

Psychological Problems Among Patients Undergoing Hysterectomy

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Abstract: Hysterectomy, which is the surgical removal of the uterus and cervix, is the commonest major gynecological operation in both developed and developing countries.

The aim of the present study was to describe the profile of women undergoing hysterectomy, identify psychological problems encountered among patients & assess the degree of pain postoperatively. A prospective descriptive **Research design** was used to investigate the current research problems over one-year period between June 2015 to the end of May 2016. The research was conducted in the department of gynecology, at Zagazig University Hospital. Some data was obtained from case notes of patients.

Results the mean age and parity were 48.7 ± 9.6 years and 4.3 ± 2.3 respectively, 77.9 % of the studied patients underwent abdominal hysterectomy (AH), the rest had vaginal and laparoscopic approach (11.5% & 10.6% respectively). The most common indications were leiomyomata (62.6%) & bleeding disorders (60.0%). The women received adequate and significant preoperative counseling concerning hysterectomy, in terms of clearing up misconceptions, relieving degree of pain, alleviating fear and physical preparation of the patient.

It can be concluded that, abdominal hysterectomy constituting the most common type & sever degree of anxiety and depression was observed among majority of patients postoperatively.

It is recommended that, maternity nurses should use nursing guidelines to help integrate existing knowledge into practice, align perioperative care, and encourage future investigations of optimal perioperative and postoperative care for patients undergoing gynecologic/oncology operations.

Keywords: Hysterectomy, Indications, Depression & Anxiety, Misconceptions.

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I. Introduction

The loss of the uterus via hysterectomy carries significant negative repercussions especially in the case of women from developing countries. As this surgical procedure results in the loss of reproductive capacity, it is avoided in younger women especially at the start of their lives, even for women who do not wish to have more children. The uterus is not an organ to be discarded lightly⁽¹⁾. The side effects of this surgical treatment invariably cause some loss of function such as cessation of menstruation, infertility and hormonal imbalance. These changes may in turn influence sexual functioning. Patients may also experience general feelings of malaise which are threatening to females especially in a traditional society where females are supposed to live within the four walls of their houses and bear children⁽²⁾.⁽³⁾ Found that 82% of hysterectomy patients reported a poor body-image which may be attributed to the importance attached to this organ.

The socialization process instills the value of the uterus and its functions and of the body as a whole which may lead to perceptions of poor body image and inadequacy. Hysterectomy has traditionally been regarded as having an adverse effect on women's sexuality because it is thought to reduce their sense of femininity⁽⁴⁾. Women are referred to psychiatrists much more commonly after hysterectomy than after any other operation.

The reactions experienced by women undergoing hysterectomy are similar to those of bereavement; that is: an initial phase of disbelief that it has been removed, followed by sadness and depression⁽³⁻⁴⁾.⁽⁵⁾ Suggests that surgical procedures like hysterectomy are emotionally stressful and may lead to depression and anxiety in females undergoing this procedure. The removal or alteration of body parts, which are symbolically significant for traditional femininity, may cause major emotional repercussions to the females whose femininity and role-identity seems to be threatened by such procedures.⁽⁶⁾ The uterus contributes to a woman's sexual, reproductive and social identity.

II. Aims of the study

- 1- Describe the profile of women undergoing hysterectomy.
- 2- Identify psychological problems encountered among patients.
- 3- Assess the degree of pain felt by the patients postoperatively.

Research design:

A prospective descriptive analytic design

Setting:

The research was conducted in the department of gynecology, at Zagazig University Hospital.

Subjects:

The study population consisted of all patients undergoing hysterectomy attending the study settings, during one year period.

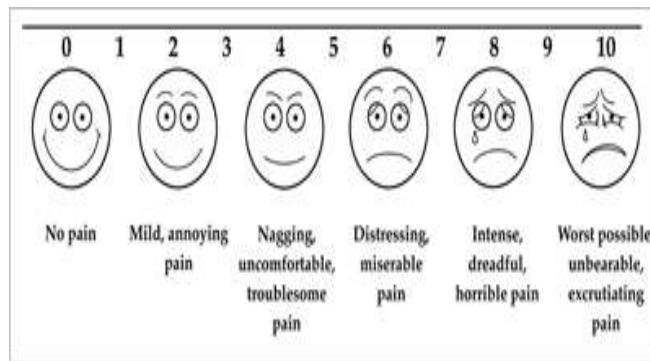
Selection criteria:

- Patient's age ranging from 20 years and more.
- Agreed to participate in the study.
- Patient's encountered a gynecological problem that indicated hysterectomy.
- Women undergoing hysterectomy, not due to obstetrical problems.

Tool of data collection:

Structured Interviewing Questionnaire: - Socio-demographic characteristics about the study subjects such as age, level of education.

- Obstetric history such as gravida, para, birth interval.
- Medical history and surgical history; include data about the presence of hypertension, cardiac disease, anemia, diabetes, urinary disease, and liver diseases. As well as history of previous surgical operation.
- Types, indications encountered among patients undergoing hysterectomy.
- Counseling about misconceptions related to hysterectomy, relieving pain, alleviating fear, and physical preparation of the patient.
- Degree of pain that a patient is experiencing postoperative **Visual Analog Scale** ⁽⁷⁾. The visual analogue scale (VAS) is a psychometric response scale which can be used in questionnaires. It is a measurement instrument for subjective characteristics or attitudes that cannot be directly measured



It was developed by **Wewers & Lowe (1990)** ⁽⁷⁾. It is a vertical or horizontal line usually 10 cm. the right end is marked 0 which indicate no pain and the left is marked 10 which indicate sever intolerable pain. For scoring the pain, the scale was categorized into 3 grades:

Level of pain	Characteristics of the pain	Range of score
Mild pain	pricking, pinching, aching	1-3.5 cm.
Moderate pain	pressing, cramping, sharp, burning	4-7.5 cm
Sever pain	Cutting, killing, suffocating	8-10cm

The characteristics of the pain intensity were reported by the patient and the pain level was recorded at 6 hours postoperatively. A high score reflects more intense pain and low score means less pain intensity.

Hospital Anxiety and Depression Scale (HADS), was originally developed by **Zigmond and Snaith (1983)**⁽⁸⁾, and is commonly used by doctors to determine the levels of anxiety and depression that a patient is experiencing. The HADS is a fourteen item scale that generates ordinal data. Seven of the items relate to anxiety and seven relate to depression. **Zigmond and Snaith**⁽⁸⁾ created this outcome measure specifically to avoid reliance on aspects of these conditions that are also common somatic symptoms of illness, for example fatigue and insomnia or hypersomnia. Thus, it was hoped, would create a tool for the detection of anxiety and depression in people with physical health problems. Each item on the questionnaire is scored from 0-3 and this means that a person can score between 0 and 21 for either anxiety or depression.

Preparatory phase:

It includes reviewing of literature, different studies and theoretical knowledge of various aspects of the research topic using books, articles, internet, periodicals and magazines. This also helped in designing the study tools.

Validity and reliability:

Tools were reviewed by a panel of five experts in the field of obstetrics and gynecological nursing to test its content validity. Modifications were done accordingly based on their judgment. Cronbach's alpha coefficient was calculated to assess the reliability of the developed tool through their internal consistency.

Administrative design:

An official permission was granted by submission of an official letter from the Faculty of Nursing of Zagazig University to the responsible authorities of the study setting to obtain their permission for data collection.

Ethical consideration:

All ethical issues were taken into consideration during all phases of the study; the researcher maintained an anonymity and confidentiality of the subjects. She introduced herself to the women and briefly explained the nature and aim of the study to every woman before participation and women were enrolled voluntarily after the written informed consent process. Women were also assured that all information obtained during the study was confidential and used for the research purpose only, and they have the chance to withdraw from the study when they want.

Pilot study:

A pilot study was conducted on a sample of 10% of cases who were not included in the total sample size. It was done to test the study tools in terms of clarity and feasibility, and the time required to be applied. Following the pilot study, the questionnaire was reconstructed and necessary modifications were done to reach the final form.

The field study of this work was carried out:

Data collection took a period of one year, from the first of June 2015 to the end of May 2016. The researcher collected data daily during the whole week whenever there was a hysterectomy patient.

Statistical design:

After data collection, it was revised, coded and fed to statistical software SPSS. The statistical analysis used considered all tests to be T test with alpha error = 0.05. After that all numeric data were expressed in the form of range (minimum to maximum), mean and standard deviation (SD). Categorical data were expressed in the form of frequencies and percentages.

A. Analysis of numeric data:

One-Sample Kolmogorov-Smirnov Test

Nearly all data were found to be following normal distribution so the following statistical analysis was done which included Independent sample t test. Some data variables were found to have a skewed distribution so the following non parametric analysis was done included Man Whitney test (Z).

B. Analysis of categorical data:

Pearson's chi square test, Mont Carlo exact test, and Fisher exact test were used.

Level of significance:

For all statistical tests done, the threshold of significance was fixed at the 5% level (p-value). A p-value > 0.05 indicates non significant result and the p-value < 0.05 indicates a significant results and the p-value is the degree of significance. The smaller the p-value obtained, the more significant is the result, the p-value being the probability of error of the conclusion.

III.Results

Table (1): Distribution of Hysterectomy Patients According to their Socio-demographic Characteristics N=235.

Demographic data		N0=235	%
Age in years	30-	40	17.0%
	40-	95	40.4%
	50&more	100	42.6%
Mean ± SD		48.7 ±9.6	
Education	Illiterate /read and write	100	42.6%
	Primary and preparatory	37	15.7%
	Secondary	59	25.1%
	University	39	16.6%
Parity	Nullipara	27	11.5%
	Primipara	3	1.3%
	2-3	89	37.8%
	4& more	116	49.4%
Mean ± SD		4.3 ± 2.3	
Co-morbidity	Yes	129	54.9%
	No	106	45.1%

Table (1) shows the socio-demographic characteristics of the studied patients. It reveals that, the majority of the women (83.0%) was 40 years and above with a mean of 48.7 ± 9.6 years. More than two fifths (42.6%) were illiterate or can read and write. Concerning the obstetrical history, table 1 shows that 11.5% nulliparous and 1.3% primiparous patients underwent hysterectomy and almost one half (49.4%) of hysterectomy patients had 4 paras and more with a mean of 4.3 ± 2.3 . Regarding medical & surgical history, it shows that more than half (54.9%) of hysterectomy patients had chronic diseases.

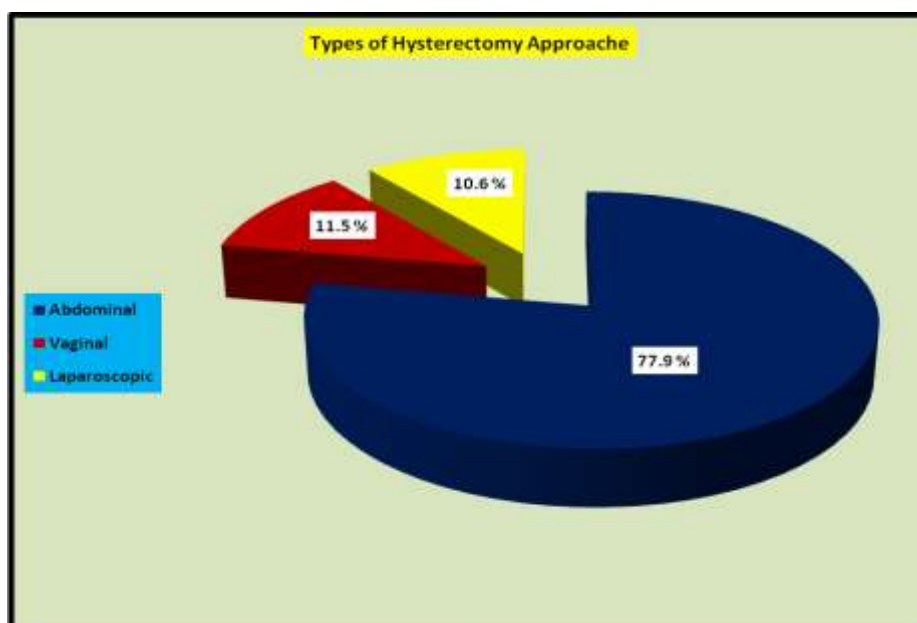


Figure (1) Distribution of Hysterectomy Approaches among the Studied Patient (n=235)

Figure 1 illustrates that, more than three fourths (77.9 %) of the studied patients underwent abdominal hysterectomy, while partially equal and small percentages had vaginal and laparoscopic approach of hysterectomy (11.5% &10.6% respectively).

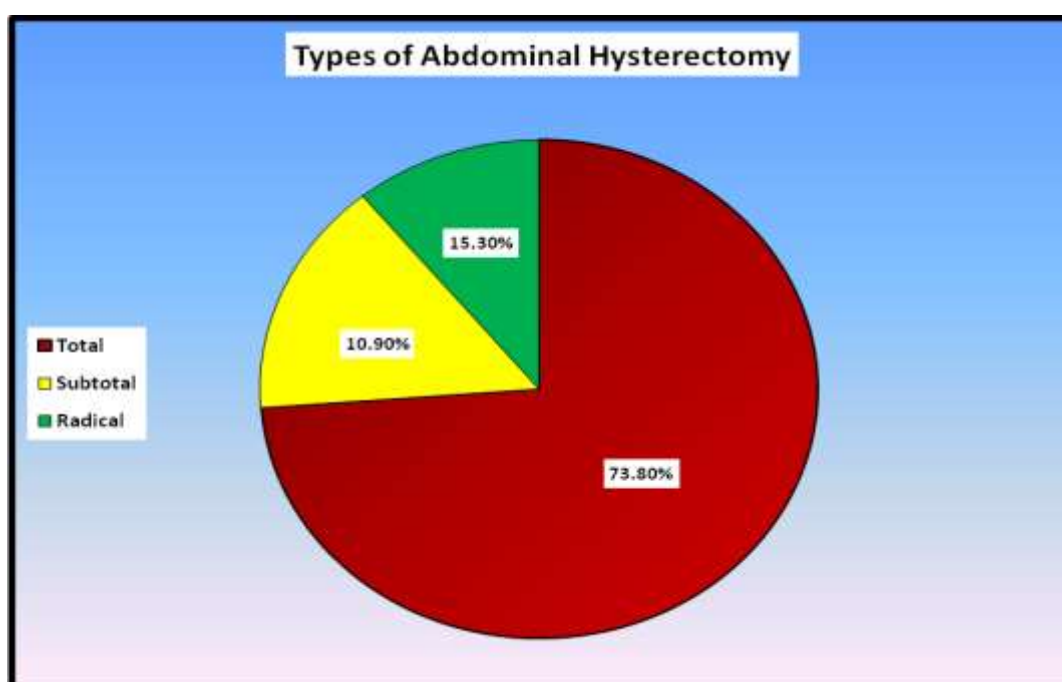


Figure (2) Distribution of the Types of Abdominal Hysterectomy among the Studied Patients (n=183)

Figure 2 shows that, almost three quarters (73.8%) of the patients had total abdominal hysterectomy. Meanwhile, subtotal and radical type of hysterectomy constituting the other types of abdominal hysterectomy (10.9% and 15.3% respectively).

Table (2) Distribution of Hysterectomy Patients According to their Misconceptions about Hysterectomy (n=235).

Misconceptions about Hysterectomy	No=235	%
• Hysterectomy induces menopause.	220	93.6%
• Hysterectomy affects sexual relation	185	78.7%
• Hysterectomy causes and leaves a big scar.	82	34.9%
• Hysterectomy will cause loss of femininity	219	93.2%
• Hysterectomy equals disturbance of family life	187	79.5%
• Hysterectomy means taking women away from their desired activities	92	39.1%

Concerning misconceptions related to hysterectomy, table 2 reveals that, the vast majority of women had misconceptions that hysterectomy induces menopause and nearly equals loss of their femininity (93.6% & 93.2% respectively). Meanwhile, more than three quarters thought that hysterectomy will affect their sexual relation and cause disturbances in their family life (78.7% & 79.5%). Also, more than one third believes that it will leave a big scare or it will take them away from their desired activities (34.9% & 39.1% respectively).

Table (3) Distribution of Hysterectomy Patients According to the Indications of Hysterectomy (n=235).

Indications of Hysterectomy	No=235	
	No	%
Menstrual disorders	141	60.0%
Atypical endometrial hyperplasia	33	14.0%
Post menopausal bleeding (PMB)	19	8.1%
Endometriosis/ Dysmenorrhea	25	10.6%
Adenomyosis	18	7.7%
Leiomyomata	147	62.6%
Ovarian cancer	39	16.6%
Dysfunction uterine bleeding (DUB)	39	16.6%
Pelvic inflammatory disease (PID)/pelvis abscesses	15	6.4%

	Utero-vaginal prolapsed	38	16.2%
	Cervical cancer	32	13.6%

As for the indications of hysterectomy, table 3 reveals that, leiomyomata & menstrual disorders were the most common indications (62.6% & 60.0% respectively), followed by equal percentages of ovarian cancer and DUB (16.6%). Meanwhile, partially equal percentages of atypical endometrial hyperplasia, utero-vaginal prolapse, and cervical cancer constituted other indications for hysterectomy (14.0% & 16.2% & 13.6% respectively).

Pre and post surgical depression and anxiety scores of hysterectomy patients on the HADS are shown in table 4. It shows that there is significant difference in depression & anxiety (P = 0.001) of hysterectomy patients during the pre surgical and post surgical phases. It can be observed that greater depression & anxiety is manifested in the post surgical phase by patients undergoing hysterectomy as compared to their pre-surgical phase.

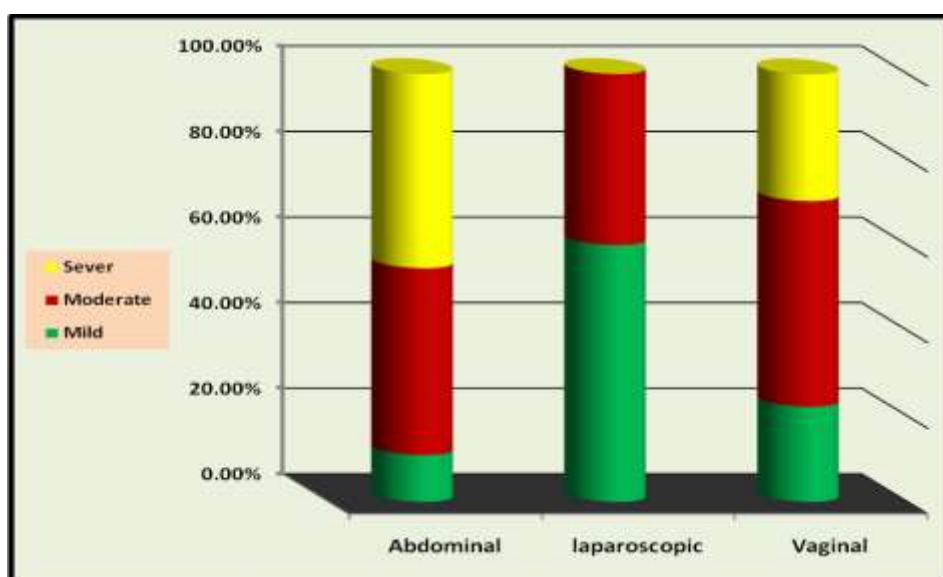


Figure (3) Distribution of the Hysterectomy Patients According to their Degree of Visual Analogue Scale (n=235).

Women were tested for the degree of pain, six hours after the 3 types of hysterectomies using the visual analogue scale. Thus, figure 3 demonstrates that severe degree of pain was more common among those who had abdominal and vaginal hysterectomies (45.4% & 29.6% respectively). On the other hand, patients underwent laparoscopic hysterectomy were more likely to suffer from mild and moderate degree of pain in comparison to the other 2 groups.

IV. Discussion

Hysterectomy, which is the surgical removal of the uterus and cervix, is the commonest major gynecological operation in the developed countries; about 600,000 hysterectomies are performed annually in the United States, and about a third and a quarter of women will have a hysterectomy during their life time and before menopause respectively (Paul et al., 2015) ⁽⁹⁾.

From the data presented, the operation was commonly performed on women aged 40-50 years and more, married, having low education as well as multipara. This is similar to reports from other study in Nigeria (Sachin et al., 2012) ⁽¹⁰⁾. It was also incongruence with the report from Saudi Arabia by Leung et al., (2007) ⁽¹¹⁾ where the average age is in the early forties and between 20-25% of women would have had a hysterectomy. Furthermore, Khalid et al., (2008) ⁽¹²⁾ study at El Manial University Hospital-Egypt revealed that more than the half of the hysterectomy patients were married, illiterate & read and write (53.4%).

Hemant&Burute, (2016) ⁽¹³⁾ revealed that the majority of women who had hysterectomy were in their 5th to 6th decades of life, their mean age was 50.1 ± 15.6 years.

Ahmed&Nafiah, (2015) ⁽¹⁴⁾ reported that the predominant level of education was completed primary education in 36.6% of cases, 27.4% had completed secondary educations, and 5.7% of patients attended the university. The patients also were (77%) married & housewives (26.3%). Lena et al., (2012) ⁽¹⁵⁾ showed that, hysterectomy

was accepted more by illiterate married women, whose age ranged between 40-49 years with a mean age of 49.9 ± 11.3 years.

The present study finding shows that more than half of hysterectomy patients had chronic diseases. The finding is in congruence with **Brummer et al., (2011)**⁽¹⁶⁾ study that was conducted at remote area of Satiati District from Maharashtra who found that 27.2% & 6.6% of patient had hypertension and diabetes. Also, **Lujain et al., (2016)**⁽¹⁷⁾ reported that more than half (52.0%) of hysterectomy patients especially vaginal route had co-morbidities (most commonly coded hypertension and diabetes mellitus).

Regarding hysterectomy approaches, the present study revealed that more than three fourths of the studied patients underwent AH while partially equal and small percentages had vaginal and laparoscopic approach. In agreement with this, **Elwelely & Ibrahim, (2015)**⁽¹⁸⁾ study in Saudi Arabia reported that of 251 women, 199 (79.0%) underwent AH and 52 (21.0%) underwent VH and only 3 women had laparoscopic approach. Similarly, **Lena et al., (2012)**⁽¹⁵⁾ study in Nigeria about indications and outcome of gynecological hysterectomy at Aminu Kano Teaching Hospital, Kano: A 5-Year Review found that AH was the most frequently performed, accounting for 78.2% while, VH only constitutes 20.9% of cases.

Also, the present in disagreement with finding of **Leung et al., (2007)**⁽¹¹⁾ who found that the proportion of AH decreased in comparison to VH (12.0% vs. 34.0% respectively). Also, **Hemant & Burute (2016)**⁽¹³⁾ reported that, the rate of total abdominal hysterectomy (TAH) was the least common approach in comparison to VH and LH (24.0% vs. 44.0% & 32.0% respectively). A possible reason for this might be due to the fact that when choosing the route and method of hysterectomy, the physician should take into consideration how the procedure may be performed most safely and cost-effectively to fulfill the medical needs of the patient.

Concerning the types of AH, the current study revealed that almost three quarters of the patients had TAH, subtotal and radical type of hysterectomy constituting the other types of AH. This is in accordance with **Brummer et al., (2011)**⁽¹⁶⁾ and

Lena et al., (2012)⁽¹⁵⁾ who reported TAH was the most frequent type (68.8% and 74.1% respectively) while; subtotal hysterectomy was only (31.2% and 1.0%) respectively. Moreover,

Arnold & Saravanan (2015)⁽¹⁹⁾ and

Duke et al., (2014)⁽²⁰⁾ reported that TAH was performed in the majority of cases in comparison to subtotal AH (90.6% & 93.5% vs. 9.4% & 6.5% respectively). This is because subtotal hysterectomy is not favored except at CS hysterectomy, for the fear of cancer of the cervical stump & the shortcomings of subtotal hysterectomy includes retaining the cervix, a potential site for cancer, which usually is difficult to treat, in addition the increase cost of treating other potential cervical pathologies

(**Lena et al., 2012**)⁽¹⁵⁾. Moreover, the present study finding revealed that severe pain was more common among those who had abdominal and vaginal hysterectomies in comparison to patients underwent laparoscopic hysterectomy (LH) who suffered from mild and moderate degree of pain. Similarly,

Paul et al., (2015)⁽⁹⁾ found that post-operative pain in patients underwent TAH were higher than that of VH & LH.

High risks of adverse psychological reactions to hysterectomy have been reported by women in the present study. The majority of women have fears that they will lose their sexual attractiveness as they will not be liked, they will be rejected and their sexual life will be destroyed. In this respect, many studies emphasized the fact that femininity has been proposed as a positively valued quality, thus the perception of losing one's femininity is a serious and threaten event in a women life, therefore hysterectomy may function as a stressor. Although hysterectomy does not create any visible organ loss, the psychological reflections of the anxieties regarding it are prominent

(**Leung et al., 2007**)⁽¹¹⁾.

The present study also reveals that, leiomyomata & bleeding disorders were the most common indications of hysterectomy, followed by ovarian cancer, prolapse, and dysfunction uterine bleeding (DUB). In agreement with this

Arnold & Saravanan (2015)⁽¹⁹⁾ who reported that the leading indications for hysterectomy were uterine fibroid with or without heavy menstrual bleeding 107 (39.6%), while utero-vaginal prolapse 71 (26.3%) was the second most common indication. Other indications include; DUB 40 (14.18%), ovarian tumor (7.4%), endometrial & cervical polyps 11 (4.07%), adenomyosis 8 (3.0%) and PID 5 (1.9%).

Similarly,

Khalid et al., (2008)⁽¹²⁾, **Lena et al., (2012)**⁽¹⁵⁾, and **Paul et al., (2015)**⁽⁹⁾ found that the common indications for hysterectomy were uterine fibroid, DUB, chronic cervicitis, cervical dysplasia, and adenomyosis. Conversely,

Helmy et al., (2005)⁽²¹⁾ found that, the leading indications for hysterectomy were utero-vaginal prolapse 62 (47.3%), while uterine fibroid with or without heavy menstrual bleeding was the second most common 44 (33.6%). Other indications include DUB 12 (9.1%), endometrial hyperplasia 5 (3.8%), cervical intra-epithelial neoplasia 4 (3.1%), chronic pelvic pain and adenomyosis etc...

Concerning degree of anxiety and depression the present study reveals that greater depression & anxiety is manifested in the post surgical phase by patients undergoing hysterectomy as compared to their pre-surgical phase. In the same stream,

Goetsch et al., (2005)⁽²²⁾ suggest that despite their motivation, many women undergoing surgery show negative psychological effects, such as anxiety and depression, after the loss of their reproductive organ. Additionally, it is noticeable that the result of the present is congruent with Egyptian study carried by

Obilahi et al., (2013)⁽²³⁾, they concluded that, women undergoing hysterectomy are at great risk of psychiatric morbidity before and after hysterectomy.

Meanwhile the findings of the present study is in contrast with the study of

Abd-Elrhman et al., (2010)⁽²⁴⁾ who revealed significant improvements in general well being and psychological measures and sexuality among women undergoing hysterectomy. The plausible reasons for the findings of the present study may be related to the women concerns related to femininity and sexuality. Sexuality for women is a taboo and is a symbolic of femininity and for men sexuality is an important social issues and source of power for men.

V.Conclusions

Based on the present study findings, it can be concluded that; the operation was commonly performed on women aged 40-50 years and more, married, having low education as well as multipara. More than three fourths of the studied patients underwent AH while partially equal and small percentages had vaginal and laparoscopic approach. The most common indications were leiomyomata & bleeding disorders. It demonstrates that severe degree of pain was more common among those who had abdominal and vaginal hysterectomies. On the other hand, patients underwent laparoscopic hysterectomy were more likely to suffer from mild and moderate degree of pain in comparison to the other 2 groups.

VI.Recommendations

Based on the present study findings, the following recommendations are suggested:

- Maternity nurses should use evidence based guidelines to help integrate existing knowledge into practice, align perioperative care, and encourage future investigations of optimal perioperative and postoperative care for patients undergoing gynecologic/oncology operations.
- Preoperative assessment and counseling of patients undergoing hysterectomy concerning alleviation of fear and clearing up misconceptions are essential to reduce postoperative pain, prevent complications and improve patient's quality of life

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Table 4: Pre & Postoperative Assessment of Depression &Anxiety Scores of Hysterectomy Patients on the Hospital Anxiety & Depression Scale n= (235).

HADS items	Groups						MCP
	Preoperative n=235			Postoperative n=235			
	Never	Sometimes	Most times & All times	Never	Sometimes	Most times & All times	
I feel tense or 'wound up'	26.5%	22.0%	37.5%	14.0%	51.5%	64.5%	0.001*
I get a sort of frightened feeling as if something awful is about to happen	13.0%	24.5%	25.5%	31.0%	37.0%	51.0%	0.001*
Worrying thoughts go through my Mind	11.5%	24.0%	34.5%	22.5%	35.5%	55.0%	0.001*
I feel as if I am slowed down:	18.0%	21.5%	26.5%	29.0%	49.0%	63.0%	0.001*
I have lost interest in my appearance:	7.5%	18.5%	31.5%	4.5%	34.5%	64.5%	0.001*
I can sit at ease and feel relaxed	8.0	17.5%	38.0%	44.5%	22.0%	22.5	0.001*
I look forward with enjoyment to things	25.5%	21.0%	16.5%	54.5%	28.5%	13.0%	0.001*

MCP: P value based on Mont Carlo exact probability

* P < 0.05 (significant)

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