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The effect of designed nursing guidelines applying on knowledge and anxiety among women undergoing hysterectomy

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Abstract---Background: Patients who have undergone a hysterectomy should get care that meets both their physical and psychological requirements, and this care must include the patients' relatives. Aim: To evaluate the effect of designed nursing guidelines applying on knowledge and anxiety among women undergoing hysterectomy. Design: A quasi-experimental design was used to accomplish this study (pre/post-test). Setting: The study was conducted at the obstetric outpatient clinic at Mansoura University Hospital. Subject: A convenient sampling technique of 50 women undergoing hysterectomy who were attended in the previously selected setting was used. Tools: *two tools were used* (I) a structured-interview questionnaire, which consisted of three parts demographic data, obstetric history and history about hysterectomy, and Women's knowledge regarding hysterectomy, and (II) a State-Trait Anxiety Inventory. Results: The current study found that there was a highly statistically significant difference between women's knowledge of pre and post-designed nursing guidelines applying. women undergoing hysterectomy who were exposed to the designed nursing guidelines experienced lower mean anxiety scores post-nursing guidelines than those pre-nursing guidelines applying ($P = <0.05$). Conclusion: Designed nursing guidelines applying have a positive effect on improving knowledge and reducing anxiety among women undergoing hysterectomy. Recommendations: Designed nursing guidelines are recommended for women undergoing hysterectomy to improve their knowledge and reduce anxiety levels.

Keywords---Anxiety level, designed nursing guidelines, knowledge, women undergoing hysterectomy.

Introduction

Hysterectomies are typically performed on premenopausal women for benign disorders, with fibroids, dysfunctional bleeding, endometriosis, and prolapsed pelvic organs being the most common causes of these operations (Shrivastava & Chaudhry, 2015). Hysterectomy is an important procedure to relieve the pain associated with gynecological pelvic discomfort, unusual uterine hemorrhage, dyspareunia, and dysmenorrhea are some of the symptoms and hypermenorrhea. (Ashrafi et al., 2017) Hysterectomy is the most common non-obstetric treatment for women and affects 1 in 9 women globally throughout their lifetime. Inpatient hysterectomies were carried out on adult women for 62,364 non-obstetric reasons nationwide. The majority (84.9%) of hysterectomies were done for benign reasons, with the most common diagnoses for benign hysterectomies being vaginal prolapse (2.0%), menstruation disorders (48.0%), and uterine fibroids (50.0%). Gynecologic malignancies accounted for 15.1% of hysterectomies (Desai & Vrunda, 2015). It could be both partial and total. It is considered a severe form of maternal morbidity due to the risks associated with anesthesia and surgical intervention (D'Arpe, 2015).

Patients who have had hysterectomies should get care that meets both the patient's medical and psychological needs must be met, and the patients' families must be involved in this care. In addition to other psychiatric treatments, it is frequently forgotten to offer sound information, emotional support, and counsel. Women who have had hysterectomies typically exhibit interest in counseling and joining support groups because they believe that sharing information and experience will improve their health (Nausheen et al., 2016).

Due to the abrupt drop in female hormones in circulation, hysterectomy unavoidably causes significant alterations in the female body. These adjustments could be social, sexual, psychological, or bodily. Surgical menopause, which also has an impact on the woman's mind and extends to her social life, is the primary cause of the physical and sexual changes that follow a hysterectomy (Clarke & Geller, 2013).

In total, a hysterectomy was linked to a 26% relative risk increase for sadness and a 22% relative risk increase for anxiety. A hysterectomy placed women under the age of 35 at a 47 percent higher risk for depression and a 45 percent higher risk for anxiety. A hysterectomy is one of the most common obstetrical and gynecological operations performed worldwide. It has a significant death rate. In Egypt, 165,107 hysterectomy instances were recorded (Rathbone & Rathbone, 2019).

To help obstetric nurses increase women's awareness and anxiety, designed nursing guidelines are applied. Help a woman who has had a hysterectomy manage the different side effects of the procedure and get used to the way her body will now work. The woman can increase her expertise by using a holistic

perspective and nursing care delivery. To reduce anxiety in women having hysterectomies, the nurse can assist the patient in making the necessary modifications (Kendall & Fairman, 2014).

Significance of the Study

Hysterectomy patients experience a wide range of medical, before and following the treatment, there may be psychological, emotional, social, or sexual concerns. Depression and anxiety may be more common in women who undergo hysterectomies. The main causes of these issues are inadequate information, a lack of assistance and counseling, and worries and anxieties based on incorrect information (Wheeler, 2014). Hysterectomy incidence in Egypt was calculated to be 165,107 per year throughout all governorates in Upper Egypt (Health grades, 2016), indicating that there are a sizable number of women in the Egyptian population who are affected by the condition.

Aim of the study

This study aimed to evaluate the effect of designed nursing guidelines applying on knowledge and anxiety among women undergoing hysterectomy through:

- 1) Assessing women's knowledge regarding hysterectomy.
- 2) Assessing Women's anxiety mean scores pre and post-designed nursing guidelines applying
- 3) Designing nursing guidelines according to women undergoing hysterectomy requirements.
- 4) Evaluating the effect of designed nursing guidelines applying on knowledge and anxiety among women undergoing hysterectomy.

Research Hypothesis

The current study hypothesized that designed nursing guidelines applying regarding hysterectomy are expected to improve women undergoing hysterectomy and reduce anxiety.

Subjects and Methods

Research design

This study (pre/post-test) was carried out according to a quasi-experimental design.

Setting

The study was conducted at the obstetric outpatient clinic at Mansoura University Hospital.

Subject

A convenient sampling technique of 50 women undergoing hysterectomy who were attended in the previously selected setting was used.

Tool of data collection

Tool (I), A structured interview questionnaire, The researchers created closed-ended questions based on a literature review. It had three parts and was written in clear, simple Arabic.

Part (1): Demographic data of the women included 4 items including; age, residence, educational level, and occupation

Part (2): Used to collect data on the obstetric history of the women & history regarding hysterectomy such as the number of pregnancies, presence of other diseases, Indications of hysterectomy, types of hysterectomy, and techniques of hysterectomy.

Part (3) Women's knowledge regarding hysterectomy, to determine the investigated women's level of knowledge of hysterectomy, including its definition, kinds, causes, risk factors, complications, and follow-up (Pre/post-designed nursing guidelines applying).

Scoring System

There are 22 questions and at least 4 answers in total for each one. Scores were awarded for the right response (2 points) and the wrong answer (0 points). The incorrect answer received a score of 1. After calculating the overall score for all of the answers, the response "do not know" was deemed to be wrong and received a score of 0. Using the same scores as the multiple-choice questions, the responses to the open-ended questions were rated as accurate, incorrect, or incomplete. The results of the women's questions were scored using the established methodology. Total accurate answers for the questions were 22, or 100%, and based on the replies of women, the knowledge satisfaction level was rated as satisfactory for answers that accounted for any total of 50% or more correct answers and unsatisfactory level for any total of less than 50% correct answers.

Tool (II):- State-Trait Anxiety Inventory

The Spielberger State-Trait Anxiety Inventory is a self-assessment questionnaire made up of brief statements that can be used to gauge one's level of state-trait anxiety (Spielberger, 1972). In 20 of the items, participants were asked to describe how they felt about themselves in a particular position and under certain conditions, while also considering how they felt about the circumstance in which they were present.

The direct and reverse expressions in this section are separated. The scoring was done using the SPSS program in a computer setting. There were initially two distinct scales designed for the direct and inverted expressions. After being positive for direct expressions and negative for negative inquiries, the total weighted score for the negative expressions is removed from the total weighted score for the direct expressions.

Scoring system

The scale's items, which rate the severity of state-trait anxiety, are scored as follows: "none," "some," "many," and "completely" (4). The average score is 80, with 20 being the lowest.

Content validity and reliability of tools

To test the face, a panel of 5 specialists in obstetric and gynecological nursing from Mansoura University reviewed the tools. Each expert was allowed to assess the tools' content coverage, phrasing, length, format, and total appearance. Rephrasing and canceling for four questions were added as modifications in response to the comments. Using the test-retest approach, the reliability of the instrument was investigated, and the Pearson Product Correlation Coefficient was used to calculate its value, which came out at 0.87.

A Supportive Material designed nursing guidelines applying for women undergoing hysterectomy: (5) Nursing experts and consultants of an obstetrician at Mansoura University Hospital concerned with providing the patient with the necessary information about hysterectomy, types, causes, risk factors, complications, and post-hysterectomy care. It was designed and developed by researchers in simple Arabic language in light of related literature. The document was then reviewed by a jury of performed.

Data collection

Phases of preparation, implementation and assessment were used to carry out the current study.

Preparatory phase

To help with the creation of data collection methods and the creation of designed nursing guidelines, a study of the recent and prior literature was conducted, covering many parts of the issue. This was done utilizing textbooks, journals, periodicals, and internet searches.

Ethical considerations

The administrators of the settings were formally requested to allow the researchers to meet the women after explaining the goal of the study through formal letters from the administrator of the nursing faculty at Mansoura University. Women had the option to withhold information, and the researchers strictly protected the women's privacy, confidentiality, and anonymity while emphasizing reassurance and safety to lessen the women's worry.

Pilot Study

Before completing the actual study, a pilot study was done to determine the amount of time needed to complete the forms and to evaluate the tools' consistency, applicability, and clarity of the material. Fifty women who were having hysterectomies—who were not included in the main study sample—were

used for the pilot study. From there, the tools underwent the necessary corrections, omissions, and additions until they took on their final form.

Field of Work

Beginning in June 2019 and ending in February 2020, the actual fieldwork was completed over nine months. - The researchers were accessible on these 2 days from 10:00 a.m. to 2:00 p.m. at the Mansoura University Hospital weekly Wednesday and Thursday outpatient clinic. - At the Outpatient Clinic of the Mansoura University Hospital, data were gathered from the ladies through one-on-one interviews. That took roughly an hour for each interview. - The development of the data collection tool based on the literature study took one month before the evaluation.

Data collection, questionnaire completion, and the designed nursing guidelines applying each required eight months. -The follow-up for all women who had undergone hysterectomy was initiated as soon as the baseline examination was complete. - Informed women who had hysterectomies were encouraged to contact the researchers by phone at any time for advice or to report any health issues. Three phases of the designed nursing guidelines applying were: Step 1: One month of assessment preparation It was based on the literature review (pre/post-test) that was conducted as part of the planning stage for creating the data collection tool used for the interviews.

Design and implementation during Phase II (8 months): The pre-built tool was used to analyze the actual requirements of women following a hysterectomy to create the designed nursing guidelines. The broad purpose, content, teaching strategies and tools employed were all decided upon before creating the designed nursing guidelines. The overall goal was to increase women's knowledge and anxiety levels following a hysterectomy. Content: Material was created to fulfill the demands of women who had hysterectomies and to correspond with their understanding and level of interest.

Lectures with presentations and group discussions were the primary teaching methods used for the theoretical portion. A laptop, posters, and a booklet were among the teaching tools. The sessions were held in the selected setting of Mansoura University, at the front desk of the outpatient clinic. There were 4 hours in all of the sessions. Each session lasted a maximum of 1-2 hours. The sessions had the following two components: Part I: To increase women's knowledge of hysterectomy and their anxiety, researchers are disseminating data on the term's meaning, types, causes, high-risk factors, surgical techniques, complications, post-hysterectomy high-risk diseases and issues after hysterectomy.

The designed nursing guidelines applying and their goals were introduced at the beginning of the first session. Beginning with the second session, each one began with a summary of the information presented at the prior session and the goals of the current one, keeping in mind that all women who had undergone hysterectomy should be addressed using language that was basic and obvious. In each session at the conclusion, a summary was prepared, time was set out for

questions and answers, and a schedule for the subsequent session was laid out. According to each woman's follow-up period, the researchers confirmed with the women a day for the following session. Except for the final session, sessions ended through feedback.

A Jury of specialists, and professors in the fields of gynecological & obstetric nursing, assessed the content validity and clarity of the illustrated booklet for the designed nursing guidelines. The necessary adjustments were made in light of their feedback, and the designed nursing guidelines book's final version was distributed. The researchers provided the women with designed nursing guidelines by applying illustrated booklet in Arabic that served as a women's referral guideline.

Phase III: Evaluation of the designed nursing guidelines applying

The post-test questionnaire, which had the same format as the pre-test, was used to evaluate the designed nursing guidelines applied to examine changes in the knowledge and anxiety of the women over time using the same pretest tools.

Administrative Design

The medical and nursing directors of the aforementioned setting received formal approval to conduct the study through a letter from the dean of the nursing faculty at Mansoura University. The letter provided the study's title, purpose, and anticipated results.

Statistical Design

The gathered information was arranged, reviewed, evaluated, tallied, and then analyzed using the number and percentage distribution. Using a statistical tool for social sciences, a computer performed the statistical analysis (SPSS). The Chi-square test was used to compare qualitative variables, while the Pearson correlation coefficient (r) for continuous parametric variables was used to compare quantitative variables. The following was thought regarded as the results' significance: $P < 0.05$ and $P < 0.001$ indicate a statistically significant difference, whilst $P > 0.05$ indicates a statistically insignificant difference.

Results

According to Table 1, the average age of the women undergoing hysterectomy who participated in the study was 47.67 ± 8.24 years, 70% of them were from urban regions, 64% had preparatory education, and 80% of them were housewives.

According to Table 2, 30% of the women in the study had given birth more than five times. Respectively, (56%, 38%, and 48%) suffer from diabetes, hypertension, and cardiac disorders. According to indications for hysterectomies, 70% of the women undergoing hysterectomy who participated in the study had hysterectomies because of fibroids, 86% of the study's women underwent total hysterectomies, and 88% of those operations were performed via the abdomen.

Figure (1) shows that there was a statistically significant difference in the total knowledge of the studied women before and after the designed nursing guidelines

applying at ($X^2 = 78.18$ at $p 0.05$). Before the implementation, only 24% of the women have a satisfactory level of total knowledge, whereas, after the implementation, 78% of them had a satisfactory level of total knowledge.

Table (3) demonstrates that there was a significant difference in the mean anxiety score for women undergoing hysterectomy before and after designed nursing guidelines applying, with a decrease at ($P < 0.001$).

Table (4) shows that there was a statistically significant difference between the total knowledge score and their anxiety scores with a p -value < 0.05 of the studied women undergoing hysterectomy after designed nursing guidelines applying.

Table (1): the studied women undergoing hysterectomy distribution according to their demographic characteristics (N=50)

Demographic data	No.	%
Age (years)		
20-29... yrs	1	2.0
30-39... yrs	3	6.0
40-49... yrs	32	64.0
More than 50 yrs	14	28.0
Mean = 47.67 ± 8.24		
Educational level		
Preparatory	32	64.0
Secondary	16	32.0
High education	2	4.0
Occupation		
Works	10	20.0
Housewife	40	80.0
Residence		
Urban	35	70.0
Rural	15	30.0

Table (2): The studied women undergoing hysterectomy distribution according to their obstetric, history of hysterectomy (N=50)

Items	No.	%
No. of pregnancy (50)		
Nulligravida	10	20.0
Primigravida	14	28.0
2-4	11	22.0
>5	15	30.0
*presence of another disease		
Diabetes	28	56.0
Hypertension	19	38.0
Cardiac disorders	23	46.0
Indications of hysterectomy:		
Fibroids	37	74.0
Prolapse	6	12.0
Endometriosis	1	2.0

Peripartum hysterectomy	6	12.0
Types of hysterectomy:		
Total hysterectomy	140	86.0
Subtotal hysterectomy	20	14.0
Techniques of hysterectomy:		
Abdominal	44	88.0
Vaginal	6	12.0

*Responses are not mutually exclusive.

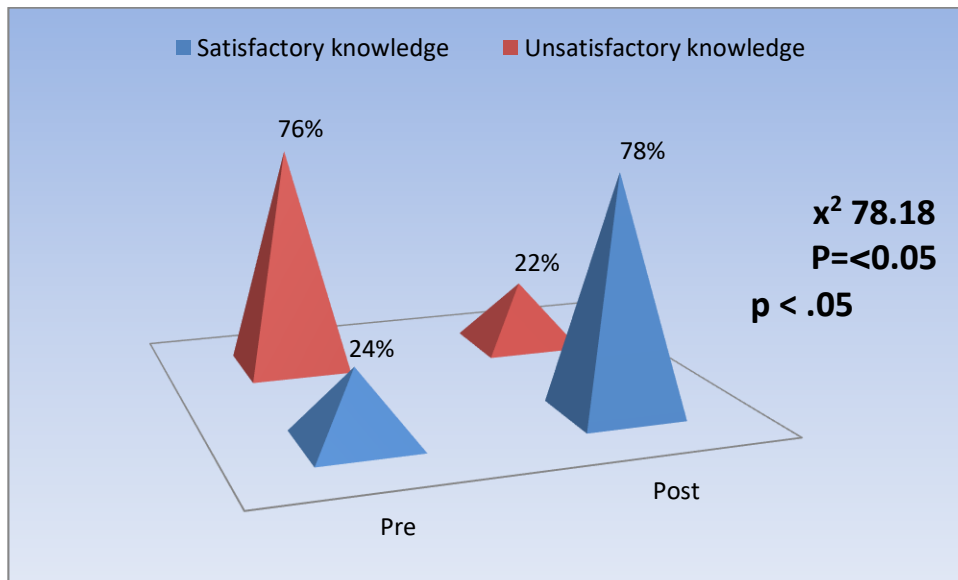


Figure (1): The studied women's total knowledge about hysterectomy pre/post designed nursing guidelines applying. (n= 50)

Table (3): Differences in the studied women's anxiety mean scores pre/post-designed nursing guidelines applying

Item	Pre-designed nursing guidelines applying	Post-designed nursing guidelines applying	t-test	p-value
Anxiety mean scores	43.33 ± 7.56	24.23 ± 2.41	17.78	<0.001**

t: paired sample t-test P: **: Highly statistically significant at $p < 0.001$

Table (4) Correlation between total women's knowledge and their anxiety pre and post-designed nursing guidelines applying (N=50)

Total women's knowledge	Anxiety levels	
Pre-designed nursing guidelines applying (N=50).	r	0.132
	p	.126
Post-designed nursing guidelines applying (N=50).	r	0.563
	p	.000

P: **: Highly statistically significant at $p < 0.001$

Discussion

A hysterectomy has been performed on roughly 37–39% of women by the time they are 65 years old, with this age group having the highest prevalence. A positive attitude towards hysterectomy can only prevent many problems if women are fully informed on the causes and effects of the procedure. Hysterectomies have become more common recently for a variety of causes. Problems could arise depending on the operation and anesthetic. The clinical experience revealed that many patients were unaware of hysterectomy. In a study, 66% of the female participants reported they were interested in learning more about the implications of hysterectomy (Graw & Beyond, 2018).

The majority of the women undergoing hysterectomy were a mean age of 47.67 ± 8.24 years, according to the study's findings. According to the researchers, these traits are expected in the sample because they are frequently connected to conditions that could suggest a need for a hysterectomy. The average age of women having hysterectomies was 44.5 years, which is consistent with this conclusion, according to a study by Kjlhede et al. (2019) to assess the effect of stress on their recovery after abdominal hysterectomy. The researchers conclude that menopause and its associated hormonal changes often start at this age.

The results of the current study revealed that less than three-quarters of them had preparatory education, the majority of them were housewives, and most of them lived in urban areas. This finding was consistent with Persson, et al., (2013) who studied "Pelvic organ prolapse after a subtotal and total hysterectomy of the Sweden women," which found that the mean age of the studied women was 44.48 years and suggested that this may be attributed to the high prevalence of uterine fibroids, the primary reason for the hysterectomy, among women between the ages of 40 and 49. This study's findings contradict those of Ali (2018), who examined the "El Manial University Hospital's Nursing Care Protocol on Reducing Post-Hysterectomy Problems" and discovered that more than half of the women's level of education was read and written.

In the current study, it was discovered that more than one-third of them had given birth to children more than five times. This may be because the majority of the women had low levels of education and were unaware of the risks associated with multiple pregnancies, including the need for hysterectomy and the development of chronic diseases, and nearly half of them had hypertension.

Regarding the history of hysterectomy among the women in the study, it was revealed that the majority of the women undergoing hysterectomy were because of fibroids and that they had previously experienced pelvic pain and vaginal bleeding as a result. This study's findings were in agreement with those made by Katon et al., (2017) in their study on "Trends in hysterectomy rates among women veterans" in the United States, which was published in Washington.

The majority of the women in the study who had hysterectomies had total abdominal approaches, which, in the researchers' opinion, was because the majority of hysterectomies were performed because of fibroid tumors, which can't be removed vaginally, as well as the women's age at the time of the procedure, which was a significant predictor of choosing the first type due to the high risk of developing ovarian cancer in the future and the fact (physical, psychological and sexual). It could prevent her from returning to her normal life quickly and increase her anxiety.

The findings are consistent with those of Banovcinova and Jandurova (2016) who examined 70 women who had undergone hysterectomies and discovered that about half of them had abdominal hysterectomies. Nalini Devi K et al. (2015) also discovered that more than two-thirds of the women in the experimental group had undergone abdominal hysterectomies.

Less than a quarter of the studied women had satisfactory total knowledge of pre-designed nursing guidelines applying, whereas three-quarters of them had satisfactory total knowledge post- designed nursing guidelines applying, showing that there is a statistically significant difference improvement in women's knowledge after designed nursing guidelines applying regarding hysterectomy.

The findings are consistent with those of Padma Priya, et al. (2017), who demonstrated in their study that 20 out of 30 women in the experimental group (66.67%) had subpar pre-test knowledge scores. Yet, following the intervention, 5 out of 30 (16.67%) and 22 out of 30 (73.33%) got good knowledge scores respectively. Contrarily, in the control group, 16 out of 30 (53.33%) had bad pre-test knowledge scores, and in the post-test, the majority of women had poor knowledge scores—19 out of 30 (63.33%).

This may be because as people's understanding has grown, they have stopped intervening in hazardous lifestyles and have started following instructions that promote better health and hence fewer difficulties. It implied that the designed nursing guidelines applying were successful. The study's findings thus place high importance on designed nursing guidelines applying regarding hysterectomy. A highly statistically significant difference between women's knowledge before and after the designed nursing guidelines applying was found in the current study's findings to indicate that women's comprehension of hysterectomy improved. This illustrated the value of advising women to get hysterectomy surgery after designed nursing guidelines applying.

This result is analogous to research conducted in Bengaluru in Mathew, (2020) to assess the knowledge of postoperative care among 30 women undergoing abdominal hysterectomy before and after a structured education program.

Women are now more knowledgeable about a few crucial aspects of postoperative hysterectomy care, according to the study's post-test results.

The present study's findings showed that there was a significant difference in the mean anxiety score for women undergoing hysterectomy before and after designed nursing guidelines applying, with a decrease. This demonstrates the effectiveness of designed nursing guidelines applying in the researchers' view. This showed how important it is to appreciate the aim of designed nursing guidelines applying, which is to reduce anxiety related to hysterectomy. This proved the value of designed nursing guidelines as well as their efficacy.

It was determined that there was a statistically significant difference between the total knowledge score and the anxiety scores of the studied women undergoing hysterectomy after the designed nursing guidelines applying. According to Merighi, et al., (2019), all of the participants in the study "Experiences and expectations of women submitted to hysterectomy" in Brazil positively experienced hysterectomy because of the educational activities that the women had engaged in before the hysterectomy that had the objectives of dispelling women's doubts, reducing their anxieties concerning the hysterectomy procedure, and demystifying all the symbolic content. This indicates that women's knowledge deficit before designed nursing guidelines applying enhances their notions and consequently, their anxiety

Conclusion

Based on the results of the current study, it can be concluded that the research hypothesis is justified since the designed nursing guidelines applying have a positive effect on improving knowledge and reducing anxiety among women undergoing hysterectomy.

Recommendations

The following recommendations are put forth in light of the findings and analysis of the current study:

- To increase their understanding and lower their fear, designed nursing recommendations are advised for women having hysterectomies.
- To generalize the findings, the current study must be replicated with a wider sample of women in various contexts.
- Further research needs to be done, with a particular focus on the use of nursing instruction guidelines for women regarding post-operative discharge care of hysterectomy.

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