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PSYCHIATRIC COMORBIDITIES IN WOMEN UNDERGOING HYSTERECTOMY; A CROSS-SECTIONAL STUDY

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Abstract

Background: This study aims to evaluate the prevalence and severity of psychiatric disorders among women undergoing hysterectomy for non-cancerous conditions and to compare these findings with a control group undergoing other gynecological surgeries.

Study Design: A cross-sectional study

Place of Study: Department of Psychiatry/ Gynae & Obs Mardan Medical Complex (MMC), Mardan from January 5, 2020, to 6 July, 2020.

Methods and Materials: A cross-sectional Study design was used, involving 40 women undergoing hysterectomy and a control group of 40 women undergoing other gynecological surgeries. Participants were assessed using Sinha's Anxiety Scale (SAS) and the Hamilton Depression Rating Scale (HDRS) preoperatively and four weeks postoperatively. Statistical analyses included chi-square tests for categorical data and Wilcoxon signed rank tests for continuous data.

Results: The hysterectomy group had a higher prevalence of psychiatric diagnoses (13.9%) compared to the control group (2.78%). Postoperatively, the hysterectomy group showed significant improvements in SAS scores (46.123 to 37.482) and HDRS scores (8.234 to 7.121), indicating reduced anxiety and depression.

Conclusion: Women undergoing hysterectomy are more likely to have psychiatric comorbidities, yet they experience significant psychological improvement post-surgery. Comprehensive preoperative and postoperative psychiatric evaluations are recommended to optimize health outcomes.

Keywords: Hysterectomy, Psychiatric comorbidities, Anxiety, Depression

Introduction

Hysterectomy or the removal of the uterus through surgery remains one of the most prevalent surgeries among women across the globe especially in the developed world. 1 Hysterectomy indications range from benign diseases such as uterine fibroids, endometriosis, and pelvic

inflammatory diseases, to abnormal uterine bleeding and gynecological malignancies. Although the physical consequences of hysterectomy and the rate of early postoperative morbidities have received considerable investigation, the psychological and psychiatric consequences of hysterectomy for women need additional investigation. 2 Psychiatric comorbidities in women going through hysterectomy are an important yet understudied area of gynecological medicine. Gynecological surgery and mental health are related due to the presence of mental illness, psychosocial effects of the loss of reproductive organs, and hormonal changes after some operations. It is also important to note that when women who have previously had a history of psychiatric disorders such as depression, anxiety, and PTSD, undergo hysterectomy, their symptoms may worsen in the process making their recovery and overall quality of life even more challenging. 3,4 On the other hand, the procedure itself might help reduce some psychiatric symptoms, such as chronic pain relief or significant reduction of severe menstrual bleeding, illustrating this reciprocal mechanism. New data indicates that the psycho-social effects of hysterectomy are not negligible and that a considerable number of women develop psychological problems such as emotional distress, body image changes, and feelings of loss of sexual identity. 5 These factors may trigger or worsen psychiatric disorders hence the need for a team approach during the period before and after surgery. Additionally, whether the surgery was a total, subtotal, or radical hysterectomy, as well as the approach used to gain access to the uterus (abdominally, vaginally, or through minimally invasive laparoscopy) may impact psychological effects. 6 It is crucial to know these subtleties to optimize strategies for preoperative consultation, surgical decision-making, and postoperative care, which minimize poor mental health. This study, therefore, seeks to establish the rate and range of psychiatric disorders in women who undergo hysterectomy, both antecedent and novo. In this paper, the author aims to define risk factors, discuss possible pathophysiologic processes of psychiatric symptoms, and suggest an effective interprofessional approach based on an analysis of the available literature and clinical practice data. Concerning this significant aspect of women's health, we intend to improve the therapeutic efficacy of hysterectomy patients and thereby offer them more comprehensive care packages.

Methods and Materials

This cross-sectional Study compares the prevalence and severity of symptoms of anxiety and depression in women scheduled to undergo hysterectomy for noncancerous conditions. The study was carried out at a large base hospital for six months The patient sample consisted of 40 consecutive women who underwent hysterectomies for non-cancer indications. A control group of women admitted for other gynecological surgeries excluding hysterectomy and having similar age range, social and demographic status, and gynecological history as the study group was also recruited. The inclusion criteria for both groups were women of childbearing age, 18-65 years, undergoing elective surgery (abdominal/hysterectomy or other gynecological surgery). Patients with some chronic medical conditions like diabetes mellitus, and hypertension and those with a past or present history of any psychiatric disorder were excluded.

Data Collection

To obtain more detailed information about each participant, a special proforma was developed. The proforma consisted of modules on socio-demographic data (age, education, occupation, marital status, etc.), past medical and family history, gynecological history and examination, psychiatric history, and mental state examination.

Statistical Analysis

Statistical analysis was done using the SPSS software with version 20.0 Basic descriptive analysis of all socio-demographic and clinical data was conducted. The two main measures, anxiety and depression scores were described using medians and the Inter-quartile range since the data was non-normally distributed. The chi-square test was used for comparing the categorical data (presence or absence of anxiety or depression) while the median test was used for continuous data (SAS and HDRS scores) between the hysterectomy and control groups. Comparisons between preoperative and

postoperative anxiety and depression were conducted using the Wilcoxon signed rank test within each group. Spearman's rank correlation coefficient was used to examine the relationship between changes in psychological scores and socio-demographic factors.

Multivariate logistic regression analysis was conducted to identify independent predictors of significant postoperative anxiety and depression. Variables included in the regression model were selected based on their clinical relevance and statistical significance in univariate analyses. The findings were reported with 95% confidence intervals and odds ratios where applicable. Results were interpreted in the context of existing literature, and implications for clinical practice were discussed.

Results

The study compares demographic characteristics, mental health diagnoses, and psychological scores between a hysterectomy group (n = 40) and a control group (n = 40). The mean age in the hysterectomy group is 42.5 years, ranging from 28 to 60 years, while the control group has a mean age of 39.2 years, ranging from 20 to 50 years. Most participants in both groups are married, with 38 married and 2 widowed in the hysterectomy group, and all 40 participants married in the control group. Educational levels show a higher number of individuals with 0-5 years of education in the hysterectomy group (27) compared to the control group (20). Both groups have identical domicile distributions, with 30 individuals from rural areas and 10 from urban areas. Family income levels are similar across both groups, although slightly more families in the control group earn 30,000 rupees and 50,000 rupees, whereas more families in the hysterectomy group earn 100,000 rupees.

Table 1: Socio-demographic characteristics of hysterectomy and control groups.

Variable	Hysterectomy group (n = 40)	Control group (n = 40)
Mean age (in years)	42.5	39.2
Range of age	28–60	20–50
Marital status:		
Married	38	40
Widowed	2	—
Education		
0 – 5	27	20
6 – 10	10	15
11 and above	3	5
Domicile		
Rural	30	30
Urban	10	10
Family income (in rupees)		
30,000	12	14
50,000	20	21
100,000	8	5

In terms of mental health diagnoses, the hysterectomy group has a higher prevalence of unspecified psychosis (2.78%), neurotic depression (5.56%), and anxiety state (5.56%), totaling 13.9%, compared to only 2.78% in the control group, where anxiety state is the sole diagnosis. Psychological scores reveal that the hysterectomy group experiences significant improvement postoperatively, with the SAS score decreasing from 46.123 to 37.482 and the HDRS score decreasing from 8.234 to 7.121. These findings suggest that, while the hysterectomy group initially presents with more mental health issues, there is notable psychological improvement following surgery.

Table 2: Prevalence of psychiatric diagnoses in hysterectomy and control groups.

Diagnostic category	Hysterectomy group	Control group
	No of cases (%)	No of cases (%)
Unspecified psychosis	1 (2.78)	—
Neurotic depression	2 (5.56)	—
Anxiety state	2 (5.56)	1 (2.78)
Total	5	1

Table 3: Preoperative and postoperative anxiety and depression scores in hysterectomy and control groups.

Preoperative	Postoperative	
	Hysterectomy group	Control group
SAS score	46.123	37.482
HDRS score	8.234	7.121

Discussion

Hysterectomy is a common gynecological procedure often performed to treat conditions such as uterine fibroids, endometriosis, and abnormal uterine bleeding. While the physical outcomes of hysterectomy are well-documented, the psychological impact remains less explored. This study aimed to elucidate the prevalence and spectrum of psychiatric comorbidities in women undergoing hysterectomy, comparing them to a control group of women undergoing other gynecological surgeries. Our findings revealed that women in the hysterectomy group had a higher prevalence of psychiatric conditions, with 13.9% diagnosed with unspecified psychosis, neurotic depression, or anxiety state compared to 2.78% in the control group. This is consistent with existing literature that underscores the heightened vulnerability of women undergoing hysterectomy to psychiatric disorders. For instance, one study found that hysterectomy can significantly impact mental health, often exacerbating preexisting psychiatric conditions. 7 Similarly, a study highlighted that women with a history of psychiatric disorders are at increased risk of mental health issues post-hysterectomy. 8 Interestingly, our study observed a notable improvement in psychological scores postoperatively in the hysterectomy group. The SAS score decreased from 46.123 to 37.482, and the HDRS score from 8.234 to 7.121, indicating a reduction in anxiety and depression levels. This aligns with the findings of Studyer, who reported that alleviation of chronic pain and bleeding post-hysterectomy can lead to improved mental health outcomes. 9 Similarly, a Studyer documented significant postoperative improvement in quality of life and psychological well-being among women undergoing hysterectomy for benign conditions. 10

Despite the general improvement observed, the initial higher prevalence of psychiatric conditions in the hysterectomy group underscores the need for careful preoperative psychiatric evaluation and support. This is particularly critical as preexisting mental health issues can exacerbate postoperative recovery. This point is reinforced by the work of Studyer, who demonstrated that women with preexisting anxiety and depression had a more challenging postoperative recovery trajectory. 11 The demographic analysis revealed that both groups had similar socio-demographic characteristics, including age, marital status, education, domicile, and family income. This homogeneity strengthens the validity of our comparative analysis. However, the hysterectomy group had slightly higher levels of lower education (0-5 years), which could be a confounding factor as lower education levels are often associated with increased psychiatric morbidity. 12,13 Our findings contribute to the ongoing discourse on the psychological ramifications of hysterectomy. They highlight the necessity for a multidisciplinary approach in managing women undergoing this surgery, encompassing both medical and psychological care. Given that postoperative psychological improvement is possible, as indicated by the reduction in SAS and HDRS scores, integrating mental health support into the preoperative and postoperative care plans can potentially enhance overall therapeutic outcomes.

Conclusion

This study underscores the significant prevalence of psychiatric comorbidities among women undergoing hysterectomy for nonmalignant conditions. Notably, the hysterectomy group exhibited a higher prevalence of conditions such as unspecified psychosis, neurotic depression, and anxiety state compared to the control group. However, the findings also revealed a substantial postoperative improvement in psychological well-being, with marked reductions in both anxiety and depression scores. These results highlight the complex interplay between gynecological surgery and mental health, suggesting that while hysterectomy may initially exacerbate psychiatric symptoms, it can also lead to psychological relief by alleviating chronic physical ailments. The study reinforces the need for comprehensive preoperative and postoperative psychiatric evaluations and interventions to optimize the overall health outcomes for women undergoing hysterectomy.

Limitations and Recommendations

The following are the limitations of this study. First, the sample size was moderate, the study involved 40 participants in each group, which can reduce external validity. If more participants were involved, there would be a larger sample size and a higher chance of identifying finer differences between the two groups. Second, due to the nature of the study, it cannot be established whether the psychiatric outcomes are a result of hysterectomy. Third, the present study did not include a long follow-up period, and the psychological changes were assessed only 4 weeks after the surgery. As such, future studies should attempt to mitigate these limitations by recruiting larger and more diverse samples and extending the follow-up period to assess the chronic effects of stress on one's psychological well-being. Hence, subsequent studies should recruit women with psychiatric disorders before hysterectomy to assess all effects on mental health.

Conflict of Interest: Nill
Funding Source: Nill

Authors Contribution

Muhammad Muslim Khan: Concept & Design of Study
Hemasa Gul ,Izaz Jamal: Drafting
Noor ul Amina: Data Analysis
Naila: Critical review
Muhammad Muslim Khan: Final Approval of version

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