

# Psychiatric disorders following hysterectomy

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## Summary

Hysterectomy is one of the most commonly performed gynecological surgical procedures on the uterus which are thought to be an insult to the women's emotional equilibrium. It leads to the feeling of reduced femininity which may develop psychiatric disorders. The objective of the study was to evaluate the proportion and pattern of psychiatric disorders among the hysterectomized women. This was a cross sectional and comparative study, conducted in the department of Psychiatry in collaboration with the outpatient department of Gynecology and Obstetrics, Sylhet MAG Osmani Medical College Hospital, Sylhet, Bangladesh during the period from January 2012 to December 2012. For this purpose 365 married women of reproductive age group, after 3 to 6 months of planned hysterectomy fulfilling the inclusion and exclusion criteria were selected consecutively as a case group and age matched 365 healthy women were selected as control group. The result showed that, the mean age of the respondents was 41.48 (SD±3.79) years which was almost identical to control group (p=0.953). Most (49.5%) of the women were below the age of 40 years. Psychiatric disorders were most frequent in hysterectomized group (38.3%) as compared to control group (28.1%) (p<0.001). The most common psychiatric disorder was major depressive disorder (26.5%) followed by panic disorder (5.2%), obsessive compulsive disorder (3.8%) and conversion disorder (2.7%). The results of this study suggest that a significant number of women suffer from psychiatric disorders after hysterectomy than the age matched control.

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## Introduction

A hysterectomy is the surgical removal of the uterus, usually performed by a gynecologist and it may be total or partial. Removal of the uterus renders the patient unable to bear children and has surgical risks as well as long-term effects, so the surgery is normally recommended when other treatment options are not available.<sup>1</sup> The hysterectomy is one of the most commonly performed gynecological surgical procedures throughout the world.<sup>2</sup> In 2003, over 600,000 hysterectomies were performed in the United States alone, of which over 90% were performed for benign condition.<sup>3</sup> The surgical operation on the uterus is thought to be an insult to the women's emotional equilibrium. So that its loss leads to a feeling of reduce femininity which in turn leads to psychiatric disorder.<sup>4,5</sup> This reaction has been described not only as depression, but also an agitation, insomnia, non-specific anxiety, reduce psychosexual functioning, stress response syndrome and psycho somatic disorder.<sup>6-9</sup> After hysterectomy most of the patients present with depressed mood, hot flushes, urinary symptoms, fatigue, headache, dizziness and insomnia.<sup>10</sup> By using various measures and methodologies, many researchers have found a high prevalence of psychiatric morbidity following hysterectomy, ranging up to 70%.<sup>11</sup> Majority

of the women after hysterectomy can be permanently depressed and can also show symptoms of mixed anxiety and depressive disorders.<sup>12</sup> In our country the prevalence of psychiatric morbidities following hysterectomy were found as 38.8% and out of them 33% patient were suffering from depressive disorders.<sup>13</sup> But in an earlier study it was estimated about 73.1%, out of which 27% were suffering from anxiety disorders.<sup>14</sup>

So woman following hysterectomy should examine by a psychiatrist for proper evaluation and appropriate management of the psychiatric morbidities. For this reason the objective of the study was to find out the proportion and pattern of psychiatric disorders among the hysterectomized women. This study will give baseline information about psychiatric morbidity among the hysterectomized women as well as be helpful for the development of awareness.

## Materials and methods

This was a comparative and cross sectional study carried out in the department of Psychiatry in collaboration with the outpatient department of Gynecology and Obstetrics, Sylhet MAG Osmani Medical College Hospital (SOMCH), Sylhet, Bangladesh; during the period from 1<sup>st</sup> January 2012 to 31<sup>st</sup> December 2012. For

this purpose 365 married women with reproductive age group, after 3 to 6 months following planned hysterectomy were selected consecutively as a case group and age matched 365 controls were also selected from accompanying non-hysterectomized women with no apparent gynecological or medical illness. Nulliparous women, women with emergency hysterectomy, having malignant lesions leading to hysterectomy, having chronic medical illnesses or other major surgical treatment, history of psychiatric disorders or substance abuse or taking any psychotropic drug were excluded from the study. The respondents were interviewed using data collection sheet containing socio demographic and other information such as age, occupation, education, socio economic status, family type etc. which was structured and fixed response type. Diagnoses were assigned according to DSM-IV-TR Criteria for Axis I and primary psychiatric disorders were diagnosed under supervision of qualified psychiatrists of the department of Psychiatry, SOMCH. The interviews were held in a peaceful and non-threatening environment. Ethical issues were maintained properly and an informed written consent was taken from every patient. After collecting data, editing was done manually and was analyzed with Statistical Package for Social Sciences (SPSS) version 16. Quantitative data were expressed as mean and standard deviation and qualitative data as frequency and percentage. Comparison was done by Chi-Square ( $\chi^2$ ) test and t-test where applicable. A probability (p) value of  $< 0.05$  ( $p < 0.05$ ) was considered statistically significant and  $p < 0.01$  was considered highly significant but  $p > 0.05$  was taken as non-significant.

## Results

In this study, the age of the respondents ranged from 35 to 48 years with mean age of  $41.48 \pm 3.79$  years in hysterectomized group; whereas the age of the control women ranged from 35 to 48 years with the mean age of  $41.49 \pm 3.8$  years. The mean age of respondents in both group was not statistically significant ( $p = 0.953$ ). Most of the women (49.5%) were below the age of 40 years (Table 1). According to the distribution of parity, there were 360 (98.6%) multiparous and 05 (1.4%) primiparous respondents in hysterectomized group; whereas 335 (91.8%) multiparous and 30 (8.2%) primiparous in control group. Chi square test was employed to analyze the data that show the parity difference between the respondents of hysterectomized and control group was statistically significant ( $p = 0.0001$ ) (Table 2). Most of the patients of both groups were housewives and the difference between the hysterectomized group and control group in relation to occupation was not statistically significant ( $p = 0.955$ ). In hysterectomized group 230 (63.1%) respondents were illiterate, 93 (25.4%) respondents completed primary education, 36 (9.8%) respondents completed secondary, 5 (1.4%) respondents completed higher secondary and 1 (0.3%) respondent was graduate, whereas in the control group 210

(57.7%) respondents were illiterate. 124 (33.9%) respondents completed primary education and 31 (8.5%) respondents completed secondary education. The difference between the hysterectomized group and control group in relation to educational background was statistically significant ( $p = 0.020$ ). In terms of family types, there was no statistical significant difference between two groups ( $p = 0.605$ ). In hysterectomized group 205 (56.3%) respondents were from lower socio-economic group, 159 (43.4%) respondents were from middle socio-economic class and 1 (0.3%) respondents were from higher socio-economic class. Whereas in control group 231 (63.4%) respondents were from middle socio-economic class, 129 (35.2%) respondents were from lower socio-economic class and 5 (1.4%) respondents were from higher socio-economic class. Chi square test was employed to analyze the data that shows there was statistically significant difference between two groups ( $p = 0.0001$ ) (Table 3). Psychiatric comorbidity was most frequent in hysterectomized group (38.3%) as compared to control group (28.1%) ( $p < 0.001$ ) (Table 4). The most common psychiatric disorder was major depressive disorder (26.5%) followed by panic disorder (5.2%), obsessive compulsive disorder (3.8%) and conversion disorder (2.7%). This was highly significant difference in hysterectomized women as compared to control group ( $p < 0.0001$ ) (Table 5).

**Table 1: Distribution of respondents according to age (n=730)**

Age (years)	Hysterectomized group (n=365)		Control group (n=365)		P value*
	No.	(%)	No.	(%)	
35-40	180	(49.5)	179	(49.2)	
41-45	174	(47.5)	174	(47.5)	0.977 <sup>a</sup>
46-50	11	(3.0)	12	(3.3)	
Mean( $\pm$ SD)	41.48 $\pm$ 3.79		41.49 $\pm$ 3.80		0.953 <sup>b</sup>
Range	35-48		35-48		

\*<sup>a</sup>  $\chi^2$  (Chi square) test and \*<sup>b</sup>unpaired Student's 't' test were employed to analyze the data.

**Table 2: Distribution of respondents according to parity (n=730)**

Parity	Hysterectomized group (n=365)		Control group (n=365)		P value*
	No.	(%)	No.	(%)	
Multiparous	360	(98.6)	335	(91.8)	0.0001 <sup>*</sup>
Primaeparous	5	(1.4)	30	(8.2)	

\* $\chi^2$  (Chi square) test were employed to analyze the data.

**Table 3: Distribution of respondents according to socio demographic condition (n=730)**

Characteristics	Hysterectomized group (n=365)		Control group (n=365)		P value*
	No.	(%)	No.	(%)	
<b>Occupation</b>					
Housewife	339	(92.9)	340	(93.1)	0.955*
Service	20	(5.5)	20	(5.5)	
Business	6	(1.6)	5	(1.4)	
<b>Education</b>					
Illiterate	230	(61.1)	210	(57.7)	0.020*
Primary	93	(25.4)	124	(33.8)	
Secondary	36	(9.8)	31	(8.5)	
Higher secondary	5	(1.4)	0	(0)	
Graduate	1	(0.3)	0	(0)	
<b>Family Types</b>					
Nuclear	188	(51.6)	181	(50.3)	0.605*
Joint	177	(48.4)	184	(49.7)	
<b>Socio economic condition</b>					
Lower	205	(56.3)	129	(32.2)	0.0001*
Middle	159	(43.4)	231	(63.4)	
Higher	1	(0.3)	5	(1.4)	

\* $\chi^2$  (Chi square) test was employed to analyze the data.

**Table 4: Distribution of respondents by co-morbid psychiatric disorders (n=730)**

Co-morbid Psychiatric disorders	Hysterectomized group (n=365)		Control group (n=365)		P value*
	No.	(%)	No.	(%)	
Present	140	(38.3)	103	(28.1)	<0.001*
Absent	225	(61.7)	262	(71.9)	
Total	365	(100.0)	365	(100.0)	

\* $\chi^2$  (Chi-square) test was employed to analyze the data. Figure in the parenthesis indicates corresponding percentage.

**Table 5: Distribution of respondents by specific type of co-morbid psychiatric disorders (n=730)**

Psychiatric disorders	Hysterectomized group (n=365)		Control group (n=365)		P value*
	No.	(%)	No.	(%)	
Major depressive disorder	97	(26.5)	41	(11.3)	0.0001*
Generalized anxiety disorder	0	(0)	36	(9.8)	
Obsessive compulsive disorder	14	(3.8)	10	(2.7)	
Conversion disorder	10	(2.7)	4	(1.1)	
Panic disorder	19	(5.3)	6	(1.6)	
Somatization disorder	0	(0)	6	(1.6)	
No psychiatric disorder	225	(61.7)	262	(71.9)	

\* $\chi^2$  (Chi-square) test was employed to analyze the data.

## Discussion

The present study revealed that most of the hysterectomized women were in their late adulthood. The age of the subjects ranged from 35 to 48 years with the mean of 41.48 (SD±3.79) years. Among them 180 (49.5%) were belonging to 35 to 40 years age group. In this regard, Habib et al. showed a mean age of hysterectomized women was 45.05±9.03 years where Bhatia et al. showed that, majority of the cases (44%) belonged to 35 to 44 years.<sup>13,15</sup> So the present study finding was consistent with the findings of other studies. Regarding the parity, current study showed that, 98.6% respondents of the hysterectomized group were multiparous. In this regards, another Bangladeshi study showed that 86.96% respondents were multiparous and an Indian study showed that 74% respondents were multiparous.<sup>13,15</sup> This preponderance of multiparity could be due to the fact that before completion the family (at least two children) it was hardly tried by the gynecologist to manage the adverse gynecological condition conservatively. Consequently patient and her family member might also refuse to give consent before completion her family.

The present study showed that 92.9% respondents were housewives, by 5.5% were service holders and 1.6% had their own business. A previous study of Bangladesh found that 65.4% of respondents were housewives and an Indian study found that 78% of respondents were housewives.<sup>14,15</sup> All these studies are consistent with the present study regarding occupations of the hysterectomized women. In this study the majorities (63.1%) of the respondents were illiterate followed by 25.4% completed primary level, 9.8% completed secondary level, 1.4% completed higher secondary level and only 0.3% was graduate. A study conducted in Egypt found 42.9% respondents were illiterate, 28.6% completed primary, 17.1% completed secondary and 11.3% completed graduation.<sup>16</sup> An Indian study also found that, majority (62%) of the respondents were illiterate.<sup>15</sup> So regarding education of the hysterectomized women, the present study was similar to the other studies. In this study 56.3% respondents were from lower socio-economic class, 43.4% from middle socio-economical class and 0.3% from higher socio-economic class. This result was supported by the study of Khanam et al. where 64.2% of hysterectomized women came from lower socio-economic class.<sup>14</sup> This study was done in a government medical college hospital and treatment was done free of cost. This might be the cause that maximum respondents were from lower socio-economic class. In this study most (51.6%) of the hysterectomized women came from nuclear family (51.6%). Majority of our urban population and least of rural population are living in nuclear family and this study was done in a tertiary level hospital situated in a metropolitan city. This might be

the cause of maximum participation of women from nuclear family. On the other hand decision making about the surgery needed for the women may be easy in nuclear family.

Regarding the psychiatric disorders the current study revealed that, psychiatric disorders were present in 38.3% of hysterectomized women while in control group it was 28.1%. Regarding the psychiatric disorders the study showed a highly significant difference in hysterectomized women as compared to control group ( $p < 0.001$ ). Habib et al. reported 38.8% of cases having a psychiatric illness where as Khanam et al. showed that the prevalence of psychiatric diagnosis was 57%.<sup>13,14</sup> An Egyptian study detected 78.7% of psychiatric morbidity.<sup>16</sup> The common psychiatric disorder in hysterectomized women was major depressive disorder (26.5%) followed by panic disorder (5.2%), obsessive compulsive disorder (3.8%) and conversion disorder (2.7%) where in control group major depressive disorder was found in 11.2%, generalized anxiety disorder were found in 9.8%, obsessive compulsive disorder were found in 2.7%, panic disorder were found in 1.6%, and conversion disorder were found in 1.1% of respondents. Regarding the patterns of psychiatric disorders the study also showed a highly significant difference in hysterectomized women as compared to control group ( $p < 0.0001$ ). In this regards Habib et al. found major depressive disorder was 33.3%, generalized anxiety disorder was 23.8%, panic disorder was 14.3%, somatization disorder was 14.3%, somatoform disorder was 9.5% and obsessive compulsive disorder was 4.8%.<sup>13</sup> Presence of more psychiatric morbidities in the hysterectomized group than the control group might be due to the removal of organ that predispose psychiatric disorder in the same way as any loss. Hysterectomy may also predispose the belief of reduced femininity and inability of bearing child may lead to psychiatric disorder also. To diagnose a patient for generalized anxiety disorder according to DSM-IV-TR the duration of symptoms must present for at least 6 months. In this study women before three months and after six months following hysterectomy were excluded during sampling, this might be the cause of absence of generalized anxiety disorder in hysterectomized group though this is the second most common disorder found in control group.

### Conclusion

As the co-morbid psychiatric disorders were significantly more in hysterectomized women than the control subjects, it may delay the full recovery of the patients and may cause burden for the patients and also health delivery system. This

emphasizes to develop a rich referral system and to establish a liaison service between the department of Psychiatry and department of Gynecology and Obstetrics to ensure better management of hysterectomized women.

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