

Effectiveness of Pre-Operative Education on Psychological Wellbeing of Women Undergoing Hysterectomy Admitted in Gynae Unit of A Tertiary Care Hospital, Ludhiana, Punjab

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Abstract

Hysterectomy is one of the most commonly performed gynecological surgeries and is often associated with psychological problems such as anxiety, stress, and depression that affect the overall well-being of women. The present study aimed to assess the effectiveness of pre-operative education on psychological well-being among women undergoing hysterectomy admitted in the gynecology unit of DMCH Hospital, Ludhiana, Punjab, India. A quasi-experimental research design was adopted and 40 women undergoing elective hysterectomy were selected through purposive sampling technique and divided into experimental ($n_1=20$) and control ($n_2=20$) groups. The experimental group received structured pre-operative education on psychological well-being prior to surgery, while the control group received routine care. Data were collected using a structured socio-demographic questionnaire and DASS-21 scale to assess depression, anxiety, and stress levels before and after the intervention. Data were analyzed using descriptive and inferential statistics (SPSS version 25). The findings revealed a significant reduction in depression, anxiety, and stress scores among women in the experimental group compared to the control group after administration of pre-operative education at $p \leq 0.05$ level of significance. The study concluded that pre-operative education was effective in improving the psychological well-being of women undergoing hysterectomy and should be incorporated into routine pre-surgical care to enhance emotional preparedness and overall recovery.

Keywords: Elective hysterectomy, pre-operative education, psychological wellbeing.

Introduction

Early in life, when menstruation begins, reproductive health becomes the lens through which many women first understand their bodies not just biologically, but emotionally and socially, as the uterus is imbued with meanings of femininity, fertility, and identity¹. The female reproductive system, which includes the uterus, ovaries, fallopian tubes, and vagina, undergoes complex biological changes from puberty through menopause. These changes are significantly influenced by hormonal levels, age, and various health conditions. A woman's reproductive health is not limited to fertility but also encompasses hormonal balance, menstrual regularity, sexual function, and emotional stability². Throughout different stages of

life, women may face various gynecological challenges that affect their health, self-image, and quality of life³. As women advance in age, especially in the reproductive to perimenopausal phases (usually between 35 to 55 years), the risk of developing gynecological disorders increases⁴. Many women suffer from conditions such as abnormal uterine bleeding, fibroids, endometriosis, adenomyosis, chronic pelvic pain, and uterine prolapse. These issues not only affect physical health but also disrupt social, emotional, and occupational functioning⁵. When conservative treatments such as hormonal therapy, medications, or minimally invasive procedures fail to relieve symptoms, surgical management becomes necessary. In such cases, hysterectomy the surgical removal of the uterus is often recommended as a definitive solution⁶. Hysterectomy is one of the most common major surgeries performed on women globally, particularly among those in their late 30-50 years⁷. It may be indicated for a variety of benign and malignant conditions, including fibroids, abnormal uterine bleeding, endometriosis, pelvic inflammatory disease, uterine prolapse, and cancers of the uterus, cervix, or ovaries⁸. Hysterectomy may be either planned (elective) or emergency. Planned hysterectomies are scheduled in advance, often after thorough investigation and failure of medical management. These are usually performed for non-life-threatening conditions that impact quality of life, such as chronic fibroids or bleeding. On the other hand, emergency hysterectomies are performed in urgent or life-threatening situations for example, in the case of severe postpartum hemorrhage, uterine rupture, or cancer-related complications; Hysterectomy is planned and emergency procedures often require quicker decision-making and can be more emotionally distressing for the patient due to the sudden nature of the situation⁶.

There are also various types and surgical methods of hysterectomy, and the choice depends on the medical condition, size and position of the uterus, presence of comorbidities, and the patient's reproductive and health goals. It may be total (removing the body, fundus and cervix of the uterus, often called "complete"), partial (removal of the uterine body while leaving the cervix intact, also called "supracervical") or subtotal hysterectomy paracervical (removal of upper part of the uterus and the cervix). In radical hysterectomy, a surgeon removes the whole uterus, tissue on the sides of the uterus, the cervix and the top part of the vagina. It disables the women to bear child and has surgical risks as well as long term effects, so the surgery is normally recommended when other treatment options are not available⁷. The side effects of this surgical treatment invariably cause some loss of function such as cessation of menstruation, infertility and hormonal imbalance and during recovery from hysterectomy a person may also experience pain, bleeding, constipation and menopause-type symptoms, such as hot flashes⁸. Hysterectomy may also lead to various changes in patients' life. Women who undergo hysterectomy face a multitude of physical and psychosocial problems both before and after the hysterectomy⁴. Physical problems include insomnia, breathlessness, tiredness, fatigue, muscular ache, joint pain and skin problems like dryness, loss of elasticity etc and psychological problems include mood swings, irritability, depression, tendency to cry easily, short-tempered behaviour and lessened self-confidence⁹.

While hysterectomy is often medically necessary and offers significant relief from distressing symptoms, it also has a profound emotional and psychological impact on women. The uterus holds symbolic value for many women, as it is associated with femininity, motherhood, and identity. Thus, the removal of the uterus even when medically justified can evoke intense emotional responses including fear, grief, anxiety, sadness, and altered self-perception. These feelings may be even more overwhelming when the surgery is done suddenly in an emergency, leaving little time for psychological adjustment. Many women experience preoperative anxiety, emotional confusion, and fear regarding the surgery, its consequences, and life after

the procedure. Concerns about loss of fertility, early menopause, changes in sexual function, surgical pain, and long-term health outcomes often add to the emotional burden. Inadequate preparation or poor communication from healthcare providers can further amplify these negative emotions, making the surgical experience more traumatic^{8,9}. In such scenarios, preoperative education plays a vital role in enhancing a woman's psychological preparedness. Preoperative education refers to the structured delivery of information, guidance, and emotional support to the patient before surgery. It helps clarify doubts, reduce fear of the unknown, build realistic expectations, and improve decision-making. Educating women about the type of hysterectomy they will undergo, what to expect during and after surgery, and how to manage recovery not only prepares them physically but also strengthens emotional resilience¹⁰.

Preoperative education has emerged as a vital intervention in surgical care. It involves providing patients with structured and comprehensive information about the surgical procedure, anesthesia, postoperative care, and psychological coping strategies. The goal of such education is to reduce preoperative anxiety, promote a sense of control, and enhance psychological resilience¹¹. Multiple studies have indicated that patients who receive thorough preoperative education demonstrate lower levels of anxiety and depression, faster postoperative recovery, and improved satisfaction with care. However, the extent and quality of preoperative education vary widely, and its specific impact on women undergoing hysterectomy remains underexplored in certain clinical contexts¹².

Hence, the focus of the study is to assess the effectiveness of pre-education on psychological well being women undergoing hysterectomy. Interventions like providing pre-operative information, skill teaching of selected post-operative behaviors such as turning, sitting, mobility, deep breathing, and muscle relaxation exercises, which are essential and effective measures to improve knowledge, reduce post-operative anxiety and depression and promote positive post-operative outcomes¹³. Post-operative recovery is an important task for patient especially in case of patient in depression after hysterectomy. Pre-operative instruction tends to decrease post-operative complication, increase patient satisfaction, shorten the length of hospitalization, and promote physical well-being and overall improves quality of life too¹⁴

Problem statement

“A study to assess the effectiveness of pre-operative education on psychological wellbeing of women undergoing hysterectomy admitted in gynae unit of a tertiary care hospital, Ludhiana, Punjab.”

Aim:

To assess the effectiveness of pre-operative education on psychological wellbeing of women undergoing hysterectomy

Objectives:-

1. To assess the baseline psychological well being of women undergoing hysterectomy.
2. To evaluate the effectiveness of pre-operative education on psychological well being of women undergoing hysterectomy.
3. To determine the association of psychological well being of women undergoing hysterectomy with selected socio demographic variables

Operational Definitions

- **Effectiveness:** It refers to the extent of change occurs in the emotional & mental health of women undergoing hysterectomy after the intervention of pre-operative education on coping strategies.
- **Pre-operative education:** It refers to the nurse led intervention to prepare the women to cope with

the emotional symptoms like anxiety, stress & depression as administered 24 hours before the procedure (elective hysterectomy).

- **Psychological Well-being:** It refers to the state of mental & emotional health of women and not merely the absence of mental illness and the women were able to manage emotional changes like stress, anxiety and depression symptoms experienced before and after undergoing hysterectomy as assessed by standardized depression anxiety stress scale (DASS-21).
- **Women undergoing hysterectomy:** Females who had chosen to undergo a planned surgical removal of the uterus for reasons other than an emergency, and it included both total abdominal hysterectomy and laparoscopic hysterectomy.

Hypothesis

H₀₁: There will be no statistical significant effect of pre operative education on psychological well being of women undergoing hysterectomy at $p \leq 0.05$ level of significance.

H₁: There will be a statistical significant effect of pre operative education on psychological well being of women undergoing hysterectomy at $p \leq 0.05$ level of significance.

Material and method

Quantitative research approach & quasi-experimental research design was used to assess the effectiveness of pre-operative education on psychological wellbeing of women undergoing hysterectomy admitted in gynae unit of a tertiary care hospital, Ludhiana, Punjab. Responses were collected by self-report method using depression, anxiety and stress scale (DASS-21). Quantitative data was obtained by using interview & self-report technique. Data was tabulated and analysed using descriptive and inferential statistics (SPSS version 25).

Inclusion and Exclusion criteria

Inclusion criteria: - Women undergoing elective hysterectomy who were

- willing to participate.
- available on 2nd post operative day (for the post test)

Exclusion criteria

- Women who didn't receive pre-operative education on psychological wellbeing.

Ethical consideration

Ethical clearance was undertaken from Institutional Ethical committee. Informed written consent was taken from the subjects prior to data collection and assured that their information would be kept confidential. Subjective information sheet was also provided as per the language ability of subjects to explain the purpose, procedure and benefits of the study.

Analysis and interpretation of data

Analysis and interpretation of the data was done in accordance with the objectives of the study using descriptive statistics (frequency, percentage distribution, graphs and inferential statistics (ANOVA and t-test) at 0.05 level of significance & categorized under different sections.

SECTION :- I(A)

SOCIODEMOGRAPHIC PROFILE

Table 1 Frequency and percentage distribution of Women undergoing Hysterectomy as per their Socio-demographic Profile.

N=40

Socio-demographic characteristics	f(%)			X ²
	Experimental Group n ₁ = 20	Control Group n ₂ = 20	Total N=40	
Age (in years)**				
30-40	7(35)	3(15)	10(25)	2.933 df=3 p=0.435 ^{NS}
40-50	9(45)	9(45)	18(45)	
50-60	3(15)	6(30)	9(22.5)	
≥60	1(5)	2(10)	3(7.5)	
Educational status				
Illiterate	0(0)	1(5)	1(2.5)	4.150 df=3 p=0.240 ^{NS}
Elementary	8(40)	9(45)	17(42.5)	
Seconadry	4(20)	7(35)	11(27.5)	
Graduate and above	8(40)	3(15)	11(27.5)	
Occupation status of Women				
Working	2(10)	1(5)	3(7.5)	0.360 df=1 P=0.548 ^{NS}
Not working	18(90)	19(95)	37(92.5)	
Living status				
With husband only	1(5)	1(5)	2(5)	0.128 df=2 p=1.00 ^{NS}
With in-laws	6(30)	5(25)	11(27.5)	
With husband and children	13(65)	14(70)	27(67.5)	
Socioeconomic class as per kuppuswami scale (2024)				
Upper (I)	0(0)	0(0)		5.476 df=2 p=0.059 ^{NS}
Upper middle (II)	4(20)	3(15)	7(17.5)	
Lower middle(III)	7(35)	14(70)	21(52.5)	
Upper lower (IV)	9(45)	3(15)	12(30)	

NS=non significant **mean age (years) ±SD (Experiment group)=43.95±7.76

Mean age (year) ±SD (control group)=47.60±9.13

Table 1 depicts that all variables in both groups were found to be non significant which simply depicts their homogeneity.

SECTION –I (B)

CLINICAL PROFILE

Table 2: Frequency and percentage distribution of women undergoing hysterectomy as per their clinical variables.

Clinical variables	f(%)			X ² Statistics
	Exp Group n ₁ = 20	Control Group n ₂ = 20	Total N=40	
BMI (in kg/m²) as per WHO				
Underweight (<18.5)	0(0)	1(5)	1(2.5)	2.34 df =4 p=0.673 ^{NS}
Normal (18.5-24.9)	6(30)	9(45)	15(37.5)	
Overweight (25.0-29.9)	9(45)	6(30)	15(37.5)	
Obese class I (30.0-34.9)	4(20)	3(15)	7(17.5)	
Obese class II (35.0-39.9)	1(5)	1(5)	2(5)	
Obese class III (≥40.0)	0(0)	0(0)	0(0)	
Number of child birth				
Nil	3(15)	1(5)	4(10)	3.821 df=3 p=0.337 ^{NS}
01	2(10)	2(10)	4(10)	
02	14(70)	12(60)	26(65)	
03 and above	1(5)	5(25)	6(15)	
Do you have any medical history				
Yes	4(20)	5(25)	9(22.5)	0.143 df=1 p=0.705 ^{NS}
No	16(80)	15(75)	31(77.5)	
Specification of history of medical illness *	(n=4)	(n=5)		
Hypertension	2(50)	4(80)		
Diabetes	1(25)	2(40)		
Hyperthyroidism	2(50)	1(20)		
Do you have any surgical history				
Yes	7(35)	6(30)	13(32.5)	0.114 df=1 p=0.736 ^{NS}
No	13(65)	14(70)	27(67.5)	
Specification of surgical history	(n= 7)	(n= 6)		
LSCS	3(42.8)	3(50)		
Cholecystectomy	1(14.2)	3(50)		
Appendectomy	1(14.2)	0(0)		
Salpingectomy	1(14.2)	0(0)		
Hernioplasty	1(14.2)	0(0)		

Do you have any history of substance abuse				
No	20(100)	20(100)		
Previous hospitalization				
Yes	7(35)	6(30)	13(32.5)	0.114
No	13(65)	14(70)	27(67.5)	df=1
Specification of previous hospitalization(n=7)	(n=7)	(n=6)		p=0.736 ^{NS}
Cholecystectomy	1(14.2)	2(33.3)		
LSCS	3(42.8)	3(50)		
Appendectomy	1(14.2)	0(0)		
Salpingectomy	1(14.2)	0(0)		
Biopsy	1(14.2)	0(0)		
Stroke	0(0)	1(16.6)		
Hernioplasty	0(0)	0(0)		
Reason of undergoing hysterectomy				
Fibroid	13(65)	15(75)		2.543
Menorrhagia	6(30)	4(20)		df=3
Uterine perforation	0(0)	1(5)		p=0.594 ^{NS}
Risk of cancer	1(5)	0(0)		

Table 2 depicts that all variables in both groups were found to be non significant which simply depicts their homogeneity.

Table 3 Frequency, percentage and mean score of psychological wellbeing(depression,anxiety and stress) of women undergoing hysterectomy .

N=40 (n₁=20, n₂=20)

Groups Score ↓	Levels of psychological wellbeing(depression)f(%)					Mean ±SD	Mean %
	Normal	Mild	moderate	Severe	Very severe		
	(0-9)	(10-13)	(14-20)	(21-27)	(28+)		
Experimental	2(10)	3(15)	8(40)	7(35)	-----	17.70±5.46	42.1
Control	2(10)	3(15)	7(35)	8(40)	-----	18.50±6.80	44.04
Groups Score ↓	Levels of psychological wellbeing (anxiety) f(%)					Mean ±SD	Mean %
	Normal	Mild	moderate	Severe	Very severe		
	(0-7)	(8-9)	(10-14)	(14-15)	(20+)		

Experimental	4(20)	1(5)	8(40)	3(15)	4(20)	18.20±8.55	43.3
Control	5(25)	2(10)	3(15)	7(35)	3(15)	18.40±9.76	43.8
Groups → Score ↓	Levels of psychological wellbeing (stress) f(%)					Mean ±SD	Mean %
	Normal (0-14)	Mild (15-18)	moderate (19-25)	Severe (26-33)	Very severe (34+)		
Experimental	1(5)	1(5)	12(60)	3(15)	3(15)	19.40±6.90	46.1
Control	2(10)	3(15)	4(20)	7(35)	4(20)	20.30±7.65	48.3

Max.score	Min score	Overall mean score of psychological wellbeing
Depression : 42	0	experimental group = 55.30±18.33
Anxiety : 42	0	Control group = 57.20±22.10
Stress : 42	0	

Table 4: Frequency ,percentage and mean score of level of psychological wellbeing among women undergoing hysterectomy after pre-operative education.

N=40

Groups → Score ↓	Levels of psychological wellbeing (depression) f(%)					Mean ±SD	Mean %
	Normal (0-9)	Mild (10-13)	moderate (14-20)	Severe (21-27)	Very severe (28+)		
Experimental	12(60)	4(20)	4(20)	-----	-----	8.40±7.95	20
Control	1(5)	2(10)	9(45)	8(40)	-----	18.65±4.68	44.4
Groups → Score ↓	Levels of psychological wellbeing (anxiety) f(%)					Mean ±SD	Mean %
	Normal (0-7)	Mild (8-9)	moderate (10-14)	Severe (14-15)	Very severe (20+)		
Experimental	15(75)	5(25)	-----	-----	-----	6.50±3.22	15.47
Control	1(5)	5(25)	10(50)	1(5)	3(15)	18±7.16	42.85
	Levels of psychological wellbeing (stress) f(%)						

Groups Score ↓						Mean ±SD	Mean %
	Normal (0-14)	Mild (15-18)	moderate (19-25)	Severe (26-33)	Very severe (34+)		
Experimental	12(60)	6(30)	2(10)	-----	-----	8.10±3.69	19.2
Control	1(5)	10(50)	5(25)	4(20)	-----	20.70±6.33	49.2

Max.score	Mini score			Overall mean score of psychological wellbeing
Depression : 42		0		Experimental group=23.00±8.11
Anxiety : 42		0		Control group =57.60±18.64
Stress : 42				

Table 4 depicts the highlight that women who received pre-operative education experienced a remarkable reduction in depression, anxiety, and stress levels after the intervention. Therefore, pre-operative education should be considered an essential component of care for women scheduled for hysterectomy to enhance their psychological well-being and surgical experience.

Table 5 (a): Comparison of level of psychological wellbeing of women in experimental and control group.

Depression	Levels of psychological wellbeing (depression)					
	Experimental Group			Control Group		
	Mean ±SD	MD	t-value	Mean±SD	MD	t-value
Pre –test (baseline)	17.70±5.46	9.3	t=9.829 df=19 p=0.000*	18.50±6.80	0.15	t=0.94 df=19 p=0.926 ^{NS}
Post-test(after education)	8.40±7.95			18.65±4.68		
Anxiety	Levels of psychological wellbeing (Anxiety)					
	Experimental Group			Control Group		
	Mean ±SD	MD	t-value	Mean±SD	MD	t-value
Pre –test (baseline)	18.20 ±8.55	11.7	t=7.64 df=19	18.40±9.76	0.4	t=0.230 df=19

Post-test(after education)	6.50±3.22		p=0.001*	18.00±7.16		p=0.821 ^{NS}
Stress	Levels of psychological wellbeing (stress)					
	Experimental Group			Control Group		
	Mean ±SD	MD	t-value	Mean±SD	MD	t-value
Pre –test (baseline)	19.40±6.90	12.5	t=6.55 df=19 p=0.001*	20.30±7.65	0.4	t=0.228 df=19 p=0.822 ^{NS}
Post-test(after education)	8.10±3.69			20.70±6.33		

N=40 *significant

NS=non significant

Table 5(b) Comparison of overall pre and post test of psychological wellbeing of women in experimental and control group.

N=40

Groups	Psychological wellbeing			
	Pre-test	Post –test	MD	t value
Experimental group (n ₁ =20)	55.30±18.33	23.00±8.11	32.3	t=8.655 df=19 p=0.000*
Control group (n ₂ =20)	57.20±22.10	57.60±18.64	0.4	t=0.087 df=19 p=0.931 ^{NS}

*significant

NS =Non significant

Table 5(b) illustrate comparison and mean score of psychological wellbeing of women undergoing hysterectomy .In experimental group as per observation pre-test mean score was 55.30±18.33 and post-

test mean score was 23.00 ± 8.11 with mean difference 32.3. Whereas in control group, pre-test mean score was 57.20 ± 22.10 and post test mean score was 57.60 ± 18.64 with mean difference 0.4. Hence, above findings indicated that overall mean score in experimental group decreases in case of post-test with mean difference of 32.3. The difference was found to be statistically significant.

Table 6: Association between baseline depression score with socio-demographic variables in experimental group and control group.

N=40

Sociodemographic variables	Experimental group			Control group		
	n ₁ (20)	Mean $\pm$ S. D	F/t	n ₂ (20)	Mean $\pm$ S. D	F/t
Occupational status of Women						
Working	2	9.00 $\pm$ 1.41	6.282	1		0.069
Not working	18	21.55 $\pm$ 7.34	df=18 p=0.001*	19	20.63 $\pm$ 8.97	p=0.946 ^{NS} df=18
Living status						
With husband only	1		0.769	1		0.354
With in-laws	6	18.33 $\pm$ 6.121	df=2	5	19.60 $\pm$ 10.99	p=0.939 ^{NS}
With husband and children	13	20.92 $\pm$ 9.00	p=0.657 ^{NS}	14	21.00 $\pm$ 8.58	df=2
Dietary habits						
Vegetarian	15	21.6 $\pm$ 7.64	1.125	15	21.33 $\pm$ 8.40	0.975
Non vegetarian	5	16.4 $\pm$ 8.41	df=18 p=0.435 ^{NS}	5	18.40 $\pm$ 10.33	p=0.520 ^{NS} df=18
Socioeconomic class						
Upper middle (II)	4	25.5 $\pm$ 9.14	1.638	3	22.00 $\pm$ 3.46	0.787
Lower middle (III)	7	21.14 $\pm$ 6.61	df=2	14	18.85 $\pm$ 8.96	p=0.644 ^{NS}
Upper lower (IV)	9	17.33 $\pm$ 7.87	p=0.235 ^{NS}	3	27.33 $\pm$ 9.86	df=2

Minimum score 0

*significant

Maximum score 42

NS=non significant

Table 7: Association between baseline Anxiety score with socio-demographic variables in experimental group and control group.

N=40

Sociodemographic variables	Experimental group			Control group		
	n ₁ (20)	Mean $\pm$ S. D	F/t	n ₂ (20)	Mean $\pm$ S. D	F/t

Occupational status of Women						
Working	2	7.0±1.41	5.784	1		0.369
Not working	18	19.44±8.08	p=0.001* df=18	19	18.21±9.91	p=0.716 ^{NS} df=18
Living status						
With husband only	1		0.550	1		0.372
With in-laws	6	13.66±6.50	P=0.827 ^{NS}	5	18.8±11.09	p=0.934 ^{NS}
With husband and children	13	20.30±9.12	df=2	14	17.85±9.93	df=2
Dietary habits						
Vegetarian	15	18.53±8.73	1.604 p=0.272 ^{NS}	15	18.93±9.22	0.582 p=0.801 ^{NS}
Non vegetarian	5	17.2±8.89	df=18	5	16.8±12.29	df=18
Socioeconomic class						
Upper middle (II)	4	25.5±8.386	1.375	3	20.66±7.57	1.653
Lower middle(III)	7	16.85±8.23	p=0.347 ^{NS}	14	18.28±9.66	p=0.243 ^{NS}
Upper lower (IV)	9	16.0±7.93	df=2	3	16.66±15.14	df=2

Minimum score 0

*significant

Maximum score 42

NS=non significant

Table 8: Association between baseline stress score with socio-demographic variables in experimental group.

N=40

Sociodemographic variables	Experimental group			Control group		
	n ₁ (20)	Mean ± S. D	F/t	n ₂ (20)	Mean ± S. D	F/t
Occupational status of Women						
Working	2	15.0±1.41	0.948	1		0.039
Not working	18	19.88±7.11	p=0.356 ^{NS} df=18	19	20.31±7.86	p=0.969 ^{NS} df=18
Living status						
With husband only	1		0.931	1		0.435
With in-laws	6	14.33±5.42	p=0.538 ^{NS}	5	18.00±8.00	p=0.895 ^{NS}
With husband and children	13	22.15±6.29	df=2	14	21.00±7.95	df=2

Habitat						
Rural	8	17.25±7.62	1.147	6	22.66±7.11	0.900
Urban	12	20.83±6.29	p=0.266 ^{NS} df=18	14	19.28±7.90	p=0.380 ^{NS} df=18
Socioeconomic class						
Upper middle (II)	4	25±5.77	1.263	3	22.66±4.61	1.414
Lower middle(III)	7	18.85±6.61	p=0.359 ^{NS}	14	19.14±7.67	p=0.307 ^{NS}
Upper lower (IV)	9	17.33±6.85	df=2	3	23.33±11.01	df=2

Minimum score 0

*significant

Maximum score 42

NS=non significant

Discussion:

It was conducted according to objectives of the study. The findings of the study supported by Essa M.R, Ismail Aziz .A,Hassan Ibrahim.N (2017) with quasi experimental research design on effect of progressive muscle relaxation technique on stress ,anxiety and depression after hysterectomy in which during pre-intervention phase,the stress mean score among the experimental was higher than that of the control group (15.20±3.83) and 14.62±3.894). In case of anxiety control group was higher than experimental group (9.52±3.146 and 10.07±4.79 and in relation to depression experimental group has higher score than that of the control group(8.175±1.73 and 7.825±1.567 respectively¹⁹.

Another study supported by **Mohamed ferhi et.al(2024)** conducted a prospective cohort study to assess the psychological outcomes and quality of life after hysterectomy in Tunisia.Total 60 women were included in the study. Following the hysterectomy, there were improvement in quality of life and psychological outcomes across all domains, regardless of whether total or subtotal hysterectomy was performed. The mean score of anxiety decreased from 12.57 to 8.77 after hysterectomy and from 14.83 to 9.57 for depression.So, there is statistically significant difference was found¹⁶.

Similar findings were found in the study conducted by **Pansare Shruti,Jain Shruti.(2021)** who studied the impact of pre-operative education on post-operative psychosocial health among 96 women reporting to the gynecology ward after hysterectomy operation . The results revealed that the mean score of intervention group for pre-operative anxiety was 6.81±2.69 as compared to 9.13±3.36 in the control group while post-operative scores were 6.79±3.46 & 9.71±3.16 respectively. In case of depression, there was rise in score in control group from 9.93±4.55 pre-operatively to 10.48±4.82 post-operatively. In intervention group it fell from 8.02±3.46 pre-operatively to 6.85±3.98 post-operatively².

Similarly, **Essa M.R, Ismail Aziz .A,Hassan Ibrahim.N (2017)** revealed that significant improvement in the psychological well-being of women undergoing hysterectomy after receiving pre-operative education. In the study group, there was a notable reduction in anxiety, with mean scores decreasing from 9.525 ± 3.146 to 4.575 ± 2.011 (p = .000). Similarly, stress levels showed a marked decline from 15.200 ± 3.838 to 8.200 ± 3.568 (p = .000), indicating that the intervention helped participants feel more emotionally prepared for surgery. Moreover, depression scores also significantly dropped from 8.175 ± 1.738 to 4.200 ± 2.334 (p = .000). On the other hand, the control group showed no significant changes in anxiety (p = .925), stress (p = .954), or depression (p = .607) levels¹⁹.

As per association of sociodemographic variables, similar findings by **Rassi Sheehan.L,Mohmed.Q, Ghafel.H(2019)** indicated that (91%) women were non working, followed by (8%) of them are government employee. Association of anxiety with all other sociodemographic variables (age, occupation status, level of educational, habitat, and monthly income) was found to be statistically non-significant except occupation $p=0.000^{16}$.

Another study by **Sabra.IA, Elweley ZM.(2015)** revealed that association between depression with occupation. It was observed that majority 66% women were not working with mean score of 36.87 ± 11.02 and 40% women were working with mean score of 24.52 ± 11.04 . Association of depression with other sociodemographic variables (age, marital status, occupation, level of education, habitat and economic status) was found to be statistically non significant except occupation²⁰.

Conclusion

Hence, pre-operative education was found to be effective in improving the psychological wellbeing of women undergoing hysterectomy. The findings indicated that pre-operative education plays a crucial role in preparing patients mentally for surgery, thereby enhancing their emotional readiness and overall well-being. Thus, incorporating such educational interventions into routine pre-surgical care is highly recommended.

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