Effect of Psycho- educational Nursing Program on Psychological Stress and Depressive Symptoms among Women with Hysterectomy.

* Hend, A. Mostafa, Doha, A. Mahmoud

*Lecturers of Psychiatric and Mental Health Nursing. Faculty of Nursing.Benha University, Egypt

Abstract
Background: Women with hysterectomy face numerous emotional and psychological stressors that have a significant effect on their well beings and their quality of life.
Aim: Study aimed to evaluate effect of psycho educational nursing program on psychological stress and depressive symptoms 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, Qualybia Governorate.
Sample: The sample of the study was purposive sample of (40) women with hysterectomy.
Tools: Tool (1):- Structured Interview Questionnaire, Tool (2): Stress Scale for Women with Hysterectomy, and Tool (3) Beck's Depression Inventory Scale.
Results: Findings indicated that there were highly statistically significant reduction in the severity of total stress and total level of depressive symptoms post program implementation than before. Also, there was a highly statistically significant positive correlation between total stress score and total level of depressive symptoms score among studied women with hysterectomy pre and post program implementation.
Conclusion: The psycho educational nursing program had a positive effect on reducing the psychological stress and depressive symptoms among studied women with hysterectomy
Recommendations: Sex counseling should be a routine part of the care for hysterectomy patients which will have an impact on their sexuality concern.
Key Words: Hysterectomy, Psychological Stress, Depressive Symptoms, psycho-education.

I. Introduction

The uterus is the part of the female reproductive system in which a baby grows. It is above the vagina, between the bladder and rectum. It is about 7 cm long and 5 cm across at the widest point. The uterus is held in place within the pelvis by several ligaments. The female reproductive system is made up of internal organs, including the vagina, uterus, ovaries and fallopian tubes. It also includes the external genital organs. All the internal organs are in the pelvis, which is below the abdomen and between the hip bones *(American Cancer Society, 2015).*The uterus receives a fertilized egg and protects the fetus (baby) while it grows and develops. The uterus contracts to push the baby out of the body during birth. Every month, except when a woman is pregnant or has reached menopause, the lining of the uterus grows and thickens in preparation for pregnancy. If the woman doesn't get pregnant, the lining is shed through the cervix into the vagina and out of the body. This is called menstruation *(Martini etal., 2012).*

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, 2014)**.

Hysterectomy is the process of uterus removal and it is performed for many several reasons that including; **Fibroids:** These are benign tumors that grow inside the uterus. Fibroids can cause persistent bleeding, anemia, pelvic pain, and/or bladder pressure. **Endometriosis:** This is a condition in which uterine

tissue grows outside the uterus—on the ovaries, fallopian tubes, or elsewhere in the body. Endometriosis can cause painful menstrual periods and/or heavy bleeding, and can sometimes cause infertility. **Uterine prolapse:** If the ligaments and tissues supporting the uterus become weakened, the uterus can slip down into the vagina. **Gynecologic cancer:** Hysterectomy is often part of treatment for cancer of the uterus, cervix, ovaries, and/or fallopian tubes. **Persistent vaginal bleeding:** Heavy, irregular periods that consistently last longer than 5–7 days may be treated with hysterectomy when other treatments are ineffective *(Stanley &Swierzewski, 2015).*

Many women with hysterectomy experience a variety of changes in their emotional states especially psychological stress and depression. Psychological stress can be defined as internal drive which threatens the individual equilibrium and cause changes in the physical, emotional, behavioral or mental state of the person. Psychological stress associated with hysterectomy is a result of the multiple demands for adjustment precipitated by the illness. These adjustments have to occur in behavioral, cognitive, emotional, interpersonal, social and physical spheres of functioning *(Russell, 2012).* Difficulties with these adjustments to hysterectomy are the basis for potentially elevation of stress, which can then contribute to a host of problems. The negative effects associated with stress reactions include anxiety and fear states, depression and anger which can adversely affect symptoms and disease *(Ciccarelli&White, 2013).*

Depression is also another psychological problem associated with hysterectomy particularly if patient has had her ovaries removed during the surgery. If a woman hasn't reached menopause, 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 who undergo hysterectomy *(Weils, 2012).*Depression means a state of low mood that can affect a person's thoughts, behavior, feelings and sense of well-being. People with a depressed mood can feel sad, 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 concentrating, remembering details or making decisions, and may attempt or commit suicide*(American Psychiatric Association, 2013).*

When people are under stress or experience change in their mood (depression), they use different coping patterns which help in promoting prolonged life. Coping is an attempt to master a new situation that is potentially threatening, challenging or gratifying. Sometimes people fail to overcome the stressful situation with the coping odes they have adopted. In such situations a new coping skill can be taught to people to improve their chances for health. Some relaxation methods can help a person to relax; to attain a state of increased calmness; or otherwise reduce levels of pain, anxiety, stress or anger, lower the blood pressure and slow heart and breathe rates, for example, deep breathing exercise, progressive muscle relaxation, hypnosis, reading ,yoga, autosuggestion and prayer *(Ann et al., 2011 &Chiange et al., 2011).*

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 patients 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, 2011).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 anxiety and cope with stress or pain, which is the primary focus of most psychosocial interventions (Allen et al., 2012).   .

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 2012, 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 *(Sarahetal, 2016).*In Egypt in 2012, with 866 new cases and 373 recorded death *(National Cancer Institute, 2017)*.

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. Therefore, many studies have indicated that because a hysterectomy constitutes the loss of an important organ, it may be a potent stimulus for stress and psychological problems such as depression in women*(Wang, 2015).*So, there is an important need to conduct studies to determine the health needs and problems of women undergoing hysterectomy in order to relieve their depression and psychological stress .Therefore this study aimed to evaluate the effect of psycho educational nursing program on psychological stress and depressive symptoms among women with hysterectomy.

Aim of the Study:
This study aimed to: Evaluate the effect of psycho educational nursing program on psychological stress and depressive symptoms among women with Hysterectomy.
Research Hypothesis:
The psycho educational nursing program will have a positive effect on reducing psychological stress and depressive symptoms among women with Hysterectomy.

II.   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. The department consists of reception room, room for first stage of labor services, vaginal delivery 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.
- Aged from 18-45 years old.
- Accepted and willingness to participate in the study.

Exclusion criteria:
-Females with another chronic physical disease.
- Females who have history of psychotic symptoms.
- Females who have visual and hearing impairment.

Tools of Data Collection:
The data was collected by using the following tools:
Tool (1):- Structured Interview Questionnaire:
This tool was developed by the researcher based on pertinent literature to elicit information about socio-demographic and clinical characteristics of studied patients such as age, sex, marital status, level of education, occupation, residence, duration of illness, causes of hysterectomy and admission to hospital before).
Tool (2):- Stress Scale for women with hysterectomy:
This scale was developed by *(Jacob, 2005).* It was translated into Arabic and tested for reliability and validity by *(Hassnine, 2018).* It's used to assess psychosocial stress; it consisted of 25 items in the form of scale covering psychological, physiological, social and spiritual areas of stress. Positive and negative statements were included in the scale. The response alternatives were always, sometimes, rarely and never. These responses score as 1, 2, 3 and 4 for positive items and 4, 3, 2 and 1 for negative items.
Positive statements (12 statements): 1, 2, 3, 4, 5, 6, 7, 14, 15, 18, 19 and 24.
Negative statements (13 statements): 8, 9, 10, 11, 12, 13, 16, 17, 20, 21, 22, 23 and
 25.
Scoring system of stress scale was categorized as follows:
 50-60%   Mild
61-70%   Moderate
>Severe 70%

Tool (3): 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:-
- 0–13: indicates minimum depression
- 14–19: indicates mild depression
- 20–28: indicates moderate depression
- 29–63: indicates severe depression.

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 depressive symptoms scale and stress scale to become easier and more understandable for the patients. In addition, the researcher gathering positive sentences in sequence followed by negative sentences in stress scale to become easier in gathering data. Test re-test reliability was done, r = 0.90 for depressive symptoms scale and 0.88 for stress scale.

Ethical Consideration*:*
Data collection was carried out as follows:
- 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 patients who are participated in the study.
- Confidentiality of each subject was protected by putting code for each one instead of using subject's name.

A 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 patients 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 for the study was carried out in the period from (October to the middle of November 2018). 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 Structured Interviewing Questionnaire, stress scale and Beck's Depression Inventory scale.

Implementation phase:
        The study hypothized that the application of the psycho-educational program will have a positive effect on reducing psychological stress and depressive symptoms among women with Hystrectomoy. The planned psycho-educational program was developed and implemented throughout (8) session\ two days \ week. Each session lasted from 60-90 minutes. The patients were classified into five groups: each group consisted of 8 patients. The sessions with patients were carried out during the period (from the middle of November 2018 to the middle of April 2019).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 female genital system, its function and causes of hysterectomy.
 The 3rd session: Side effects and complication of hysterectomy.
 The 4th session: Psychological stress that accompany hysterectomy (definition, causes, signs and symptoms of psychological stress).
 The 5th session: Depressive symptoms that accompany hysterectomy (definition, signs and symptoms and complication of depression).

The 6th session: Application of some different coping strategies with psychological stress and depressive symptoms.

The 7th session: Application of some different coping strategies with psychological stress and depressive symptoms.

The 8th session: Summary about the program sessions and post- assessment test

Post assessment phase:

This phase aims at evaluate the effect of psycho educational nursing program on psychological stress and depressive symptoms among women with hysterectomy. After the conduction of psycho-educational program sessions, a post test was done by using the   stress scale and depressive symptoms 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 $p<0.05$.

III.   Results:

Table (1) Shows percentage distribution of studied women with hysterectomy according to their socio-demographic characteristics. It clarified that the mean age of the studied sample was 34.55 ± 7.73 years. Regarding to marital status, the majority of them were married (80.0%). In accordance with their education level, more than one third of studied patients (40.0%) have secondary education and more than half of them are employed (52.0%). Regarding their residence, the majority of them are from rural areas (62.5%).

Table (2) Shows percentage distribution of studied women with hysterectomy according to their clinical data. Regarding the duration of illness, more than half of the studied sample (52.5%) had a short duration of six months before hysterectomy. In relation to the reasons for performing hysterectomy, more than two thirds (67.5%) of studied women mentioned that they had persistent vaginal bleeding. More than half of them (57.5%) are admitted to the hospital before.

Figure (1) Reflects comparison between total stress level among studied women with hysterectomy pre and post program implementation. It shows that there is a highly statistically significant relief in the severity of total stress post program implementation than before from (62.5% to 20.0%) at p- value <0.001.

Figure (2) Shows comparison between total level of depressive symptoms among studied women with hysterectomy pre and post program implementation. It clarifies that there is a highly statistically significant reduction in the severity of total level of depressive symptoms to (20%) among the studied sample post program implementation compared to pre program implementation (64%) at p- value>0.001.

Table (3) Reveals relationship between socio-demographic characteristics of studied women with hysterectomy and the mean score of total stress pre and post program implementation. It illustrates that there is no statistically significant difference between all socio-demographic characteristics items and the mean score of total stress among studied women pre and post program implementation at p-value>0.05.

Table (4) Illustrates relationship between socio-demographic characteristics of studied women with hysterectomy and the mean score of total level of depressive symptoms pre and post program implementation. It indicates that there is no statistically significant difference between all socio-demographic characteristics items and the mean score of total level of depressive symptoms among studied women pre and post program implementation at p-value>0.05.

Table (5) Indicates relationship between clinical data of studied women with hysterectomy and total mean score of stress pre and post program implementation. It reflects that there is no statistically significant difference between all items of clinical data and total stress mean score for studied women pre and post program implementation at p-value>0.05.

Table (6) Illustrates relationship between clinical data of studied women with hysterectomy and the mean score of total level of depressive symptoms pre and post program implementation. It shows that there is no statistically significant difference between all items of clinical data and mean score of total level of depressive symptoms for studied women pre and post program implementation at p-value>0.05. .

Table (7) Reflects correlation between mean score of total stress and mean score of total level of depressive symptoms among studied women with hysterectomy pre and post program implementation. It shows that there is a highly statistically significant positive correlation between mean score of total stress and mean score of total level of depressive symptoms among studied women with hysterectomy pre and post program implementation at p- value <0.001**.

Table (1):-Percentage distribution of studied women with hysterectomy according to their socio-demographic characteristics (N= 40).

So Socio- demographic Characteristics	Studied women	
	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 ± 7.73		
Sex		
Female	40	100.0
Marital status		
Single	8	20.0
Married	32	80.0
Widowed	0	0.0
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		
Rural	25	62.5
Urban	15	37.5

Table (2):-Percentage distribution of studied women with hysterectomy according to their clinical data (n=40)

Clinical Data	Studied women	
	N	**%**
Duration of illness		
Six Month	21	52.5
one year	13	32.5
Two yearsand 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
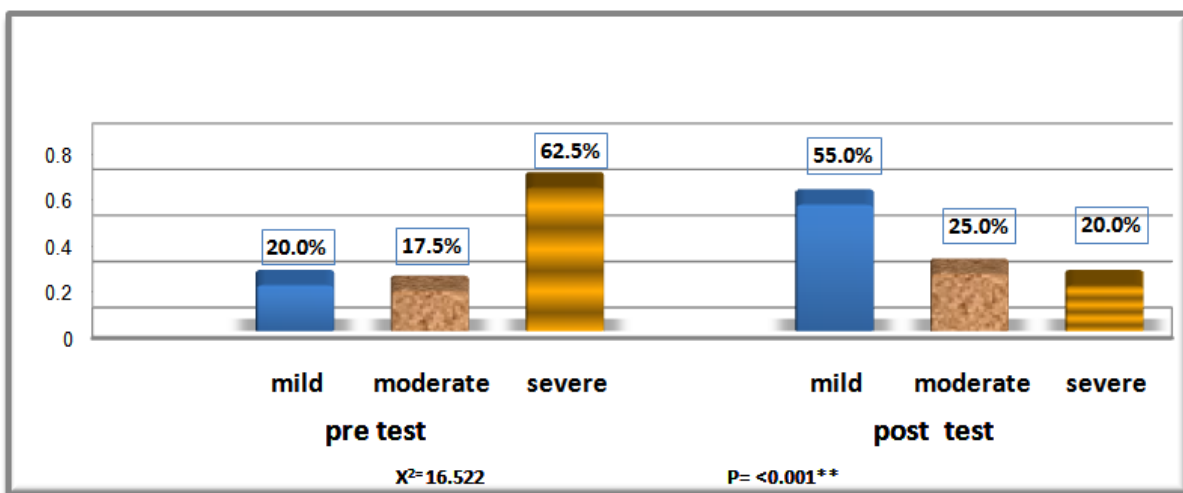
Figure (1) Comparison between total stress level among studied women with hysterectomy pre and post program implementation (N=40)
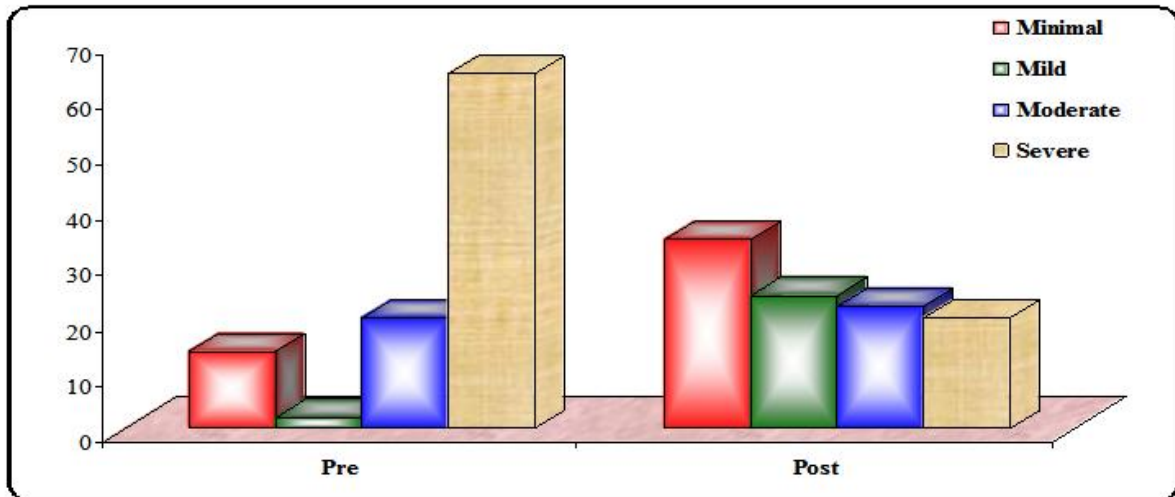
Figure (2): Comparison between total level of depressive symptoms among studied women with hysterectomy pre and post program implementation (N=40)

Table (3): Relationship between socio-demographic characteristics of studied women with hysterectomy and the mean score of total stress pre and post program implementation (N=40).

Socio-demographic characteristics		N	Total 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<25	4	78.500	±	11.902	F	0.308	> 0.05	68.750	±	20.839	1.458	> 0.05
	25- <35	12	69.200	±	17.681				54.800	±	13.710		
	35- <45	18	74.375	±	15.802				59.375	±	14.773		
	45- <55	6	71.333	±	16.158				66.333	±	16.978		
Sex	Female	40	69.364	±	17.959	T	1.631	> 0.05	57.409	±	17.440	0.747	> 0.05
Marital status	Single	8	72.899	±	17.776	F	0.799	> 0.05	62.667	±	19.284	0.548	> 0.05
	Married	32	72.219	±	15.309				59.031	±	15.047		
Education level	Illiterate	5	66.000	±	19.481	F	0.632	> 0.05	47.400	±	8.620	2.033	> 0.05
	Basic education	9	75.222	±	12.194				67.444	±	14.875		
	Secondary	16	71.375	±	16.597				57.625	±	15.654		
	University	10	76.700	±	14.562				59.800	±	16.019		
Occupation	Employed	21	75.524	±	13.400	T	1.351	> 0.05	61.714	±	15.634	1.133	> 0.05
	Unemployed	19	69.947	±	17.171				56.211	±	15.299		
Residence	Rural	25	75.320	±	13.919	T	0.764	> 0.05	59.800	±	14.858	0.344	> 0.05
	Urban	15	70.467	±	17.768				57.933	±	17.056		

>0.05 No statistically significant.

Table (4): Relationship between socio-demographic characteristics of studied women with hysterectomy and the mean score of total level of depressive symptoms pre and post program implementation (N=40).

Socio-demographic characteristics		N	Depressive symptoms pre			ANOVA or T-test		Depressive symptoms post			ANOVA or T-test	
			Mean	±	SD	test value	P-value	Mean	±	SD		
Age	18-25	4	28.5	±	14.849	0.929	0.456	12.5	±	10.607	0.642	> 0.05
	25-35	12	28.3	±	8.769			18.5	±	15.911		
	35-45	18	30.889	±	13.11			15.889	±	11.196		
	45-55	6	30.85	±	12.942			19.1	±	15.331		
Sex	Female	40	32.407	±	9.37	-2.315	0.0272	20.074	±	12.13	-1.99	> 0.05
Residence	Rural	25	32.207	±	9.017	2.28	0.0302	18.448	±	11.331	0.963	> 0.05
	Urban	15	23.476	±	15.785			14.381	±	16.77		
Marital status	Single	8	30	±	10.817	0.286	0.798	20.667	±	16.01	0.562	> 0.05
	Married	32	28.13	±	13.107			16.043	±	13.687		
Education level	Illiterate	5	31.591	±	11.014	6.023	0.0028	16.818	±	11.134	2.487	> 0.05
	Basic education	9	29.267	±	11.811			17	±	17.075		
	Secondary	16	30	±	12.093			23	±	13.248		
	University	10	5.75	±	8.342			1.25	±	2.5		
Occupation	Employed	21	28.786	±	11.564	0.089	0.932	17.786	±	16.503	0.45	> 0.05
	Unemployed	19	28.444	±	13.574			16.333	±	12.939		

>0.05 No statistically significant

Table (5): Relationship between clinical data of studied women with hysterectomy and total mean score of stress pre and post program implementation (N=40).

Clinical Data		N	Total 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	
duration of disease	Six Month	21	75.857	±	16.156	F	0.612	>0.05	63.905	±	16.562	0.719	>0.05
	one year	13	73.846	±	16.344				57.769	±	16.371		
	Two years and more	6	64.667	±	11.719				65.000	±	1.000		
Reasons for performing hysterectomy	Persistent vaginal bleeding	27	85.333	±	3.215	F	0.764	>0.05	69.667	±	15.044	0.364	>0.05
	Uterine prolapsed	3	67.900	±	15.509				57.500	±	17.646		
	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	±	15.202	-1.412	>0.05
	No	17	72.565	±	15.880				65.043	±	15.429		

>0.05 No statistically significant.

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

Clinical characteristic		N	Depressive symptoms pre			ANOVA or T-test		Depressive symptoms post			ANOVA or T-test	
			Mean	±	SD	test value	P-value	Mean	±	SD	test value	P-value
duration of disease	Six Month	21	29.537	±	12.335	1.364	0.249	18.098	±	14.519	2.238	>0.05
	one year	13	24	±	15.313			10.556	±	8.443		
	Two years and more	6	27.56	±	13.22			13.87±	7.98			
Reasons for performing hysterectomy	Persistent vaginal bleeding	27	24.091	±	13.62	-1.302	0.199	8.818	±	8.942	-2.231	>0.05
	Uterine prolapsed	3	29.795	±	12.622			18.974	±	14.269		
	Uterine cancer	10	23.64	±	15.76			14.65	±13.6: 67			
Admission to hospital before	Yes	23	28.522	±	13.087	-0.034	0.973	17.196	±	14.231	0.785	>0.05
	No	17	28.75	±	12.659			11.5	±	7.937		

>0.05 No statistically significant.

Table (7): Correlation between mean score of total stress and mean score of total level of depressive symptoms among studied women with hysterectomy pre and post program implementation(n=40)

Correlation (Pre& Post Test)	Total level of Stress			
	Pre-program		Post-program	
	R	P-value	R	P-value
Total level of depressive symptoms	0.863	<0.001**	0.956	<0.001**

** Highly statistically significant

IV.   Discussion

Hysterectomy is one of the most common gynecological surgeries in many countries around the world. Although a hysterectomy is used to treat cancers of the uterus and the ovaries, fibroids, genital prolapse, and resistant uterine bleeding, at least 80% of the hysterectomies performed are for the treatment of benign diseases of the female genital tract. A hysterectomy is a heavy and invasive surgical procedure, with a mortality rate of 1 in 1000 females, and various side-effects, such as bleeding, infection, hospital readmission, and reduced physical functioning, have been observed *(Bahri et al., 2016).* On the other hand, the relationship between hysterectomies and psychological disorders has been raised as undergoing a surgery such as a hysterectomy has

a strong effect on a woman's sexuality, causing poor body image and other factors which could lead to psychological stress and appearance of some depressive symptoms since 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, 2015).*

The present study aimed to evaluate the effect of psycho educational nursing program on psychological stress and depressive symptoms among women with hysterectomy. It was hypothesized that the mean score of psychological stress and the mean score of depressive symptoms will be decreased after attending the educational program than before. So the researcher assess the level of psychological stress and depressive symptoms among studied women, developing psycho educational program as therapeutic strategy , implementing this program and evaluating the effect of this program on psychological stress and depressive symptoms among the studied women.

The result of the present study revealed that less than half of studied women with hysterectomy age were ranged from 35 to less than 45years and their mean age was 34.55 ± 7.73years. This could be due to spread of tumors and fibrosis of uterus among this age group. These results are consistent with Ewalds et al., (2015) who found that about two thirds of his studied sample was aged between 26 and 35 years old and only one third of the patients were aged between the ages of 46 and 55 years old. And these results are contradicting with Larki et al., (2016) who mentioned that the majority of his studied sample was above 45 years old.

Regarding to marital status, the present study findings reported that the majority of studied women were married. This finding might be due to married patients are more distressed about loss of her dream of having baby and loss of her fertility which may lead to loss of her spouse end of her marital life. This result goes parallel with Vandyk et al., (2011) who found that more than half of his studied sample was married.

As regards to the education level, the present study result revealed 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 are inconsistent with Stang et Al. (2014) who mentioned that the majority of his studied sample had basic education.

Concerning the occupation of the studied samples, the present study findings showed that more than half of them were employed. This might be due to patients having financial responsibilities toward their families which neciessate the job and not neglects it despite their illness. These results were similar to study done by Leithner et al., (2012) who found that the majority of his studied sample was employed women. But these findings inconsistent with study done by Kvist et al.(2015) who found that two thirds of his studied sample was unemployed.

Concerning reasons for performing hysterectomy and patients' admission to hospital, the results of present study demonstrated that more than half of studied sample were admitted to hospital because of persistent vaginal bleeding. These could be justified by persistent vaginal bleeding is chronic condition that has a dangerous consequences for studied patients and hence requires immediate treatment and hospitalization. This finding is in accordance with Shah et al., (2012), who mentioned that majority of studied sample had a history of hospitalization.

Regarding stress level among studied women with hysterectomy pre and post program implementation, the current study results indicated that there was highly statistically significant reduction of the severity of total stress post program implementation than before. This indicate the effectiveness of the program content and session application which was with the need and interest of the studied patients in which they taught how to cope effectively with stress through different coping methods such as deep breathing exercises, muscle relaxation technique, positive thinking, praying, exercises, reading a book and visualization.

Also, the studied patients were instructed to participate in demonstration and re-demonstration of these coping methods to reduce their feeling of stress which leads to increasing patients' hope in their lives and encouraging them to perform their daily activities freely without stress. These results went parallel with the studies done byBahri etal.,(2016) &Cohen & Halling (2011) & Hashim (2012), as they found that psychological stress is very common among studied female sample with hysterectomy and there was significant reduction in severity of total stress after implementation of psycho educational program.

The results of present study demonstrated that there was a highly statistically significant reduction in the level of total depressive symptoms among studied women post program implementation than before. This could be justified by the majority of the studied female sample are depressed before program implantation because the surgery of hysterectomy has many psychiatric implications especially depression because removal of vital organ as uterus represents loss of their sexuality &their reproductive life, and hence loss of their marital life. After program implementation , depressive symptoms decreased which is a proof to 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 patients with hysterectomy as it provides not only the

patients but also, their families with full information about the disease and all aspects of treatment in order to improve their emotional conditions and hence improving their quality of life.

These current results went parallel with the study done by Badakhsh et al., (2012) who found many of his studied patients experienced significantly more depression following hysterectomy and there was significant reduction in the level of depression after implementation of psycho educational program. Also, these results were supported by the studies of Elweley& Sabra (2015) & Shah et al., (2012) as they revealed that majority of women after hysterectomy are depressed and many symptoms of mixed stress and depressive disorder are reduced after attending the sessions of psycho educational program.

As for correlation between mean score of total stress and mean score of total depressive symptoms of studied women pre and post program implementation, the current study results revealed that there was a highly statistically significant positive correlation between mean score of total stress and mean score of depressive symptoms of studied women pre and post program implementation. This indicated that when stress increase, depressive symptoms also increase. This could be justified by hysterectomy produce chronic stress that preventing the patients from enjoying their normal life, performing daily activities, and maintain self confidence and patience which ultimately reflect on their emotional state and made them more depressed because it is not only the health but social, financial, sexual and family life of the patients is adversely affected.

Finally, it can be said that, the psycho-educational program in the current study has made a positive contribution in reducing psychological stress and depressive symptoms among studied women with hysterectomy. The results of this study were consistent with the study hypothesis that the psycho educational nursing program will minimize psychological stress and depressive symptoms than before program .

V. Conclusion:

There were statistical significant differences between pre/post test regarding total level of stress and total level of depressive symptoms. There was a highly statistically significant correlation between total stress score and total level of depressive symptoms score of the studied patient's pre / post program implementation. This concluded that the psycho educational nursing program had a positive effect on the psychological stress and depressive symptoms among studied women with hysterectomy. Which lead to acceptance of the study hypothesis that psycho-educational nursing intervention program is the key element for reducing psychological stress and depressive symptoms among studied women with hysterectomy.

VI. Recommendations:

Generalization of psycho-educational program for all women undergoing hysterectomy in all hospitals to alleviate their psychological stress and depressive symptoms.

Stress management and assertiveness training program should be given to women with hysterectomy to relieve their psychological problems and enhance their coping patterns.

Sex counseling should be a routine part of the care for hysterectomy patients which will have an impact on their sexuality concern.

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