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Effectiveness of an Instructional Program on Depression of Women with Hysterectomy: A Quasi-Experimental Design

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Abstract

Background: *Women after hysterectomy experience depression, which significantly impacts their quality of life and general well-being.* ***Study Aim:*** *The current study aimed to evaluate the effectiveness of an instructional program on depression of women after hysterectomy.* ***Methods:*** *In the current study, a quasi-experimental design is used across two measurement periods (pre-test and post-test) in both experimental and control groups. A purposeful non-probability sample consists of sixty women after hysterectomy. Two groups comprise the sample: thirty women in the control group are not exposed to the instructional program, and the other 30 women in the experimental group are exposed to the instructional program. A current study was carried out in the Obstetrics and Gynecology Consultant Unit at Al-Zahra Teaching Hospital within Al-Najaf Al-Ashraf Health Directorate in Iraq.* ***Results:*** *The present study's results showed there was an extremely substantial statistical decrease at a P-value lower than 0.01 among the experimental group participants in their depression severity after implementation of the program compared with the control group.* ***Conclusion:*** *The study concluded that an instructional program is an effective method for reducing depression severity among women after hysterectomy.* ***Recommendations:*** *popularization of an instructional program for every woman who had hysterectomies in every hospital and clinic to reduce their depressive severity and enhance their quality of life.*

Keywords: *Instructional program, Depression, Hysterectomy*

Introduction

Depression, a common mental illness, is characterized by a sense of sadness, worthlessness, and hopelessness; a loss of interest or pleasure; and difficulty concentrating[1]. Depression is a rising health concern nowadays. According to the World Health Organization (WHO), unipolar major depression was the fifth most important health issue in the world in 1990, and it is predicted that by 2020, it will overtake ischemic heart disease as the second most serious issue[2]. In general, compared to men, women are more to be depressed for an extended period of time. Depression is a mood condition that can lead to persistent sorrow and interest loss, impact feelings, thinking, and behavior, and cause a range of emotional and physical proplems[3].

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The uterus is a particularly important organ for many women because, in addition to serving reproductive purposes, it also has associations with femininity, identity, and sexuality[4]. Uterine removal has particular implications for women and has a significant impact on cultures, beliefs, and attitudes[5].

One of the most common surgeries worldwide is a hysterectomy. However, after a hysterectomy, surgical complications and alterations in body image cause psychological discomfort[6]. Women who have undergone hysterectomy are more likely to experience depressive symptoms, which include low mood, sadness, anxiety, emptyness, hopelessness, helplessness, worthlessness, guilt, irritability, humiliation, or restlessness. They could stop enjoying previously enjoyable activities, lose their appetite or overeat, struggle to concentrate, remember specifics, or make decisions[7].

Hysterectomy had a significant impact on women's psychiatric well-being. Nursing staff must understand this potentially problematic situation for the purpose of properly resolving it, and to address these issues, they must employ nursing interventions. Nurses must also carefully assess the patients' psychosocial requirements after hysterectomy, after which they must work to sufficiently educate the patients' and give them the necessary care. Nurses can also conduct evaluations to assess the psychological well-being of patients who have undergone hysterectomy[8]. The quality of life for these individuals might be improved by reducing the disabilities that result from their disabilities, which would be made possible by a greater understanding of the elements that contribute to depression and its reduction[9].

Hence, an instructional program may help to reduce the severity of depression in women who had hysterectomy. Unfortunately, little research has been done to fully investigate this topic. Therefore, it merits additional research. The present study aims to detect the effectiveness of an instructional program for depression in women after hysterectomy.

METHODS AND MATERIALS

Study Design:

In the current study, a quasi-experimental design is used across two measurement periods (pre-test and post-test) in both experimental and control groups.

Sitting of the Study:

The current study was conducted at the Consultant Obstetrics and Gynecology Unit at Al-Zahra Teaching Hospital within Al-Najaf Al-Ashraf Health Directorate in Iraq. This department was selected due to the women's availability, in addition to women reviewing this department after hysterectomy.

Sample of the Study:

A Non-probability (purposive) sample consists of 60 women after hysterectomy. The sample

is divided into two groups: 30 women in the control group are not exposed to the instructional program, and the other 30 women in the experimental group are exposed to the instructional program.

Study Instrument:

An assessment tool used to assess the depression severity of women's after hysterectomy , the tool included 2 parts :

Part 1: Socio-Demographic-Clinical Data:

A- Personal Information:

There are sixitems in a socio-demographic datasheet, which include: age, residency, occupational status, level of education, martial status, and number of children. In order to prepare for data analysis, these variables are coded.

B- Clinical Data:

This questionnaire consists of three items, which include the duration of the causes of hysterectomy, the reasons for performing hysterectomy, and the type of operation. In order to prepare for data analysis, these variables are coded.

Part 2: Beck Depression Inventory (BDI):

The Beck depression inventory (BDI) original scale is adopted from Beck et al. (1961); Al-Amarei et al. (2019), and then the researcher translated the assessment tool from English to Arabic by an expert to assess the severity of depression in women with hysterectomy before and after the intervention. It consists of 21 questions with a value of 0–3 for each answer that contain various features of depression such as mood, pessimism, sense of failure, lack of satisfaction, guilty feeling, sense of punishment, self-hatred, self-accusations, self-punitive wishes, crying spells, irritability, social withdrawal, indecisiveness, body image, work inhibition, sleep disturbance, fatigability, loss of appetite, weight loss, somatic preoccupation, and loss of libido, which were comprehensively scored as the level of depression ranging from (0–63).

Reliability of the Study Instrument:

Although the BDI scale used in the current study has a global validity and reliability scale, the researcher calculated the reliability due to the Arabic language being utilized to collect the data rather than English. By using the Cronbach's Alpha coefficient test in a pilot study, the reliability of the current questionnaire was assessed. With a Cronbach's alpha value of (0.79) for the Beck Depression Inventory (BDI) scale, the test's results showed that the reliability is satisfactory.

Procedures:

The assessment and implementation stages were used to accomplish the objective of the current study. These phases took place over a five-month period, from the beginning of December 2022 to the end of May 2023.

1. Assessment Phase: Women were interviewed during this phase to gather fundamental information. The researcher introduced himself to each woman during the starting interview and explained the goals, time frame, activities of the study, and the method used to fill out the scale. The data collected in this phase served as the baseline for subsequent comparisons used to evaluate the effectiveness of instructional program.

2. Implementation Phase: The researcher goes to the hospital every weekday for five hours. Participation in five scheduled sessions of instruction. The women studied were collected in the form of five groups; each group consisted of six women. Every participant group received all of these sessions at the rate of one session per week. Each session lasted between three-quarters of an hour and one hour, including conversation and discussion time regarding each participant's performance, development, and reactions. The program contains a set of general goals, and each session has certain objectives and topics that are accomplished through a variety of teaching techniques, including lectures, group discussions, and brainstorming. Additionally, the objectives of the instruction program were discussed at the start of the first session. At the start of each session, remarks about the previous session were given. All of the women in the intervention group received an educational booklet, which was delivered during program sessions along with visual aids. The researcher kept in touch and followed up with each group throughout the duration of the program (from the beginning of the first session until the end of the program).

3- Evaluation Phase: Each group of the experimental groups is examined by post-test after one week from the end of implementing the program. Also, each group of the experimental groups is examined by post-test after six weeks without receiving the instructional program (just the usual nursing care).

Results:

Table (4.1) Distribution of Socio-Demographic Data of the Experimental and Control Group Participants (NO. =60; 30 for each of the Experimental and Control Groups)

Socio-Demographic Data	Rating And Interval	Experimental group		Control group	
		Freq.	**%**	**Freq.**	**%**
Age/years	26 <= 34	4	13.3	3	10.0
	35 – 43	**13**	**43.3**	8	26.7
	44 – 52	7	23.3	**12**	**40.0**
	53 – 61	4	13.3	3	10.0
	62 – 70	2	6.7	4	13.3
	Mean	43.63	46.07		
	SD	10.347	8.940		
Residency Area	Rural	11	36.7	12	40.0
	Urban	**19**	**63.3**	**18**	**60.0**
Level of Education	Read and Write	6	20.0	6	20.0
	Primary School Graduated	5	16.7	6	20.0
	Intermediated School Graduated	3	10.0	6	20.0
	High School Graduated	6	20.0	6	20.0
	Institute/University Graduated	**9**	**30.0**	4	13.4

	Post-Graduated	1	3.3	2	6.6
Occupational status	**Housewife**	**14**	**46.6**	**11**	**36.7**
	Free works	8	26.7	9	30.0
	Employee	8	26.7	10	33.3
Marital Status	Single	1	3.3	1	3.3
	Married	**22**	**73.4**	**24**	**80.0**
	Divorced	5	16.7	1	3.3
	Widowed	1	3.3	3	10.0
	Separated	1	3.3	1	3.3
Number of children	<= 2	7	23.3	6	20.0
	3 – 4	**12**	**40.0**	**10**	**33.3**
	5 – 6	7	23.4	9	30.0
	7+	4	13.3	5	16.7

According to this table, the majority of experimental group participants (43.3%) are between the ages of 35 and 43, urban residents (63.3%), those who are housewives (46.6%), (73.4%) are married women, number of children (40%) are within (3 – 4) and (30%) have graduated from an institute or college. The control group is predominately made up of (44-52) year olds (40%), urban residents (60%), housewives (36.7%), (33.3%) of the number of children are within (3 – 4), and (80%) are married women.

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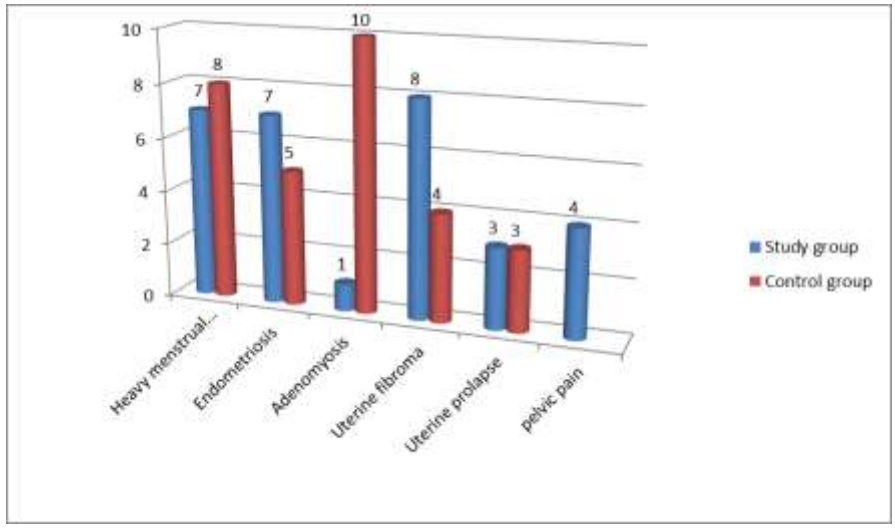

Figure (4.1) Reasons for Performing Hysterectomh among Expeimental and Control Groups Participant.

According to figure (4.1), the majority of experimental group participants have (uterine fibroma; n= 8; percentage= 26.66%), while most of control group participants have (adenomyosis; n= 10; percentage= 33.33%).

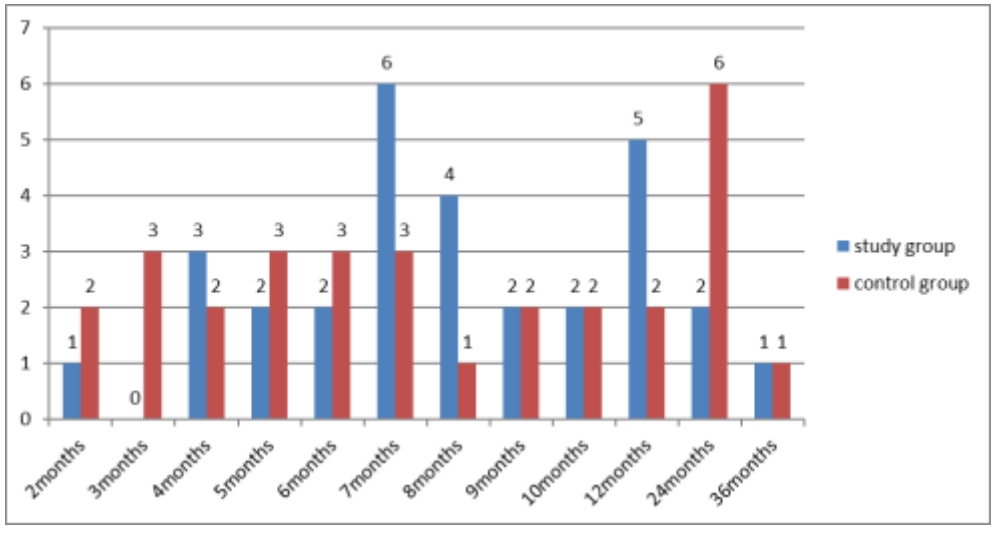

Figure (4.2) Duration of Causes of Hysterectomy among Experimental and Control Groups Participant.

Regarding figure (4.2), most experimental group participants have (seven months duration of hysterectomy ; n= 6; percentage= 20%), while most of control group participants have (twenty-

four months duration of hysterectomy ; n= 6 ; percentage= 20%).

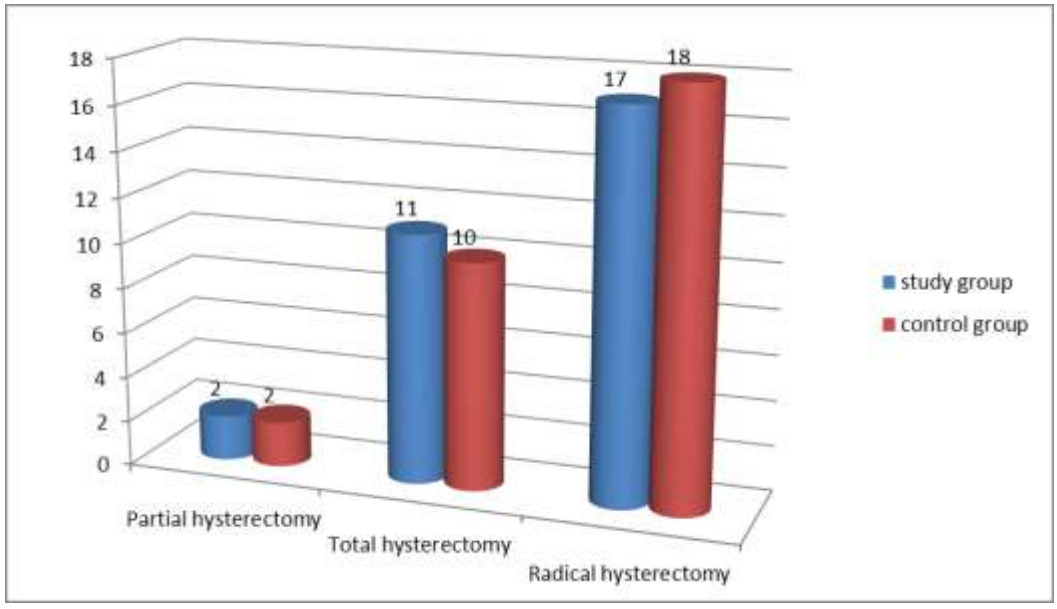

Figure (4.3) Types of Operation among Experimental and Control Groups Participant.

With Regard to figure (4.3), most expweimental group participants have (radical hysterectomy ; n= 17; percentage= 56.66%), while most of the control group participants have (radical hysterectomy ; n= 18; percentage= 60%).

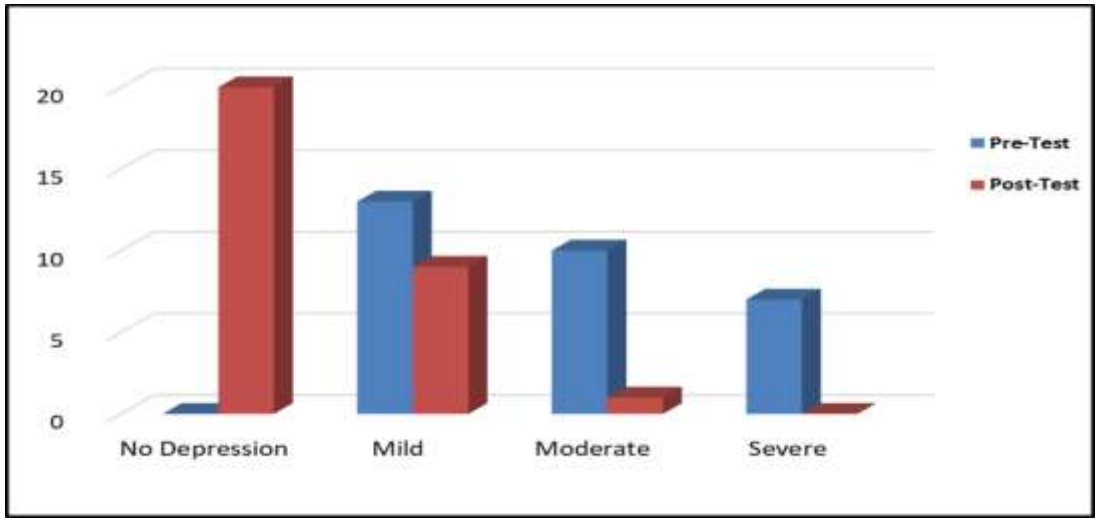

Figure (4.4) Levels of Depression between the Women Participating in the Experimental Group during Two Evaluation Periods (Pre-test and Post-test).

Figure (4.4) shows levels of depression between the women participating in the experimental group during two evaluation periods (Pre-test and Post-test). It reveals that in the pre-test assessment, about (0%) of the patients have no depression; (13%) have mild depression; (10%) have moderate depression and only (7%) have severe depression. In the post-test assessment, about (20%) of the patients have no depression; (9%) have mild depression; (1%) have moderate depression; and only (0%) have severe depression.

Table (4.2) Paired Sample Statistics in Levels of Depression Between the Women Participating in the Experimental Group during Two Evaluation Periods (Pre-test and post-test)

Periods of Evaluation	Mean	Std. Deviation	Paired Test	t	Df	Sig.
Pre-test	1.03	0.45	3.12		29	**0.0021**
Post-test	0.39	0.22				

Table 4.2 demonstrates a very substantial disparity in levels of depression among the experimental group throughout the two durations of evaluation (pre-test and post-test) at a P-value lower than 0.01 (i.e., the instructional program was effective for women with hysterectomy).

Table (4.3) Paired Sample Statistics in Levels of Depression Between the Women Participating in the Control Group during Two Evaluation Periods (Pre-test and post-test)

Periods of Evaluation	Mean	Std. Deviation	Paired Test	t	df	Sig.
Pre-test	0.94	0.40	0.11		29	0.73
Post-test	0.92	0.43				

Table (4.3) reveals that there is a non-significant difference in the levels of depression among the control group throughout the two durations of evaluation (pre-test and post-test) at a P-value higher than 0.05.

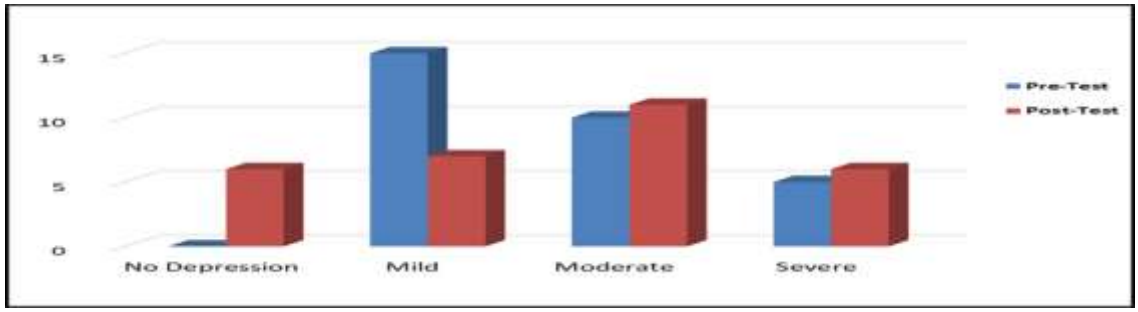

Figure (4.5) Levels of Depression Among the Women Participating in the Control Group during Two Evaluation Periods (pre-test and post-test).

Figure 4.5 shows Levels of depression among the women participating in the control group during two evaluation periods (pre-test and post-test). It reveals that in the pre-test assessment, about (0%) of the women have no depression; (15%) have mild depression; (10%) have moderate depression and only (5%) have severe depression. In the post-test assessment, about (6%) of the women have no depression; (7%) have mild depression; (11%) have moderate depression and only (6%) have severe depression.

Table (4.4) Association between Depression at the Post-Test among Experimental Group Participants and their Socio-Demographic Data

Socio-demographic data	Rating And Interval	Mean	Std. Deviation	F	Sig.
Age/years	<= 34 26	0.62	0.28	2.03	0.120
	35 – 43	0.38	0.14		
	44 – 52	0.38	0.28		
	53 – 61	0.39	0.22		
	62 – 70	0.12	0.03		
Residency Area	Urban	0.40	0.18	0.03	0.853
	Rural	0.39	0.26		
Level of Education	Read and write	0.36	0.17	0.63	0.674
	Primary School Graduated	0.36	0.20		
	Intermediated School Graduated	0.41	0.18		
	High School Graduated	0.31	0.18		
	Institute/University Graduated	0.46	0.31		
	Post-graduated	0.67			

Occupational status	Employed	0.42	0.31	1.27	0.296
	Free work	0.48	0.19		
	Housewife	0.33	0.18		
Marital Status	Single	0.86		1.61	0.203
	Married	0.36	0.23		
	Divorced	0.42	0.10		
	Widowed	0.52			
	Separated	0.57			
Number of children	<= 2	0.54	0.31	1.56	0.223
	3 – 4	0.39	0.15		
	5 – 6	0.33	0.19		
	7+	0.29	0.26		

Table (4.4) sheds light on the relationship between depression at the Post-test among experimental group participants and their socio-demographic characteristics. The table indicates there is no statistically significant association between depression and their socio-demographic data at (P>0.05).

Table (4.5) Association between Depression at the Post-Test among Experimental Group Participants and their Clinical Data

Clinical Data	**Rating And Interval**	**Mean**	**Std. Deviation**	**F**	**Sig.**
Reasons for Performing Hysterectomy	Heavy menstrual bleeding	0.39	0.20	0.74	0.59
	Endometriosis	0.42	0.10		
	Adenomyosis	0.48	0.00		
	Uterine fibroma	0.48	0.33		
	Uterin prolapse	0.33	0.14		
	Pelvic pain	0.23	0.23		
Types of Operation	Partial hysterectomy	0.38	0.13	0.01	0.98
	Total hysterectomy	0.40	0.24		
	Radical hysterectomy	0.39	0.23		
Duration of Causes of Hysterectomy	2 months	0.57	0.00	8.38	**0.001***
	4 months	0.21	0.10		
	5 months	0.93	0.10		
	6 months	0.24	0.13		
	7 months	0.44	0.10		

8 months	0.43	0.12
9 months	0.17	0.03
10 months	0.57	0.07
12 months	0.24	0.16
24 months	0.57	0.13
36 months	0.14	0.00

Table 4.5 denotes the relationship between depression at the Post-test among experimental group participants and clinical characteristics. Table shows there is a statistically significant association among the duration of the causes of hysterectomy and depression at ($P<0.05$), while other parameters were not significant at ($P>0.05$).

Discussion:

Hysterectomy is the main gynecologic procedure that could have potential impact on women's health, it has a negative impact on the psychological states of women and limits the regular activities[10]. The present study was carried out to assess the effectiveness of the instructional program on depression of women with hysterectomy.

Depression is a frequent condition in later life and is linked to significant impairment and poor quality of life. Anyone of any age can experience cognitive impairment due to depressive disorder[11]. Many factors can be contributing to depression; one of these factors is aging[12]. Therefore, the findings of the current study showed that the majority of the participants (43.3%) were between 35 and 43 years old. This finding might be due to several studies reporting that prevalence of uterine fibrosis is higher in this age range. This result was congruent with an Egyptian study that was done by[7], who studied the "Effect of Psycho-educational Program on Depressive Symptoms, Post- traumatic Stress Response and Quality of Life among Women with Hysterectomy." Their results showed that 45 % of them are between the ages of 35 and 45, with an average age of 34.55±7.65 years.

Regarding residency, the results of the current study revealed that most of the participants live in urban areas (63.3%). This finding could be explained by the fact that more people live in urban than rural regions in Al-Najaf. Consequently, the researcher encounters more patients from urban residential areas rather than rural areas. In addition, an Egyptian study done by[10,] "Effect of an Educational Supportive Program on Self-Esteem and Marital Relation Among Women Undergoing Hysterectomy," found that nearly two -thirds (63.3%) of women that were studied come from urban areas, and urban is the dominant residential area for patients who were included in this study.

Regarding the level of education among participants, the researcher states that most of the participants are graduates of an institute (30.0%), followed by the those who graduated from high school (20.0%). This result is likely caused by the fact that the majority of the sample

was drawn from urban regions, where a higher priority was placed on completing high education. This study consistent with[13], who studied "The information requirements and self-perceptions of Turkish women undergoing hysterectomy." The results confirm that the majority of the study sample has a high level of education(29.7%).

Concerning occupational status, the findings of the current study showed that almost fifty percent of those participants (46.6%) are housewives. From the perspective of our culture, moms are responsible for the household and child care, while fathers spend the majority of their time working and serving as the provider. Therefore, mothers devote their entire day to caring for their children. This finding is supported by[10], who found that more than half of samples were housewives.

In regards of marital status, the majority of the studied participants are married women. This result is probably due to social and religious norms or might be due to the fact that fewer than 50% of the women in this study were in the 35– 43 age range, which is the appropriate age for marriage. This finding is consistent with[7], who found that more than half of the participants are married women (80.0%).

In terms of the subjects' number of children. The findings indicate that the majority of the study sample has 3 – 4 children. In the point of view this result may be due to do not apply family plan or might be related to that hysterectomy multigravida parous women. This result comes along with[13], whose results confirm that the majority of the study sample has three or more children.

Concerning the reasons for performing hysterectomy, the researcher indicates that the majority of causes were uterine fibroid (26.66%). This finding is consistent with an Iraqi study done by[14], who studied the "Assessment of the Frequency of Hysterectomy in Relation to its Causes in Salahuddin General Hospital, 2022," and found that fibroid is the majority reason for performing hysterectomy (23.1%). Additionally,[15] mention that the fibroid is considered the most common benign tumor in women through childbearing age.

Concerning the duration of the cause of hysterectomy, Figure 4.2 illustrates that (7 months) duration was the majority of the study subjects (20%). This finding may be because there are more samples in this category than in other categories, or it might be related to the fact that the gynecologist applied conservative management before surgical management according to management guidelines. This result is almost in line with a study conducted by[16], who mention that durations ranging from 3 to 6 months were significant.

In regards to type of operation, Figure (4.3) demonstrates that radical hysterectomy was the largest percentage of the study subjects (56.66%). This result might be due to guidelines for management, where the benefits of radical hysterectomy include maintaining ovarian function in young patients, enabling direct lymph node examination, and maintaining functional vaginal length. This finding agrees with[13],whose study assures that a high percentage was radical hysterectomy.

women who have undergone hysterectomies are frequently linked to stress, anxiety, and depression in reading the literature; they may make it more difficult for women to comply with their condition, which has a detrimental impact on their quality of life[17].

The present study's results showed there was an extremely substantial statistical decrease among the studied women in their severity of depression after executing the program compared to previously. After implementing the program over the duration of the present study, the study found extremely substantial statistical differences in the severity of depression among the women participating in the experimental group during the two evaluation periods (pre-test and post-test). This finding indicates that for women participants in the experimental group, the severity of their depression decreased compared to those in the control group during the two assessment periods. Utilizing instructional programs is a successful method of decreasing depression in women after hysterectomy. This study is supported by[17,] who conducted a study entitled "Effect of progressive muscle relaxation technique on stress, anxiety, and depression after hysterectomy" and found the experimental group's depression mean score had dramatically decreased after the program's execution. Additionally, like this, a reduction in the level of depression was not discovered at the same time as the control croup following the application of routine nursing care.

The results of the current study revealed that there was no statistically significant association between women's socio-demographic data and the effectiveness of the study program (i.e., the program application is not affected by the participants' age, residency, occupational status, marital status, educational level, or number of children). These results were congruent with[18,] who studied "The effect of education given before surgery on self-esteem and body image in women undergoing hysterectomy." This study indicated that there is no association between socio-demographic data and the effectiveness of programs among women undergoing hysterectomy.

The results of the present study reported that there was no statistically significant association among the women's clinical characteristics and the effectiveness of the study program (i.e., the program application is not affected by the participants' reasons for performing hysterectomy and types of operation), except for the duration of causes of hysterectomy, which was statistically significant (highest mean level at 5 months (0.93); and lowest mean level at 36 months (0.14)). In regards to the highest level of mean at 5 months, the researcher attributed these results to the women's short period of suffering from the complaint of their disease (disease that caused hysterectomy). In addition to their fear of Complications and consequences after hysterectomy (long-term complications), this leads to an increase in the severity of their depression. In regards to the lowest level of mean at 36 months, the researcher attributed these results to the studied women's ability to adapt to the disease as a result of the long period they lived with their disease, which led to a decrease in the severity of their depression.

Conclusion:

The instructional program was effective in reducing the severity of depression in women after

hysterectomy.

Recommendation:

- An instructional program can be included in the nursing curriculum, as this program can be taught to nursing students and nursing staff to learn how to reduce depression associated with hysterectomy.
- popularization of an instructional program for every woman who had hysterectomies in every hospital and clinic to reduce their depression severity and enhance their quality of life.
- Supplying women who have had hysterectomies with an efficient discharge plan that includes a follow-up visit schedule, the necessary tests, and referrals for each category of anticipated symptoms following hysterectomies, particularly psychological complaints.
- The findings of the study can serve as a benchmark for other research in the same setting.

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