Effect of Psycho- educational Program on Depressive Symptoms, Post- traumatic Stress Response and Quality of Life among Women with Hysterectomy

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Abstract

Background: Women with hysterectomy suffer from many psychological and emotional problems that have a significant effect on their well beings and their quality of life. **Aim:** Study aimed to evaluate the effect of psycho-educational program on depressive symptoms, post-traumatic stress response and quality of life among women with Hysterectomy. **Research design:** A quasi-experimental design (one group pre/post test) was utilized to achieve the aim of the study. **Setting:** The study was conducted at obstetric and gynecologic department at Benha University Hospital, Benha city, Qualybia Governorate. **Sample:** A purposive sample of (40) women with hysterectomy. **Tools:** Tool (I) divided into two parts: - A structured Socio-demographic Interview Questionnaire sheet. **Part two**: Beck's Depression Inventory Scale, Tool (II) Post Traumatic Stress Scale and Tool (III) Quality of life scale. **Results:** Findings reflected that there were highly statistically significant reduction in the severity of the total levels of depressive symptoms, post-traumatic stress response and improvement in the total quality of life level post program implementation than before. **Conclusion:** The psycho educational program had a positive effect on reducing depressive symptoms, post-traumatic stress response and improving quality of life among women with Hysterectomy. **Recommendations:** Generalization of psycho-educational program for all women with hysterectomy in all hospitals to alleviate their depressive symptoms and post-traumatic stress and improve their quality of life.

Keywords: Psycho-education, Depressive Symptoms, Post- traumatic stress, quality of life Hysterectomy.

Introduction

Uterine cancer is the most common cancer of the female reproductive system. It is a malignant tumor that starts in the cells of the uterus. Malignant means that it can invade, or grow into, and destroy nearby tissue. It can also spread, or metastasize, to other parts of the body. Cells in the uterus sometimes change and no longer grow or behave normally. These changes may lead to non-cancerous or benign conditions such as endometriosis. They can also lead to non-cancerous tumors such as uterine fibroids. This means that the abnormal cells are not yet cancer, but there is a chance that they may become cancer if they aren't treated. The most common precancerous condition of the uterus is atypical endometrial hyperplasia. In some cases, changes to cells in the uterus can cause cancer **(American Society of Clinical Oncology, 2020)**.

Hysterectomy is the process of uterus removal. Hysterectomy is the most common obstetrical surgical procedure among women, with approximately 600,000 surgeries performed annually in the United States. Approximately one third of women will have a hysterectomy during their lifetime. Among premenopausal women, most hysterectomies

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are performed for benign conditions, with the most frequent indications being fibroids, dysfunctional bleeding, endometriosis, and pelvic organ prolapsed **(Shrivasatva & Chaudhry, 2019).**

Depressive symptoms are common emotional and psychological problems associated with hysterectomy women particularly if they had ovaries removed during the surgery as removing the ovaries – the main source of estrogen in the female body – brings on instant "surgical menopause," complete with hot flashes and other typical symptoms, including emotional changes. Ovaries are removed in 55 to 80 percent of women undergoing hysterectomy **(Weils, 2019).** Depressive symptoms among women with hysterectomy are several including low mood that can affect a person's thoughts, behavior, feelings and sense of well-being, sadness, anxious, empty, hopeless, helpless, worthless, guilty, irritable, ashamed or restless. They may lose interest in activities that were once pleasurable, experience loss of appetite or overeating, have problems at concentrating and remembering details or making decisions **(American Psychiatric Association, 2019).**

Moreover, post-traumatic stress response is also another psychological problem among women with hysterectomy as it is defined as a severe anxiety disorder that develops after exposure to an event with actual threatened, or perceived death or serious injury, or a threat to the physical integrity of oneself or others that results in significant psychological trauma **(Wimalawansa, 2019).** Many women with hysterectomy experience a variety of changes in their emotional states especially post-traumatic stress and depression. Psychological outcomes frequently occur after a hysterectomy that affects not only woman themselves but also

their family members and caregivers **(Chun et al., 2021).**

Furthermore, quality of life is also negatively affected among women with hysterectomy as it is defined as a multifaceted concept that has been defined and measured in multiple ways. Conceptualization of QOL has included physical and psychosocial variables such as health status, functioning, and limitation in physical activity, personal accomplishments, and satisfaction with life, happiness, well-being and community participation. Women with hysterectomy usually suffer from physical, psychological, emotional, social, and sexual problems which negatively affect not only their abilities to cope with their conditions but also, performing their daily activities normally and hence affecting all dimensions of quality of life. So it is important to appoint the role of psychiatric mental health nurse to interact with the hysterectomy women for ensuring that the woman cope better with the hysterectomy, should design guidelines and counsel them to improve their quality of life **(Terrill et al., 2018).**

Psycho-education is also a very important concept that considered a well established form of treatment and rehabilitation for women with hysterectomy. It is being defined as use of methods, techniques and educational programs in order to facilitate remission or reduce effects of the illness or disability. During the sessions therapeutic strategies that increase abilities and improve functioning of women are being used. Psycho-educational sessions provide knowledge that is being related to individual course of illness and healing and in effect they engage patients on cognitive and emotional levels **(Chadzynska&charzynska, 2021).**Women with hysterectomy may also benefit from psycho-educational programs that are designed

to increase understanding and knowledge about the disease and associated issues as opposed to learning techniques to reduce their depressive symptoms, post-traumatic stress and improve their quality of life which is the primary focus of most psychosocial interventions **(Allen et al., 2020)**.

Significance of the study:

Nowadays, hysterectomy is one of the most common gynecological surgeries in many countries around the world .According to several reports in 2020, Approximately 600,000 hysterectomies are performed annually in the United States and about 27% women of Indian women had undergone hysterectomy by 50 years of age **(Sarah etal, 2021).**In Egypt in 2020, with 966 new cases and 473 recorded death **(National Cancer Institute, 2020)**.

The world mental health surveys documented significant differences in the prevalence and distribution of post traumatic events across the world. The South African Stress and Health Survey, for example, reported a lifetime post traumatic event prevalence rate of 73.8%, which was higher than in other surveys in Europe and Japan where the rate was in the range of54–64%. At 54%, Spain has the lowest reported prevalence of trauma exposures, followed by Italy's 56.1% and Japan's 60%. Northern Ireland's rate of 60.6% was the highest among surveys in Europe **(Ferry et al., 2020)**.

Hysterectomy has a strong effect on a woman's sexuality as women often consider the uterus to be a sexual organ, and the controller and regulator of important physiological functions in the body, as well as the source of youth, energy, activity, and a symbol of child-bearing capacity **(Wang, 2021).** So, there is an important need to conduct studies to determine the health needs and problems of women undergoing hysterectomy. Therefore, this study aimed to evaluate the effect of psycho educational program on depressive symptoms, post-traumatic stress response and quality of life among women undergoing hysterectomy.

Aim of the Study:

This study aimed to: Evaluate the effect of psycho educational program on depressive symptoms, post-traumatic stress response and quality of life among women with hysterectomy.

Research Hypothesis:

The psycho educational program will have a positive effect on reducing depressive symptoms, post-traumatic stress response and improving quality of life among women with hysterectomy.

Subject and Methods:

Research Design:

A quasi experimental design (one group pre /post-test) was utilized to achieve the aim of the study.

Research Setting:

The study was conducted at obstetric and gynecologic department at Benha university hospital, Benha City, Qalyubia governorate. This hospital is affiliated to ministry of high education and it consists of two major building, medical building and surgical building. Obstetric and gynecologic department is located in the six floor of surgical building and it consists of reception room, room for first stage of labor services, vaginal delivery room, operation room, cesarean section room and post natal care room.

Research subject:

Based on the previous studies that examine the same outcome and found significance differences, sample size has been calculated using the following equation: n = (z2×p × q)/D2 at power 80% and CI 95%, so the sample of the study was purposive sample of (40) women with hysterectomy who are

hospitalized at the above mentioned settings and fulfill the following inclusion and exclusion criteria:

Inclusion criteria:

- Women with hysterectomy surgery.
- Aged from 18-65years old.
- Accepted and willingness to participate in the study.

Exclusion criteria:

- Women with other obstetric surgeries.
- Women who have history of psychotic symptoms or neurological disorders.
- Women who have visual and hearing impairment.

Tools of Data Collection:

The data was collected by using the following tools:

Tool (I):- A Structured Interviewing Questionnaire Sheet:

This sheet was developed by the researcher based on pertinent literature and consists of two parts. **Part (one)** to elicit information about socio-demographic and clinical characteristics of the studied women such as age, sex, marital status, level of education, occupation, residence, duration of illness, causes of hysterectomy, admission to hospital before.

Part (two): Beck's Depression Inventory Scale:

This scale was originally developed by **(Beck, 1966),** for measuring depressive symptoms .It was translated into Arabic and tested for reliability and validity by **(Mahmoud, 2018)**, it includes (21) question. Each question was ranged from 0-3 grades. Where, minimum depression scored 0 grade mild depression scored 1 grade, moderate depression scored 2 grade and severe depression scored 3 grade.

Scoring system was as follows:-

- 0–20: indicates mild depression
- 21–41: indicates moderate depression
- 42–63: indicates severe depression.

Tool (II): Post-Traumatic Stress Scale (PTSD):

The post-traumatic stress disorder scale was developed by **Davidson et al. (1997)** and consisting of 17 questions. They indicate the degree to which they have been bothered by that particular symptom of post-traumatic stress. Each of the items describes the symptom in terms of severity or frequency, creating the subscales of intrusive re-experiencing (items 1,2,3,4,5),avoidance, and numbness (items 6,7,8,9,10,11,12), and hyper arousal (items 13,14,15,16,17). Items responses range from 1 (not at all), 2 (A little bit), 3 (Moderately), 4 (Quite bit), and 5 (extremely).

Scoring system:

Total scores were ranging from 17–85.

- Low = < 43 score
- Moderate= 43-<64 score
- High= ≥ 64 score

Tool (III): Quality of life scale for women with hysterectomy:

This scale was originally developed by **Walker et al., (1987)** to identify a way of living or the manner in which people conduct their day-to-day activities. It has been translated into Arabic and tested for reliability and validity by **(Meligy, 2006)**. It consisted of 28 questions in the form of likert scale covering the emotional, social, mental and physical dimensions of life. Positive and negative statements were included in the scale. The response alternatives were Disagree, Agree, strongly agree. These responses score as (1) Disagree, (2) Agree, (3) strongly agree for positive items and (3)Disagree, (2)Agree,(1)strongly agree for negative items. The low score indicated poor quality of life and high score indicated good quality of life.

Positive statements (12 statements):1, 2, 5, 6, 7, 8, 14, 16, 18,21,22 and 23.

Negative statements (16 statements): 3,4,9,10,11,12,13,15, 17,19,20,24,25,26,27and 28).

Scoring system was categorized into three levels:

❖ Level 1 (Low quality of life): ranged from 50<70%

❖ Level 2 (Moderate quality of life): ranged from 70-<85%

❖ Level 3 (High quality o<f life): ≥ 85%

Methods:

Validity and Reliability:

Content validity of tools was carried out by a Jury of 5 experts of psychiatric mental health nursing and medical field as some modifications was done in rephrasing of some sentences to give the right meaning in Arabic translation in both Beck's Depression Inventory scale and post-traumatic stress scale to become easier and understandable for the studied women. In addition, the researcher gathering positive sentences in sequence followed by negative sentences in quality of life scale to become easier in gathering data. Test re-test reliability was done, $r = 0.91$ for Beck's Depression Inventory scale, 0.94 for post- traumatic stress scale and 0.92 for quality of life scale.   .

Ethical Consideration:

• Written official permission and approvals for conducting this study has been obtained from the vice dean of the Faculty of Nursing, Benha University to general director of Benha University Hospital to obtain approval for data collection.

• The researchers obtain oral consent from all studied women who are participated in the study.

• Confidentiality of each subject was protected by putting code for each one instead of using subject's name.

Pilot study: has been carried out on 10% (4 patients) selected from the previously mentioned setting before starting the data collection to test the applicability, feasibility, clarity, objectivity of the tool. In addition, it served to estimate the approximate time required for interviewing the studied women as well as to find out any problems that might interfere with data collection. These patients were excluded later from the actual study sample.

Data collection (pretest) for the study was carried out in the period from (October to the middle of November 2021). The subjects were divided into 5 groups; each of them consisted of 8 patients. Implementation of the study passed into three phases (pre assessment phase, implementation phase and post assessment phase).

Pre assessment phase:

A comfortable, private place was chosen for the interviewers. Orientation was done about the researcher's name, purpose, significance, content of the study. Subjects were interviewed where pre-assessment was done using A Structured Interviewing Questionnaire sheet, Beck's Depression Inventory scale, post-traumatic stress scale and quality of life scale.

Implementation phase:

The study hypothized that the application of the psycho-educational program will have a positive effect on reducing depressive symptoms, post-traumatic stress and improving quality of life among women with hysterectomy.

The planned psycho-educational program was developed and implemented throughout (10) session\ two days \ week. Each session lasted from 60-90 minutes. The studied women were classified into five groups: each group consisted of 8 patients. The sessions with the studied women were carried out during the period (from the middle of November 2021 to the end of May 2022).The program has a

general objectives and every session has its specific contents and objectives, this was achieved through several teaching methods as, brain storming, lecture, group discussions, demonstration , re -demonstration and intervention booklet using the following media as laptop, PowerPoint, video, and pictures. At end of each session a feedback was taken and also a time was devoted for answering any questions.

The content of the psycho-educational program sessions was as follows:

The 1st session: Introduction about aim, objectives and content of the sessions.

The 2nd session: Theoretical background about hysterectomy surgery (indication-contraindication and complication).

The 3rd session: Depressive symptoms that accompany hysterectomy (definition, causes, signs and symptoms and complication of depression).

The 4th session: Application of some different coping strategies with depressive symptoms and post-traumatic stress symptoms (deep breathing exercise- progressive muscle relaxation).

The 5th session: post-traumatic stress symptoms that accompany hysterectomy (definition, causes, signs and symptoms and complication).

The 6th session: Application of some different coping strategies with depressive symptoms and post-traumatic stress symptoms (guided imagery-visualization- self-hypnosis and assertiveness).

The 7th session: Application of different stress management techniques (reading a book- praying- therapeutic touch- exercises and music therapy).

The 8th session: Quality of life among women with hysterectomy (definition, dimensions, negative effects of hysterectomy on all dimensions of quality of life).

The 9th session: Application of some strategies and techniques to improve quality of life among women with hysterectomy.

The 10th session: Summary about the program sessions and post- assessment test.

Post assessment phase:

This phase aims at evaluate the effect of psycho educational program on depressive symptoms, post-traumatic stress response and quality of life among women with hysterectomy. After the conduction of psycho-educational program sessions, a post test was done by using the Beck's Depression Inventory scale, post-traumatic stress scale and quality of life scale.

Statistical analysis:

The collected data were organized, coded, computerized, tabulated and analyzed by using the statistical package for social science (SPSS), version (20). Data analysis was accomplished by the use of number, percentage distribution, mean, and standard deviation, and correlation, coefficient. A significant level value was considered when $p<0.05$.

Results:

Table (1): Presents socio- demographic characteristics of the studied women with hysterectomy. It shows that less than half (45.0%) of them are aged between 35-45 years with the mean age 34.55 ± 7.65 years. Concerning marital status, more than three quarters (80.0%) of them are married. As regard to their education level, more than one third (40.0%) of the studied women have secondary education and more than half (52.0%). of them are employed. Regarding their residence, nearly two thirds (62.5%) of the studied women are from rural areas.

Table (2): Reflects clinical data of the studied women with hysterectomy. Concerning the onset of the disease, more than half (52.5%) of them mention they are tired since one year before hysterectomy.

Regarding the reasons for performing hysterectomy, more than two thirds (67.5%) of the studied women mention that they suffer from persistent vaginal bleeding and more than half of them (57.5%) are admitted to the hospital before.

Figure (1): Illustrates total level of depressive symptoms among the studied women with hysterectomy pre and post program implementation. It reports that there is a highly statistically significant reduction in the severity of total level of depressive symptoms from (62.5% to 20.0%) post program implementation than before at p-value <0.001**.

Figure (2): Reflects total level of post-traumatic stress among the studied women with hysterectomy pre and post program implementation. It reveals that there is a highly statistically significant reduction in the severity of total post-traumatic stress from (48.4% to 19.1%) post program implementation than before at p- value <0.001**.

Figure (3): Demonstrates total quality of life level among the studied women with hysterectomy pre and post program implementation. It shows that there is a highly statistically significant improvement in the total level of low quality of life from (82.5% to 20.0%) post program implementation than before at p- value <0.001**.

Table (3): Illustrates that there is a statistically significant relation between some items of socio-demographic characteristics such as age and marital status and the total level of depressive symptoms among the studied women with hysterectomy pre and post program implementation at p-value<0.05*.

Table (4): Reveals that there is a statistically significant relation between some items of socio-demographic characteristics such as age, residence and the total level of post-traumatic stress among the studied women with hysterectomy pre and post program implementation at p-value<0.05*.

Table (5): Demonstrates that there is no statistically significant relation between all items of socio-demographic characteristics and the total quality of life level among the studied women with hysterectomy pre and post program implementation at p-value>0.05.

Table (6): Indicates that there is a statistically significant relation between clinical data items such as onset of the disease and total level of depressive symptoms among the studied women pre and post program implementation at p-value<0.05*.

Table (7): Reports that there is a statistically significant relation between clinical data items such as admission to hospital and the total level of post-traumatic stress among the studied women with hysterectomy pre and post program implementation at p-value<0.05*.

Table (8): Illustrates that there is no a statistically significant relation between all items of clinical data and the total quality of life level among the studied women with hysterectomy pre and post program implementation at p-value >0.05.

Table (9): Shows that, there is a highly statistically significant positive correlation between total levels of depressive symptoms and post-traumatic stress pre and post program implementation at p- value <0.001**. While there is a highly statistically significant negative correlation between total quality of life level and total levels of depressive symptoms and post-traumatic stress among the studied women with hysterectomy pre and post program implementation at p-value <0.001**.

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Table (1):- Socio- demographic characteristics of the studied women with hysterectomy.

socio-demographic characteristics	Studied women (n=40)	
	N	%
Age(In years)		
18<25	4	10.0
25-<35	12	30.0
35-<45	18	45.0
45-<55	6	15.0
Mean ± SD 34.55 ± 7.65		
Marital status		
Single	8	20.0
Married	32	80.0
Education level		
Illiterate	5	12.5
Basic education	9	22.5
Secondary (Diplome)	16	40.0
University	10	25.0
Occupation		
Employed	21	52.5
Unemployed	19	47.5
Residence		
Urban	15	37.5
Rural	25	62.5

Table (2):- Clinical data of the studied women with hysterectomy .

Clinical Data items	Studied women (n=40)	
	N	%
Onset of the disease		
One year	21	52.5
two years	13	32.5
Three years and more	6	15.0
Reasons for performing hysterectomy		
Persistent vaginal bleeding	27	67.5
Uterine prolapsed	3	7.5
Uterine cancer	10	25.0
Admission to hospital before		
Yes	23	57.5
No	17	42.5

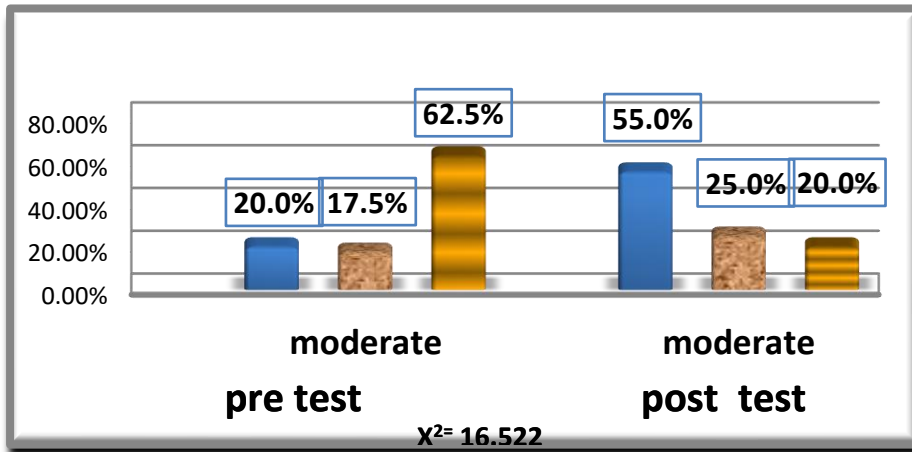**Figure (1): Total level of depressive symptoms among the studied women with hysterectomy pre and post program implementation (n=40).**
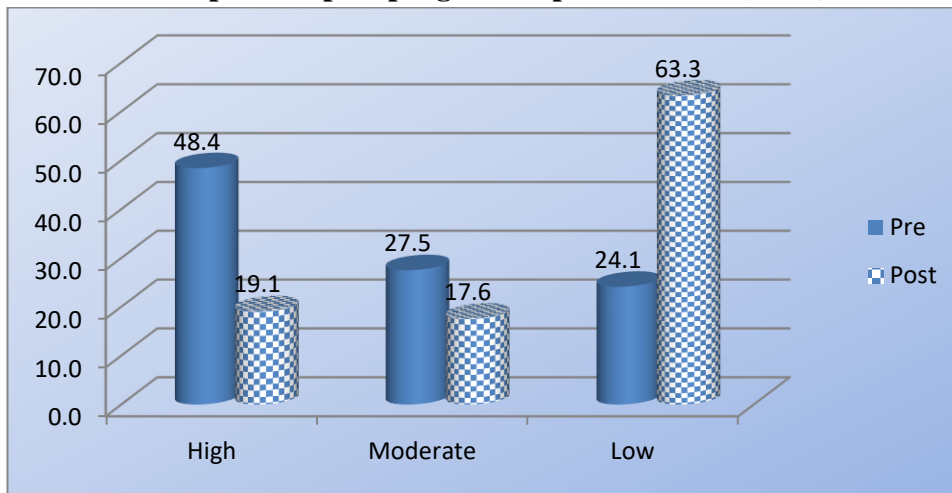

Figure (2): Total level of post-traumatic stress among the studied women with hysterectomy pre and post program implementation (n=40)
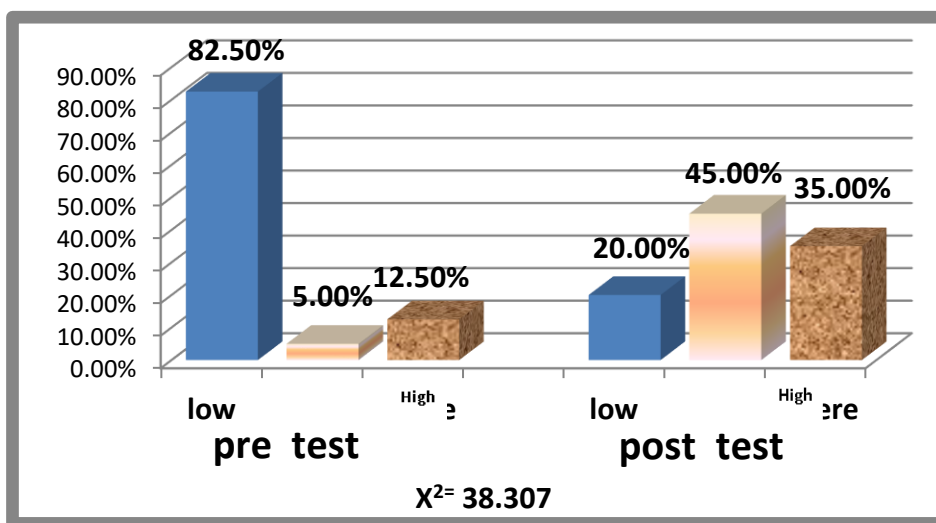

Figure (3): Total quality of life level among the studied women with hysterectomy pre and post program implementation (n=40)

Table (3): Relationship between socio-demographic characteristics and the total level of depressive symptoms among the studied women with hysterectomy pre and post program implementation (n=40).

Items of Socio-demographic characteristics		N	Total level of depressive symptoms (pretest)			ANOVA or T-test		Total level of depressive symptoms (posttest)			ANOVA or T-test	
			Mean	±	SD	test value	P-value	Mean	±	SD	test value	p-value
Age	18-25Y	4	28.5	±	14.849	0.925	< 0.05*	12.5	±	10.768	0.654	< 0.05*
	25-35Y	12	28.3	±	8.769			18.5	±	15.911		
	35-45Y	18	30.889	±	13.11			15.889	±	11.196		
	45-55Y	6	30.85	±	12.942			19.1	±	15.331		
Residence	Rural	25	32.207	±	9.017	2.28	> 0.05	18.448	±	11.331	0.963	> 0.05
	Urban	15	23.476	±	15.785			14.381	±	16.798		
Marital status	Single	8	30	±	10.817	0.294	< 0.05*	20.667	±	16.01	0.562	< 0.05*
	Married	32	28.13	±	13.345			16.043	±	13.687		
Education level	Illiterate	5	31.591	±	11.014	6.023	> 0.05	16.818	±	11.1231	2.654	> 0.05
	Basic education	9	29.267	±	11.811			17	±	17.075		
	Secondary	16	30	±	12.543			23	±	13.435		
	University	10	5.75	±	8.342			1.25	±	2.5		
Occupation	Employed	21	28.786	±	11.564	0.076	> 0.05	17.786	±	16.503	0.87	> 0.05
	Unemployed	19	28.444	±	13.587			16.333	±	12.9768		

< 0.05* Statistically significant   >0.05 No statistically significant

Table (4): Relationship between socio-demographic characteristics and the total level of post-traumatic stress   among the studied women with hysterectomy pre and post program implementation (n=40).

Items of Socio-demographic characteristics		N	Total level of post-traumatic stress										
			Pre Test			ANOVA or T-test		Post Test			ANOVA or T-test		
			Mean	±	SD	test value		P-value	Mean	±	SD	test value	P-value
Age	18<25Y	4	78.500	±	11.976	F	0.343	<0.05*	68.750	±	20.856	1.443	< 0.05*
	25- <35Y	12	69.200	±	17.676				54.800	±	13.710		
	35- <45Y	18	74.375	±	15.802				59.375	±	14.773		
	45- <55Y	6	71.333	±	16.134				66.333	±	16.943		
Marital status	Single	8	72.899	±	17.554	F	0.795	> 0.05	62.667	±	19.284	0.548	> 0.05
	Married	32	72.219	±	15.309				59.031	±	15.430		
Education level	Illiterate	5	66.000	±	19.342	F	0.633	> 0.05	47.400	±	8.620	2.033	> 0.05
	Basic education	9	75.222	±	12.231				67.444	±	14.875		
	Secondary	16	71.375	±	16.597				57.625	±	15.654		
	University	10	76.700	±	14.543				59.800	±	16. 543		
Occupation	Employed	21	75.524	±	13.324	T	1.342	> 0.05	61.714	±	15.634	1.166	> 0.05
	Unemployed	19	69.947	±	17.543				56.211	±	15.299		
Residence	Rural	25	75.320	±	13.956	T	0.344	< 0.05*	59.800	±	14.843	0.355	< 0.05*
	Urban	15	70.467	±	17.342				57.933	±	17.432		

< 0.05* Statistically significant   >0.05 No statistically significant

Table (5): Relationship between socio-demographic characteristics and the total quality of life level among the studied women with hysterectomy pre and post program implementation (n=40).

Items of Socio-demographic characteristics		N	Total quality of life level									
			Pre Test			ANOVA or T-test		Post Test			ANOVA or T-test	
			Mean	±	SD	test value	P-value	Mean	±	SD	test value	P-value
Age	18<25Y	4	42.500	±	9.454	F 0.765	> 0.05	55.750	±	24.354	1.639	> 0.05
	25- <35Y	12	55.600	±	15.764			72.000	±	14.967		
	35- <45Y	18	50.500	±	14.933			65.063	±	14.878		
	45- <55Y	6	71.333	±	16.155			66.333	±	16.989		
Marital status	Single	8	50.833	±	18.123	F 0.795	> 0.05	62.333	±	22.888	0.433	> 0.05
	Married	32	51.813	±	14.445			66.406	±	15.271		
Education level	Illiterate	5	56.000	±	17.464	0.455	> 0.05	78.400	±	8.649	0.435	> 0.05
	Basic education	9	47.667	±	9.545	F		58.444	±	14.988		
	Secondary	16	53.375	±	16.232			66.688	±	16.768		
	University	10	48.500	±	13.434			66.300	±	17.543		
Occupation	Employed	21	49.429	±	13.766	T 1.356	> 0.05	62.476	±	16.067	0.467	> 0.05
	Unemployed	19	53.158	±	15.577			70.316	±	15.345		
Residence	Rural	25	49.840	±	12.798	T 0.644	> 0.05	66.120	±	15.559	-0.768	> 0.05
	Urban	15	53.467	±	17.451			66.333	±	17.299		

>0.05 No statistically significant

Table (6): Relationship between clinical data and the total level of depressive symptoms among the studied women with hysterectomy pre and post program implementation (n=40).

Clinical data items		N	Total level of depressive symptoms (pretest)			ANOVA or T-test		Total level of depressive symptoms (posttest)			ANOVA or T-test	
			Mean	±	SD	test value	P-value	Mean	±	SD	test value	P-value
Onset of the disease	one year	21	29.537	±	12.335	1.453	<0.05*	18.098	±	14.519	2.254	<0.05*
	two years	13	24	±	15.313			10.556	±	8.443		
	Three years and more	6	27.56	±	13.22			13.87±	7.98			
Reasons for performing hysterectomy	Persistent vaginal bleeding	27	24.091	±	13.62	1.365	>0.05	8.818	±	8.942	-2.254	>0.05
	Uterine prolapsed	3	29.795	±	12.622			18.974	±	14.269		
	Uterine cancer	10	23.64	±	15.76			14.65±	±13.65	67		
Admission to hospital before	Yes	23	28.522	±	13.087	1.765	>0.05	17.196	±	14.231	0.798	>0.05
	No	17	28.75	±	12.659			11.5	±	7.937		

< 0.05* Statistically significant   >0.05 No statistically significant

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Table (7): Relationship between clinical data and the total level of post-traumatic stress among the studied women with hysterectomy pre and post program implementation (n=40).

Clinical data items		N	Total level of post-traumatic stress									
			Pre Test			ANOVA or T-test		Post Test			ANOVA or T-test	
			Mean	±	SD	test value	P-value	Mean	±	SD	test value	P-value
Onset of the disease	One year	21	75.857	±	16.156	F	0.412	> 0.05	63.905	±	16.566	0.419	> 0.05
	Two years	13	73.846	±	16.344				57.769	±	16.387		
	Three years and more	6	64.667	±	11.719				65.000	±	1.065		
Reasons for performing hysterectomy	Persistent vaginal bleeding	27	85.333	±	3.243	F	0.764	>0.05	69.667	±	15.044	0.874	>0.05
	Uterine prolapsed	3	67.900	±	15.576				57.500	±	17.665		
	Uterine cancer	10	78.037	±	15.641				59.000	±	14.943		
Admission to hospital before	Yes	23	73.941	±	15.073	T	0.327	**<0.05***	58.118	±	15.208	-1.652	**<0.05***
	No	17	72.565	±	15.843				65.043	±	15.443		

Note: the above table has extra columns; the test value column (F/T) and its numeric value are separate.

< 0.05* Statistically significant   **>0.05 No statistically significant**

Table (8): Relationship between clinical data and the total quality of life level among the studied women with hysterectomy pre and post program implementation (n=40).

Clinical data items		N	Total quality of life level									
			Pre Test			ANOVA or T-test		Post Test			ANOVA or T-test	
			Mean	±	SD	test value	P-value	Mean	±	SD	test value	P-value
Onset of the disease	One year	21	76.857	±	15.156	F 0.412	>0.05	87.905	±	16.534	0.465	>0.05
	Two years	13	74.846	±	14.344			60.769	±	16.356		
	Three years and more	6	66.667	±	13.719			66.000	±	1.054		
Reasons for performing hysterectomy	Persistent vaginal bleeding	27	87.333	±	12.243	F 0.754	>0.05	76.667	±	15.032	0.865	>0.05
	Uterine prolapsed	3	65.900	±	16.576			65.500	±	17.643		
	Uterine cancer	10	87.037	±	16.641			65..000	±	14.943		
Admission to hospital before	Yes	23	67.941	±	16.073	T -0.432	> 0.05	58.118	±	15.256	-1.453	> 0.05
	No	17	82.565	±	16.848			65.043	±	15.443		

>0.05 No statistically significant

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Table (9): Correlation between total levels of depressive symptoms, post-traumatic stress and quality of life among the studied women with hysterectomy pre and post program implementation(n=40).

Correlation	Pre program				Post program			
	Total level of depressive symptoms		Total level of post traumatic stress		Total level of depressive symptoms		Total level of post traumatic stress	
	R	P-value	R	P-value	R	P-value	R	P-value
Total level of depressive symptoms	-		0.376	<0.001**	-		.287	.000**
Total level of post traumatic stress	0.376	<0.001**	-		.287	<0.001**	-	
Total level of quality of life	-0.435	<0.001**	-.967	.000**	-.167	<0.001**	-.999	.000**

** Highly statistically significant

Discussion

Hysterectomy is the most common gynecological surgeries in many countries around the world as hysterectomy is a heavy and invasive surgical procedure, with a mortality rate of 1 in 1000 females, and various side-effects, such as hospital readmission, , infection, bleeding and reduced physical functioning, have been observed **(Bahri et al., 2021).** On the other hand, the relationship between hysterectomies and psychological problems has been raised as anxiety, depressive symptoms, post-traumatic stress symptoms, loss of feminity, impaired woman's sexuality, causing poor body image and hence poor quality of life because women often consider the uterus to be a sexual organ, and the controller and regulator of important physiological functions in the body, as well as the source of youth, energy, activity, and a symbol of child-bearing capacity **(Wang, 2020).**

The current study aimed to evaluate the effect of psycho educational program on depressive symptoms, post-traumatic stress response and quality of life among women with hysterectomy. It was hypothesized that psycho educational program will have a positive effect on reducing depressive symptoms, post-traumatic stress response and improving quality of life among women with hysterectomy. So the researcher assess the levels of three variables among studied women, developing psycho educational program as therapeutic strategy , implementing this program and evaluating the effect of this program on depressive symptoms, post-traumatic stress response and quality of life among the studied women.

The current study results reflected that less than half of studied subjects their mean age was 34.55 ± 7.76years, this might be due to many researches reported that spread of tumors and fibrosis of uterus more commen among this age group. These results were in the same line with **Ewalds et al., (2019)** who illustrated that nearly half of his studied sample was aged between 26 and 35 years old. While these results are contradicting with **Larki et al., (2019)** who reported that the majority of his studied sample was above 45 years old.

Concerning marital status, the present study findings reflected that the majority of studied women were married. This finding could be due to less than half of the studied women are aged from 35-45 years and this a suitable age for marriage. This result went parallel with **Vandyk et al., (2019)** who showed that more than half of his studied sample was married.

Regarding the education level, the current study results reported that more than one third of studied women had secondary education (diplome). This finding probably due to the majority of studied sample was from rural areas in which there was low socio-economic status and there was less attention to complete high education. These results were consistent with **Stang et al., (2019) w**ho reflected that the majority of his studied sample had basic education.

As regard to the occupation of the studied women, the present study results showed that more than half of them were employed. This could be due to many women having financial responsibilities toward their families as well as the cost of treatment which neciessate the job. These results were in the same line with the study done by **Leithner et al., (2020)** who revealed that the majority of his studied sample was employed women. On other hand, these findings were inconsistent with **Kvist et**

al.(2018) who found that two thirds of his studied sample was unemployed.

As regard to reasons for performing hysterectomy and patients' admission to hospital, the results of present study demonstrated that more than half of the studied women were admitted to hospital because of persistent vaginal bleeding. These might be justified by many studies revealed that persistent vaginal bleeding is the most common indicator for performing hysterectomy. This finding was similar to the study of **Shah et al., (2021),** who mentioned that majority of his studied sample had a frequent admission to hospital.

The current study findings illustrated that that there was a highly statistically significant reduction in the level of total depressive symptoms among studied women post program implementation than before. This probably might be due to the majority of the studied women had a fear from the operation itself as removal of such vital organ represents loss of their sexuality, feminity and their reproductive life. After program implementation , depressive symptoms decreased which is a proof that psycho educational program is considered an important and essential part of the comprehensive treatment plan that mustn't be neglected and should be applied in all hospitals for all women with hysterectomy as it provides not only women but also, their families with full information about the disease and all aspects of treatment in order to reduce fear, anxiety, improve their emotional conditions and hence improving their quality of life.

Regarding total level of post-traumatic stress among studied women with hysterectomy pre and post program implementation, the present study findings indicated that there was a highly statistically significant reduction of the severity of total

level of post-traumatic stress post program implementation than before. This reflect the effectiveness of the psycho-education program content and sessions application which was with the need and interest of the studied women in which they taught how to cope effectively with stress through using different stress managment strategies such as deep breathing exercises, muscle relaxation technique, positive thinking, praying, exercises, reading a book and visualization.

In addition, the studied women were instructed to participate in demonstration and re-demonstration of these stress management strategies to reduce their feeling of stress which leads to increasing patients' hope in their lives, encouraging them to perform their daily activities freely without stress and cope effectively with their conditions. These results were consistent with the studies done by **Bahri et al., (2021) & Cohen & Halling (2020) & Hashim (2018),** found that post-traumatic stress is very common among their studied sample and there was significant reduction in severity of it after implementation of psycho educational program.

The present study findings demonstrated that there was a highly statistically significant improvement in the total quality of life level post program implementation than before. From the researcher point of view, these could be due to poor quality of life among women with hysterectomy preprogram implementation caused by persistent complain before the operation such as vaginal bleeding as reported by more than half of the studied women, this complain make them stressed, anxious, depressed, social isolated and feared all the time how they perform their responsibilities and other daily activities normally which affect negatively not only their physical health but also all dimensions of quality of life.

Quality of life was improved among the studied women after program implementation, which pointed to the effective implementation of the psycho-educational program sessions, in which the studied women were acquired knowledge and information about how to cope with their illness, importance of spouse support, importance of practicing exercise, having friends and social network to provide them with psychological support during the moment of crisis in addition, importance of personal hygiene and easy accessibility of medical services for follow up. All these things help the studied women to perform activity of daily living normally and hence improve their quality of life.

These present study findings were in the same line with the study of **Kayani et al., (2019)** who revealed that majority of his studied women experienced significant improvement in the total level of quality of life after attending the session of psycho educational program. Also, these results were similar to the study of **Shrivasatva &Chaudhry (2019)** who reported the same results.

The current study results indicated that there was a statistically significant relation between some items of socio-demographic characteristics such as age and marital status with the total level of depressive symptoms among the studied women with hysterectomy pre and post program implementation. This could be due to less than half of the studied women were aged from 35-45 years and this age is suitable for developing many depressive symptoms as result of hysterectomy because many women had negative emotions such as anxiety, sadness, fear of spouse loss, loss of femininity, distorted self-esteem, body image and social isolation which negatively affected their marital life.

Furthermore, the present results showed that there was a statistically significant relation between some items of socio-demographic characteristics such as age, residence and the total level of post-traumatic stress among the studied women with hysterectomy pre and post program implementation. This might be due to fear of the studied women to loss such vital organ at their middle age and loss of ability to have other children and also loss of spouse. In addition, lack of information regarding their disease and difficult accessibility to medical services especially at rural areas causing increase the level of post-traumatic stress among the studied women.

The current study findings indicated that there was a statistically significant relation between some items of clinical data such as onset of the disease and total level of depressive symptoms among the studied women pre and post program implementation. This probably due to the studied women had a short duration of complain in addition, their fears from consequences of hysterectomy and loss of ability to adjust to their illness causing increase the level of depressive symptoms. These results were in the same line with the study of **Shrivasatva &Chaudhry (2019)** who reflected the same relation among his studied sample.

The present results revealed that there was a statistically significant relation between clinical data items such as admission to hospital and the total level of post-traumatic stress among the studied women with hysterectomy pre and post program implementation. This could be due to hysterectomy requiring frequent hospitalization and follow up. In addition, fear from operation itself, and inability to cope with their condition and how their spouses accept their appearance. All of these increase level of post traumatic stress.

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The current study findings revealed that there was a highly statistically significant positive correlation between total levels of depressive symptoms and post-traumatic stress pre and post program implementation. Moreover, there is a highly statistically significant negative correlation between total quality of life level and total levels of depressive symptoms and post-traumatic stress among the studied women with hysterectomy pre and post program implementation.

This research indicated that when depressive symptoms increase, post-traumatic stress also, increases but the quality of life decreases. This probably due to following hysterectomy many women developed post-traumatic stress as a result of sadness, fear of loss a vital organ such as uterus and inability to cope with the current situation. All of these, distorted women concept toward body image, their self-esteem, increasing depressive symptoms such as social isolation, hoplessness, helplessness which preventing them from enjoying their normal life, performing daily activities, which ultimately negatively affected on all dimensions of quality of life as it is not only the health but social, financial, sexual and family life of the women were adversely affected.

Conclusion:

Psycho-educational program had a positive effect on reducing depressive symptoms, post-traumatic stress response and improving quality of life among the studied women with hysterectomy.

Recommendations:

❖ Generalization of psycho-educational program for all women with hysterectomy in all hospitals to alleviate their depressive symptoms and post-traumatic stress and improve their quality of life.

❖ Providing an effective discharge plan for women with hysterectomy including follow up visits schedule, the required examinations, and referral numbers for each type of the expected complaints after hysterectomy.

❖ Sex counseling should be provided for hysterectomy women which will have an impact on their sexuality concern.

❖ The Future research should be done with a larger sample size in several hospitals and in a broader geographical area to generalize the results.

References:

Allen, J., Glodich, A., &Kelly, K.(2020). Psycho-educational Approaches .In J.G. Allen, Traumatic relationships and serious mental disorders, Chichester, UK: Willey, pp.347-372.

American Psychiatric Association (2019). Diagnostic and statistical manual of mental disorders (DSM- S) (5th ed).

American Society of Clinical Oncology (2020). Uterine Cancer. Available at: http://www.cancer.net/cancer-types/uterine-cancer/view-all.

Bahri,N.,Tohidinik,R., **Najafi,** F., **Larki,**M., **Amini,T.&Sartavosi**, A. **(2021).** Depression following hysterectomy and influencing 6g factors.Iran Red Crescent Med J.; 18(1):e30493.

Beck,A.(1966). Beck depression inventory. Arch Gen Psychiatry,4(6):pp561-571.

Chadzynska, M., &charzynska, K. (2021). The participation of patients with HCV in psycho-education; The analyses from the patient,s perspective. Archives of Psychiatry and Psychotherapy.2:67-72.

Chun, Y., Whiteley, N., Dennis, S., Mead, E.,& Carson, J. (2021). Anxiety after stroke. The importance of sub typing., 49(3), 556–564. doi:10.1161/STROKEAHA.117.020078.

Cohen, S.M., & Halling ,A.O.(2020). Psychosocial Adaptation During

Recovery from Hysterectomy . Journal of Obstetrics and Gynecology(2) 45-51.

Davidson, J. R. T., Book, S. W. &Colket, J. T. (1995). Davidson Self-Rating PTSD Scale. Available from Multi-Health Systems, Inc., 908 Niagara Falls Boulevard, North Tonawanda, NY 1420.

Ewalds, S., Hirvonen, T., & Kvist, M.,(2019). Depression, Anxiety, Hostility- and Hysterectomy. Journal of Psychosomatic Obstetric Gynecology.; 26(3):193-204.

Ferry, F., Bunting B., &Murphy ,S. (2020). Traumatic events and their relative PTSD burden in Northern Ireland: a consideration of the impact of the "Troubles" Soc Psychiatry Psychiatric Epidemiology. Available at :https://doi.org/10.1155/2018/6187328.

Hashim, A. (2018). Rate of Psychiatric Disorders Among Women Attending-Gynecology Clinics in Baghdad . A thesis submitted to the scientific council of Psychiatry in partial fulfillment for the degree of fellowship of the Iraqi council for medical specializations in Psychiatry .

Kayani, SI, Pundir ,J., Omanwa, K. (2019). Quality of life after total laparoscopic hysterectomy: a one-year follow-up study. Minerva Ginecol. 2019 Aug; 68 (4):412-7. [Online] Available from: https://www.ncbi.nlm.nih.gov/pubmed/26018242

Kvist, M., Ewalds, S.&Hirvonen, T. (2018). Depression, Anxiety, Hostility- and Hysterectomy. Journal of Psychosomatic Obstetric Gynecology.; 26(3):193-204.

Larki,M., **Amini,**T., **Sartavosi**, A., **Bahri,N.,Tohidinik,**R.&**Najafi, F. (2019).** Depression following hysterectomy and influencing factors.Iran Red Crescent Med J.; 18(1): 30493.

Leithner, K., Hilger, E., & Kern, M. (2020). "Psychiatric Morbidity in Gynecological and Otorhinolaryngological Outpatients: A Comparative Study . Obstetrics and Gynecology General Hospital Psychiatry, 31, 233–239.

Mahmoud, D.A. (2018)."Effect of psycho-educational program on depressive symptoms among patients with chronic renal failure". PHD thesis, Faculty of Nursing, Benha University.

Meligy, E.(2006)."Quality of life in patients with hysterectomy and its relation to depression", Master thesis, Faculty of Nursing.Ain Shams University.p:125 .

National Cancer Institute (2020). Bethesda MD. SEER Cancer Stat Facts: Cervix Uteri Cancer. http://seer.cancer.gov/statfacts/html/cervix.html.

Sarah, M.,Temkin,Lori ,M., & Anne-Michelle, N.,(2021). The End of the Hysterectomy Epidemic and Endometrial Cancer Incidence: What Are the Unintended Consequences of Declining Hysterectomy Rates?.

Shah, S., Wagan, M.A., & Saud., S.(2021) . Incidence of Anxiety and Depression in Women Undergoing Hysterectomy . Pakistan Journal of Pharmacology , Vol 24 (2) , , pp.23-28 .

Shrivasatva, D.&Chaudhry, P. (2019). Happy Hysterectomy? Quality of Life after in Rural Women of Central India.Global Journal of Medical Research: E Gynecology and Obstetrics Volume 15 Issue 3 Version 1.0 [Online] Available from: file:///C:/Users/acer/Downloads/990-1-961-1-10-20181207.pdf

Stang, A., Kluttig,A., Berger,K.,et al.(2019). Education level, prevalence of hysterectomy, and age at amenorrhoea: a cross-sectional analysis of 9536 women from six population-based cohort studies in Germany. BMC Womens Health;14:10. doi: 10.1186/1472-6874-14-10. [PubMed: 24433474] .

Effect of Psycho- educational Program on Depressive Symptoms, Post- traumatic Stress Response and Quality of Life among Women with Hysterectomy

Stanley, J., and Swierzewski, M., (2019). Gynecologic Surgery, HealthCommunities.com Partners.

Terrill, A., Schwartz, J., & Belagaje, S. (2018). Best practices for the interdisciplinary rehabilitation team: A review of mental health issues in hysterectomy. Research and Treatment, 2018.

Vandyk, A., Brenner, I., Tranmer, J.& Van Den Kerkhoff, E.(2019). Depressive Symptoms Before and After Elective Hysterectomy. Journal of Obstetrics and Gynecology Neonatal Nursing; 40: 566-76

Walker, N.,Sechrist, R. & Pender, J.(1987). The health promoting lifestyle profile: development and psychometric characteristics, Nursing research; 36 (2):76-81.

Wang, F.(2020). Integrated interventions for improving negative emotions and stress reactions of young women receiving total hysterectomy. Int J Clin Exp Med.;7(1):331–6. [PubMed: 24482729] .

Wang, F.(2021). Integrated interventions for improving negative emotions and stress reactions of young women receiving total hysterectomy. Int J Clin Exp Med.;7(1):331–6. [PubMed: 24482729] .

Weils, P. (2019).A Survey About the Effect Of Hysterectomy on Sexual Dysfunction in Patients Underwent Surgery in Sanandaj Behsat Hospital. Sci J Kurdistan Univ Med Sci. 2012.

Wimalawansa, S. (2019). Mechanisms of Developing post-traumatic stress Disorder: New targets for drug development and other potential interventions. Vol 13 No 5 . pp 807-816.

تأثير برنامج تعليمى نفسى على الاعراض الاكتئابيه واضطراب مابعد الصدمه وجودة الحياه لدى السيدات الخاضعات لجراحه استئصال الرحم

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عادة ما تواجه السيدات اللاتى خضعن لجراحه استئصال الرحم العديد من المشاكل النفسيه والانفعاليه والتى بدورها تنعكس بالسلب على رفاهيتهن النفسيه وجودة الحياه لديهن. لذلك هدفت الدراسة إلى تقييم تأثير برنامج تعليمى نفسى على الاعراض الاكتئابيه واضطراب مابعد الصدمه وجودة الحياه لدى السيدات الخاضعات لجراحه استئصال الرحم. وقد أجريت الدراسة بقسم النساء والتوليد بمستشفى بنها الجامعى - مدينه بنها بمحافظة القليوبية حيث تتضمن هذه الدراسه عينة غرضيه مكونه من (40) سيدة خضعن لجراحه استئصال الرحم. وقد أسفرت النتائج ان هناك انخفاض فى المستوى الكلى للاعراض الاكتئابيه واضطراب مابعد الصدمه كما ان هناك نحسين فى جودة الحياه لدى السيدات الخاضعات للدراسه وذلك بعد تطبيق البرنامج عما كان قبله. وفي ضوء هذه النتائج يوصي بتعميم هذا البرنامج التعليمى النفسى على كل السيدات الخاضعات لجراحه استئصال الرحم بجميع المستشفيات من اجل تخفيف الاعراض الاكتئابيه واضطراب مابعد الصدمه وتحسين جودة الحياه لديهن.