

The Effect of Implementing Evidence Based Practices Guidelines on Women's Knowledge and Practices Regarding Self-Care after Hysterectomy

Amany Shehata Ahmed 1, Azza Mohamed Mohamed Hafez 2, Manal Farouk Mustafa 3, Entisar Mohamed Youness 4, and Momen Mohamed Hassan 5

1. Assistant Lecturer at Maternity & Newborn Health Nursing, Faculty of Nursing, Damietta University, Egypt.
2. Professor of woman's health & obstetrical Nursing, Faculty of Nursing, Minia University, Egypt.
3. Professor and head of the department of obstetrics & gynaecological Nursing, Faculty of Nursing, Assuit University, Egypt.
4. Professor of obstetrics & gynaecological Nursing, Dean of Faculty of Nursing, Sphinx University, Egypt.
5. Professor of obstetrics & gynaecology, Faculty of Medicine, Minia University, Egypt.

Abstract

Introduction: Evidence-based practices guidelines for women undergoing hysterectomy are considered a strategy for promoting their health and wellbeing. Self-care is the ability of individuals, families, and communities to promote health, prevent disease, maintain health, and to cope with illness and disability with or without the support of a healthcare provider. **Aim:** This study aimed to evaluate the effect of implementing evidence-based practices guidelines on women's knowledge and practices regarding self-care after hysterectomy. **Subjects and Methods:** A Quasi-experimental (one group pre & post-test) design was utilized in this study. A purposive sample of 60 women was recruited in this study that was conducted at gynaecological departments of Minia university hospital, Egypt. The study utilized four tools, **(I)** Structured interview questionnaire, **(II)** Structured questionnaire on women's knowledge, **(III)** Women's self-reported practices, & **(IV)** Follow up questionnaire. **Results:** The study's main findings revealed that (88.30%) of women had inadequate knowledge and (98.30 %) of them had unsatisfactory practices regarding self-care after hysterectomy in the pre-test. While, after application of evidence-based practices guidelines, it was observed that there was a highly statistically significant improvement ($P \leq 0.001$) in women's total knowledge and practices. The most common health problems experienced within 6 weeks after hysterectomy was night sweats & hot flashes (86.6 %). **Conclusion:** Implementing evidence-based practices guidelines was effective and significantly improved women's knowledge and practices regarding self-care after hysterectomy. **Recommendations:** Discharge planning regimen for self-care practices after hysterectomy should be developed and implemented pre-and post-operatively to prevent complications

Keywords: Hysterectomy, knowledge, Practices, & self-care

Introduction

Hysterectomy is the removal of the uterus and it is the commonest major surgical procedure after caesarean section performed in gynaecology (Alshawish, et al., 2020 & Ezzat, 2019). It is the effective treatment option for many conditions like fibroids, abnormal uterine bleeding (AUB), endometriosis, adenomyosis, uterine prolapse, pelvic inflammatory disease (PID), and in some cases of malignancy of the genital tract (Li & Ding, 2018).

There are three main types of hysterectomies namely; total hysterectomy (complete removal of uterus and cervix), subtotal hysterectomy (removal of the uterus, leaving the cervix in situ) and radical hysterectomy (complete removal of uterus, cervix, upper vagina and parametrium). Hysterectomy may also include removal of the adjacent fallopian tubes and ovaries (American College of Obstetricians & Gynecologists (ACOG), 2021).

Women who undergo hysterectomy face a multitude of physical, psychological, emotional, social, and sexual problems both before and after the surgery, such as backache, vaginal discharge, weakness, pain, weight gain, incontinence, and difficulty in sitting/walking. After the uterus was removed, a sensation of incompleteness was also observed. Proper designing and application of discharge planning not only affect women's health but also causes a reduction in readmissions (Desai, et al., 2016).

Evidence-based practice (EBP) involves integrating the best available evidence with clinical knowledge and expertise,

while considering women's unique needs and personal preferences. If used consistently, optimal women outcomes are more likely to be achieved. Using EBP means ending outdated care delivery practices and choosing effective and scientifically validated methods to meet individual woman's needs (Wilson & Austria, 2021).

Self-care is the ability of individuals, families, and communities to promote health, prevent disease, maintain health, and to cope with illness and disability with or without the support of a healthcare provider. It is a broad concept which includes hygiene (general and personal); nutrition (type and quality of food eaten); lifestyle (sporting activities, leisure, etc.); environmental factors (living conditions, social habits, etc.); socioeconomic factors (income level, cultural beliefs, etc.); and self-medication (World Health Organization (WHO), 2019).

Nurses play a significant role for women undergoing hysterectomy. Their interventions begin before women's hospitalization with preoperative consultation, intra, and post-operative care to minimize the incidence of post-operative complications after hysterectomy and reduce women's stay in hospital. Their role continues after discharge to ensure women's satisfaction (Forsmo, et al., 2017)

Significance of the study

Hysterectomy is one of the most common gynecological procedures performed in both developed and developing countries. Worldwide, the annual hysterectomy

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rates vary among different countries ranging from 1.2 to 4.8/1000 women (Michael, et al., 2020; & Fathy, et al., 2018). It accounts for 50 percent of gynecological surgical procedures in women over 35 years of age worldwide (Mansuria, et al., 2016).

Approximately 600,000 hysterectomies are performed annually in the United States. Most hysterectomies are performed for benign indications (Pollack et al., 2019 & Tonolini, 2018). In Egypt, the annual incidence rate for hysterectomy is estimated to be 165,107 annually all over governorates, divided between the upper and Lower Egypt (Health grade, 2016).

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 (Jan, et al., 2020).

Educational programs for women undergoing hysterectomy will promote better self-care behavior, reduce postoperative anxiety and pain, and alleviate some of the negative influences of hysterectomy. So, interventions may not affect the actual incidence of the side-effects; they may help women cope with adverse outcomes better, thus emphasizing the importance of the adaptation process to accept this condition with a positive thought (Alshawish, 2020).

Aim of the study:

The aim of the current study was to evaluate the effect of implementing evidence-based practices guidelines on women's knowledge and practices regarding self-care after hysterectomy

Research Hypothesis:

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

Subjects and Methods:

Research design:

Quasi experimental research design (one group pre-test and post-test) was utilized to fulfill the aim of the current study.

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 that requiring hysterectomy. This setting is considered one of the important medical and specialized hospitals in north Upper Egypt and it provides free health services for women

Sample type and size:

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

A purposive sample was utilized in this study. Sixty (60) women who underwent hysterectomy were selected meeting the inclusion criteria to participate in the study. The

sample size was calculated according to (Jaeger, 1984) equation as the size of the target population was 61 according to records of Minia University hospital, 2020.

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; the required sample 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

Tools of data collection:

Tool I: Structured interview questionnaire (pre-intervention):

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

- **Part (1):** Personal data of the women as 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 as 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 (Kumari, 2012), to assess women's knowledge regarding self-care after hysterectomy. It included 47 items in the form of multiple choices questions (a-b-c-d-) and divided into 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 and was calculated as following:

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

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

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

Tool III (pre/post-intervention): Women's self-reported practices regarding self-care after hysterectomy.

It was developed by the researcher that was adopted from (King Edward Memorial Hospital; Physiotherapy Department, 2017). It included self-care practices regarding deep breathing exercises, leg exercise, getting out of bed after

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

Self-reported practices' scoring system: (total items 31)

It was developed by the researcher 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 practices score regarding self-care after hysterectomy was classified as the following:

- Satisfactory practice ($\geq 60\%$).
- Unsatisfactory practice ($< 60\%$).

Tool IV: Follow up questionnaire:

It was designed by the researcher to assess health problems experienced within 6 weeks after hysterectomy. Women were asked by phone. Six weeks were chosen based on the evidence that recovery from hysterectomy is completed at this period

Supportive Material:

Following a comprehensive study of the relevant literature, the researcher created an Arabic booklet to provide additional support material. As a result, it was written in an easy-to-understand language and had several pictures to help women learn about hysterectomy and its self-care.

Tools' validity & reliability:

The contents' validity were tested by a panel of five experts from the staff of obstetrics and gynaecological nursing professors (from Minia & Assuit University, Egypt) who reviewed the tools for transparency, comprehensiveness, comprehension, applicability and simplicity. Modifications were done accordingly based on their judgment.

The tools were tested for internal consistency by using Cronbach's alpha test to identify the extent to which the items of the tools measured the same concept and were correlated with each other. The results were .881 and .769 for women's knowledge and practices regarding self-care after hysterectomy respectively.

Pilot Study:

A pilot study was conducted on 10% of women (6) who underwent hysterectomy at the previously mentioned setting to assess the current study's tools for its clarity, validity, and time required to be applied. According to the results of the pilot study, all required and necessary modifications were done. The pilot study was not included in the total sample size

Data collection procedure:

The study was carried out through three phases: assessment, implementation, and evaluation phase. These phases were carried out from the beginning of June 2021 to the end of October 2021, covering five months. The researcher visited the previously mentioned setting three days per week; Saturday, Sunday, & Monday. She was available from 8.00 am to 8.00 pm with the internship students of the Faculty of Nursing.

Assessment phase:

- Women were recruited from Minia university hospital for obstetrics & gynaecology. The researcher held an interview with women and at the beginning introduced her-self, welcomed each woman, explained the purpose, nature, duration, and activities of the study, and took oral consent.
- The researcher provided the women an overview and clarification about the previous tools of data collection. 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 started to fill the interviewing questionnaire to assess women's personal data, gynaecological history, and utilized the structured questionnaire on women's knowledge and practices regarding self-care after hysterectomy as a pre-test (one day preoperatively) in a time ranged from 25-30 minutes.

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 two 30-45 minutes instructional sessions and the content of the instructional sessions was reviewed by experts in the same specialty. The number of women in the session was not more than five in order to facilitate the learning process and allow every woman to participate in the discussion. The sessions were continuous separated by only 5 minutes if women have any question.

The first session: the researcher started with:

- Orientation about the EBP guidelines' objectives, benefits, contents, and its impact on the women's condition.
- Provided information about hysterectomy; definition, types, indications, complications, length of hospital stay, 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: The researcher focused on self-care practices regarding pain management, wound care, vulval region care, personal hygiene, good posture, rest, sleeping, & returning to work. It also included teaching on self-care

regarding sexual activity; follow up visits, medications compliance, warning signs, and menopausal symptoms including hormonal replacement therapy (HRT). Also, teaching regarding emotional feelings & most common postoperative health problems and proper self-care measures that could apply to overcome it.

- Each of session was started by a summary about what has been discussed in the previous session and the objectives of the new session using simple Arabic language. Also, the session ended by a summary of its contents and feedback from the women was obtained to ensure that they got the maximum 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 re-demonstrations. It was conducted at the gynaecological units where women were staying.
- Motivation and reinforcement were done by praising and appreciation to encourage women to participate in the study
- The researcher also communicated with the women via telephone cell for instructions and reinforcement after discharge from the hospital.

Evaluation phase:

- The effect of implementing EBP guidelines on women's knowledge and practices regarding self-care after hysterectomy was done through comparing between pre & post-test.
- Regarding women's knowledge of self-care after hysterectomy, the post-test was taken preoperatively after the end of the instructional sessions.
- Regarding women's practices of self-care after hysterectomy, the post-test was taken postoperatively during women's stay in hospital except the practice of wound care; the post-test was taken after 10 days from surgery to ensure removal of wound sutures & dressings. This was done through contacting women by phone.

- Follow up questionnaire to assess the presence of any health problems was filled 6 weeks after hysterectomy through contacting women by phone.

Administrative design:

An official written approval letter clarifying the title, purpose, and setting of the study was obtained from the Dean of Faculty of Nursing- Minia University and submitted to the responsible authorities of the selected setting for permission to carry out the study.

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. Oral consent was obtained from women who were willing to participate in the study, after explaining the nature and purpose of the study.
3. Women had the right to refuse to participate /or withdraw from the study at any time without giving rationale.
4. Women's privacy was considered during the data collection.
5. No health hazards were present.
6. Women were assured that all their data are highly confidential and anonymity was also assured through assigning a number for each woman.

Statistical design:

The collected data was tabulated, computerized, analyzed and summarized using descriptive statistical tests to test research hypothesis by using the Statistical Package for the Social Sciences (SPSS, 20.0). Descriptive data was expressed as mean and standard deviation. Qualitative data was expressed as frequency and percentage. McNemar test was used to compare between percentage of two groups (before & after intervention) and r-test for correlation coefficient. The level of significance was obtained at $P \leq 0.05$ and high significance obtained at $P \leq 0.001$

Results

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

Characteristics	(N=60)	%
Age/ Years		
25-35 yrs.	4	6.7
36-46 yrs.	23	38.3
>47 yrs.	33	55
Mean + SD = 46.4+7.23 years		
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		
Urban	11	18.3
Rural	49	81.7
Marital statuses		
Married	45	75
Widow	15	25
Parity (Obstetrical data)		

Characteristics	(N=60)	%
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 ± 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	%
1. 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
2. Type hysterectomy performed		
• Subtotal hysterectomy	8	13.3
• Total hysterectomy	52	86.7
3. 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.

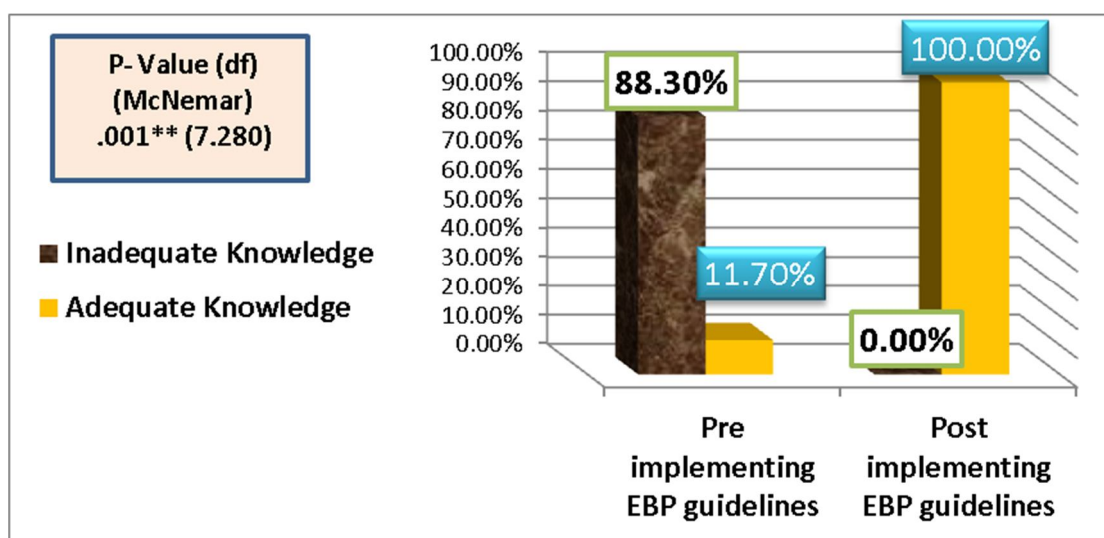


Figure (1): Percentage distribution of women's total knowledge regarding self-care after hysterectomy pre & post implementing EBP guidelines (No. =60).

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 women's total knowledge dimensions regarding self-care after hysterectomy pre & post implementing EBP guidelines (No. =60).

Items	Level of women's knowledge regarding self-care after hysterectomy (No.=60).		T-test (P-value)
	Level of women's knowledge pre implementing EBP guidelines (No.=60)	Level of women's knowledge post implementing EBP guidelines (No.=60)	
	Mean + SD	Mean + SD	
1. Physical activities	2.5833 + 1.41770	4.6333+ .63691	10.351(.001**)
2. Diet	4.6500 + 2.45519	9.2167+1.09066	14.940(.001**)
3. Exercise	1.1667 + 1.10724	6.2833+1.02662	29.26(.001**)
4. Personal hygiene	1.6500 + 2.1.03866	3.7333+.44595	14.968 (.001**)
5. Bladder care	1.8333 + 1.29099	3.9167+.33404	12.359 (.001**)
6. Bowel care	1.4167 + .92593	2.4500+.62232	8.078 (.001**)
7. Sexual activities	.3333 + .91442	4.0833+1.31860	19.625 (.001**)

Items	Level of women's knowledge regarding self-care after hysterectomy (No. =60).		T-test (P-value)
	Level of women's knowledge pre implementing EBP guidelines (No.=60)	Level of women's knowledge post implementing EBP guidelines (No.=60)	
	Mean + SD	Mean + SD	
8. Pain management	1.1333 + .72408	1.7667+.46456	5.963(.001**)
9. Emotional feelings	1.6167 + .49030	1.6500+.48099	531 (.597NS)
10. Prevention of complications	2.5833 + 1.07816	3.8167+.46910	8.604 (.001**)
11. Follow up	1.8000 + .40338	1.9833+.12910	3.639(.001**)
Total knowledge level	19.77 + 7.507	42.68+3.457	23.740(.001**)

T-test is used to compare between means of two groups. **: highly significant difference in between departments (p value ≤ 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.

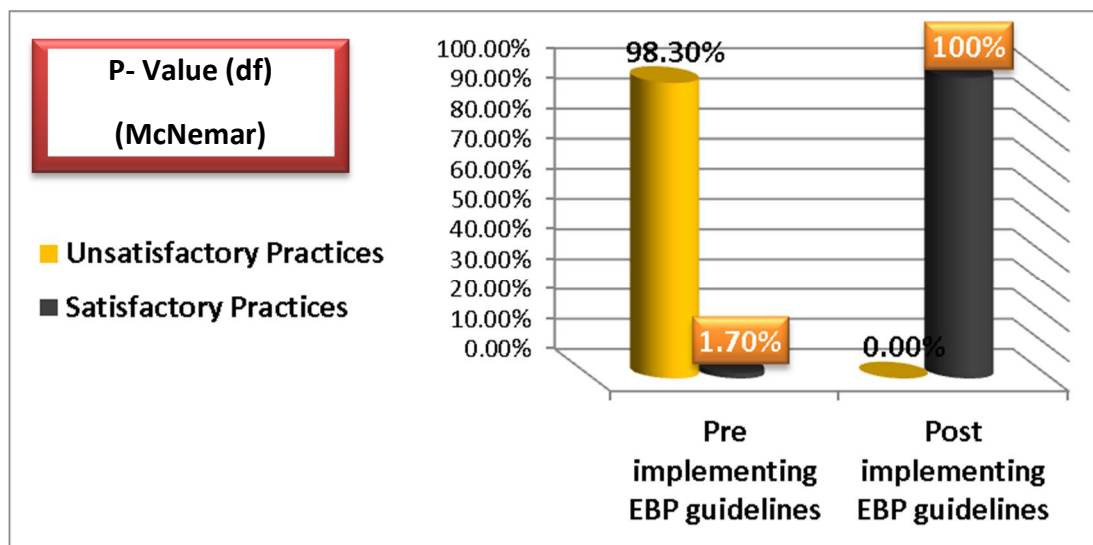


Figure (2): Percentage distribution of women's total self-reported practices regarding self-care after hysterectomy pre & post implementing EBP guidelines (No. =60).

Figure (2): Illustrates that there is a highly statistically significant improvement (P value=.001) in the women's total practices regarding self-care after hysterectomy.

Table (4): Comparison between women's total practices dimensions regarding self-care after hysterectomy pre & post implementing EBP guidelines (No. =60).

Items	Level of women's practices regarding self-care after hysterectomy (no.=60)		T-test (P-value)
	Level of women's practices pre implementing EBP guidelines	Level of women's practices post implementing EBP guidelines	
	Mean + SD	Mean + SD	
1. Practice of deep breathing exercises.	.2333+.81025	4.7333+.66042	30.512 (.001**)
2. Practice of leg exercises.	1.2667+.44595	1.9667+.18102	11.733 (.001**)
3. Practice of pelvic floor exercises.	.0500+.38730	6.0500+1.32031	34.674 (.001**)
4. Practice of getting out of bed after surgery.	2.4333+2.85105	3.0000+.00000	5.158 (.001**)
5. Practice of wound care.	1.6167+1.00998	3.7000+.80885	14.353 (.001**)
6. Practice of vulval region care.	3.4833+2.01260	10.0333+.141381	23.422 (.001**)
Total practices' level	8.07+3.645	28.48+3.170	35.906 (.001**)

T-test is used to compare between means of two groups. **: highly significant difference in between departments (p value ≤ 0.001).

Table (4): Displays that there is a highly statistically significant difference (P value= .001) between total level of women's practices pre & post implementing EBP guidelines regarding self-care after hysterectomy in all dimensions

Table (5): Correlation between total knowledge & total practices scores among women, pre & post implementing EBP guidelines (No. = 60).

Variable			Pre- guidelines		Post- guidelines	
Pre- guidelines	Knowledge	r	1	.409**		
		P value			.001	
Pre- guidelines	Practices	r	.409**	1		
		P value	.001			
Post- guidelines	Knowledge	r			1	.147
		P value				.262
Post- guidelines	Practices	r			.147	1
		P value			.262	

**Correlation is significant at the 0.01 level (2-tailed). * P ≤0.05 (significant).

**p ≤0.001 (highly significant), P – value based on Pearson correlation coefficient.

Table (5): Reveals that there is a highly statistically significant (P value=.001) mild positive correlation (r=.409) between level of women's total knowledge & total practices regarding self-care after hysterectomy pre implementing EBP guidelines. There is no statistically significant (P value= .262) weak positive correlation (r=.147) between level of women's total knowledge & total practices regarding self-care after hysterectomy post implementing EBP guidelines.

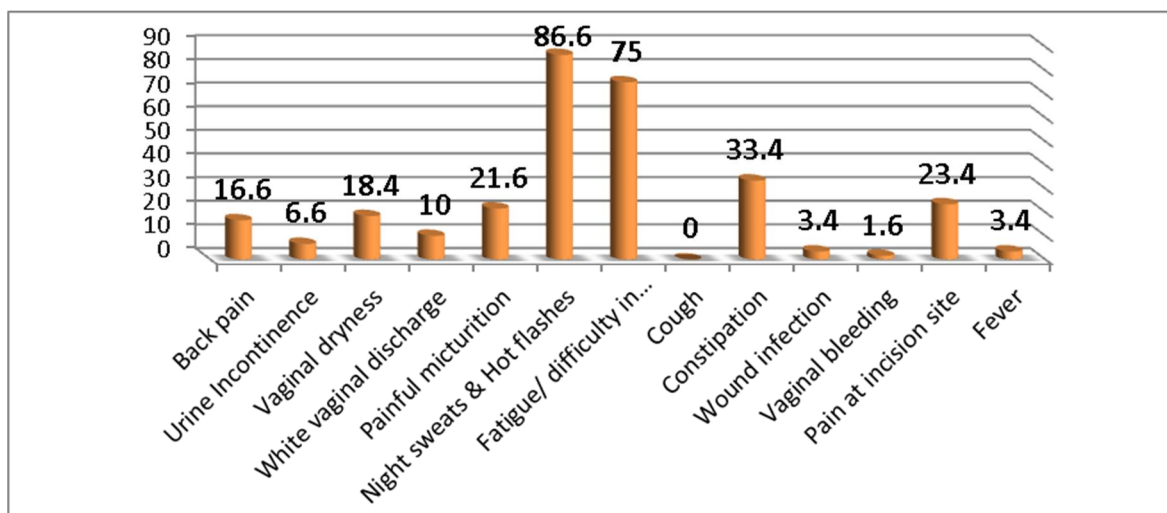


Figure (3): Percentage distribution of the women’s health problems experienced within 6 weeks after hysterectomy (No. 60).

Figure (3): Illustrates that the most common health problems experienced within 6 weeks after hysterectomy are night sweats & hot flashes (86.6 %) followed by fatigue/ difficulty in household activities (75 %).

Discussion

The use of EBP improves women's care quality while lowering costs. The finest clinical judgments are made using the most up-to-date scientific evidence, clinical knowledge, and consideration of the women's values and preferences (Melnik, et al., 2018).

According to the indication 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 previous finding was supported by the study of (Jan, et al., 2020), about the usefulness of organized training program on information among postoperative patients on self-care with hysterectomy in Kashmir, illustrated that more than half 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, this finding of the current study agreed with a study conducted by (Shehata & Mohammed, 2021), who studied the efficacy of implementing discharge plan on women undergoing hysterectomy, where the study's findings illustrated that the main causes of hysterectomy among study and control groups were AUB followed by fibroid uterus.

The current study findings disagreed with (Jodie, et al., 2017) who studied trends in hysterectomy rates among women veterans in the United States in Washington, found that chronic pelvic pain syndrome was the predominant cause of hysterectomy among women. This difference with the current study explored increased infections as sexually transmitted infections among American women which led to adhesions and chronic pelvic pain as a predominant cause of hysterectomy.

Concerning the level of women’s total knowledge and practices regarding self-care after hysterectomy pre and post implementing EBP guidelines, the current study discovered that the majority of the women had inadequate knowledge and the great majority had unsatisfactory practices in the pre-test, while it was found that all of them had adequate knowledge and satisfactory practices regarding self-care after hysterectomy in the post-test.

The inadequate knowledge and unsatisfactory practices level of the studied 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 and practices level might be improved post implementing EBP guidelines due to speaking with an easy to understand language, providing better teaching and learning materials that

enabled the learning, and due to frequent demonstration and re-demonstration.

The findings of the current study were in agreement with the study by (Shehata & Mohammed, 2021), about the efficacy of implementing discharge plan on women undergoing hysterectomy, discovered that there was a highly statistically significant difference between study and control group at post and follow up of intervention as there was a higher score of satisfactory self-care practices post-hysterectomy among study group compared to control group.

In agreement with the current study, a study done by (Elgi & Lekha, 2017), who studied the effectiveness of self-instructional module on knowledge and selected outcomes among women undergoing hysterectomy in a tertiary care hospital in South India, reported that the experimental group had a statistically significant ($p < 0.001$) higher post-test scores of knowledge compared to the scores of the pre-test. Also, there was a statistically significant ($p < 0.001$) higher post-test scores of knowledge between experimental and control group.

The current study was also consistent with (Padma Priya, 2017), who studied the effectiveness of preoperative instructions on knowledge, pain, and selected post-operative behaviors among women undergoing abdominal hysterectomy in selected hospital, Bangalore, Karnataka, showed that the experimental group had a statistically significant ($p < 0.001$) higher post-test scores of knowledge and practices compared to the control group.

The current study revealed that there was a highly statistically significant ($P \text{ value} = .001$) mild positive correlation ($r = .409$) between level of women's total knowledge & total practices regarding self-care after hysterectomy in the pre-test. This result was in accordance with the study by (Chacko, et al., 2016), who conducted assessment of knowledge and practice of self-care among women undergone hysterectomy, revealed that there was a mild positive correlation ($r = 0.322$) between the knowledge and practices of self-care among women undergone hysterectomy. This finding was expected because if women had enough knowledge, they would have better practices.

Concerning the assessment of postoperative tiring symptoms experienced within 6 weeks after hysterectomy, the current study showed that the majority of the women complained of night sweats & hot flashes followed by three quarters of them complained of fatigue/difficulty in household activities. The literatures point out that the optimum lengths of inability to work after an abdominal hysterectomy are 6 weeks for sedentary work and 12 weeks for physically demanding jobs (Solomayer, et al., 2018).

The study by (Chacko, et al., 2016), who conducted assessment of knowledge and practice of self-care 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 agreement with the current study, the study done by (Elsayed, et al., 2021), about 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 to suffer from complications as: abdominal cramps, distension, and constipation compared to those in the control group.

Merits of the study:

The researcher was available for long time with the women and this allowed her to reinforce knowledge and practices related to hysterectomy self-care for several times.

Limitation of the study:

The current study used non-probability sample and this limits the external validation of the results.

Conclusion:

Based on the present study's findings, the study concluded that:

The implementation of EBP guidelines was effective and significantly improved women's knowledge and practices regarding self-care after hysterectomy. It was found that there was a highly statistically significant improvement in women's total knowledge and practices after the intervention. These findings proved and supported our study hypothesis. Moreover, regarding the postoperative health problems experienced within 6 weeks after hysterectomy, it was found that the majority of the women complained of night sweats & hot flashes.

Recommendations:

In the light of the current study's findings, it is recommended that;

1. Distribution of booklet about self-care practices after hysterectomy in gynaecological departments.
2. Discharge planning regimen for self-care practices after hysterectomy should be developed and implemented pre-and post-operatively to prevent complications.
3. Give health education to women about non-pharmacologic interventions for the reduction of night sweats and hot flashes as acupuncture, yoga, structured exercises, meditation, mindfulness-based practices, and relaxation techniques.
4. Continuous in-service training programs for nurses about postoperative hysterectomy care should be provided.
5. Further research is still needed to investigate the association between post-hysterectomy self-care guidelines and other health-related complications.

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