

## Correlates of anxiety in patients posted for hysterectomy

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### Abstract

Patients undergoing hysterectomy are susceptible to develop anxiety and other psychiatric morbidities. This study was conducted to assess the presence of anxiety symptoms and their correlations with various socio-demographic variables in patients posted for hysterectomy surgery. This is a cross-sectional, single interview study conducted on 30 consecutive patients posted for hysterectomy surgery. Each patient was individually interviewed using a semi-structured proforma. To assess various domains of anxiety, Hamilton Anxiety Rating Scale (HAM-A) was administered. The mean age of the participants was 46.16 years (S.D. 5.91), all of them were married, majority of them being housewives, with good educational background and from urban area. Majority of participants had gynaecological diagnosis of Abnormal Uterine Bleeding. The mental status examination in some (37%) of them revealed anxious mood, and preoccupation with worries. Pain symptoms were present in 67% of the participants. None of the participants had diagnosable anxiety disorder. The mean HAM-A score was 16.5 (SD=5.04) with mild anxiety in 30% and moderate anxiety in 37%. Correlation with age, education, residence, duration of symptoms and gynaecological diagnosis were not significant. Significantly higher anxiety (on HAM A) was found in those with pain symptoms. Women posted for hysterectomy surgery have anxiety which correlates with pain symptoms. They should be evaluated for anxiety symptoms which can help in early diagnosis and treatment and help reduce further morbidity in them.

**Keywords:** Hysterectomy, Anxiety, Pain symptoms.

### Introduction

Hysterectomy is a surgical removal of the uterus and may also involve removal of cervix, ovaries, fallopian tubes and other surrounding structures. Hysterectomy may be total (removing the body, fundus and cervix of the uterus; often called "complete") or partial (removal of the uterine body while leaving the cervix intact; also called "supracervical"). It is commonly performed gynaecological surgical procedure. Hysterectomy is a surgical procedure that significantly affects the quality in which the operated person views herself, lowers self-esteem and brings about changes in the quality of life.<sup>(1-2)</sup> Some investigators have shown that more than 50% of patients present with abnormal emotions before hysterectomy including anxiety and/or depression.<sup>(3)</sup> Hysterectomy is a potent stressor and may induce stress response in these patients.

Anxiety is a normal adaptive biological response to threat, associated with apprehension about an uncertain future and a state of helplessness due to perceived inability to predict or control a desired outcome.<sup>(4)</sup> The term anxiety covers four aspects that an individual experiences: mental apprehension, physical tension, physical symptoms and dissociative anxiety.<sup>(5)</sup> One of such anxiety provoking situations can be the time when a person is posted for surgery. Hospitalization for surgery is associated with increased anxiety and if the surgery is being performed on an organ like uterus, the resulting anxiety can be overwhelming.<sup>(6)</sup> The emotions present in anxiety disorders range from simple nervousness to bouts of terror.<sup>(7)</sup> State anxiety arose

steadily from the night before surgery to the point of leaving the ward to go to operation theatre. Anxiety then increases sharply prior to the anaesthesia, decreasing sharply afterwards. Patients with higher levels of trait anxiety are more likely to experience higher levels of anxiety throughout their admission in hospital.<sup>(8)</sup>

Various studies done in past show that significant anxiety symptoms are associated with surgeries. Thus evaluation of anxiety can have a critical role in chain of events that controls the post operative pain response.<sup>(9)</sup> To our knowledge, there is a dearth of research to assess current trends of anxiety in these patients in Central India. Hence, this study was conducted to assess the presence of anxiety symptoms and their correlations with various socio-demographic variables in patients posted for hysterectomy surgery.

### Materials and Methods

This was a cross-sectional, non-randomized, single interview study carried out in gynaecological unit of tertiary care hospital. Study was conducted after taking permission from institutional ethics committee. 30 consecutive patients posted for hysterectomy surgery and willing to be a part of study were included after obtaining written informed consent. This study aimed at studying anxiety symptoms in patients posted for hysterectomy surgery and to find the correlation, if any of various socio-demographic and clinical factors with anxiety. Each patient was individually interviewed using a semi-structured proforma prepared for the study which included socio-demographic profile, clinical and

psychiatric profile and gynaecological diagnosis. To assess various domains of anxiety, Hamilton Anxiety Rating Scale (HAM –A) was administered. HAM-A is one of the first rating scales developed to measure the severity of anxiety symptoms. The scale consists of 14 items, each defined by a series of symptoms and measures both psychic anxiety (mental agitation and psychological distress) and somatic anxiety (physical complaints related to anxiety). Each item is scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0–56, where 14-17 indicates mild severity, 18–24 mild to moderate severity and 25–30 moderate to severe.<sup>(6)</sup> Interviews were conducted 24-48 hours before the surgery and each interview required around 20 minutes. Data thus collected was tabulated and analyzed using non parametric tests under guidance of statistician to draw the conclusions.

## Results

Mean age of the participants was 46.16 years (S.D. =5.91). Fifty percent of the participants were in the age group of 35-44 years, followed by 45-54 years (40%) and above 55 years (10%). Majority (53.3%) of the participants in this study were housewives and rest of the participants (46.7%) were employed. All the participants were married. 33.3% of the participants were educated till Primary, 30% were educated more than 12<sup>th</sup> standard, secondary and higher secondary education (20 %) and only few did not have any formal education (16.66%). 43.3% of the participants resided in Suburban area, followed by 33.33% residing in rural area and only few (23.4 %) in urban area (Table 1).

**Table 1: Demographic profile**

Sr. No.	Demographic factors		Frequency N=30	Percentage (%)	
1.	Age group (years)	35-44	15	50.0%	Mean=46.16 S.D.=5.91
		45-54	12	40.0%	
		55-64	3	10.0%	
2.	Occupation	Unemployed (Housewife)	16	53.3%	
		Employed	14	46.7%	
3.	Education	Not educated	5	16.6%	
		Primary	10	33.3%	
		Sec and Higher Sec	6	20.0%	
		Above 12 <sup>th</sup>	9	30.0%	
4.	Residential Background	Rural	10	33.3%	
		Suburban	13	43.3%	
		Urban	7	23.4%	

**Presenting Gynaecological Complaints:** About 70% of the participants in the study had bleeding related complaints like menorrhagia and dysmenorrhoea while 30% did not have any bleeding related complaints. Urinary complaints of urgency and frequency were present in 36.66% and 63.34% did not have urinary complaints. About 26.66% of the total patients had prolapse related complaints of something coming out of their vagina and 73.34% did not have those complaints. More than half (66.67%) had abdominal complaints in the form of pain and swelling in abdomen. About only 10 % of total patients had complaints of white discharge per vagina.

**Duration of presenting gynaecological complaints:** The gynaecological complaints lasted for about 1-6 months in 43.33% of the participants followed by more than 12 months in 36.66% and 6-12 months in 13.33%. Only 6.66% had complaints for less than one month.

**Table 2: Psychiatric Symptomatology**

Sr. No.	Psychiatric symptoms		Frequency N=30	Percentage (%)
1.	Palpitations	Absent	13	43.3%
		Present	17	56.7%
2.	Restlessness	Absent	14	46.7%
		Present	16	53.3%
3.	Preoccupation with worries	Absent	19	63.3%
		Present	11	36.7%
4.	Sleep disturbances	Absent	23	76.7%
		Present	7	23.3%
5.	Duration	Nil	6	20.0%
		1- 15 days	15	50.0%
		15 – 30 days	6	20.0%

	More than 30 days	3	10.0%
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About 80% of the total patients complained of psychiatric symptoms. 20% did not report any psychiatric complaints. 56.7% of the total participants complained of palpitations. Restlessness was present in 53.3% of participants. About 36.7% of the participants reported preoccupation with worries. Sleep disturbances were present in 23.3% of the participants whereas 76.7% had no major sleep problems. Half of the participants had psychiatric symptoms lasting for 1-15 days, 20% had it for 15-30 days and 10% reported those for more than 30 days (Table 2).

**Mental Status Examination:** Most (63.3%) of the participants had euthymic mood while some (36.7%) had anxious mood on Mental Status Examination. Majority of the participants did not have any worries (63.3%) whereas 16.7% had worries related to health and 20% had worries about surgery.

**Gynaecological Diagnosis:** Out of the total participants, majority (60%) had abnormal uterine bleeding, 30% had cervical prolapse, 6.66% uterine fibroid and least (3.33%) had adnexal uterine mass.

**Table 3: Severity of anxiety according to HAM-A Scale**

Sr. No.	HAM-A Severity		Frequency N=30	Percentage (%)
1	0-13	No anxiety	10	33.33%
2	14-17	Mild anxiety	9	30.0%
3	18-24	Moderate anxiety	11	36.67%
4	25-30	Severe anxiety	0	0
	Total		30	100%

Mean HAM-A score was 16.5 with Standard Deviation (SD) of 5.04. Item wise split score on Ham-A showed that anxious mood had maximum mean score 2.76 with SD 0.89, followed by tension (mean=1.86, SD=0.77) and insomnia 1.96 (SD=0.8). This was followed by cardiovascular symptoms, Somatic muscular symptoms and gastrointestinal symptoms. Participants had moderate mean score on depressed mood, fears, genitourinary and intellectual symptoms. The participants had minimum score on respiratory, behaviour at interview and autonomic symptom. On assessing the patients on HAM-A scale, 36.67% has moderate anxiety, 30% had mild anxiety whereas 33.33% did not have anxiety (Table 3).

**Table 4: Correlation of HAM-A with Demographic factors and Gynaecological Symptoms**

Sr.No	Factors		N=30	Mean	S.D.	P value
1	Age (years)	< 45 years	15	17.33	5.53	0.37
		> 45 years	15	15.26	4.35	
2.	Education	Till Primary (4 <sup>th</sup> )	15	13.66	3.49	0.23
		Above Primary	15	19.33	4.83	
3.	Occupation	Unemployed(housewife)	16	17.25	5.09	0.98
		Employed	14	15.64	5.04	
4.	Residential background	Rural	23	16.13	4.90	0.542
		Urban	7	17.71	5.73	
5.	Pain related symptoms	Absent	10	11.7	2.21	0.04
		Present	20	18.9	4.29	
6.	Duration of gynecological symptoms	< 6 months	15	13.93	3.43	0.134
		>6 months	15	19.06	5.18	

There was no significant correlation found between socio-demographic factors and HAM-A scale. On comparing HAM-A score of the participants with presence or absence of pain related symptoms a significant positive correlation was found between the two groups. Thus presence of pain was associated with higher anxiety levels (P- 0.04).<sup>(13)</sup> On comparing HAM-A score of the participants with duration of gynaecological symptoms for < 6 months (N=15, Mean=13.93, S.D. =3.43) and >6 months (N=15,

Mean=19.06, S.D. = 5.18), there was no statistically significant difference found between two groups (p-0.13). (Table 4)

**Correlation of HAM-A SCORE with Gynaecological Diagnosis (Table 4):** On comparing HAM-A scores of the participants with gynaecological diagnosis of Abnormal Uterine Bleeding (N=18, Mean=17.88, S.D.=5.01) and those having other diagnoses like prolapse of uterus and fibroid (N=12, Mean=14.41,

S.D.=4.52), there was no statistically significant difference found between the groups.

### Discussion

The Mean age of the participant was 46.16 years (S.D. = 5.91) and most of the participants belonged to the age group of 35-44 years. This finding was similar to the finding in other studies where mean age of participants posted for hysterectomy was 40.6 years.<sup>(14)</sup> Almost half of the study population was employed and remaining unemployed. Hysterectomy can be equally done in both the class. This finding was not consistent with the finding in other studies which stated that hysterectomy was commonly performed in unemployed females.<sup>(15)</sup> More than half of the participants were educated till secondary suggesting that hysterectomy was more commonly performed in patients with low education.<sup>(16)</sup> Higher status women in relation to education and employment receive more preventive screening for reproductive organ problems much earlier than that required to necessitate surgery. And these women explore more options for treatment other than hysterectomy after the illness is discovered. All the participants were married. Most of the patients belong to suburban and rural area, while few were from urban background. This finding is consistent with other studies which stated that hysterectomy was more commonly preferred by women residing in rural and suburban area.<sup>(17)</sup> This difference is due to their reduced choices of treatment. For them, a hysterectomy may be the only viable option for treating their gynaecological problem because of lack of adequate access to the alternative treatment options available to women from urban areas.

Duration of gynaecological symptoms in most of the patients was for less than 1 year, while 36.7% had more than 1 year, which shows that duration of symptoms does not predict the decision for the hysterectomy procedure. Bleeding per vagina and Pain was predominant symptom in most of the patients, which suggest pain as distressing factor for the patients seeking treatment and opting for hysterectomy.<sup>(14)</sup> More than half of the participants had gynaecological diagnosis of abnormal uterine bleeding.

Most of the patients reported psychiatric complaints in the form of palpitations, restlessness, preoccupation with worries and sleep disturbances. Few had no psychiatric complaints. One third of the participating patients had anxious mood and rest had euthymic mood. 36.7% of the participants reported pre occupation with worries, which suggest that it may require psychiatric management. The mean HAM-A score of the participants reflects that anxiety was present in most of the participants. The split HAM A showed higher score on the factors anxious mood and tension. According to literature, the HAM A score can be graded into following categories 1) less than 17 with mild anxiety, 2) 18-24 with moderate anxiety and 3) 25-

30 with severe anxiety.<sup>(11)</sup> In this study almost half the participants did fall in category of less than 17 HAM A score that is mild anxiety. This corresponds with the clinical condition of the patients.

When HAM A score was compared across the demographic factors of age, educational background, residential background and occupation, no significant correlation was found between demographic factors and HAM A scores. No significant correlation could be found with the age, education, residence and occupation, but the results were not in line with other studies which suggested that younger age, higher education, unemployed and residence in urban background was associated with higher anxiety.<sup>(18,19,20)</sup> Older patients have more experience of hospital admissions, surgery and general anaesthesia and thus accounting for the lower anxiety levels in older patients. The patients with higher level of education are more aware of the complications related to surgery and anaesthesia. Their information seeking behaviour is associated with high level of anxiety. The same reason applies to population residing in urban areas leading to more anxiety in urban females undergoing hysterectomy.

In this study, duration of gynaecological complaints and HAM A had no significant correlation. although HAM A scores were high in participants having illness more than 6 months which is consistent with other studies that suggested positive correlation of increase in duration of symptoms with higher anxiety levels.<sup>(21)</sup> Statistically significant correlation was found between pain related symptoms and HAM A score. The presentation of pain is associated with higher anxiety similar to the findings of other studies stating the same.<sup>(13,22)</sup>

### Conclusion

In this study, mild to moderate anxiety was found in two thirds of patients posted for hysterectomy. Significantly higher anxiety (on HAM A) was found in those with pain symptoms.

### Limitations

Few limitations of the study were smaller sample size, single center based, single assessment based.

### Implications

It is important to screen anxiety symptoms in patients posted for major surgery like hysterectomy. Treating anxiety symptoms would help in relieving these patients of the distress due to the forthcoming hysterectomy.

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