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Effect of Nursing Instructional Guideline on Women's Quality of Life after Hysterectomy

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Abstract: **Hysterectomy is the most common gynecological surgical procedure among women, many complications with serious consequences may occur. The aim of this study was to evaluate the effect of nursing instructional guideline on Women's Quality of Life after Hysterectomy. Research design: A quasi-experimental design was used. Setting: This study was carried out at the outpatient clinics of Ain Shams University Maternity Hospital. Sampling: A purposive sample of 160 women with hysterectomy was conducted. Tools: First Tool: Structured Interviewing Questionnaire: Part I: Socio-demographic characteristics of the women, Part II: Part II: Designed to collect data of obstetric history of the women & Medical history of the related cause of hysterectomy, Part III: Assessment of the predisposing factors which were related to hysterectomy, Part IV: Designed to collect data about women's health complaints after hysterectomy, Part V: Assessment of the studied women's knowledge related to hysterectomy(pre and post intervention), Second Tool: Quality of Life Assessment. Results: the result of the study revealed that statistically significant differences in all items (vasomotor, sexual, social & psychological complaints) between pre/post implementation of instructional guideline, studied women' total knowledge indicated that 22.50% of them had satisfactory level pre-implementation compared to 74.30% of them post implementation and statistically significant difference (X2 =68.19 at p<0.05) between pre/post, moreover improvement of total quality of life after hysterectomy, where 10 % of studied women had good quality of life pre implementation compared to 41.80 % of them post implementation also showed statistically significant differences, also study showed statistically significant difference between the total knowledge and their health complaints of the studied women and statistical significant difference between the total knowledge score and their total quality of life. Conclusion: Based on the results of the current study, it can be concluded that, the research hypothesis is justified since the implementation of the instructional guideline led to significant improvements in women' knowledge and their quality of life after hysterectomy. Recommendation: Further studies should be conducted on application of Nursing Instructional Guideline women undergoing to hysterectomy operation.**

Keywords: **Hysterectomy, Quality of Life, Nursing instructional guideline.**

1. INTRODUCTION

"Quality of Life" (QOL) is an important outcome in health care system. World Health Organization (WHO) defines Quality of Life as "Individuals' perception of their position in life in the context of the culture and value systems in which they live and concerning their goals, expectations, standards, and concerns". WHO-QOL consists of 4 domains; physical health, mental status, social relationships, and environment. Women who had hysterectomy may affect directly to four domains of their quality of life (**World Health organization WHO, 2017)**.

Among premenopausal women, most hysterectomies are performed for benign conditions, with the most frequent indications being fibroids, dysfunctional bleeding, endometriosis, and pelvic organ prolapsed **(Shrivasatva & Chaudhry, 2015)**.

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Hysterectomy is the significant operation to reduce the suffering from gynecological signs and symptoms such as pain, abnormal uterine bleeding, dyspareunia, dysmenorrheal, hyper menorrhea and pelvic mass**. (Ashrafi, et al., 2016)**

Worldwide, hysterectomy affects 1 in 9 females during her lifetime and is the most frequently performed non obstetric procedure in women. Nationally, 62,364 inpatient hysterectomies were performed for non-obstetric indications in adult women. Most (84.9%) were performed for benign indications, with uterine fibroids (50.0%), menstrual disorders (48.0%), and genital prolapsed (2.0%) as the leading diagnoses for benign hysterectomies while hysterectomies for gynecologic malignancies represented (15.1%) **(Desai, 2015).**

Health complains among women after hysterectomy(post-operative complications) include hematoma or abscess in the minor pelvis, abdominal hemorrhage, vaginal bleeding, fever, urinary retention, stenosis or obstruction of the urethra, pelvic organ fistula, infection of the urinary tract , infection of the incision site , intestinal occlusion, numbness and tingling near the incision site, organ or tissue prolapsed, excessive hysterectomy scar tissue growth, loss of normal hormone levels, osteoporosis onset that occurs earlier, menopausal symptoms including hot flashes and severe mood swings **(Thomas, 2018).**

Hysterectomy obviously brings drastic changes in the female body due to the sudden decrease in the circulating female hormones. These changes can be physical, psychological, sexual or social ones. The physical and sexual changes after hysterectomy occur mainly by the act of the surgical menopause which also affects the woman's psychology and extend to the social life **(Clarke & Geller, 2013).**

Nursing Instructional Guidelines are a method of translating the best available evidence into clinical, communicable, organizational, in the hope of improving health-care , aid in decision making, providing optimal and holistic care to the women and refer patients with difficult problems to the relevant specialists and so ensure safe and high-quality life **(Digumarti, et al 2013).**

So, Nursing Instructional Guidelines help community health and obstetric nurses contribute in many important ways to the improvement of women's quality of life. In providing care to a woman with hysterectomy, help the woman to manage the various effects of the surgery and adjust to change in body function. The holistic viewpoint and nursing care delivery can help the woman to improve quality of life. The nurse can help the woman to make the changes needed in order to adjust to life with a hysterectomy **(Kendall & Fairman, 2014).**

Significance of the Study:

Women who undergo hysterectomy face a multitude of physical, psychological, emotional, social, and sexual problems both before and after the surgery. The major factors contributing to these problems are lack of proper information, lack of support and counseling, and fears and apprehensions born out of wrong information. So, it is important to appoint qualified community health nurses in order to interact with the hysterectomy women and their families. The aim of such interaction should be ensuring that the woman copes better with the hysterectomy and post-hysterectomy scenario by lessening the problems faced by the hysterectomy women **(Wheeler, 2014).**

In Egypt**,** hysterectomy incidence was estimated to be 165,107 annually all over governorates, divided between the upper and lower Egypt **(Health grades, 2016)**, that means that a considerable number of women suffering from the proposed problem in the Egyptian community.

Aim of the study

The aim of this study was to evaluate the effect of nursing instructional guideline on women's quality of Life after hysterectomy through:

1) Assessing women's knowledge regarding hysterectomy.

2) Assessing Women's quality of Life before implementation of nursing instructional guideline.

3) Designing and carrying out effect of nursing instructional guideline on Women's quality of Life after Hysterectomy.

4) Evaluating the effect of nursing instructional guideline on Women's quality of Life after Hysterectomy.

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Hypothesis

The current study hypothesized that nursing instructional guideline will improve quality of Life for women's after hysterectomy.

2. SUBJECTS AND METHODS

Research design: A quasi experimental design was adopted to carry out this study.

Setting:
The study was carried out at the outpatient clinics of Ain Shams University Maternity Hospital which lies at El- Abbasia square in Cairo and which mainly serves the population of east of Cairo. The mentioned hospital is considered the main maternity hospital in east of Cairo.

Sampling size and technique:

A purposive sample was used in the study. The total number of women with hysterectomy in Ain Shams University Maternity Hospital during the years of 2017 and 2018 was 458 women and selected of (20%) the total sample. The sample size (n) is calculated according to the formula:

n = [z2 * p * (1 - p) / e2] / [1 + (z2 * p * (1 - p) / (e2 * N))]

Where: **z** = 1.96 for a confidence level (α) of 95%, **p** = proportion (expressed as a decimal), **N** = population size, **e** = margin of error.

z = 1.96, **p** = 0.2, **N** = 458, **e** = 0.05

n = [1.962 * 0.2 * (1 - 0.2) / 0.052] / [1 + (1.962 * 0.2 * (1 - 0.2) / (0.052 * 458))]

n = 245.8624 / 1.5368 = 159.982

n ≈ 160

The sample was taken with the following inclusive criteria: Married women with hysterectomy, living with their partners, after at least one month of the surgery because the women after hysterectomy start follow up after one month of the surgery date.

Tool of data collection:

Structured Interviewing Questionnaire with closed ended questions was developed by the researchers based on literature review. It was written in simple, clear, Arabic language and consisted of five parts as the following:

Part I: Designed to collect data about the socio-demographic characteristics of the women had 7 items including; age, residence, educational level, occupation, and monthly income.

Part II: Designed to collect data of obstetric history of the women & Medical history of the related cause of hysterectomy:

Part IV: Designed to collect data about women's health complaints & health problems after hysterectomy **(Pre/post instruction guideline)**

1) Assessment of women's health complaints after hysterectomy**:** It covered the following: **Vasomotor complaints** which included hot flushes, night sweats, sleeping difficulties, weight gain, skin dryness, and hair fall. **Psychological complaints** which included sadness, sudden crying gags, lack of concentration, nervousness and irritability, and lack of self-confidence. **Sexual complaints** which included lack of sexual desire, lack of sexual arousal, lack of love and intimacy during coitus, vaginal dryness, and absence of orgasm. **Social complaints** which included difficulty of achieving daily social activities, inability to meet the family responsibilities, partner attitude change, relatives' attitude change, lack of interest by others, and financial difficulties that may obstruct follow up after hysterectomy.

Scoring System: A woman, who reported 30% of complaints or less, representing 1 or 2 complaints, was not considered having health complaints when calculating the total score.

Part V: Assessment of the studied women's knowledge related to hysterectomy: the meaning of hysterectomy, types, causes, risk factors, complications, and follow-up. **(Pre/post instruction guideline).**

Scoring System:

- It contains 22 questions; each question has 4 or more responses. The correct answer took score 2 and the incorrect answer took score zero. The incomplete answer took score 1. The response (do not know) was considered as an incorrect answer during collecting the total answers scores and took score zero. The answers of the open-ended questions were evaluated as correct, incorrect or incomplete with the same scores of the multiple-choice questions. The scoring system was followed to the outcome of women's responses to questions. Total correct responses of questions were 22 points equal to (100%) and according to women's responses, the knowledge satisfaction level was categorized as satisfactory level for 50% or more of the total correct answers and unsatisfactory level for less than 50% of the total correct answers.

Second Tool: Quality of Life Assessment (Pre/post instruction guideline): It contained assessment of the studied women's quality of life after hysterectomy using an assessment tool which was adopted from the World Health Organization **(WHO, 2010)** and was modified according to the study purposes. It measured the physical, psychological, social, and sexual domains of the women's' life after hysterectomy.

Scoring System:

- The quality of life assessment contained 23 items for all the domains; the physical domain contains 7 items, the psychological domain contains 7 items, the social domain contains 5 items, and the sexual domain contains 4 items.
- The responses were categorized into good, average, or poor; the good response took score 2, the average response took score 1, and the poor response took score zero.
- The scoring system was followed to the total of the women's responses. Total responses were 23 points equal to 100% and according to woman's responses, the quality of life assessment was categorized as good quality of life for more than 70%, average quality of life for 50% - 70%, and poor quality of life for less than 50% of the total responses.

Content validity and reliability of tools:

Tools were reviewed by a panel of 5 experts in obstetric and gynecological & community health nursing at faculty of nursing Ain Shams University to test the face. Each of experts was asked to examine tools for content coverage, clarity, wording, length, format and overall appearance. Modifications were done according to the comments "rephrasing and cancelling for four questions". The reliability of the instrument was carried out with test-re-test method and analyzed with Pearson Product Correlation Coefficient which yielded 0.83 after computation.

A Supportive Material Instructional Guideline for women after hysterectomy:

it was designed and developed by researchers in simple Arabic-language in the light of related literature and then reviewed by a jury of performed; (5) nursing experts and consultants of obstetrician at Ain Shams University Hospitals. The guideline was divided into 2 parts as follows: sample.

Part One: Concerned with providing the patient with the essential information about hysterectomy, causes, complications, technique, and. **Part two**: post-hysterectomy Care. including; lifestyle changes, management of common women problems after hysterectomy.

II Operational Design:

Preparatory phase:

A review of the current and past available literature, covering the various aspects of the problem, using textbooks, articles, magazines and internet search was done, to assist in the development of data collection tools and the preparation of nursing instructional guideline.

Ethical considerations:

Official permission was obtained by submission of formal letters issued from the administrator of the faculty of nursing at Ain Shams University to the settings' administrators to allow the researchers to meet the women after explanation of the study purpose. As regard to women, they had the right to refuse sharing and the researchers provided strict concerns for privacy, confidentiality, and anonymity of the women and stressed reassurance and safety to reduce the women's anxiety.

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Pilot Study:

A pilot study was carried out before conducting the actual study whereby; this was done to estimate the time required for filling in the sheets and to test content clarity, applicability and consistency of the tools. The pilot study was conducted on 10 women with hysterectomy from the total number of women were 458 women, who were excluded from the main study sample, then, the necessary changes were fulfilled by correction, omission or addition of items, until the final shape of the tools was reached.

Field of Work:

- The actual field work was done over a period of nine months from beginning of June 2019 up to the end of February 2020.
- The Outpatient Clinic in Ain Shams University Maternity Hospital runs every Wednesday and Thursday every week, the researchers were available in these 2 days from 10.00 a.m. to 2.0 p.m.

- Data were collected from the women through individual interviews at The Outpatient Clinic in Ain Shams University Maternity Hospital. Each interview took about one hour.

- Preparation for assessment took one month for developing the data collection tool based on literature review.

- Data collection and filling in of the questionnaire and application of the nursing intervention program took 8 months.

-The follow up was started immediately after finishing baseline assessment for all women after hysterectomy.

- Women who have hysterectomy were informed to be in contact with the researchers through telephone calls for any guidance, at any time, and for reporting any health problems.

The study implantation included 3 phases:

Phase 1: Preparation for assessment (1 month): It was based on the preparatory phase for developing the data collection tool obtained from the interviewing questionnaire, as well as literature review (pre/posttest).

Phase II: Design and implementation (8 months): The nursing instructional guideline was designed based on analysis of the actual needs of women after hysterectomy in pre assessment by using the pre constructed tool. The nursing instructional guideline was developed through determining the general objective, content, teaching methods and aids used.

The general objective: was to improve the knowledge, physical, psychological, social, and sexual aspects of quality of life for women after hysterectomy. Content: Content was designed to meet needs of women after hysterectomy and to fit into their interest and level of understanding. Teaching methods used in theoretical part were lectures with presentation and group discussions, while in practical part they were conducted through demonstration and re-demonstration. Teaching aids included: laptop, posters and a booklet.

The sessions took place at the reception of the Outpatient Clinic in Ain Shams University Maternity Hospital. The total number of sessions' hours was 10 (4 hours for theory sessions & 6 hours for practical sessions). The duration of each session was 1-2 hours. The sessions included the following two parts:

Part I: Promotion of women's knowledge about hysterectomy and quality of life, the researchers are providing information about meaning of hysterectomy, types, causes, high risk factors of hysterectomy, techniques of hysterectomy, complications of hysterectomy, post hysterectomy high risk diseases as well as women's health complaints and problems after hysterectomy.

At the starting of the first session, an orientation about the program and its purposes was given. From the second session, each one started by a summary about what was given through the previous session and objectives of the new one, taking into consideration using simple and clear language to suit the level of all women after hysterectomy. By the end of every session a summary was made, and time was allocated for questions and answers, and a plan for next session was presented. The researchers adjusted with women a day for the next session according to follow up time of each woman. Except for the last session, a termination of sessions through feedback was done.

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Part II: Practices for women' quality of life after hysterectomy included many activities, like Physical Domain (Easy and calm sleeping &Achieving daily routine work), Psychological Domain (Positive feeling about life), Sexual Domain(Comfort during coitus after hysterectomy), Social Domain (Receiving enough health care)and dealing with associated health problems & complaints (constipation, Vaginal pain during coitus, Vaginitis, Hot flushes, Nervousness and irritability and Difficulty of achieving daily social activities).The Nursing Instructional Guideline illustrated booklet was evaluated for its content validity and clarity by a panel of experts, professors in the fields of community and gynecological &obstetric nursing. In the light of their comments, the necessary modifications were carried out and the final form of the instructional guideline booklet was administered. The women were given the instructional guideline illustrated booklet, designed by the researchers in Arabic language, to serve as a referral guideline for women.

Phase III: Evaluation of the instruction guideline: Evaluation of the program was done by using the posttest questionnaire which was the same formats of pre-test in order to compare changes in women after in relation to their knowledge and their quality of life. It was assessed immediately post implementation of the nursing instructions guideline.

Administrative Design:

An official permission to carry out the study was obtained through an issued letter from the Dean of the Faculty of Nursing, Ain Shams University to the medical and nursing directors of the previously mentioned setting. The letter included the title, aim and the expected outcomes of the study.

Statistical Design

The collected data were organized, revised, scored, tabulated and analyzed using the number and percentage distribution. Statistical analysis was done by computer using statistical package for social sciences (SPSS). Qualitative variables were compared using Chi-square test and quantitative variables were compared using Pearson correlation coefficient (r) for continuous parametric variables. The significance of the results was considered as follows: When $P > 0.05$: it is a statistically insignificant difference, while $P < 0.05$ and $P < 0.001$: it is a statistically significant difference.

3. RESULT

Table (1): Distribution of the studied women according to their socio-demographic characteristics (N=160).

First (a): Socio-demographic data	No.	%
Age (years)		
20-29… yrs	3	1.9
30-39… yrs	9	5.6
40-49… yrs	104	65.0
More than 50 yrs	44	27.5
Mean = 46.56 ± 9.31		
Educational level		
preparatory	100	62.5
Secondary	51	31.8
High education	9	5.7
Marital status		
Married	160	100
Occupation		
Works	29	18.1
Housewife	131	81.9
Residence		
Urban	113	70.6
Rural	47	29.4
Monthly income		
Sufficient	69	43.1
Insufficient	91	56.9

Table (1): Shows that **the mean age** of the studied women was 46.56 ± 9.31 years, 70.6% of them were from urban areas, 62.5% of them had preparatory level while 81.9% of women were housewives 56.9% had **insufficient monthly incomes.**

Table (2): Distribution of the studied women according to their obstetric and past history (N=160).

First (b): Reproductive history	No.	%
No. of pregnancy (160)		
Nulligravida	30	18.8
Primigravida	45	28.1
2-4	30	18.8
>5	55	34.3
*Complaint of other disease (n=)	92	57.5
Diabetes	36	39.1
Hypertension	44	47.8
Cardiac disorders	12	13.1

*Responses are not mutually exclusive.

Table (2) reports that 34.3were pregnant for more than 5 times of the studied women had more and related to complain of other diseases illustrated(39.1,47.8,13.1 %) suffer from Diabetes, Hypertension, Cardiac disorders respectively.

Table (3): Distribution of the studied women according to history of hysterectomy (N=160).

Second (a): Woman health history	No.	%
Indications of hysterectomy:		
Fibroids	120	75.0
Prolapse	20	12.5
Endometriosis	2	1.2
peripartum hysterectomy	18	11.3
***Symptoms before hysterectomy:**		
Vaginal bleeding	115	71.9
Pelvic pain	119	74.4
Pelvic heaviness	83	51.9
Pain during intercourse	36	22.5
Menstruation disorder	54	33.8
Types of hysterectomy:		
Total hysterectomy	140	87.5
Subtotal hysterectomy	20	12.5
Techniques of hysterectomy:		
Abdominal	139	86.8
Vaginal	21	13.2
Complications after hysterectomy	51	31.9
Type of complications: (n= 51)		
Vaginal bleeding	2	3.9
Wound infection	17	33.3
Cervix prolapses	3	5.9
Urinary Tract Infection	3	5.9
Deep Venous Thrombosis	6	11.8
Urinary Incontinence	20	39.2

*Responses are not mutually exclusive.

Table (3) as regard to indications of hysterectomy reflects that 75.0% of studied women performed hysterectomy due to fibroids. And (71.9% and 74.4%) complained of vaginal bleeding and pelvic pain respectively. 87.5 of the studied women were total hysterectomy and 86.8 % of them were through Abdominal and 31.9% of the studied women had complications after hysterectomy and (39.2% & 33.3%) of them were urinary incontinence and wound infection respectively.

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Table (4): Differences between pre/post instructional guideline of the total health complaints after hysterectomy among the studied women (N=160).

Items	Health complaint Pre- Program		Health complaint Post -Program		X2	p- value
	No	%	No	%		
Vasomotor complaints	124	77.5	65	40.6	43.47	
sexual complaints	98	61.2	34	21.2	51.17	
social complaints	64	40.0	23	14.4	26.53	
Psychological complaints	63	39.4	13	8.2	43.14	**p < .05**

Statistically significant at P<0.05

Table (4) displays that there are statistically significant differences (p<0.05) in all items (vasomotor, sexual, social & psychological complaints) between pre/post implementation of instructional guideline among studied women after hysterectomy

Fig. (1): Percentage distribution of the studied women's total knowledge about hysterectomy Pre/post instruction guideline. (n= 160)

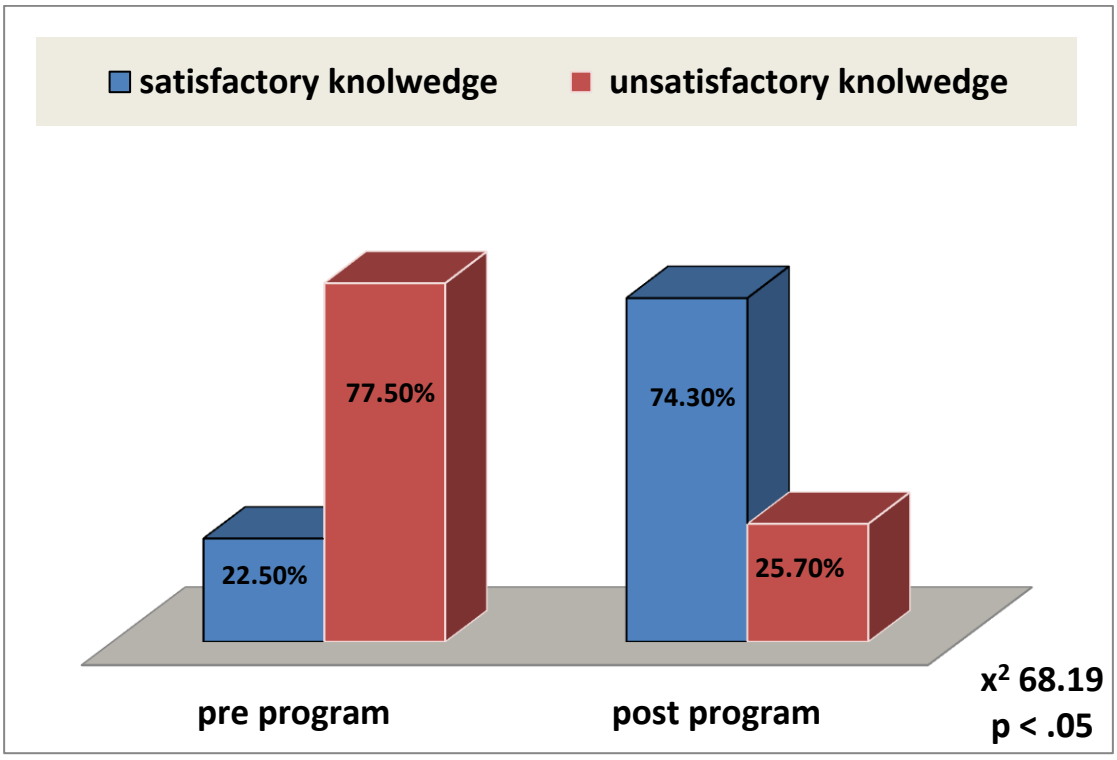

Fig. (1): illustrates that, there is statistically significant difference (X2 =68.19 at p<0.05) between pre/post implementation of instruction guideline regarding women' total knowledge, where 22.50% of studied women had satisfactory total knowledge pre-implementation compared to74.30% of them had satisfactory total knowledge post implementation.

Fig. (2): Percentage distribution of the studied women according to their total quality of life after hysterectomy Pre/post instruction guideline (n=160).

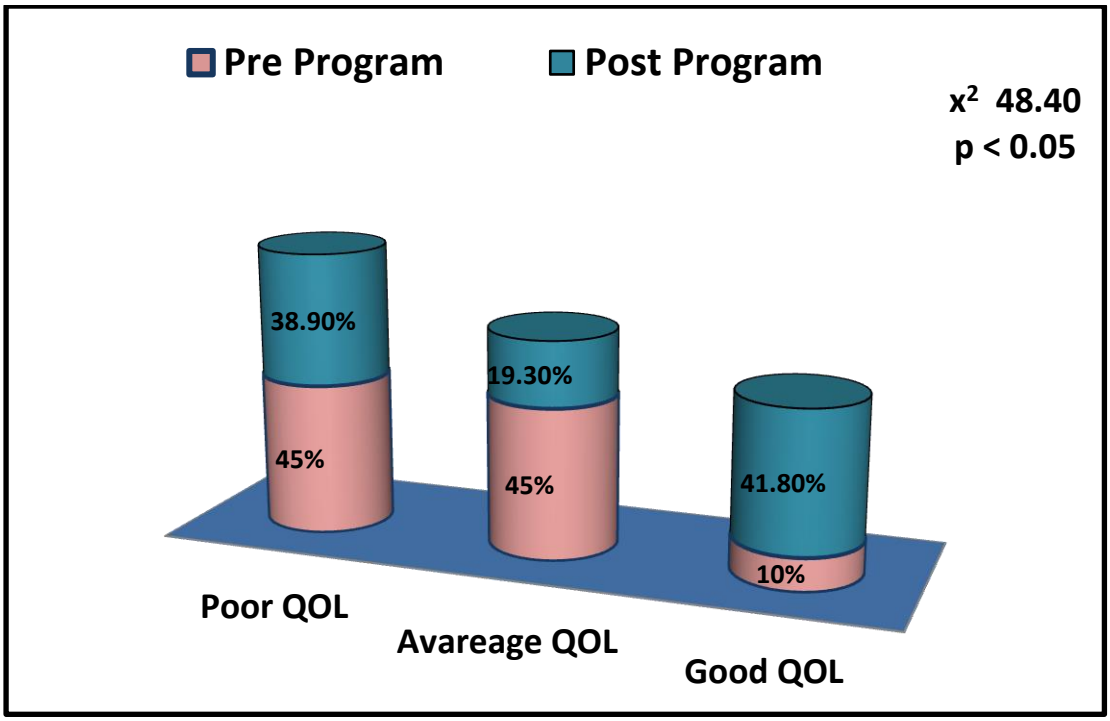

Fig. (2): displays that there are statistically significant differences (X2= 48.40 at p<0.05) between pre/post implementation of nursing instructional guideline of the studied women according to their total quality of life after hysterectomy, where 10 % of studied women had good quality of life pre implementation compared to 41.80 % of them had good quality of life post implementation .

Table (5) Statistical association between post instruction guideline total women' knowledge and total their post health complaints & problems after hysterectomy (N=160)

Post total knowledge	Post health complaints				Post health problems				χ2 test	
	Complaint (N=33)		Non complaints (N= 127)		occur (N= 25)		Not occur (N= 135)			
	No	%	No	%	No	%	No	%	χ2	P
Satisfactory	5	3.1	114	71.2	3	1.8	116	72.6	76.51	<0.05
Unsatisfactory	28	17.5	13	8.2	22	13.8	19	11.8	60.48	

Table (5) shows that there were **statistically significant difference** between **the** total knowledge and their health complaints and Post health problems with a p-value <0.05 of the studied women after implementation of nursing instructional guideline.

Table (6) Statistical association between total women's knowledge and their total quality of life after hysterectomy post implementation of nursing instructional guideline (N=160).

Post total knowledge	Total post quality of life						χ2 test	
	Good (N=67)		Average (N=31)		Poor (N=62)		χ2	P
	No	%	No	%	No	%		
Satisfactory	43	26.8	30	18.8	3	1.8	63.70	<0.05
Unsatisfactory	24	15	1	0.8	59	36.8		

Table (6) shows that there was **statistically significant difference** between the total knowledge score and their Total quality of life with a p-value <0.05 of the studied women after implementation of nursing instructional guideline.

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4. DISCUSSION

Hysterectomy is one of the most prevalent surgeries worldwide and might be the only option, although hysterectomy is generally considered safe, but several possible complications are associated with the procedure and after hysterectomy woman become menopause, and menopausal symptoms often begin suddenly for women after having the procedure done. that will affect quality of her life. Thus, nursing instructional guideline advocated for post-hysterectomy complications and discomforts control with multidisciplinary approach included medical, obstetrical and community nurses is necessary to gain favorable outcome of quality of their life and improved sense of well-being and a chance to get on with life. The present study aimed to evaluate the effect nursing instructional guideline on quality of life for women after hysterectomy

Regarding socio-demographic characteristics of the studied women, slightly two-thirds of them their age ranged between 40 to 49 years where Mean age of them is = 46.56 ± 9.31, about two third of the studied sample were preparatory education where the majority of the studied women were housewives and live in urban area and all of them were married, while about half of the studied had insufficient monthly income. This finding was in the same line with ***Persson, et al, (2013***) "Pelvic organ prolapse after subtotal and total hysterectomy of the Sweden women" in the south of east Sweden, found that the mean age of the studied women was 44.48 years and reported that this may be driven by the high occurrence of uterine fibroids, the main indication for hysterectomy, among women aged 40–49 years.This study finding contrasts with **Ali (2018)**, who studied the Nursing Care Protocol on Minimizing Post Hysterectomy Complications at El Manial University Hospital found that more than half of women their level of education was read and write.

The current study found more than two third were married, about one third of the studied women were pregnant for more than five times, this may due to the majority of them had low educational level and didn't know the complications of large number of pregnancies which make them risk for hysterectomy and complaining from chronic diseases, nearly half of them had hypertension.

As regard to history of hysterectomy of studied women, the study reflected the majority of studied women made hysterectomy due to fibroids which they complained from vaginal bleeding and pelvic pain before surgery This study finding agreed with **Katon, et al, (2017)** in the study of "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 veterans.

In relation to types of hysterectomy the majority of the studied women, hysterectomy was total through abdominal approach and according to the researchers' opinion, this was because the most cause of hysterectomy due to fibroid and can't performed through vaginal, also the age at the time of hysterectomy that was a strong predictor of undergoing the first type due to the high risk of developing ovarian cancer later on, also this type of procedure deprive them from the female hormones(estrogen and progesterone) that cause many complications(physical, psychological and sexual). which may be a barrier of return to usual life rapidly and affect the quality of her life.

The finding in the same line with **Banovcinova & Jandurova (2016**) who carried out Subjective perceptions of life among women after hysterectomy on 70 women who underwent hysterectomy found about half them, hysterectomy was through abdomen also this finding is supported by **Nalini Devi K et al(2015)** who found more than two third of the women in experimental group underwent abdominal hysterectomy..

Regardingcomplications after surgery about one third of the studied subject suffered from such as urinary incontinence , wound infection The current study finding is in the same line with these findings agreed with **Heydari, et al, (2017)** in Tehran, who confirmed in their study a significant relation between hysterectomy and stress urinary incontinence (SUI) severity and revealed that women after hysterectomy are more likely to suffer from more severe grades of SUI. So, Future studies should be designed to evaluate casual effects of hysterectomy on SUI grade.

Regarding women' total knowledge of the studied women after hysterectomy, the study illustrated that, there is statistically significant difference ($X2 = 68.19$ at $p<0.05$) improvement of women's knowledge post implementation of instructional guideline regarding information about health education after hysterectomy, where about less than one quarter of studied women had satisfactory total knowledge pre-implementation compared to three quarter of them had satisfactory total knowledge post implementation. This finding in the same line with **Padma Priya, et al (2017)** who

showed in his study that 20 out of 30 of experimental group (66.67%) women had poor pre-test knowledge score. But, after the intervention 22 out of 30 (73.33%) had average knowledge score and 5 out of 30 (16.67%) had good knowledge score. Whereas, in the control group 16 out of 30 (53.33%) had poor pre-test knowledge score and in post-test majority of women 19 out of 30 (63.33%) had poor knowledge score.

Concerning total health complaints domains after hysterectomy among the studied post implementation of nursing instructional guideline, the study illustrated statistically significant differences ($p<0.05$) in all items (vasomotor, sexual, social & psychological complaints) among studied women after hysterectomy where the study showed improvement in vasomotor and sexual complaints from the three quarter and two third of studied women pre-intervention compared to about one third and less than one quarter of them postimplementation this finding in accordance with **Nalini Devi K et al(2015)** who found the mean score of comparison group were physical activities (17.4%), diet (21.36%), emotional stress (8.86%), psychological activities (6.26%) and sexual activities (1.00%) whereas in experimental group were physical activities (32.8%), diet (40.83%), emotional stress (16.30%), psychological activities (9.53%) and sexual activities (2.67%) respectively. And indicating that structured discharge planning was effective in enhancing self-care ability score of women after hysterectomy.

Another crucial key finding in this study was that statistical association between total women' knowledge and their total health complaints after hysterectomy with a p-value <0.05. this may due to by increasing knowledge, their intervention of unhealthy life style decreased and with follow instruction that improve health and so decrease occurrence of problems . The current study finding is in the same line with **Padma Priya, et al (2017)** who study Effectiveness of pre-operative instruction on knowledge, pain, and selected post-operative behaviors among women undergoing abdominal hysterectomy in selected hospital, Bangalore, Karnataka , he found significant reduction on post-operative pain and improved selected postoperative behaviors of women in experimental group. It suggested that providing pre-operative instruction on surgery and performance of selected post-operative behaviors was effective. Thus, the results of this study, value the pre-operative instruction in terms of effective performance of selected post-operative behavior which includes turning, sitting, early mobilization, deep breathing, and relaxation exercises.

Regarding total quality of life after hysterectomy Pre/post implementation of instructional guideline, the study displayed that there are statistically significant differences where one tenth of the studied women had good quality of life pre intervention compared to nearly to half of them postintervention this study in the line with **Nalini Devi K et al(2015)** who showed that the implementation of structure discharge planning was effective as indicating teaching enhanced ability scores in the area of physical activities, diet, emotional stress, psychological activities and sexual activities which are similar to the findings .

Concerning statistical association between total women' knowledge and their total quality of life after hysterectomy post implementation of instructional guideline showed that there was **statistically significant difference** with a p-value <0.05. This finding came in accordance with **Merighi, et al, (2012)** in the study of "Experiences and expectations of women submitted to hysterectomy" in Brazil, showed all of the participating experienced hysterectomy in a positive way due to the educative activities that the women had participated in prior to the hysterectomy that had the aims of clarifying women's doubts, minimizing their anxieties in relation to the surgical procedure, and demystifying all the symbolic content that permeates the removal of the uterus. This means that women's knowledge prior to hysterectomy improves their concepts and therefore their whole quality of life after hysterectomy.

5. CONCLUSION

Based on the results of the current study, it can be concluded that, the research hypothesis is justified since the implementation of the instructional guideline led to significant improvements in women' knowledge and their quality of life after hysterectomy as well as in reducing their health complaints.

6. RECOMMENDATIONS

Based on the results and conclusion of the present study, the following recommendations are suggested:

1- Increasing women and their partners' awareness before conducting hysterectomy regarding the procedure, possible complications and expectations about the post-operative period, possible physical, sexual, and psychological domains.

2- Carrying out different health education sessions for women with hysterectomy regarding the healthy lifestyle including healthy nutrition, keeping healthy body mass index, and physical exercising.

3- Further studies should be conducted focusing on studying application of nursing instructional guideline women undergoing to hysterectomy operation.

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