Original
ISSN 2413-0516

Psychosexual Consequences that Iraqi Women Suffer after Emergency Hysterectomy

Weqar Akram Hussein[1], Zahraa Muhmmed Jameel Al-Sattam[1*], Asan Ali Qasim[2], Bushra Mohammed Majeed[1], Thikra Najim Abdulla[1], Sahar Jassim Abid[1]

[1]Department of Obstetrics and Gynecology, Al-Kindy College of Medicine, University of Baghdad, Baghdad, Iraq.
[2]Department of Obstetrics and Gynecology, Al-Elwiya Maternity Teaching Hospital, Baghdad, Iraq.
*Correspondence to: Zahraa Muhmmed Jameel Al-Sattam (E-mail: Zahraamjameel@kmc.uobaghdad.edu.iq)
(Submitted: 15 May 2025 – Revised version received: 01 June 2025 – Accepted: 30 June 2025 – Published online: 26 August 2025)

Abstract

Objective: This study aimed to explore the social and physiological changes that Iraqi women may experience after a hysterectomy.

Methods: A cross-sectional study was conducted at the consultation clinic of Al-Elwiya Maternity Teaching Hospital in Baghdad, Iraq. A total of 81 women who underwent emergency hysterectomy and could comprehend and respond to the questionnaire were recruited for this study. A structured, self-administered Arabic-language questionnaire was developed, and it included sociodemographic characteristics, surgical history, preoperative awareness, psychological symptoms, and sexual health impact.

Results: The mean age of patients was 43.5 ± 10.6 years. Symptoms of depression, anxiety, and sadness decreased slightly after surgery, but 33.3% still struggled with persistent worry. Sexual difficulties were reported by 29.6%, and 37% experienced worsening partner relationships, while 55.6% reported improved sexuality over time. Logistic regression identified several predictors: depression was notably lower one year after surgery ($P = 0.002$), while higher education and ovary removal were linked to fewer sexual problems ($P = 0.048, 0.011$). There were no significant predictors for climax, arousal, pain, or self-confidence.

Conclusion: While many women experience gradual improvements in emotional well-being and sexual function, a substantial proportion continue to face challenges. Age, education level, time since surgery, and ovary removal significantly influence recovery and adaptation. These findings highlight the importance of individualized post-surgical care, including psychological support and sexual health counseling, to enhance long-term quality of life.

Keywords: Hysterectomy, psychosexual outcomes, sexual function, ovary removal

Introduction

Hysterectomy is among the most performed surgeries in gynecology practice. Most hysterectomies are performed for benign reasons. One in three women is predicted to have a hysterectomy at some time in their life.[1,2] Numerous pre-hysterectomy symptoms can impair sexual performance and quality of life. It is also anticipated that a hysterectomy done to alleviate these symptoms will improve the patient's sexual function and quality of life.[1,3]

There are several ways to perform a hysterectomy, including laparoscopic, vaginal, and abdominal techniques. 'Total abdominal hysterectomy and bilateral salpingo-oophorectomy' refers to the complete abdominal removal of the uterus, cervix, fallopian tubes, and ovaries.[4] Depending on the surgical rationale, patient features, surgeon experience, and personal preferences, a hysterectomy may be performed using a different approach. In addition to endometrial illnesses, malignancies of the reproductive system, and localized genital endometriosis inside the myometrium, other grounds for a hysterectomy include irregular bleeding, menstrual disorders, fibroids, pelvic discomfort, and uterine prolapse.[4,5] Worldwide, hysterectomy incidence rates vary, with wealthier nations reporting greater rates. As one ages, the chance of having a hysterectomy rises. In the United States, for example, less than 2 percent of women between the ages of 20 and 29 have had a hysterectomy, and almost 4 out of 10 women between the ages of 70 and 79 have had one.[6]

An individual's quality of life, psychological well-being, self-perception, and body integrity are all significantly impacted by surgical procedures. Women's sexual and reproductive abilities are impacted by the added pressures caused by gynecological surgeries such as hysterectomies.[7] In addition, women who have such surgery run the risk of developing anxiety, social dysfunction, and depression since they may lose their ability to conceive after the treatment.[8]

As a sexual organ, a reproductive organ, a secretory organ, a representation of youth, motherhood, beauty, and strength, the uterus has many metaphorical implications for women. These views are significantly shaped by cultural influences.[7] As a result, a hysterectomy affects women physically, emotionally, and sexually in addition to causing the loss of a valuable organ.[9]

The uterus is frequently seen as a representation of femininity and fertility in a variety of cultural contexts. Accordingly, cultural differences in women's attitudes and views of this surgery can be substantial, as evidenced by studies by Hsieh et al.,[7] and Skorupska et al.[8]

The impact of minimally invasive hysterectomy procedures on female sexual function is still up for debate. Women frequently express anxiety about the procedure's possible effects on sexual function during hysterectomy counselling.[10] It is noteworthy that some women express the assumption that a hysterectomy may enhance sexual function or remove obstacles to sexual satisfaction during counselling for the surgery. Others, on the other hand, worry that having a hysterectomy would make it harder for them to have sex. However, some people have significant worries about their ability to have sex after surgery, which makes them more stressed before the procedure.[1]

To provide comprehensive, patient-centered treatment, it is essential to understand the psychosexual repercussions of emergency hysterectomy. This understanding helps doctors predict mental health needs, offer timely interventions like

hormone therapy or counseling, and ultimately improve survivors' long-term quality of life.[10] This study aimed to explore the social and physiological changes that Iraqi women may experience after a hysterectomy.

Materials and Methods

Study Design, Setting, and Time

A cross-sectional study with an analytic component was used. This study was conducted at the consultation clinic of Al-Elwiya Maternity Teaching Hospital (a major tertiary referral center for obstetric and gynecological care in the region) in Baghdad, Iraq, for one year, from March 1, 2024, to March 1, 2025.

Study Population

The study involved adult women (aged 18 and above) who had previously undergone an emergency hysterectomy and visited the hospital's consultation clinic during the study period. All eligible women attending the clinic during this time were consecutively invited. Of the 108 women approached, 81 met the inclusion criteria, 20 were excluded, and 7 refused participation, resulting in a response rate of 75%. Inclusion criteria included: (1) a history of emergency hysterectomy for obstetric or gynecological reasons, (2) the ability to understand and respond to an Arabic-language questionnaire, and (3) providing informed consent. Women with a known psychiatric illness before surgery or incomplete responses were excluded.

Data Collection Tools

A structured, self-administered Arabic-language questionnaire created via Google Forms. The questionnaire was developed after reviewing relevant literature and consulting senior obstetricians and psychiatrists. After piloting on 10 healthcare workers, the final version of the questionnaire included the following data:

1. Sociodemographic characteristics: Age, marital status, number of children, educational level, and occupation.
2. Surgical history: Cause and type of hysterectomy (total/subtotal), oophorectomy status, and time since surgery.
3. Preoperative awareness: Participants' level of knowledge about hysterectomy before undergoing the procedure.
4. Psychological symptoms were evaluated using Arabic versions of symptom frequency scales based on the PHQ-9 (Patient Health Questionnaire-9) and GAD-7 (Generalized Anxiety Disorder-7), assessing depression, sadness, anxiety, and uncontrollable worry before and after surgery. The Arabic PHQ-9 has been validated in several studies among Arabic-speaking populations, demonstrating strong internal consistency and construct validity. Likewise, the Arabic GAD-7 has shown satisfactory psychometric properties for screening generalized anxiety disorder in Arabic speakers. Using these adapted and validated tools ensures that our findings on depression and anxiety are comparable with results from other Arabic-speaking populations, thereby enhancing the generalizability of our conclusions. Nonetheless, we recognize that the absence of sexual function assessment may reduce the overall scope of postoperative quality-of-life evaluation. This limitation could be addressed in future research through culturally sensitive approaches.
5. Sexual health impact: Included domains of desire, arousal, orgasm, pain during intercourse, overall satisfaction, and relationship with partner. These were rated on a 5-point Likert scale, where higher values indicated greater negative change.
6. Coping strategies and physical complaints: Included psychological counseling, family support, and post-surgical physical symptoms (e.g., fatigue, musculoskeletal pain).

Scoring and Variables

Psychological symptoms were scored from 0 to 3 per item, based on symptom frequency ("not at all" to "nearly every day"). Sexual function domains were assessed with scores indicating the degree of change post-surgery. Composite scores were calculated for each domain. Open-ended responses were also included for qualitative insights. The FSFI was excluded because our primary objective was assessing psychological symptoms (depression and anxiety) rather than sexual function. Additionally, cultural and ethical considerations in our target population made sexual function assessment less feasible, with a high likelihood of non-response.

Statistical Analysis

Data was extracted into Microsoft Excel and analyzed using SPSS version 25. Descriptive statistics such as mean, standard deviation, frequencies, and percentages were used to summarize data. Cross-tabulations and comparative analyses explored associations between surgical characteristics (e.g., type of hysterectomy, oophorectomy) and post-operative emotional and sexual outcomes. Missing values were handled using pairwise deletion.

Results

This study included a total of 81 women who underwent emergency hysterectomy. The age range was 23 to 67 years, with a mean and standard deviation of 43.48 ± 10.56 years. Most participants were married (81.5%) and housewives (74.1%). Educational attainment was equally distributed between secondary-preparatory (37%) and college or higher (37%) levels. Placenta accreta was the indication for hysterectomy in 33.3% of cases. Total hysterectomy was more frequent than partial (66.7% vs. 33.3%), and the ovaries were removed in 55.6% of patients. More than half of the participants (59.3%) had undergone surgery more than one year before the study, and 59.3% reported having prior knowledge of the hysterectomy procedure, as shown in Table 1.

Psychological Outcomes Before and After Surgery

Before surgery, a high proportion of participants reported feeling pleasure and interest (85.2%), depression/sadness (81.5%), and anxiety/worry (85.2%). After surgery, pleasure and interest decreased to 77.8%, depression/sadness decreased to 70.4%, anxiety or worry decreased to 77.8%, and 33.3% of women struggled to manage these feelings, as illustrated in Table 2.

Sexual and Relationship Outcomes

After surgery, 24 women (29.6%) reported sexual troubles, and 30 (37%) experienced a worsening of their partner relationship. More than half of the women, 45 (55.6%) noted

an improvement in sexuality over time. Effects on sexual desire, arousal, and climax were less commonly reported by 21 (25.9%), 15 (18.5%), and 12 (14.8%), respectively. Pain during sexual intercourse was reported by 21 (25.9%) of the participant women. Moreover, 33 (40.7%) reported an effect on sexual satisfaction, and 57 (70.4%) reported that their self-confidence had been affected postoperatively, as shown in Table 3.

Predictors of Psychosexual Outcomes

Binary logistic regression analyses were conducted to identify predictors of psychosexual outcomes. The findings were as follows: Postoperative depression was significantly less likely in women whose surgery occurred more than one year ago (OR = 0.04, P = 0.002). Postoperative inability to control anxiety was more likely in older women (P = 0.039), married women (P = 0.046), and women with a history of preoperative worry (P = 0.026). Conversely, higher education (P = 0.031), ovary removal (P = 0.018), and a longer time since surgery (P = 0.023) were associated with better anxiety control. Worsening of partner relationships was significantly associated with older age (P = 0.002), lower education (P = 0.008), and a longer time since surgery (P = 0.022). Sexual troubles were less likely among women with higher education (P = 0.048) and those whose ovaries were removed (P = 0.011). Improvement in sexuality over time was significantly more likely in women who had awareness about hysterectomy (P = 0.017), while secondary education was paradoxically associated with no improvement (P = 0.001). Reduced sexual desire was significantly associated with ovary removal (P = 0.001) and partial hysterectomy (P = 0.026). Women with secondary education had a higher likelihood of reporting increased sexual desire (P = 0.014). Sexual satisfaction was influenced by age (P = 0.022), education (higher in the secondary-preparatory level; P = 0.002), and the type of hysterectomy (less satisfaction with partial; P = 0.028). Physical troubles were significantly less common among women who had a partial hysterectomy (P = 0.027) and those whose surgery occurred over a year ago (P = 0.048). No statistically significant predictors were found for sexual arousal, sexual climax, pain during sex, effects on self-confidence, or adaptation strategies. The predictors of psychological and sexual outcomes are summarized in Table 4.

Table 1. **Sociodemographic and clinical characteristics of the participants**

Variable	Category	Frequency (%)
Social Status	Single	9 (11.1%)
	Married	66 (81.5%)
	Divorced	6 (7.4%)
Education Level	Primary	21 (25.9%)
	Secondary/Preparatory	30 (37.0%)
	College or Higher	30 (37.0%)
Occupation	Housewife	60 (74.1%)
	Employed	21 (25.9%)
Cause of Hysterectomy	Placenta accreta	27 (33.3%)
	Other	54 (66.7%)
Type of Hysterectomy	Total	54 (66.7%)
	Partial	27 (33.3%)
Ovary Status	Intact	36 (44.4%)
	Removed	45 (55.6%)
Time Since Surgery	<12 months	33 (40.7%)
	≥12 months	48 (59.3%)
Knowledge of Procedure	Yes	48 (59.3%)
	No	33 (40.7%)

Table 2. **Psychological outcomes before and after surgery**

Variable	Yes (%)	No (%)
Preoperative Interest & Pleasure	69 (85.2)	12 (14.8)
Postoperative Interest & Pleasure	63 (77.8)	18 (22.2)
Preoperative Depression/Sadness	66 (81.5)	15 (18.5)
Postoperative Depression/Sadness	57 (70.4)	24 (29.6)
Preoperative Anxiety/Worry	69 (85.2)	12 (14.8)
Postoperative Anxiety/Worry	63 (77.8)	18 (22.2)
Postop. Inability to Control Worry	27 (33.3)	54 (66.7)

Table 3. **Sexual and relationship outcomes after surgery**

Variable	Change (%)	No effect (%)
Partner Relationship Worsened	30 (37.0)	51 (63.0)
Sexual Troubles	24 (29.6)	57 (70.4)
Sexuality Improved Over Time	45 (55.6)	36 (44.4)
Sexual Desire Affected	21 (25.9)	60 (74.1)
Sexual Arousal Affected	15 (18.5)	66 (81.5)
Sexual Climax Affected	12 (14.8)	69 (85.2)
Pain During Sex	21 (25.9)	60 (74.1)
Sexual Satisfaction Affected	33 (40.7)	48 (59.3)
Self-Confidence Affected	57 (70.4)	24 (29.6)

Discussion

The potential effect on sexual function is a frequently mentioned concern for numerous people planning a hysterectomy. Current literature suggests that sexual performance is generally constant or slightly improved for most patients after hysterectomy; nonetheless, numerous studies reveal a minor subset of individuals experiencing a deterioration in sexual function post-surgery.[12]

In Iraqi society, cultural norms regarding modesty, marital obligations, and the stigma surrounding sexual discussion may influence how women report sexual function and emotional well-being after hysterectomy. These societal factors can affect both openness in responses and the actual adaptation process post-surgery.

It is widely believed that a hysterectomy may negatively impact psychological well-being, thereby elevating the risk of depression. In the present study, postoperative depression was significantly less prevalent in women whose surgery was performed over one year before. In a different manner, and despite the mean score of depression decreased three months after the hysterectomy (which was a shorter duration than the current

Table 4. **Predictors of psychological and sexual outcomes**

Outcome	Significant predictor	AOR (95% CI)	*P*-value
Postoperative Depression	**Time since surgery ≥ 1 year**	0.040 (0.005 – 0.299)	0.002
Inability to Control Worry	**Age**	1.879 (1.034 – 3.416)	0.039
	Married vs. single	2.838 (1.158 – 4.24)	0.046
	College education vs. secondary education	0.632 (0.232 – 0.986)	0.031
	Ovaries removed	0.761 (0.341 – 0.952)	0.018
	Time since surgery ≥ 1 year	0.534 (0.112 – 0.732)	0.023
	Preop inability to control worry	1.461 (1.023 – 3.824)	0.026
Partner Relationship	**Age**	1.305 (1.099 – 1.549)	0.002
	College education	0.035 (0.003 – 0.418)	0.008
	Time since surgery ≥ 1 year	10.250 (1.401 – 74.96)	0.022
Sexual Troubles	**College education**	0.069 (0.005 – 0.977)	0.048
	Ovaries removed	0.085 (0.013 – 0.571)	0.011
Sexuality Improved	**Secondary-preparatory vs. primary**	0.039 (0.006 – 0.272)	0.001
	Knowledge about hysterectomy	8.302 (1.464 – 47.08)	0.017
Sexual Desire	**Secondary-preparatory vs. primary**	14.028 (1.721 – 115.1)	0.014
	Partial hysterectomy	0.116 (0.017 – 0.776)	0.026
	Ovaries removed	0.131 (0.092 – 0.488)	0.001
Sexual Satisfaction	**Age**	1.183 (1.025 – 1.964)	0.022
	Secondary-preparatory vs. primary	3.776 (1.356 – 6.404)	0.002
	Partial hysterectomy	0.110 (0.015 – 0.792)	0.028
Physical Troubles	**Partial hysterectomy**	0.147 (0.0229 – 0.512)	0.027
	Time since surgery ≥ 1 year	0.124 (0.021 – 0.874)	0.048

results), the difference was not statistically significant.[13] In the same regard, Ferrandina and colleagues reported in an earlier study that depression did not reveal any substantial changes in the scores of the women investigated 3, 6, 12, and 24 months after their hysterectomies for endometrial carcinoma.[14] Still, another earlier study done by Dhital et al., indicated a statistically significant reduction in the level of depression 6 and 12 weeks after hysterectomy for advanced prolapses (stages 3 and 4).[15] So, it was obvious that the etiology of hysterectomy was one of the commonest determinants for the difference mentioned above. Women who have a hysterectomy for fibroids or heavy menstrual bleeding may find that their sexual function improves because of their complaints being resolved. However, women who have surgery for persistent pelvic pain may still feel pain following the procedure and thus not see an improvement in their sexual function. This study indicated that postoperative anxiety control was less likely in older married women and those with a history of preoperative anxiety. In contrast, further education, oophorectomy, and prolonged duration since surgery are associated with better anxiety control. Differently, Al-Amer et al., study[16] reported an elevated anxiety after hysterectomy, observing a negative association between age and anxiety among hysterectomized patients. Also, he found that levels of stress, post-surgery duration, and social support predicted the levels of anxiety.[16] On the other hand, Björkström et al., study indicated that postoperative anxiety was significantly associated with preoperative life crises, depression, anxiety, and postoperative anxiety mirrored pre-surgery anxiety, but did not demonstrate a notable independent influence of age.[17]

Worsening of partner relationships in the current study was significantly associated with older age, lower education, and a longer time since surgery. Advanced age seems to correlate with decreasing sexual activity following hysterectomy, maybe indicating a reduction in partner relationship quality. This had been approved by the Till et al., study, in which older age was associated with a lower likelihood of maintaining sexual activity at six months post-surgery. Additionally, Higher preoperative relationship satisfaction raised the possibility of postoperative sexual engagement. Although it may not directly assess relationship decline as well, recurrent sexual inactivity indicates deteriorating couple dynamics.[12] A five-year follow-up cohort study conducted by Forsgren et al., showed no significant impact of age on sexual/relational function overall.[18] Advanced age can contribute to reduced sexual activity post-hysterectomy, thereby affecting partner relationships; nevertheless, age alone is not a conclusive factor. No reliable evidence exists indicating that the level of formal education influences partner relationship outcomes in this instance. Furthermore, a longer duration post-surgery does not consistently indicate deterioration in couple relationships. Individual resilience, partner support, and communication assume greater significance. This necessitates further research to confirm this fact.

The present work revealed that improvement in sexuality over time was significantly more likely in women who knew hysterectomy, while secondary education was paradoxically

associated with no improvement. Regardless of whether there were any unfavorable sexual effects following the procedure, education regarding the possibility of such events might improve hysterectomy satisfaction. This was supported by a previous study by Bradford et al., which showed that, after adjusting for self-reports of both good and negative sexual results, knowledge of potential unfavorable sexual effects predicted overall satisfaction with hysterectomy.[19] Additionally, Danesh and colleagues demonstrated that preoperative knowledge about hysterectomy may not lead to better functional outcomes, although it does improve satisfaction and potentially facilitate adjustment.[20] Women with prior knowledge or counselling regarding hysterectomy were significantly likely to experience improvements in sexuality over time, attributable to psychological readiness, realistic expectations, and improved coping strategies.[21] Reduced sexual desire was significantly associated with ovary removal and partial hysterectomy, and women with secondary education had a higher likelihood of reporting increased sexual desire. Dedden et al., study found that hysterectomy without ovaries removal was associated with significantly stronger improvements in sexual desire compared to that with ovaries removal.[22] This had been confirmed in Bradford et al., study, which claimed that the occurrence of bilateral oophorectomy is strongly correlated with reduced sexual desire and overall sexual function after hysterectomy.[19] Women who have their ovaries removed after a hysterectomy frequently encounter diminished sexual desire because of sudden hormonal changes. A partial hysterectomy does not offer protection against this. Women with secondary education may experience enhanced sexual outcomes due to greater knowledge of their bodies and improved communication abilities, which necessitates more recent studies.[23] In the current study, sexual satisfaction was influenced by age, education (higher in the secondary-preparatory level), and the type of hysterectomy (less satisfaction with partial). Physical troubles were significantly less common among women who had a partial hysterectomy and those whose surgery occurred over a year ago. No statistically significant predictors were found for sexual arousal, sexual climax, pain during sex, effects on self-confidence, or adaptation strategies. In comparison to Dedden et al., study, hysterectomy performed for a benign indication is not associated with significant changes in sexual satisfaction. subtotal hysterectomy was associated with an improvement in sexual function, and total hysterectomy with an improvement in sexual pain; however, the difference in change was not statistically significant. Moreover, younger women tend to experience greater improvements compared to older women.[22] Similarly, Elzeblawy and the companions found that post-hysterectomy women's quality of life and sexual satisfaction increased with guided education.[23] Differently, patients who participated in Till et al., study reported significant improvement in desire, arousal, and pain domains. However, significant decreases were reported in orgasm and satisfaction domains.[12]

The inconsistencies in the results of the previously mentioned studies regarding sexual dysfunction post-hysterectomy may be attributed to heterogeneity among studies. Variations in methodology, such as differences in sample size, participant characteristics, and the timing of assessments post-hysterectomy, are likely to contribute to these conflicting findings.

In general, future research should consider a larger multicenter approach for a broader application of findings.

Limitations

Limitations of this study included the inability to determine temporality, recall, and social desirability bias due to self-reported data, and possible selection bias from voluntary participation. The cross-sectional design limits causal inference; temporality cannot be established.

Conclusions

This study concluded that while many women experienced improvements in psychological well-being and sexual function over time following emergency hysterectomy, a considerable number continued to face emotional challenges, sexual difficulties, and strained partner relationships. The predictors of psychosexual outcomes were age, marital status, educational level, ovary removal, and time since surgery. Higher education and a longer duration since surgery were generally associated with better adaptation, while older age and lower educational attainment predicted worse outcomes in several domains. These findings highlight the importance of comprehensive, individualized postoperative support that addresses not only physical recovery but also emotional and relational well-being.

Acknowledgments

None.

Declarations

Ethics Approval and Consent to Participate

The study protocol was reviewed and approved by the Scientific Committee of Al-Kindy College of Medicine, University of Baghdad, on April 28, 2024. All participants provided informed consent electronically before participating. Confidentiality and anonymity were strictly maintained throughout the research process.

Availability of Data and Materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing Interests

The authors declare no competing interests.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Authors' Contributions

Weqar Akram Hussein: Supervision, conceptualization, review, and editing. Zahraa Muhmmed Jameel Al-Sattam: Methodology, investigation, data curation, formal analysis, writing – original draft. Asan Ali Qasim, Bushra Mohammed Majeed, Thikra Najim Abdulla, Sahar Jassim Abid: Data collection, review of manuscript.

References

1. Yurtkal A, Canday M. Optimizing hysterectomy: a prospective comparative analysis of surgical techniques and their impact on women's lives. Journal of Personalized Medicine. 2024 Feb 29;14(3):265.
2. Committee on Gynecologic Practice. Choosing the route of hysterectomy for benign disease. Obstetrics and Gynecology. 2017 Jun;129(6):1149–50.
3. Carroll L, O'Sullivan C, Doody C, Perrotta C, Fullen B. Pelvic organ prolapses: The lived experience. Plos One. 2022 Nov 2;17(11): e0276788.
4. Huang CC, Lo TS, Huang YT, Long CY, Law KS, Wu MP. Surgical trends and time frame comparison of surgical types of hysterectomy: A nationwide, population-based 15-year study. Journal of Minimally Invasive Gynecology. 2020 Jan 1;27(1):65–73.
5. Ghomi A, Nolan W, Sanderson DJ, Sanderson R, Schwander B, Feldstein J. Robotic hysterectomy compared with laparoscopic hysterectomy: is it still more costly to perform?. Journal of Robotic Surgery. 2022 Jun;16(3):537–41.
6. Adam EE, White MC, Saraiya M. US hysterectomy prevalence by age, race and ethnicity from BRFSS and NHIS: implications for analyses of cervical and uterine cancer rates. Cancer Causes & Control. 2022 Jan 1:1–6.
7. Hsieh CH, Lu YY, Liang SY. The health concerns related to hysterectomy among Taiwanese women with uterine fibroids-a mixed-methods study. Women & Health. 2021 Jul 3;61(6):581–90.
8. Skorupska K, Wawrysiuk S, Bogusiewicz M, Miotła P, Winkler I, Kwiatkowska A, Rechberger T. Impact of hysterectomy on quality of life, urinary incontinence, sexual functions and urethral length. Journal of Clinical Medicine. 2021 Aug 16;10(16):3608.
9. Till SR, Schrepf A, Pierce J, Moser S, Kolarik E, Brummett C, As-Sanie S. Sexual function after hysterectomy according to surgical indication: a prospective cohort study. Sexual Health. 2022 Mar 1;19(1):46–54.
10. Berlit S, Lis S, Jürgens S, Buchweitz O, Hornemann A, Sütterlin M, Tuschy B. Postoperative sexual functioning in total versus subtotal laparoscopic hysterectomy: what do women expect?. Archives of Gynecology and Obstetrics. 2017 Sep;296:513–8.
11. Rehan MK, Qasem EA, El Malky ME, Elhomosy SM. Effect of psychosexual counseling on sexual quality of life among post-hysterectomy women. Menoufia Nursing J. 2023;8(1):61–79.
12. Till SR, Schrepf A, Santiago S, As-Sanie S. Psychosocial predictors of change in sexual activity and sexual function after hysterectomy in women with pelvic pain. Am J Obstet Gynecol. 2023;229(3): 322.e1–322.e8.
13. Bahri N, Tohidinik HR, Fathi Najafi T, Larki M, Amini T, Askari Sartavosi Z. Depression Following Hysterectomy and the Influencing Factors. Iran Red Crescent Med J. 2016;18(1):e30493.
14. Ferrandina G, Petrillo M, Mantegna G, Fuoco G, Terzano S, Venditti L, et al. Evaluation of quality of life and emotional distress in endometrial cancer patients: A 2-year prospective, longitudinal study. Gynecologic Oncology. 2014;133(3):518–25.
15. Dhital R, Otsuka K, Poudel KC, Yasuoka J, Dangal G, Jimba M. Improved quality of life after surgery for pelvic organ prolapse in Nepalese women. BMC Womens Health. 2013;13:22.
16. Al-amer R, Atout M, Malak MZ, Ayed A, Othman WM, Saleh MYN, et al. Prevalence and predictors of anxiety and stress among Jordanian women following hysterectomy: an observational multicentre study. BMC Psychology. 2025;13(1):305.
17. Björkström LM, Wodlin NB, Nilsson L, Kjølhede P. The Impact of Preoperative Assessment and Planning on the Outcome of Benign Hysterectomy - a Systematic Review. Geburtshilfe Frauenheilkd. 2021;81(2):200–13.
18. Forsgren C, Johannesson U. Sexual function and pelvic floor function five years after hysterectomy. Acta Obstetricia et Gynecologica Scandinavica. 2025;104(5):948–57.
19. Bradford A, Meston C. Sexual outcomes and satisfaction with hysterectomy: influence of patient education. J Sex Med. 2007;4(1):106–14.
20. Danesh M, Hamzehgardeshi Z, Moosazadeh M, Shabani-Asrami F. The Effect of Hysterectomy on Women's Sexual Function: A Narrative Review. Med Arch. 2015;69(6):387–92.
21. Mahmoodi Dangesaraki M, Maasoumi R, Hamzehgardeshi Z, Kharaghani R. Effect of the EX-PLISSIT model on sexual function and sexual quality of life among women after hysterectomy: a randomised controlled trial. Sexual Health. 2019;16(3):225–32.
22. Dedden SJ, Werner MA, Steinweg J, Lissenberg-Witte BI, Huirne JAF, Geomini P, et al. Hysterectomy and sexual function: a systematic review and meta-analysis. J Sex Med. 2023;20(4):447–66.
23. Elzeblawy Hassan H, Khalaf Gooda W, RagabAhmed T, Shehta Said Farag D. Marital, Sexual Satisfaction and Quality of Life among Post-hysterectomy Women: Impact of Nursing Counseling Guided by BETTER Model. Egyptian Journal of Health Care. 2025;16(1):99–116.