

Anxiety and psychological aspects of hysterectomy-A prospective study

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ABSTRACT

Background: Hysterectomy is one of the most commonly performed operative procedures and is associated not only with the stress of surgery, but is also associated with psychiatric illness like anxiety. Unfortunately, the currently available literature does not give a conclusive picture about the effect of hysterectomy on the psychological wellbeing of the woman. There is thus a need to study these factors, so that timely intervention could be planned for these subjects.

Methods: Sixty subjects who underwent hysterectomy, in the department of Obstetrics and Gynaecology, were recruited for this study. The socio – demographic details of these patients were collected using a semi structured proforma, psychological distress was assessed using Life Distress Inventory (LDI) and psychiatric morbidities using Structured Clinical Interview For DSM-IV Axis –I Diagnosis (SCID-I).

Results: In our study anxiety and psychological distress reduced in the post-operative assessment which was significant statistically. Majority of the subjects were married (86.7%) in the age group of 41-45 years, from lower middle class (93.3%) and were unemployed (55%). The most common reason for hysterectomy was uterine fibroid (38.3%) in our study.

Conclusions: The main aim of the current study was to delineate the impact of hysterectomy on the psyche of the women who undergo the surgery. Hence an attempt was made to understand the psychological distress and psychiatric morbidity perceived by the women before and after undergoing hysterectomy. Patient would benefit from increased awareness on part medical professionals for pre-existing psychological morbidity in the preoperative period with timely intervention.

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Hysterectomy is the most frequently performed gynaecological operation worldwide (Pandey et al., 2014) and traditional abdominal or vaginal hysterectomy continues to be the most common approach (Hollender, 1960). Around 90% of all hysterectomies are carried out for benign conditions (Jawor et al., 2001) with the commonest indications being uterine fibroid, dysfunctional uterine bleeding, endometriosis, vaginal prolapse and chronic pelvic pain (Acharya, 2017). Complications of hysterectomies can be both medical and psychiatric in nature. Medical complications include infections, haemorrhage, pain, injury to the adjacent organs and psychiatric complications includes anxiety, depression, positive and negative psychological outcomes.

In many cases, the impact of surgery on the preoperative symptoms, particularly in terms of quality of life, may prove to have the most discernible effect on the psychological status (Helstrom & Nilsson, 2005). Overwhelmingly more women report positive than negative psychological effects after hysterectomy. Reliefs from worries and fears of malignancy, debilitating menorrhagic and pelvic pain are appreciated immensely. Many are grateful to be freed of contraceptive concerns and anxiety about unplanned or unwanted pregnancies. Many women appreciated no longer having to deal with the nuisance of monthly regular bleeding, as well as the fact that sexual enjoyment and satisfaction often increase.

Hysterectomy can have a major psychological impact on women on bodily integrity, woman's sense of femininity, preoccupation with and intrusive thoughts about the lost uterus, her self-esteem and her relationship with her spouse or who are not yet ready to surrender their fertility and significant others are jeopardized as well (Adelusola & Ogunniyi, 2001). Women undergoing this operation experience almost immediate endocrinological effects and have surgical risks as well as long-term effects.

It is suggested that monitoring of preoperative mood, family cohesiveness and dispositional resilience may provide a useful adjunctive measure in attempting to identify women at risk of reporting an unsatisfactory surgical outcome (Thornton, et al., 1997). Thus, hysterectomy has a tremendous impact on the psychological wellbeing of the concerned women.

Research undertaken in recent times has differed in their findings as compared to the earlier studies. It was initially found that hysterectomy precipitated or increased psychiatric morbidity. Recent studies have however shown that the procedure did not affect the psychological wellbeing of the patient or in fact had a beneficial effect. As current literature does not give a conclusive picture about the effect of hysterectomy on the psychological wellbeing of the woman, the current study is done to assess the psychiatric morbidities and psychological changes before and after hysterectomy.

Objectives

1. To assess the psychological distress and anxiety among pre and post hysterectomy women.
2. To analyze the impact of hysterectomy on psychological distress and anxiety on these women.
3. To evaluate the socio-demographic details among pre and post hysterectomy women.

MATERIALS AND METHODS

Source of Data

After obtaining institutional ethical committee clearance a prospective study was conducted by Psychiatry Department of medical college hospital, Bengaluru, on subjects who were admitted to Obstetrics and Gynaecology department pre operatively and post operatively.

Inclusion Criteria

1. Patients aged >18 &< 50 years.
2. Patients undergoing hysterectomy for all indications other than malignancy.
3. Patients from whom written Informed Consent was obtained, to participate in the study.

Exclusion Criteria

1. Patients on Hormone replacement therapy.
2. Patients who have attained menopause.

Instruments Used

1. **Semi-structured Proforma:** The semi structured proforma was compiled in the department of psychiatry, for the purpose of this research work. It was used to record socio demographic and the family details, the details of hysterectomy such as the indication, procedure adapted and other details.
2. **Life Distress Inventory:** The Life Distress Inventory (LDI) is an 18- item self-rating inventory intended to measure the current level of distress experienced across 18 areas of life (Yoshioka & Shibusawa, 2002). Developed as a clinical research instrument, the LDI has been successfully employed for rapid clinical assessment and monitoring of distress, for evaluating treatment to reduce such distress and for examining the correlates of life distress. Factor analysis indicated that the instrument measures distress related to marital concerns (MC), career concerns (CC), outside activities (OA),self and family (SF), and life satisfaction/optimism (SO). Total distress score are the sum of all items, which can range from 0 to 126. Higher scores reflect greater distress.
3. **Structured Clinical Interview for DSM-IV Axis I Diagnosis (SCID-I):** SCID-I for DSM-IV Axis-I is a structured interview for making the major DSM-IV Axis I diagnosis (First, Spitzer, Gibbon & Williams, 2002). Structured interviews have been developed to increase diagnostic reliability through standardization of the arrangement process and to increase diagnostic validity by facilitating the application of DSM-IV diagnostic criteria and by systematically probing for symptoms. The language and diagnostic coverage used in SCID are most appropriate for adults of age 18 and older. A clinician does his/ her usual interview and uses a portion of the SCID CV to confirm and document a suspected DSM-IV diagnosis. Most disorders in the SCID include a criterion that requires there to be clinically significant distress or impairment before a DSM-IV diagnosis can be made. When the interview is completed the clinician indicated the DSM-IV diagnosis.

Methodology

Sixty subjects, who fulfilled the inclusion criteria and exclusion criteria, were taken up for the study after obtaining a written consent for a period of one and half year. The socio – demographic details of these subjects were gathered using a semi structured proforma, developed by the department. Subjects were assessed 2 days prior to surgery using Life Distress Inventory (LDI), the Clinical version of Structured Clinical Interview for DSM-IV

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(SCID-I), to determine the psychiatric diagnosis on AXIS-I and later assessed for psychological distress and psychiatric diagnosis six weeks after surgery.

Statistical Methods

Analysis of variance has been used to find the significance of study parameters between three or more groups of subjects, student t test (two tailed, independent) has been used to find the significance of study parameters on continuous scale between two groups, inter group analysis on metric parameters. Chi-square test/ Fisher Exact test has been used to find the significance of study parameters on categorical scale between two or more groups. 95 % Confidence interval has been computed in the study with significant p value <0.05 using SPSS version 20 and Excel have been used to generate graphs, tables etc.

RESULTS

Socio demographic variables

In our study subjects were compared on various socio demographic characteristics. Majority of the subjects were between the age group of 41-45 years, 36.7% of the population were illiterates and 55% of them were housewives. The indications for hysterectomy were uterine fibroid 23(38.3%), 14 (23.3%) received the diagnosis of Dysfunctional uterine fibroid, menorrhagia in 10(16.7%) and a diagnosis of UV prolapsed, pelvic inflammatory disease, ovarian cyst, chronic cervicitis and dermoid cyst was done in the rest (21.6%). Abdominal hysterectomy was performed in 44 (73.3%) subjects while 16 (26.7%) subjects underwent vaginal hysterectomy. [Table 1]

Table 1: Socio demographic profile tables

	No. of patients (n=60)	Percentage
Age in years		
30-35	7	11.7
36-40	19	31.7
41-45	23	38.3
46-50	11	18.3
Occupation		
Employed	11	18.3
Unemployed	33	55.0
Others	16	26.7
Family income		
0-2500 Rs/month	18	30.0
2501-5000 Rs/month	20	33.3
5001-7500 Rs/month	7	11.7
7501-10000Rs/month	5	8.3
>10000 Rs/month	10	16.7
Reason for surgery		
1.Uterine Fibroid	23	38.3
2.DUB	14	23.3
3.Menorrhagia	10	16.7
4.UV Prolapse	5	8.3
5.PID	3	5.0
6.Ovarian cyst	2	3.3
7.Chronic cervicitis	2	3.3
8.Dermoid cyst	1	1.7

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Psychological distress before and after hysterectomy

Preoperative psychological distress reduced from 40.48 ± 10.26 to post-operative psychological distress of 33.63 ± 9.42 . The mean LDI score reduced significantly during the post-operative period with p value < 0.0002 . [Table 2]

Table 2: Distribution According to Life Distress Inventory (LDI) pre-operative and post-operative hysterectomy.

LDI Scores	Pre-op	Post-op	% Difference	Chi square	CI	P value
					95%	
<30	7(11.7%)	22(36.7%)	25	10.73	9.74 to 38.96	0.0015
31-40	28(46.7%)	29(48.3%)	1.6	0.031	-15.79 to 18.85	0.8613
41-50	16(26.7%)	5(8.3%)	-18.4	6.776	4.77 to 31.61	0.0083
51-60	4(6.7%)	3(5%)	-1.7	0.156	-7.90 to 11.53	0.6928
>60	5(8.3%)	1(1.7%)	-6.6	.2.728	-2.009 to 16.42	0.0986
Mean \pm SD	40.48 ± 10.26	33.63 ± 9.42	-6.85	-3.809	10.39 to -3.300	0.0002
Min-Max (LDI)	22.00-66.00	20.00-64.00				

Psychological distress and its association with anxiety

The mean psychological distress in association with anxiety was reduced from 41.52 ± 10.01 to postoperative anxiety of 30.57 ± 6.53 . The mean LDI score reduced significantly during the postoperative period with p value < 0.0022 . [Table 3]

Table 3: Distribution According to Comparison of Life distress Inventory pre-operative and Post-op Psychiatric morbidity

Psychiatric morbidity (Anxiety)		n=60	% Difference	Mean LDI \pm SD	Chi square	CI 95 %	P value
Pre op	Present	38	-10.35	41.52 \pm 10.01	-2.438	-18.84 to 1.85	0.0179
	Absent	22		31.17 \pm 8.18			
Post op	Present	3	-7.35	37.92 \pm 11.17	-3.206	-11.9 to 2.76	0.0022
	Absent	57		30.57 \pm 6.53			

Psychiatric morbidity before and after hysterectomy

Psychiatric morbidity reduced significantly from 90% during the preoperative period to 41.7% in the postoperative period with p value < 0.0001 . [Table 4]

Table 4: Distribution according to pre op and post op psychiatric morbidity SCID I

Psychiatric morbidity SCID- I	Pre-op psychiatric morbidity SCID I (n=60)		Post-op psychiatric morbidity SCID- I (n=60)		Difference	Chi square	CI	P value
	No	%	No	%			95%	
	No	%	No	%				
Absent	6	10	35	58.3	48.3	30.863	32.11 to 61.07	0.0001
Present	54	90	25	41.7	-48.3	30.863	32.11 to 61.07	0.0001
Anxiety	38	63.33	3	5	-58.33	40.002	42.97 to	0.0001

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Psychiatric morbidity SCID- I	Pre-op psychiatric morbidity SCID I		Post-op psychiatric morbidity SCID- I		% Difference	Chi square	CI			
	(n=60)		(n=60)				95%			
	No	%	No	%				P value		
disorder							69.85			
Non anxiety disorder	22	36.66	57	95	58.34	45.014	42.92 to 69.86	0.0001		

Before surgery the psychiatric morbidity namely, anxiety was present in 38 subjects (68%). After surgery anxiety disorder reduced and was present only in 3 subjects (5%) with significant p value <0.0001 computed using the paired proportion test. [Table 5]

Table 5: Distribution According to Pre Op and Post Op Psychiatric Morbidity

Psychiatric morbidity (Anxiety)		n=60	% Difference	Chi square	% Difference	CI 95%	P value
Pre op	Present	38	63.33	8.464	26.67	8.7 to 42.29	0.0036
	Absent	22	36.66				
Post op	Present	3	5	96.39	-90	77.69 to 94.64	0.0001
	Absent	57	95				

DISCUSSION

Hysterectomy is the most common major surgery performed on women in the world. Compared to a higher frequency of hysterectomy (10-20%) in other countries (Singh & Arora, 2000) a lower rate (4-7%) has been reported from India(Butt, Jeffery, & Van der Spuy, 2011).Surgical removal of the uterus, and frequently the ovaries, is widely accepted both by medical professionals and the public as appropriate treatment for various common non-cancerous uterine conditions that can produce often disabling levels of pain, discomfort, uterine bleeding, emotional distress, and related symptoms. The current study was done with a view to derive the socio demographic profile along with the psychological distress experienced and psychiatric diagnostic profile of the women who are undergoing hysterectomy. Adhering to the currently accepted scientific requirements in our study all the above assessments were carried out employing structured clinical interview schedules.

Impact of hysterectomy on psychological distress

Psychological distress is an unpleasant feeling or emotion causes discomfort and interferes with the functioning of the person. In other words, it is psychological discomfort that interferes with your activities of daily living. Psychological distress can result in negative views of the environment, others, and the self. Sadness, anxiety, distraction, and symptoms of mental illness are manifestations of psychological distress (Mirowsky & Ross, 2003).

In this study the levels of psychological distress improved after hysterectomy as compared to their preoperative state which was significant statistically [tables 2]. These findings are in accordance with other studies (Kjerulff, 2000)(Rannestad, Eikeland, Helland & Qvarnstrom, 2001) where it was reported that hysterectomy resulted in a marked improvement in

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symptoms of fatigue, psychological symptoms, and sexual dysfunction as well as marked improvements in the quality of life and in the area of social functioning. Our results also correlated with another Indian study (Singh & Arora, 2008) which showed that women stopped bothering about their menses and also that women started visiting religious places, and women started to show interest in day today activities like mopping, washing utensils, indicating that they were much better after hysterectomy.

Studies done by (Singh & Arora, 2005) and (Kumari, Walia, & Singh, 2000) reported post hysterectomy women started to feel that they are not females anymore, a feeling which was earlier shown by menopausal women only, which did not correlate with our study. (Yen JY et al. 2008) and (Faroogi, 2008) reported that some women expressed fears about possible change in sexual dysfunction presenting as diminished libido, pain, discomfort a finding that our current study did not support.

Studies done in both West as well as India were in contrast to our study where they showed negative influence on the psychological distress of the women undergoing hysterectomy in the form of reduced self confidence, worried about their body image, relationship issues and reduction in quality of life (Reis, Engin, Ingec, & Bag, 2008; Malyam, Parameshwaraiah, Gopalkrishna, Sannappa, & Kumar, 2018)

Some researchers (Montazeri, Vahdaninia, Ebrahimi & Jarvandi, 2003; Oetker-Black et al., 2003) strongly believe that positive effect of hysterectomy can be further enhanced by providing useful information at appropriate time, social support, giving proper instructions, improving access to professional and public support systems before subjecting the women for hysterectomy which was highlighted in our study also.

Association between psychiatric morbidity and hysterectomy

In the current study to assess the influence of hysterectomy on the psychiatric status of the women, they were systematically assessed for Axis I psychiatric illnesses using Structured Clinical Interview for DSM IV TR pre operatively and post operatively, on two days prior to and six weeks after the surgery respectively. 90% i.e., 54 out of the 60 women taken up for surgery suffered diagnosable psychiatric illness before the operation [table 4]. This extremely high rate of psychiatric morbidity is not a rare phenomenon which is in accordance with western and Indian studies done by (Helmy et al, 2008; Essa, Ismail, & Hassan, 2017; Subramaniam, Subramaniam, Charles & Verghese, 1982).

The women in this study reported a significant reduction in the prevalence of the overall psychiatric morbidity after hysterectomy from 90% to about 41.7%. On further analyzing this positive influence of hysterectomy, we found that the surgery benefitted maximally the women suffering from anxiety disorder (reduced from 63.3% to 5%) [table 4,5].

Some studies western and Indian (Guthrie, Clark, & Dennerstein, 2007; Kugaya et al., 2003; Subramaniam, Subramaniam, Charles & Verghese, 1982) have found that psychiatric morbidity anxiety was increased after hysterectomy which was in contrast to our study. The reason for this increased psychiatric morbidity post operatively might be due to previous emotional problems, poorer body image, women with higher stress, younger women with higher anxiety levels, previous history of depression, lower educational status and lower socio economic status (Leppert, Legro & Kjerulff, 2007; Farquhar, Sadler & Stewart, 2008).

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Interaction between psychological distress and psychiatric morbidity in women undergoing hysterectomy:

In the current study it was established that the women with psychiatric illnesses had significantly more psychological distress than those women who were not suffering from any psychiatric disorders in the preoperative period. Even in the post operative period also the association between the psychological distress and psychiatric morbidity experienced by the women remained significant. [Table3]

The finding of this study correlated with the studies done by (Yen JY et al, 2008; Kjerulff, Rhodes, Langenberg, & Harvey, 2000) where they have found that women with previous emotional problems and psychological distress tend to have greater psychiatric morbidities and preoperative psychiatric morbidities have shown to be a predictor of a poor postoperative psychological outcome.

Though none of the women enrolled in the current study received any formal psychological intervention during the pre-operative period, both the psychological distress and the prevalence of psychiatric morbidity reduced significantly post hysterectomy. (Donoghue, Jackson & Pagano, 2003; Essa, Ismail, & Hassan, 2017) have concluded that the reduction in psychopathology in the post operative period could be due to an early diagnosis of the disorders and giving appropriate and timely treatment to alleviate the same.

In the current study the detail psychological assessment done two days prior to the surgery, in itself could have brought about this positive change, along with the factors like ventilating, better economic status and early access to medical help (Wang, Lambert & Lambert, 2007).

Limitation of the study

Limited sample size with short follow up and was carried out in tertiary care hospital in an urban setting and hence the result cannot be generalized to the population at large.

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Conflict of Interest

The author declared no conflict of interest.

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