

## Effect of Nursing Post-discharge Protocol on Quality of Life among Menopausal Women Undergoing Gynecologic Surgery

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### Abstract

**Background:** Gynecologic surgery is a surgery performed on any part of a woman's reproductive system. Uterine prolapse can affect menopause women's quality of life and lead to maternal morbidity and mortality. The treatment of uterine prolapse depends on the symptoms and the degree. **Aim of this study:** To evaluate the effect of nursing post-discharge protocol on quality of life among menopausal women undergoing gynecologic surgery. **Research design:** A quasi-experimental design was utilized. **Research setting:** The study was carried out at gynecological outpatients' clinics affiliated with Ain Shams university hospitals. **Sampling:** A purposive sample of 210 menopausal women with uterine prolapse in the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> degree and scheduled for surgery. The pretest interviews in outpatient clinics then the post-surgery interviews after discharge at three months during the follow-up in the hospital in the outpatient department. **Tools:** Three tools were used to measure the study variables. Tool (1): structured questionnaire of personal and medical data. Tool (2): A questionnaire to evaluate knowledge about uterine prolapse surgery. Tool (3). The World Health Organization Quality of Life Instruments (THE WHOQOL-BREF) to evaluate the quality of life in bio-psychosocial and environmental domains. **Results:** showed a statistically significant difference between pre & post-test regarding knowledge. Also, there was a statistically significant relationship between items of the physical quality of life domain after the discharge protocol. **Conclusion:** Many aspects of life quality improved because of the nursing post-discharge protocol. **Recommendations:** Continuous periodic nursing care protocol should be given for menopausal women who undergoing uterine prolapse surgery.

**Keywords:** Menopause, Gynecologic Surgery, Quality of life, post-discharge protocol.

### Introduction

Gynecology surgery comprises any surgical operation involving the uterus, ovaries, cervix, fallopian tubes, vagina, and vulva, in addition to the organs and structures of the female pelvic area. Various reasons require gynecological surgery such as ovarian cysts, malignancy, chronic pelvic pain, and uterine prolapse. The prolapse can be caused by vaginal childbirth, stress, and tissue atrophy after menopause. Furthermore, the thinning and lack of vaginal moisture in menopause lead to sexual function problems. Menopause has been proven to the development of prolapse in various studies (Giannini, et al.,2018).

Uterine prolapse affects the life quality and interferes with social and personal activities for women and it is a chronic condition (Giannini, et al.,2018). Menopause is a natural consequence of a woman's life span, which occurs at approximately 45-50 years old in most

developed countries (Masoumeh, et al.,2011). According to WHO estimation, reproductive ill-health accounts for 33% of the total disease problem in women globally. The general prevalence of uterine prolapse is 2-20 percent among women under 45 years old, who have had at least one pregnancy in their lives. (World Health Organization, 2018).

The symptoms of uterine prolapse depend on the degree of prolapse. The intensity of the symptoms determines the treatment options for prolapse. An educational nursing protocol to women about uterine prolapse degree, signs and symptoms, and education about lifestyle changes and prevent risk factors: weight, smoking, and heavy work or load. There are two types of treatment; surgical and non-surgical options for treating uterine prolapse based on the severity of prolapse, general health, age, and whether the women want children in the future. The first option is a non-surgical treatment, for example, a pelvic exercise program, and vaginal

nessary. The women should be advised for promoting health and prevent complications, improve daily activities, and comfort measures (Tayrac & Sentilhes, 2013).

Pelvic surgery is associated with a risk of specific complications, so preoperatively women must be knowledgeable of these risks. Patients must also be informed of conservative and alternative surgical techniques. Education are being effective in reducing prolapse and its complications (Ministry of Health Nepal, 2018).

The second option is surgical treatment include: hysterectomy and prolapse repair: Preoperative care for vaginal hysterectomy includes the physical and psychosocial care that prepares women to undergo gynecological surgery safely. Nursing post-discharge protocol start for women who are diagnosed with uterine prolapse in the outpatient department and before the surgery takes place. The nursing protocol enhances the quality of life and improves outcomes of surgery through adequate knowledge about uterine prolapse and post-operative care. Also, provide orientation and empowerment for women's self-care (Summan, 2017).

The recovery stage is important for women post-operative which includes. Stop smoking, lose weight, have a daily routine, eat a healthy balanced diet, rest, exercise, avoid straining and constipation, support from the health team, and family. restrictions on driving after surgery for 1 to 2 weeks. Most women return to work after about 6 weeks. this varies and depends on the surgery, recovery, and type of work. It may be advisable to try to organize a shortened workweek or light duties especially if the job involves prolonged standing or heavy lifting (American college of obstetricians and gynecologists, 2019).

The primary goal of maternity nursing is to improve the quality of life for menopausal women. It is an important factor in determining an individual's health and evaluating healthcare plans. Quality refers to a multifaceted concept that encompasses psychological, physical, spiritual, emotional, and social well-being. It assesses an individual's ability to perceive life and to anticipate goals concerning the value

system and culture, as well as their level of satisfaction (Carulla et al., 2014).

#### Significance of the study:

Nurses in obstetrics and gynecology fields can positively influence women's health and post-discharge outcomes. Providing women-centered care with advocacy, caring, and shared decision-making is vital for menopause women in all these situations. The post-discharge tool outlines evidence-based maternity care across the hysterectomy and prolapse repair without a hysterectomy and is useful for rapid post-operative gynecological recovery. The recovery stage is important for women post-operative which increased women's satisfaction decreased length of stay and enhances the quality of life. The impact of prolapse surgery on quality of life is frequently recorded in low and middle-income countries, and there are limited studies of the nursing post-discharge protocol. (Gileard, et al., 2018). (Singh, 2016). There are limited studies that, discussed the nursing post-discharge protocol, therefore, this study is a step forward toward achieving consensus on the best nursing post-discharge protocol and improving the quality of life among menopausal women undergoing gynecologic surgery.

#### Aims of the study

This study aims to evaluate the effect of nursing post-discharge protocol on the quality of life among menopausal women undergoing gynecologic surgery.

#### Research hypotheses:

Menopausal women with uterine prolapse who will be exposed to nursing discharge protocol after gynecologic surgery will exhibit higher post total quality of life mean scores than in the pre-test.

#### Operational definition:

- **Menopausal age** in this study refers to the age of women between 40 and 55 years.
- **Gynecologic surgery** in this study refers to uterine prolapse.
- **Degree of uterine prolapse in this study:** women diagnosed with the second, third, and fourth-degree uterine prolapse.
- **The surgery in this study:** hysterectomy with a prolapse repair and prolapse repair without hysterectomy.

- **Quality of life** in this study refers to general health perception, psychological, physical, work capacity, sleep, sexual, and activities of daily living.

### Subjects and Methods:

**Research design:** A quasi-experimental one-group pre/post-test research design was used to test the intervention. The design was applied to accomplish the current study aim.

**Research setting:** This research was completed in selected outpatients' clinics in gynecological hospitals at Al Demerdash University hospitals. This hospital is affiliated with Ain Shams University, Egypt.

**Sampling:** A purposive sample of 210 menopausal women who have uterine prolapse and undergoing uterine surgery which represents about 5% of the total attendees in the outpatient clinic.

**Inclusion criteria:** menopausal women with diagnosed of uterus prolapse with the second, the third- and the fourth degree undergoing the surgery; hysterectomy and prolapse repair and prolapse repair without hysterectomy. Free from any medical or psychiatric illnesses, aged 40-50 years, and didn't expose to any prior learning experience about uterine prolapse and accept to be involved in the study. Women number to be selected from hospital =  $n =$

$$\frac{N}{1+N(e)^2}$$

Where: n=sample size, N=population size (394), e=Margin of errors which is  $\pm 5\%$ , Confidence level = 95%, a study power of 80%.

$$n = \frac{394}{1 + 394 \times 0.0025} = \frac{394}{1.875} = 210$$

**Tools of data collection:** Three tools were used for data collection:

**Tool: I:** structured questionnaire consisted of four parts:

- **Part one:** It included socio-demographic characteristics such as age, educational level, occupation, residence, and family income.
- **Part two:** It included clinical characteristics such as gravidity, parity, no of living children, duration, degree, category of uterine prolapse, body mass indexes (kg/m<sup>2</sup>)

(BMI) according to (World Health Organization (WHO),, 2018).

- **Part two:** It included the symptoms of the prolapsed uterus such as vaginal bulge, discomfort/pain, feeling something coming down, affected walking activities, urinary problems, vaginal bleeding or discharge, and difficulties with sexual relation

**Tool II:** Menopause Knowledge Scale (MKS).

It was developed by (Appling, et al., 2000).

Menopausal women's knowledge questionnaire included questions about definition & signs & symptoms, degree and risk factors of a prolapsed uterus, complications & prevention, medical and surgical treatment options, pre and postoperative care, healthy lifestyle factors, and total knowledge score. The scoring system regarding menopausal women's knowledge was as follows: correct answers were given score 2, whereas incorrect answers were given score 1. The total knowledge score level was categorized as "good level of knowledge" if the score is more than or equal to 75 % and as "fair level of knowledge" if the score ranges from 50 % to less than 75%. Or "weak level of knowledge" if the score is less than 50%.

**Tool III:** 26-item WHO Quality of Life - BREF, (THE WHOQOL-BREF, 2017) &

(Kalarhoudi, et al., 2011), to measure

menopausal women's quality of life. It contains 2 questions about the overall quality of life rating and subjective health satisfaction and the other 16 questions are about four life domains (physical health (7 items), psychological health (5 items), social health (4 items), and environmental (8 items). Scoring is a Likert scale ranging from 1 (very dissatisfied or very poor) to 5 (very satisfied), with a higher score indicating better quality of life. Domain scores were calculated by taking the mean of all items in each domain and then multiplying in 4 the transformed to 0b to 100% scale. The WHOQUALITY OF LIFE-BREF has been converted to the Arabic language, and the translated version showed internal reliability (Cronbach's alpha = 0.86).

**Validity & reliability of study tools:** content validity was done by a panel of five experts, two in maternity specialty and two

in community health nursing specialty, and one in nursing education specialty.

**Ethical consideration:** The ethical committee of the faculty of Nursing, Ain Shams University approved the study protocol. Informed written consent was obtained from the study subjects after an explanation of the study aim. Confidentiality and anonymity were assured by assigning a code number for each subject instead of names to protect their privacy. The right to withdraw from the study has been guaranteed at any time. Subjects were assured that data are confidential and used only for research purposes.

**Pilot study:** the pilot study was carried out to test the applicability and the clarity of the study tools for further required modifications and to detect the obstacles and problems that may be encountered during data collection. It was conducted on 11 %. Twenty menopausal women with uterine prolapse to calculate the time for applying nursing post-discharge protocol. Women participating in the pilot study were not included in the study.

**Fieldwork:** An official permission was approved from the responsible authority before conducting this study explaining the study aim. An extensive review of the literature was done to develop data collection tools and post-discharge protocol content. Data collection took one year (2018 to 2019). We conducted the pretest or baseline interviews with participating women at the time of diagnosis in the outpatient clinic, at which time they were also scheduled for surgery in hospitals. The researchers interviewed menopausal women individually in a private place in a meeting room in the outpatient department to discuss the aim of the study and obtain informed written consent and fill in the questionnaires (Tool I, Tool II and Tool III). The average time consumed in answering the questionnaire was thirty minutes. The researchers then started implementing the post-surgery interviews with women after discharge at three months during follow-up in the outpatient department. The post-discharge protocol includes nine sessions, consisting of four phases:

1. Assessment phase: researcher interviewed menopausal women and filled in the questionnaires (pre-test).
2. Planning phase: this phase included analysis of the pre-test findings; researchers designed

post-discharge protocol objectives and content according to the menopausal women's learning needs. The general objective of the protocol is to design and implement a post-discharge protocol for menopausal women undergoing uterine prolapse surgery, and then to evaluate its effect on menopausal women's knowledge and quality of life. The protocol content included basic knowledge about uterine prolapses such as the definition, signs and symptoms, degrees, risk factors & complications, medical and surgical treatment options, pre and postoperative care, prevention, and healthy lifestyle factors.

3. Implementation phase included implementation of the designed post-discharge protocol steps at the previously mentioned setting in a special room in 2 separate main sessions for all contents at morning shift three days/weeks. Discussion method was used and audiovisual material such as boosters, slide shows, video films was also used.
4. Evaluation phase: After implementing the post-discharge protocol, researchers used post-tests to assess the improvement in the life quality and knowledge of menopausal women who underwent uterine prolapse surgery before and after the post-discharge protocol.

**Statistical Analysis:** The data collected were analyzed and presented in tables with suitable statistical tests. All data were recorded, collected, and analyzed by using version 23 of the Statistical Package for the Social Sciences (SPSS). Descriptive Statistics with numerical data was expressed as means  $\pm$  standard deviations (SD). Inferential statistics such as the T. test were used. Statistical significance was achieved if  $p$  was  $<0.05$ .

### **Results:**

**Table 1:** shows the characteristics of socio-demographics of the studied women. The results revealed that, the mean age of the women was  $45.2 \pm 50.3$ . (52.48 %) of them had basic education. (63.4%) were working and 62.5% of them had not enough income.

**Table 2:** illustrates the clinical characteristics of the studied women. The

results revealed that (71.42%) of them were suffering from uterine prolapse for one year or less, (60%) were 2nd degree of prolapse. (95.23%) of them had incomplete prolapse. Body mass indexes Mean were  $24.8 \pm 2.49$  kg/m<sup>2</sup> for nonobese women and  $37.9 \pm 3.98$  kg/m<sup>2</sup> for obese women.

**Table 3:** demonstrates that, the high significant difference among menopausal women of the study group before & post-discharge protocol related to intervention about their knowledge about uterine prolapse, where (P=0.00000).

**Table 4:** shows that there is a statistically significant relationship regarding the symptoms caused by prolapsed uterus for menopausal women before & three months post-discharge protocol of intervention with (p-value=0.00000).

**Table 5:** explains the quality-of-life domain mean scores, it is observed that, there is a significant difference among the study group before & three months post-discharge protocol of intervention were with (P-value =<1.000).

**Table (1):** Socio-demographic characteristics for the studied sample (n=210)

Socio-demographic characteristics	No=210	
	NO	%
<b>Age(years)</b> 40-55 years - Mean± SD	45.2±50.3	
<b>Level of education:</b>		
Illiterate, read& write	37	17.62
Basic	110	52.48
Secondary	19	9.19
University or more	44	20.71
<b>Occupation:</b>		
Housewife	77	36.6
Working	133	63.4
<b>Residence</b>		
Rural	63	30
Urban	147	70
<b>Family income</b>		
Enough	79	37.51
Not enough	131	62.49

**Table (2):** Clinical characteristics for the studied sample (n=210)

Clinical characteristics	Mean	SD
<b>Gravidity:</b>	2.97	549
<b>Parity:</b>	1.55	1.449
<b>No of living children</b>	2.50	2.536
<b>Mean body mass indexes (kg/m<sup>2</sup>):</b>		
- Nonobese women	24.8	2.49
- Obese women	37.9	3.98
<b>Uterine prolapse duration:</b>		
≤1 year	150	71.42
≥2 year	60	28.58
<b>Degree of uterine prolapse:</b>		
2 <sup>nd</sup> degree	126	60.00
3 <sup>rd</sup> degree	80	38.00
4 <sup>th</sup> degree	4	2.00
<b>Uterine prolapse category</b>		
Incompletes prolapse	200	95.23
Complete prolapse	10	4.77

**Table 3:** The level of knowledge about uterine prolapse before and post-discharge protocol (n=210)

Women knowledge	Before (Baseline)		Post-discharge (three months)		T	p-value
	Mean	SD	Mean	SD		
<b>Definition &amp; signs &amp; symptoms.</b>	3.91	0.83	3.61	0.89	0.49	0.001
<b>Degree and risk factors of a prolapsed uterus.</b>	2.92	0.91	4.01	0.59	13.34	0.000
<b>Complications&amp; prevention.</b>	3.53	0.88	3.94	0.60	6.80	0.001
<b>Medical and surgical treatment options.</b>	2.90	0.90	3.47	0.60	10.12	0.000

Pre and postoperative care.	3.18	0.93	3.79	0.55	7.56	0.001
Healthy lifestyle factors.	2.85	0.74	4.03	0.59	15.61	0.000*
Total knowledge score.	19.29	2.69	22.85	2.90	16.31	0.000*

**Table (4):** The symptoms caused by prolapsed uterus for menopausal women undergoing surgery before and post-discharge protocol (n=210).

Symptoms	Before (Baseline)		Post-discharge (three months)		T	p-value
	No	%	No	%		
<b>Vaginal bulge</b>						
Yes	10	4.76				
No	200	95.24	0	00.00	9.40	0.00000*
<b>Discomfort/pain</b>						
Yes	90	42.86	4	1.90		
No	120	57.14	206	98.00	12.31	0.00000*
<b>Feeling something coming down</b>						
Yes	20	9.52				
No	190	90.48	0	00.00	7.81	0.00000*
<b>Affected walking activities</b>						
Yes	20	9.52				
No	190	90.48	0	00.00	10.13	0.00000*
<b>Urinary problems (incontinence or urine retention)</b>						
Yes	40	19.00				
No	170	81.00	0	00.00	8.56	0.00000*
<b>Vaginal bleeding or discharge</b>						
Yes	10	4.76				
No	200	95.24	0	00.00	13.60	0.00000*
<b>Difficulties with sexual relation</b>						
Yes	90	42.86	3	1.43		
No	120	57.14	207	98.57	15.30	0.00000*

**Table 5:** The quality-of-life domain mean scores before intervention and post-discharge protocol (n=210).

The quality-of-life domain	Before (Baseline)		Post-discharge (three months)		p-value
	Mean	SD	Mean	SD	
<b>Physical</b>					
General health perception.	42.8	19.9	55.2	27.1	< 0.001
Uterine prolapse impact.	42.8	25.7	43.8	28.9	< 0.001
Physical limitation.	47.6	20.4	55.6	24.8	< 0.002
Work capacity.	45.5	21.1	55.2	24.3	< 0.003
Sleep disturbance.	47.9	21.8	55.6	23.7	< 0.000*
Sexual activity.	44.2	20.2	53.6	23.1	< 0.000*
Activities of daily living limitations.	46.8	20.7	59.1	21.4	< 0.000*
<b>Social</b>					
Intimacy.	62.2	20.7	66.0	23.9	< 0.002
Social support.	60.0	16.8	66.9	19.8	< 0.002
Social contact activities.	55.1	17.7	62.1	21.8	< 0.001
Social limitations.	65.2	21.4	66.4	22.7	< 0.000
<b>Psychological</b>					
Depression.	24.6	8.7	8.6	8.6	0.001
Anxiety.	11.6	2.4	11.9	2.8	< 0.000
Worry.	14.0	5.7	14.7	2.9	0.05
Emotional problems.	13.0	2.9	14.1	3.8	< 0.001
Negative feeling.	3.30	1.36	3.40	1.49	< 0.001
<b>Environmental</b>	10.0	2.3	13.1	3.4	< 0.001
<b>Overall health and quality of life</b>	7.8	3.2	13.5	3.9	< 0.000*

## Discussion

The surgical treatment includes the correction of all the defects in uterine prolapse. The surgical method was determined by the severity of prolapse with its degree; the prolapse

symptoms; the woman's general health, and activity level. At discharge, women were informed to avoid sexual intercourse and heavy lifting/workload for approximately one month and asked to have a follow-up in hospital at 3 months (Shrestha, et al., 2014).

The present study demonstrated that nearly three fourth of the studied women were suffering from uterine prolapse for one year or less. Two-thirds of them had 2<sup>nd</sup>-degree uterine prolapse. A significant improvement was noted in women's knowledge (table 3) at follow-up three months after surgery compared to patients' scores before surgery. Women preoperatively have negative effects on personal relationships, physical impairment, and roles. A significant improvement in women's quality of life was reported after the nursing post-discharge protocol at three months for the above-listed domains (table 5). Also, body mass indexes Mean were  $24.8 \pm 2.49 \text{ kg/m}^2$  for nonobese women and  $37.9 \pm 3.98 \text{ kg/m}^2$  for obese women.

The present finding was also relatively consistent with the study of (Swift, et al, 2003). Who observed that the prolapse quality of life of the studied participants had improved, this includes the improvement of symptoms, which leads to improvement of the different aspects of the health-related quality of life.

This result was in agreement with (Good et al., 2013), who found that prolapse meaning-related knowledge is low in women seeking care for prolapse symptoms. Moreover, (Shrestha, et al., 2014) found that more than half of the women in her study had never heard about uterine prolapse. This result was also matched with (Dhital, et al., 2013) who mentioned that there was an improvement in quality of life after surgery for pelvic organ prolapse. The strengths of the current study include testing a discharge program and highlighting the need for health education and awareness campaign about uterine prolapse surgery among this vulnerable group. Meanwhile, the current study also had certain limitations such as recall bias (2months recall period). 2- Self-reporting of data with the possibility of over and under-reporting 3- Restriction to the small sample size of menopausal so generalization of findings couldn't be gained.

Moreover, the study of (Binjwala, et al., 2015) mentioned that stages of uterine prolapse were correlated with quality of life such as physical health, emotional stress, social limitation, intimacy, anxiety, worry, and environmental problems.

The present work revealed that a significant reduction in uterine prolapse symptoms was detected (Table 4) at three months post-discharge intervention. At baseline, discomfort/pain that aggravates when standing, affected walking activities, urinary problems, vaginal bleeding or discharge, and difficulties with sexual relationships. These symptoms were reduced significantly after surgery. Furthermore, this is in agreement with (Pizarro, et al, 2016) who found that women with uterine prolapse reported worse self-perceived associated with depression and poor psychosocial functioning. Depression is also associated with developing a severe degree of uterine prolapse symptoms, functional impairment, and impaired quality of life. Our study approved that after post-discharge protocol, a dramatic improvement not only in the quality of life, prolapse symptoms, and body image but also in depressive symptoms 3 months after surgery.

The study (Paneru, 2016) found that, a major common risk factor of uterine prolapse with statistically significant prevalence was low educated women, among more than two-thirds of the studied women; This similarity could be explained, low education, have silent ignorance, and unhealthy lifestyle, which make them unable to seek health care. These factors made them more prone to have uterine prolapse than others. They referred to education as the most important indicator of understanding the socio-economic status and level of awareness among the women. It influences their decision toward health-seeking behavior.

Also, the present finding was supported by (Fünfgeld, et al., 2017) who reported great benefits in many aspects of life after educational programs or protocol and surgery options. The remarkable improvement found in menopause women in knowledge domains post-discharge is also significant in every aspect of the quality of life. The surgical and non-surgical options improve the overall quality of life and enable them to perform daily household and/or outdoor jobs.

The study of (Shrestha, et al, 2017) which was about "women's experience and seeking medical care in the mountains of Nepal related to uterine prolapse" reported that more than one-

third of women with uterine prolapse are between 35 and 50 years old, this similarity with the arrest study could be explained in the light of the advancement of women's age and hormonal change as predisposing factors for uterovaginal prolapse. The current finding was similar to the study of (Belayneh, et al., 2019) who found an improvement in women's quality of life and women's knowledge to ensure satisfying outcomes of the post-discharge protocol. Thus, our study adds to the evidence that nursing post-discharge protocol can be used as a patient-reported outcome measures tool to demonstrate patient impact nursing protocol after surgery.

### Conclusion:

To sum up, based on the results of this study, there were improvements in knowledge scores for menopausal women undergoing prolapsed uterus surgery after the implementation of the nursing post-discharge protocol. A significant difference was also observed in many quality-of-life domains after the implementation of the nursing protocol.

### Limitations of the study

The study contributes to evaluating the nursing post-discharge protocol on quality of life among menopausal women undergoing gynecologic surgery. This will increase the knowledge and evidence about uterine prolapse complications among menopausal women. It sheds light on the improvement after conducting the nursing protocol. However, several limitations exist in this study. First, generalization is limited as the study was done only with subjects from one hospital. Second, asking the participants to wait after duty hours was difficult.

### Recommendations:

1. Menopausal women undergoing gynecological surgery should receive counseling about a nursing post-discharge protocol on quality of life.
2. Implement the nursing post-discharge protocol on a larger sample size to gain more generalization of data.
3. Further studies are needed in this field to assess the effect of health education

programs on women's knowledge regarding risk factors and preventive measures to recurrence of uterine prolapse.

4. Repetition of the study by using a qualitative approach to assess the experience of women with uterine prolapse.

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