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# The effect of implementing evidence-based practices guidelines on women's knowledge regarding self-care after hysterectomy

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#### Abstract

**Introduction:** Evidence-based recommendations for hysterectomy patients are regarded as an approach for enhancing their wellness and health.

**The Aim:** Evaluate the effect of implementing evidence-based practices guidelines on women's knowledge regarding self-care after hysterectomy.

**Subjects and Methods:** (one group pre & post-test) a quasi-experimental design was used. A purposive sample of sixty women was documented in this study that was performed at gynaecological departments of Minia university hospital, Egypt. Also utilized three tools in this study.

(I): Structured interview questionnaire.

(II): Structured questionnaire on women's knowledge.

(III): Follow up questionnaire to assess health problems experienced 6 weeks after hysterectomy and developed supportive material (Arabic booklet).

**Results:** About (88.30%) of women had inadequate knowledge regarding self-care after hysterectomy in the pre-test. While, following the implementation of the recommendations for evidence-based practices, it was found that women's overall knowledge had improved in a highly statistically significant way ( $p \le 0.001$ ). The most usual health problem women experienced 6 weeks after hysterectomy was night sweats & hot flashes (86.6%).

**Conclusion:** Implementing evidence-based practices guidelines was significantly improved women's knowledge regarding self-care after hysterectomy.

**Recommendations:** Updated discharge plan involving evidence-based practices guidelines in relation to self-care after hysterectomy should be included in habitually care for women undergoing hysterectomy.

Keywords: Hysterectomy, knowledge, & self-care

#### Introduction

The uterus is surgically removed during a hysterectomy. The cervix, ovaries, fallopian tubes, and other supporting structures might also be removed <sup>[1]</sup>. It is used to treat a variety of women's health issues, including endometriosis, abnormal uterine bleeding (AUB), persistent pelvic pain, gynecologic cancer, and uterine fibroids, which are the most prevalent cause of hysterectomy <sup>[2]</sup>.

The three types of hysterectomy are: radical hysterectomy, supracervical hysterectomy, and total hysterectomy, which includes the complete removal of the uterus and cervix. The most frequent type of hysterectomy performed is a total hysterectomy (is an extensive surgical procedure in which the uterus, cervix, fallopian tubes, upper vagina, some surrounding tissue, and lymph nodes are removed). Bilateral salpingo-oophorectomy is the medical term for the removal of the uterus, cervix, fallopian tubes, and ovaries [3].

Hysterectomy problems can occur during surgery or afterward and include wound dehiscence, organ damage, fistulas, wound hematoma or infection, intestinal obstruction, incisional hernias, and thromboembolism <sup>[4]</sup>. Risk of iatrogenic early menopause, as well as surgical and anesthetic problems, may be among the risks <sup>[5]</sup>.

Since its beginning forty years ago, the problem-solving approach to healthcare known as evidence-based practice (EBP) has made advances in integrating the best available data with clinical knowledge and women preferences to improve clinical results. According to recent studies, EBP lowers healthcare expenditures, enhances nursing skills quality, controls complications, and enhance nurses' job satisfaction [6].

Informed, deliberate, and intentional actions taken by people to maintain, protect, and advance their own and their families' health are referred to as self-care [7].

Numerous aspects of the care provided to women having hysterectomies are the responsibility of gynecological nurses. This covers the women's assessment, analysis, planning, execution, and evaluation. When a woman is admitted to the hospital, throughout her stay there, and even after discharge, nurses serve as her primary caregivers [8].

#### 2. Significance of the study

One of the most frequent gynecological operations, both in industrialized and developing nations, is hysterectomy. Globally, hysterectomy rates range from 1.2 to 4.8 per 1000 women, depending on the country [9]. Every year, the United States performs about 600,000 hysterectomies. The majority of hysterectomies are done for benign reasons <sup>[10]</sup>.

Hysterectomy incidence is projected to be 165,107 per year across all governorates in Egypt, split between Upper and Lower Egypt <sup>[11]</sup>. According to a study done by <sup>[12]</sup> at Zagazig University hospital, Egypt, a total of 700 major gynecological surgeries were performed. According to hospital records from 2016, 235 hysterectomies were performed of them for a variety of gynecological disorders, giving a prevalence of 33.5%.

In reality, irresponsible women who have hysterectomies put them at risk for life-threatening complications. Numerous hysterectomy-related complications, including hemorrhage, deep vein thrombosis, wound infection, and bowel issues, have a detrimental influence on women's functional level and, as a result, quality of life. Therefore, reducing these problems poses a significant challenge for all healthcare professionals [13].

Post-operative self-care activities are the sum total of activities vital to guarantee women's physical and mental wellbeing so that they can begin again as normal as possible in the life of the community. But owing to inadequate knowledge, women experience postoperative complications which affect their functional capability, emotional health, return to work, and endurance [14].

#### 3. Aim of the study

Evaluate the effect of implementing evidence-based practices guidelines on women's knowledge regarding self-care after hysterectomy.

# 4. Research Hypothesis

The implementation of evidence-based practices guidelines will improve women's knowledge regarding self-care after hysterectomy.

## **5. Subjects and Methods**

#### 5.1 Research design

To achieve the goal of the current study, a quasiexperimental research design (one group pre-test and posttest) was used.

#### 5.2 Research setting

This study was conducted in gynaecological departments at Minia university hospital, Egypt. These departments offer health care services to all women living in Minia districts and its villages who have gynaecological problems & problems requiring hysterectomy. This location offers free health care for women and is regarded as the major of the essential medical and specialized sectors in north Upper Egypt.

#### 5.3 Sample type and size

A purposive sample was utilized in this study. Sixty (60) women who underwent hysterectomy were selected meeting the inclusion criteria to share in the study. The sample size was determined in accordance with to Jaeger's equation [15] as the size of the target population was 61 according to records of (Minia University hospital, 2020).

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

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

According to the previous equation; a sample of the necessary size was 53 women and it was completed to 60 for proper sample size.

#### **Inclusion criteria**

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

#### **Exclusion criteria**

Hysterectomy performed due to cancer.

#### 5.4 Tools of data collection

**Tool I:** Structured interview questionnaire (preintervention):

It was divided into two parts and consisted of 10 questions.

**Part** (1): Personal data of the women Ex. age, level of education, occupation, residence, marital status, parity if married, in addition to phone number (No. 7 questions).

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

**Tool II:** (pre/post-intervention): Structured questionnaire on women's knowledge regarding self-care after hysterectomy.

It was developed by the researcher that was adapted from [16], to evaluate women's knowledge regarding self-care post hysterectomy. It included 47 items in the shape of 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 researcher using the model key answer sheet 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) scored (< 60%).
- Adequate knowledge (29-47 Q) scored (> 60%).

#### **Tool III:** Follow up questionnaire

The researcher created it to evaluate health issues faced by women during recovery weeks after hysterectomy. It was filled after six weeks from discharge and women were asked by phone. Six weeks were chosen based on the evidence that recovery from hysterectomy is completed at this period.

#### **5.5 Supportive Material**

This established in the form of a handout Arabic booklet by the researcher utilized the recent and EBP guidelines regarding self-care after hysterectomy. It was written in a simple understood words & it was developed and supported with photos to help the women understand the content of the booklet. It was utilized as a guide for women to improve their knowledge regarding self-care post hysterectomy.

This handout consisted of introduction; definition of hysterectomy, causes, types, surgical approaches, complications, recovery from hysterectomy, and self-care practices after hysterectomy including; diet, physical activity & rest; pain management after surgery; personal hygiene; wound care; sexual activities; follow up and when to consult the physician; exercises after hysterectomy like deep breathing, leg exercise, & pelvic floor exercises. In addition to psychological status & changes that occurred after hysterectomy like cessation of menstruation and inability to become pregnant again, and returning to work.

## 5.6 Tools' validity & reliability

Five specialists from the staff of obstetrics and gynecological nursing professors at Minia & Assuit University in Egypt evaluated the tools for transparency, comprehensiveness, comprehension, applicability, and simplicity in order to determine the authenticity of the contents. Adaptations were made in accordance with their judgment. The degree to which the items of the tools measured the same notion and were correlated with one another was determined by utilizing the Cronbach's alpha test to examine the tools for internal consistency. The outcome was 881 for women's knowledge regarding hysterectomy self-care.

#### 5.7 Pilot Study

In order to evaluate the current study's instruments for their clarity, validity, and time needed to apply them, a pilot study was carried out on 10% of women (6) who underwent hysterectomy at the previously indicated setting. The pilot study's findings indicate that all necessary improvements were made. The total sample size did not include the pilot trial.

#### 5.8 Data collection procedures

The three steps of the study's execution were assessment, implementation, and evaluation. These phases took place over a five-month period from the beginning of June 2021

to the end of October 2021. The researcher visited the previously mentioned setting three days per week; Saturday, Sunday, & Monday from 8.00 am to 8.00 pm until the sample size was completed. The researcher was available through this time with the internship students of the faculty of nursing, Minia University, Egypt.

#### 5.8.1 Assessment phase

- Women were documented from Minia university hospital for obstetrics & gynaecology. The researcher held an interview with women and at the beginning introduced her-self, welcomed each woman, discussed the purpose, nature, duration, as well as activities of the research, and oral consent was taken.
- The researcher offered the women an overview and confirmation about the previous tools of data gathering. The data was collected by the researcher and the required explanations and clarifications were done according to women's questions.
- The interview was held at the gynaecological departments in the hospital one day before surgery (in the morning shift) and women's privacy was maintained by interviewing each woman individually and the data was kept confidential.
- The researcher began to fill the interviewing questionnaire to obtain women's personal data, gynaecological history, as well as utilized the structured questionnaire on women's knowledge regarding selfcare after hysterectomy as a pre-test (one day preoperatively) in a time take from 25-30 minutes.

#### 5.8.2 Implementation phase

- The evidence-based practices (EBP) guidelines were implemented one day before surgery because women were in pain in the postoperative period and were not be responsive with the researcher. It started after the visiting time in the hospital has ended i.e. after 5pm. It was the most suitable time for women to receive the instructions after a sufficient time from hospital admission and all the preoperative care was provided including; lap investigations, radiology investigations, and anaesthesia assessment for operation fitness.
- The EBP guidelines were implemented through three 30-45 minutes instructional sessions and the content of the instructional sessions was reviewed by professors in the same specialty. In order to foster learning and allow each woman to engage in the debate, there were no more than five women present at any given time. The sessions were continuous separated by only 5 minutes if women have any question.

#### **The first session:** The researcher started with:

- Introduction about the EBP guidelines' benefits, objectives, contents, as well as its impact on the women's condition.
- Provided information about hysterectomy; definition, indications, types, length of hospital stay, complications, day of discharge, and what to expect, & recovery time.
- Provided teaching on self-care regarding early ambulation, getting out of bed after surgery, bladder/bowel care, diet, physical activities, & exercises as breathing exercises, coughing exercises, leg exercises, walking, pelvic floor exercises, &

abdominal exercises.

**The second session:** It emphasized on self-care practices in relation to pain management, wound care, vulval care, personal hygiene, good posture and rest, sleeping, & returning to work.

The third session: This involved learning about self-care in relation to sexual activity; medications administration, follow up visits, warning signs, and menopausal symptoms including hormonal replacement therapy (HRT). Also, teaching regarding emotional feelings & most common postoperative health issues and adequate self-care procedures that could perform to avoid it.

Every session began with a brief overview of the topics covered in the past session and the goals of the recent session in plain Arabic. Additionally, a summary of the session's contents and feedback from the women were acquired at its conclusion to make sure they received the most possible benefits.

- Different teaching methods with clear and accessible language to ensure the understanding of women regardless of their social and educational level were used as group discussion, video, demonstration and redemonstrations. It was conducted at the gynaecological units where women were staying.
- Motivation and encouragement were done by praising and appreciation to support women to share in the study. After the women were discharged from the hospital, the researcher continued to contact them by mobile phone for guidance and support.

#### **5.8.3** Evaluation phase

Through contrasting pre- and post-tests of knowledge regarding self-care after hysterectomy, it was possible to determine the impact of applying EBP recommendations on women's understanding of this topic. The post-test was taken postoperatively during women's stay in hospital.

# 5.9 Administrative design

The dean of the faculty of nursing at Minia University provided a formal approval letter, which was then forwarded to the decision-making authorities of the chosen setting for clearance to conduct the study. The letter clarified the title, purpose, and setting of the study.

#### 5.10 Ethical consideration

- 1. The research proposal was approved from the ethical committee of the faculty of nursing, Minia University (it was approved by the committee by the date of 8-2-2021).
- 2. After describing the study's nature and objectives to the women who were willing to participate, oral agreement was acquired.
- 3. Women had the right to withdraw from the study at any moment without having to give a reason.
- 4. Women's privacy was taken into considerations during gathering the data.
- 5. There were no health risks.
- 6. Women were given the reassurance that all of their information was kept in the strictest confidence, and anonymity was further guaranteed by giving each one a unique number.

#### 5.11 Statistical analysis

The Statistical Package for the Social Sciences was used to

tabulate, computerize, analyze, and summarize the acquired data in order to test the research hypothesis (SPSS, 20.0). Standard deviation and mean were used to express descriptive data. Frequency and percentage were used to represent qualitative data. In order to compare the percentages of the two groups, the McNemar test was performed (before & after intervention).  $P \le 0.05$  was used to determine the significant level, while  $P \le 0.001$  was used to determine the high significance.

#### Results

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

Characteristics	(No.=60)	%						
Age/ Years								
25-35 yrs.	4	6.7						
36-46 yrs.	23	38.3						
≥47 yrs.	33	55						
Mean $\pm$ SD = $46.4\pm7.23$								
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						
Occupation								
Housewife	54	90						
Working	6	10						
Residence	e							
Urban	11	18.3						
Rural	49	81.7						
Marital stat	tues							
Married	45	75						
Widow	15 25							
Parity (Obstetrical data)								
Nulliparous	1	1.7						
Primipara	3	5						
2-3 parity	13	21.6						
4 & more parity	43	71.7						

Table (1): Reveals that the mean age of the women is (46.4  $\pm$  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.

**Table 2:** Percentage distribution of women related to their gynaecological history (No. = 60).

Characteristics	No. 60	%						
Indications for hysterectomy								
Uterine fibroid	22	36.7						
Abnormal uterine bleeding (AUB)	29	48.3						
Obstetric hemorrhage (abnormal placentation)	4	6.7						
Large pelvic- abdominal mass	2	3.3						
Vesicular mole	2	3.3						
Post caesarean complications	1	1.7						
Type hysterectomy performed								
Subtotal hysterectomy	8	13.3						
Total hysterectomy	52	86.7						
Ovarian status								
Removed	46	76.7						
Not removed	14	23.3						

Table (2): Shows that concerning the indications for hysterectomy, it is found that nearly half of the women (48.3%) have hysterectomy performed because of AUB. 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.

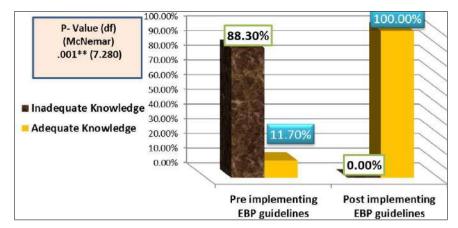


Fig 1: Percentage distribution of women's total knowledge regarding self-care after hysterectomy pre & post implementing EBP guidelines (No. =60).

Figure (1): Illustrates that there is a highly statistically significant improvement (P value=.001) in the women's total knowledge regarding self-care after hysterectomy. The majority of the women (88.30%) have inadequate knowledge pre implementing EBP guidelines. While, it is

found in the post-test that all of the women have adequate knowledge (i.e. all women answered more than 60% of the questions related to the knowledge regarding self-care after hysterectomy).

**Table 3:** Comparison between mean scores of women's total knowledge and its dimensions regarding self-care after hysterectomy pre & post implementing EBP guidelines (No. =60)

	Level of women's knowledge regarding			
Items	Level of women's knowledge pre- implementing EBP guidelines (No.=60)	Level of women's knowledge post- implementing EBP guidelines (No.=60)	T-test (P-value)	
	Mean <u>+</u> SD	Mean + SD		
Physical activities	2.5833 <u>+</u> 1.41770	4.6333 <u>+</u> .63691	10.351(.001**)	
Diet	4.6500 <u>+</u> 2.45519	9.2167 <u>+</u> 1.09066	14.940(.001**)	
Exercise	1.1667 <u>+</u> 1.10724	6.2833 <u>+</u> 1.02662	29.26(.001**)	
Personal hygiene	1.6500 <u>+</u> 2.1.03866	3.7333 <u>+</u> .44595	14.968 (.001**)	
Bladder care	1.8333 <u>+</u> 1.29099	3.9167 <u>+</u> .33404	12.359 (.001**)	
Bowel care	1.4167 <u>+</u> .92593	2.4500 <u>+</u> .62232	8.078 (.001**)	
Sexual activities	.3333 <u>+</u> .91442	4.0833 <u>+</u> 1.31860	19.625 (.001**)	
Pain management	1.1333 <u>+</u> .72408	1.7667 <u>+</u> .46456	5.963(.001**)	
Emotional feelings	1.6167 <u>+</u> .49030	1.6500 <u>+</u> .48099	531 (.597NS)	
Prevention of complications	2.5833 <u>+</u> 1.07816	3.8167 <u>+</u> .46910	8.604 (.001**)	
Follow up	1.8000 <u>+.</u> 40338	1.9833 <u>+</u> .12910	3.639(.001**)	
Total knowledge level	19.77 <u>+</u> 7.507	42.68 <u>+</u> 3.457	23.740(.001**)	

T-test is used to compare between means of two groups. \*\*: highly significant difference in between departments (p value  $\leq$  0.001). NS; no significant difference (p-value >0.05)

Table (3): Shows that there is a highly statistically significant difference (P value=.001) between level of

women's total knowledge pre & post implementing EBP guidelines regarding self-care after hysterectomy.

**Table 4:** Relation between personal data of the women with their total knowledge levels regarding self-care after hysterectomy pre & post implementing EBP guidelines (no. = 60).

	Total knowledge level (pre)				Total knowledge level (post)				
Items	Inadequate (No. = 53)		<b>Adequate (No. = 7)</b>		Inadequate (No. = 0)		Adequate (No. = 60)		
	no.	%	no.	%	no.	%	no.	%	
	1. Age/ Years								
25-35yrs	3	75	1	25	0	0	4	100	
36-46yrs	22	95.7	1	4.3	0	0	23	100	
≥47yrs	28	84.8	5	15.2	0	0	33	100	
Fisher test/ P – value	2.43(.259) NS					-			
	2. Residence								
Urban	6	54.5	5	45.5	0	0	11	100	
Rural	47	95.9	2	4.1	0	0	49	100	

Fisher test/ P – value		11.3(.0	001**)			-		
			3. Edu	cational level				
Illiterate	40	95.2	2	4.8	0	0	42	100
Read & write	1	25	3	75	0	0	4	100
Preparatory	2	100	0	0	0	0	2	100
Secondary	6	85.7	1	14.3	0	0	7	100
University	4	80	1	20	0	0	5	100
Fisher test/ P – value		12.6(.	007*)			-		
			4. 0	ccupation				
House wife	49	90.7	5	9.3	0	0	54	100
Working	4	66.7	2	33.3	0	0	6	100
Fisher test/ P – value		2.26(.1	40) NS			-		
			5. Ma	rital statues				
Married	41	91.1	4	8.9	0	0	45	100
Widow	12	80	3	20	0	0	15	100
Fisher test/ P – value		1.21(.2	34) NS			-		
			6.	. Parity				
Nulliparous	1	100	0	0	0	0	1	100
Primipara	3	100	0	0	0	0	3	100
2-3 parity	11	84.6	2	15.4	0	0	13	100
4& more parity	38	88.2	5	11.8	0	0	43	100
Fisher test/ P – value		1.24(.7	95) NS			-	•	•

Fisher –exact is used for qualitative data. NS: no significant difference (p-value >0.05). \*: Significant difference in between variables (p-value  $\le 0.05$ ) Percentage is done by row.

Table (4): Shows that there is a highly statistically significant difference between level of women's total knowledge regarding self-care after hysterectomy and some of their personal data pre implementing EBP guidelines including; residence & education (P value=.001) & (P

value=.007) respectively. After implementing EBP guidelines, it was found that all of the women have adequate knowledge (i.e. all women answered more than 60% of the questions related to the knowledge regarding self-care after hysterectomy).

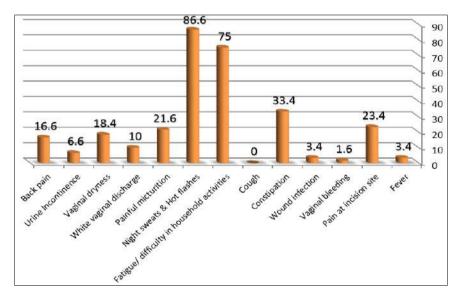


Fig 2: Percentage distribution of the women's health problems experienced 6 weeks after hysterectomy (No. 60)

Figure (2): Illustrates that the most common health problem experienced by the women 6 weeks after hysterectomy is night sweats & hot flashes (86.6%) followed by fatigue/difficulty in household activities (75%)

#### **Discussion**

The EBPs raise the standard of patient care while lowering expenses. The finest clinical judgments are made using the most up-to-date scientific evidence, clinical knowledge, and consideration of the patient's beliefs and desires [17].

According to the indications of hysterectomy among the studied women, the current study's findings illustrated that near half of the women had a hysterectomy due to abnormal

uterine bleeding (AUB) followed by fibroid uterus among more than one third of them.

The above finding was supported by the study of <sup>[14]</sup>, about "the usefulness of organized training program on information among postoperative patients on self-care with hysterectomy in Kashmir", illustrated that more than fifty-percent of the women had AUB as a cause for their hysterectomy and near one third of them had a hysterectomy because of cysts/fibroids/ and PID. In the same context, the study of <sup>[18]</sup>, about "Evaluation of the clinical stance and behavior of Egyptian gynecologists about the hysterectomy route ", reported that the vast most of women had hysterectomy due to AUB.

<sup>\*\*:</sup> highly significant difference in between variables (p-value  $\leq 0.001$ ).

According to the researcher, AUB is the most frequent symptom that sends a woman to the hospital since it has a major influence on her health, finances, social life, and general quality of life.

Conversely, the research by <sup>[19]</sup>, about "Surgical approach to hysterectomy for benign gynecological disease", uterovaginal prolapse was the most common reason for hysterectomy, followed by uterine fibroid with or without heavy menstrual bleeding. Variations in the sample's features and a variety of clinical factors may be associated to variations in the indications.

Concerning the level of women's total knowledge regarding self-care after hysterectomy pre and post implementing EBP guidelines, the current study discovered that the most of the women had inadequate knowledge in the pre-test, while it was found that all of them had adequate knowledge in the relation to self-care of hysterectomy in the post-test.

The inadequate level of total knowledge of the participated women pre implementing EBP guidelines may be due to lack of clarification from gynaecological nurses and that they had poor educational level. The total knowledge level might be improved post implementing EBP guidelines due to using simple and understood words and supplying improved instructional resources that made learning possible.

In line with the present study, a study done by  $^{[20]}$ , who investigated "the effectiveness of self-instructional module on knowledge and selected outcomes among women undergoing hysterectomy in a tertiary care hospital in South India" found that the experimental group had statistically higher knowledge scores on the post-test than on the pre-test (p< 0.001). Additionally, there was a statistically significant (p< 0.001) difference between the experimental and control groups' post-test knowledge ratings.

The above finding of the existing study was also in parallel with the study by <sup>[21]</sup>, who researched "the effectiveness of preoperative teaching on women undergoing hysterectomy" they proved that less than fifty percent of the women had average knowledge, more than thirty- three percent of them had poor knowledge, and near twenty – five percent of them had good knowledge regarding hysterectomy in the pre-test. While, it was found that the most of the women had good knowledge regarding hysterectomy in the post-test. This similarity may be due to the health setting where the previous study was conducted, which enabled the women undergoing hysterectomy to have knowledge regarding hysterectomy care.

It was observed in the current study that there was an evidence relation between level of women's total knowledge regarding self-care after hysterectomy and their personal data regarding residence & education (P value=.001) & (P value=.007) respectively in the pre-test. This finding might be related to the fact that the level of education is essential to improve the knowledge in general and that women who are resident in rural areas have limited access to health information.

Conversely, the study by <sup>[22]</sup>, about "assessment of knowledge and practice of self-care among women undergone hysterectomy", discovered that there was no significant relation between level of knowledge and practices of self-care with residence and education.

Regarding the assessment of postoperative health problem's women experienced 6 weeks after hysterectomy, the present study revealed that most women were complained of night sweats & hot flashes followed by three quarters of them

complained of fatigue/difficulty in household activities. According to the research <sup>[23]</sup>, the ideal periods of unemployment following an abdominal hysterectomy are six weeks for sedentary labor and twelve weeks for physically demanding works.

Similarly, the study by <sup>[22]</sup>, who "assessed the practice of self-care as well as knowledge among women undergone hysterectomy", illustrated that problems like hair loss, night sweats, hot flashes, and weight gain were increased during 5-6 weeks after hysterectomy, which may be due to oestrogen deficiency. This finding indicated the importance of hormonal replacement therapy if appropriate and dietary modifications after hysterectomy.

In the line with the present study, the study done by <sup>[24]</sup>, according to research on the "effect of clinical pathway of postoperative nursing care on improving postoperative outcomes for women undergoing hysterectomy," revealed that women in the study group were less likely than those in the control group to experience complications like abdominal cramps, distension, and constipation.

#### 8. Conclusion

In light of its findings, the study came to the following conclusion:

The implementation of EBP guidelines was effective and significantly enhanced women's knowledge in relation to self-care post the hysterectomy. After the intervention, it was discovered that women's overall knowledge had improved in a manner that was highly statistically significant. These findings revealed and proved the hypothesis of this study. Moreover, regarding the postoperative health problems experienced by the women 6 weeks after hysterectomy, it was found that the majority of the women complained of night sweats & hot flashes.

#### 9. Recommendations

It is suggested that; in light of the findings of the present study:

- 1. Distribution of booklet about self-care practices after hysterectomy in gynaecological departments.
- 2. A discharge schedule for self-care practices after hysterectomy should be developed and applied pre-and post-operatively to control the complications.
- 3. Give health education to women about nonpharmacologic interventions for the reduction of night sweats and hot flashes as acupuncture, yoga, structured exercises, meditation, mindfulness-based practices, and relaxation techniques
- 4. Additional study is still required to determine whether post-hysterectomy self-care recommendations and other health-related issues are related.
- 5. 10. Limitation of the study
- 6. The current study used non-probability sample and this control the external validation of the outcomes. Also, the little number of participants and the study used one group.

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#### **Author's Contribution**

Not available

# **Conflict of Interest**

Not available

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