• **Section (2):** Gynecological history of the women Ex. indications for hysterectomy, type of hysterectomy performed, & ovarian status (removed or not) (No. 3 questions).

Tool II: Self-reported knowledge questionnaire regarding self-care post hysterectomy.

It was developed by the researchers that was adapted from **(Kumari, M.M., 2012),** to assess women's knowledge regarding self-care post hysterectomy. It included 47 items were done as multiple choices questions (a-b-c-d-) and divided in to 11 categories related to: physical activities, diet, exercises, personal hygiene, bladder care, bowel care, sexual activities, pain management, emotional feelings, prevention of complications, and follow up.

Knowledge's scoring system: (total questions 47)

It was developed by the researchers using the model key answer and was calculated as following:

- Incorrect and didn't know answer scored as zero degree.
- Correct answer scored as one degree.

Total knowledge's score regarding self-care after hysterectomy was classified as the following:

- Inadequate knowledge (28 Q) if it was (≤ 60 %).
- Adequate knowledge (29-47 Q) if it was (> 60 %).

Tool III: Self-reported practice questionnaire regarding self-care post hysterectomy: It was developed by the researchers and adopted from **(King Edward Memorial Hospital; Physiotherapy Department, 2017).** It included assessment of self-care practices regarding deep breathing exercises, leg exercise, getting out of bed after

surgery, vulval care, wound care, and pelvic floor exercises.

Self-reported practices' scoring system: (total items 31): It was developed by the researchers using the model key answer and was calculated as following:

- Each item not done or done incorrectly was given zero score (0).
- Each item done correctly was given score one (1).
- Total self-care practices: satisfactory (≥60%), unsatisfactory (<60%).

Tools' validity & Tools' reliability:

Five obstetrics and gynecological nursing professors from Minia and Assuit Universities in Egypt (experts in the field) assessed the tools' validity. They evaluated factors like clarity, comprehensiveness, ease of understanding, practical application, and overall simplicity. Tools refined based on expert feedback. Internal consistency confirmed with Cronbach's alpha (0.881 for knowledge, 0.769 for practices).

Administrative design

The study received official approval from both Minia University's Faculty of Nursing Dean and the chosen setting's authorities. Details of the study (title, purpose, and setting) were provided in the approval process.

Operational design

The research plan followed a three-phase operational design: preparation, pilot study, and fieldwork.

Preparation

Comprehensive literature review (books, papers, internet, and magazines) covering past/present, local/international, and related topics were done. This informed tool development and broadened understanding of the issue.

Pilot Study

Pilot study with 6 participants (10%) evaluated tool clarity, validity, and time efficiency. Adjustments made based on findings. The total sample size did not include the pilot trial. Two questions regarding knowledge on follow up were omitted after experts' judgment of the tools.

Fieldwork

- The research team conducted data collection at the previously mentioned setting for five months (June to October 2021). They visited the setting three days a week (Saturdays, Sundays, and Mondays) between 9:00 AM and 2:00 PM to recruit participants until reaching the target sample size.
- Women were recruited from Minia university hospital for obstetrics & gynecology. Interviews began with introductions, welcoming women, and explaining the study (purpose, nature, duration, activiti es).
- Oral consent was obtained before proceeding.
- The researchers provided the women an overview and clarification about the previous tools of data collection. The data was collected by the researchers and the required explanations and clarifications were done according to women's questions.
- The interview was held at the gynecological departments in the hospital postoperatively and women's privacy was maintained by interviewing each woman individually and the data was kept confidential.
- The interview followed a structured format, starting with a questionnaire to gather participants' personal data and gynecological history. This was followed by an assessment of their knowledge and practices

related to self-care post hysterectomy. The entire interview typically lasted between 25 and 30 minutes.

Ethical consideration

1. The research proposal received ethical approval from the Faculty of Nursing's ethics committee at Minia University on February 8th, 2021.
2. Participation in the study was entirely voluntary. Women were thoroughly informed about the study's nature and purpose before providing oral consent. They retained the right to refuse participation or withdraw at any time without explanation.
3. The utmost importance was placed on protecting participants' privacy throughout data collection.
4. The study posed no health risks to participants.
5. Confidentiality of participant data was assured. Each woman was assigned a unique identifier, ensuring anonymity in the reporting of results.

Statistical design

The researchers organized and analyzed the collected data using descriptive statistics. This analysis involved tabulating and entering data, calculating summary measures using tools like means and standard deviations for quantitative data (numbers) and frequencies and percentages for qualitative data (categories). Examining relationships between variables using appropriate statistical tests like the r-test for correlations. Evaluating the likelihood that observed results could occur by chance, with $P \leq 0.05$ indicating significance and $P \leq 0.001$ indicating high significance.

Results

Table (1): Reveals that the mean age of the women is (46.4 ± 7.23 years). Nearly three-quarters of them (70 %) are illiterate and the great majority of them (90 %) are

housewives. Regarding residence, the majority of the women (81.7 %) are resident in rural areas. Three-quarters (75 %) of women are married and nearly three-quarters (71.7 %) of them have 4 & more parity.

Figure (1): highlights Abnormal Uterine Bleeding (AUB) as the most common reason for hysterectomy among the studied women, affecting nearly half (48.3%) of them.

Table (2): Demonstrates that regarding the type of hysterectomy, it is found that the majority of the women (86.7 %) have total hysterectomy type and more than three quarters of them (76.7 %) had their ovaries removed during surgery.

Table (3): 88.3% of women exhibited inadequate self-care knowledge post hysterectomy.

Table (4): 98.3% of women exhibited unsatisfactory self-care practices post hysterectomy.

Table (5): Shows significant relation between women's knowledge of self-care and their residence ($P \leq .001$) and education level ($P \leq .007$).

Table (6): demonstrates a statistically significant positive correlation ($P \leq .001$, $r = .409$) between women's overall knowledge and practices regarding self-care post hysterectomy.

Table (1): Distribution of women related to their personal data (No. = 60).

Characteristics	(N=60)	%
1. Age/ Years		
• 25-35 yrs.	4	6.7
• 36-46 yrs.	23	38.3
• ≥47 yrs.	33	55
Mean ±SD = 46.4±7.23		
2. Level of education		
• Illiterate	42	70
• Read & write	4	6.7
• Preparatory school	2	3.3
• Secondary school	7	11.7
• University	5	8.3
3. Occupation		
• Housewife	54	90
• Working	6	10
4. Residence		
• Rural	49	81.7
• Urban	11	18.3
5. Marital statues		
• Married	45	75
• Widow	15	25
6. Parity (Obstetrical data)		
• Nulliparous	1	1.7
• Primipara	3	5
• 2-3 parity	13	21.6
• 4 & more parity	43	71.7

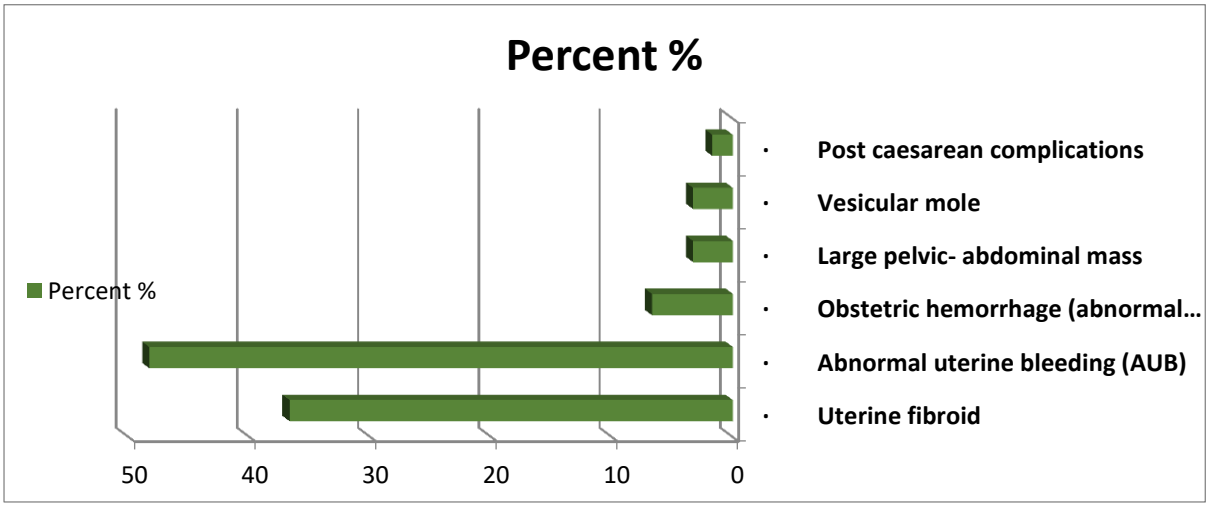

Figure (1): Distribution of women related to the indications for their hysterectomy (No. = 60).

Table (2): Distribution of women related to the type of hysterectomy performed and ovarian status (No. = 60).

Items	No. 60	%
1. Type hysterectomy performed		
• Subtotal hysterectomy	8	13.3
• Total hysterectomy	52	86.7
2. Ovarian status		
• Removed	46	76.7
• Not removed	14	23.3

Table (3): Distribution of women related to total knowledge regarding self-care post hysterectomy (No. =60).

Items of knowledge	Inadequate		Adequate	
	No.	%	No.	%
1. **Physical activities**	40	66.7	20	33.3
2. **Diet**	49	81.7	11	18.3
3. **Exercises**	59	98.3	1	1.7
4. **Personal hygiene**	45	75	15	25
5. **Pain management**	40	66.7	20	33.3
6. **Bladder care**	39	65	21	35
7. **Bowel care**	54	90	6	10
8. Sexual activities	58	96.7	2	3.3
9. Emotional feelings	61.7	37	38.3	23
10. Prevention of complications	25	41.7	35	58.3
11. Follow up	12	20	48	80
Total knowledge level	**53**	**88.3**	**7**	**11.7**

Table (4): Distribution of women's total self-reported practices regarding self-care post hysterectomy (No. =60).

Items of practices	Unsatisfactory		Satisfactory	
	No.	%	No.	%
1. Deep Breathing Exercises	59	98.3	1	1.7
2. Leg Exercise	44	73.3	16	26.7
3. Pelvic Floor Exercises	60	100	0	0
4. Getting out of bed after surgery	23	38.3	37	61.7
5. Wound care	50	83.3	10	16.7
6. Vulval region care	55	91.7	5	8.3
Total practices level	**59**	**98.3**	**1**	**1.7**

Table (5): Relation between personal data of the women with their total knowledge levels regarding self-care post hysterectomy (no. = 60).

Items	Total knowledge level			
	Inadequate (No. = 53)		Adequate (No. = 7)	
	no.	%	no.	%
1. Age/ Years				
25-35yrs	3	5.7	1	14.3
36-46yrs	22	41.5	1	14.3
≥47yrs	28	52.8	5	71.4
Fisher test/ *P* – value	**2.43(.259)NS**			
2. Residence				
Urban	6	11.3	5	71.4
Rural	47	88.7	2	28.6
Fisher test/ P – value	**11.3(.001**)**			
3. Educational level				
Illiterate	40	75.5	2	28.6
Read & write	1	1.9	3	42.8
Preparatory	2	3.7	0	0
Secondary	6	11.4	1	14.3
University	4	7.5	1	14.3
Fisher test/ P – value	**12.6(.007*)**			
4. Occupation				
House wife	49	90.7	5	9.3
Working	4	66.7	2	33.3
Fisher test/ P – value	**2.26(.140)NS**			
5. Marital statues				
Married	41	77.4	4	57.1
Widow	12	22.6	3	42.9
Fisher test/ P – value	**1.21(.234)NS**			
6. Parity				
Nulliparous	1	1.9	0	0
Primipara	3	5.7	0	0
2-3 parity	11	20.7	2	28.6
4& more parity	38	71.7	5	71.4
Fisher test/ P – value	**1.24(.795)NS**			

NS: no significant difference (p-value >0.05). Fisher –exact is used for qualitative data.
*: Significant difference in between variables (p-value ≤ 0.05)
**: highly significant difference in between variables (p-value ≤ 0.001).

Table (6): Correlation between women's total knowledge & total practices scores (No. = 60).

Variable		Knowledge	Practices
Knowledge	**r**	**1**	**.409****
	P value		**.001**
Practices	**r**	**.409****	**1**
	P value	**.001**	

**Correlation is significant at 0.01 levels (2-tailed). P ≤0.05 (significant) P ≤0.001 (highly significant)

Discussion

Self-care isn't just bubble baths and face masks. It's a comprehensive approach to empowering individuals, families, and communities to actively manage their health and well-being – with or without professional help. It encompasses a wide range of aspects that influence our health, from personal hygiene and nutrition to lifestyle choices, environmental factors, and socioeconomic realities **(World Health Organization (WHO), 2019).**

The study revealed that Abnormal Uterine Bleeding (AUB) was the most common reason for hysterectomy among the participants, affecting nearly half of them. Fibroids ranked second, impacting over a third of the women.

This study's findings regarding the most common reasons for hysterectomy (AUB and fibroids) align with those reported by **Shehata & Mohammed (2021)**. Their research, focused on discharge plans after hysterectomy, also found AUB and fibroids as the leading causes for the procedure in both their study and control groups.

Further supporting the current study's findings, **Jan et al. (2020)** reported that over half of their post-hysterectomy participants had AUB as the reason for the surgery. Additionally, similar to this study, roughly one-third had cysts, fibroids, or pelvic inflammatory disease (PID) as the cause.

Researchers highlight Abnormal Uterine Bleeding (AUB) as the most common reason women seek medical attention for hysterectomy. This is due to its significant impact on various aspects of a woman's life, including health, finances, social interactions, and overall well-being.

While the current study identified AUB as the most common reason for hysterectomy, **Jodie et al. (2017)** reported chronic pelvic pain

syndrome as the leading cause among women veterans in the US. This difference highlights potential variations in the factors contributing to hysterectomy across different populations. Notably, the Jodie et al. study emphasizes increased sexually transmitted infections (STIs) among American women, leading to adhesions and chronic pelvic pain.

A concerning finding of the study revealed that most women lacked sufficient knowledge about self-care following hysterectomy. This gap in understanding could be attributed to inadequate guidance from gynecological nurses and physicians, potentially compounded by the women's lower educational levels.

The current study aligns with **Jan et al. (2020)** in identifying limited self-care knowledge among women after hysterectomy. While the similarity in personal data between the studies might be a contributing factor, further research is needed to explore the broader reasons behind this knowledge gap and develop effective interventions.

Similar to the current study, **Ujwala et al. (2020)** reported limited pre-operative knowledge about hysterectomy among women, with less than half demonstrating average knowledge and a significant portion exhibiting poor knowledge (more than on third). This consistency across studies, regardless of any intervention in Ujwala et al.'s research, suggests a wider issue of inadequate pre-operative education for women undergoing hysterectomy.

Unlike the current study, **Chacko et al. (2016)** reported that most women in their study demonstrated average knowledge about self-care after hysterectomy. This difference might be attributed to variations in study design.

Additionally, Chacko et al. assessed women during follow-up visits 6-8 weeks post-surgery, potentially giving them more time to acquire knowledge compared to the current study's timeframe.

The current study found a statistically significant link between women's self-care knowledge and both their educational background (P value = .001) and residence (P value = .007). This relationship might be due to the critical role of education in general knowledge acquisition and potentially limited access to health information for women living in rural areas.

While the current study found a significant association between women's self-care knowledge and their residence and education level, **Chacko et al. (2016)** did not observe similar relationships in their study on women who had undergone hysterectomy. This discrepancy warrants further investigation to understand the potential factors influencing these links, considering differences in study design, participant characteristics, and the specific aspects of knowledge and self-care practices assessed.

The study revealed a concerning trend, with a large majority of women exhibiting unsatisfactory self-care practices after undergoing a hysterectomy. This finding may be linked to limited knowledge and inadequate guidance from gynecological healthcare providers.

Similar to the current study, **Shehata & Mohammed (2021)** reported a positive impact on self-care practices after hysterectomy. Their research, focused on implementing a discharge plan, observed statistically significant improvements in self-care satisfaction among the intervention group compared to the control group, aligning with the current study's

findings of generally unsatisfactory pre-existing practices.

The current study's findings on the prevalence of unsatisfactory self-care practices were consistent with **Padma Priya's (2017)** research. Her work demonstrated that providing pre-operative instructions to women undergoing hysterectomy led to significant improvements in specific post-operative behaviors. This suggests that pre-operative education could be a valuable tool in promoting better self-care and recovery outcomes after surgery.

These results confirmed the value of ongoing education and support using evidence based practices guidelines, which greatly supported and stimulated women to advance their knowledge and self-care behaviors for hysterectomy postoperative care.

This study found a statistically significant (p-value = .001) positive correlation (r = .409) between women's knowledge and self-care practices after hysterectomy. This aligns with the findings of **Chacko et al. (2016)** who also reported a positive correlation (r = 0.322). This suggests that women with higher knowledge tend to engage in more effective self-care practices, as expected.

According to the researchers, implementing a discharge plan for hysterectomy patients can improve their self-care routines and have fewer post-operative health issues. Evidence exists to support the idea that discharge planning can reduce problems affecting women's value of life.

Limitation of the study

The present research used non-probability sample and this may limit the external validation of the results

Conclusion

This study revealed two key findings:

1. Limited knowledge and poor practices: The majority of women exhibited inadequate knowledge and unsatisfactory self-care practices after hysterectomy, fulfilling the study's objectives.
2. Primary reason for hysterectomy: Nearly half of the women underwent hysterectomy due to abnormal uterine bleeding, offering insights into the prevalent reasons for this procedure.

Recommendations Based on Study Findings:

1. **Disseminating Self-Care Knowledge:** Implement the distribution of comprehensive booklets about self-care practices after hysterectomy within gynecological departments. This easily accessible resource can empower women with the information they need to actively manage their recovery.
2. **Tailored Discharge Plans:** Develop and implement a personalized discharge planning regimen focused on self-care practices. This pre- and post-operative intervention can help prevent complications and ensure a smoother transition to home care.
3. **Investing in Nursing Education:** Conduct regular in-service training programs for nurses specifically focused on providing optimal postoperative care for hysterectomy patients. This up skilling initiative can equip nurses with the necessary knowledge and skills to effectively guide and support women during their recovery journey.
4. Additional studies on large sample and in more than one health setting are still required to determine if post-hysterectomy self-care guidelines can prevent occurrence of complications after surgery.

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