Original Article

Iranian Women's Self-concept after Hysterectomy: A Qualitative Study

Abstract

Background: The loss of female organs leads to profound changes in one's perception of oneself. There is limited information about the impact of hysterectomy on women's self-concept and culture. Therefore, this study was conducted with the aim to deepen our understanding of the self-concept of Iranian women after hysterectomy. **Materials and Methods:** This qualitative study was conducted using directed content analysis approach. The participants included 30 women with a history of hysterectomy who were selected through purposive sampling method. Data were collected from August 2018 to November 2019 using in-depth and semi-structured interviews based on the self-concept mode of the Roy Adaptation Model (RAM) in Mashhad, Iran. Data analysis was performed using the deductive approach of Elo and Kyngäs in MAXQDA software. **Results:** As a result of the analysis of the interviews, the main category of "incoherent cognition of self-concept" emerged, which included the two generic categories of "heterogeneous feelings toward and imaginations of the body" and "changed self-perception", and five subcategories. **Conclusions:** Women's self-concept changed after hysterectomy in both its physical and psychological aspects. Therefore, counseling before and after hysterectomy is recommended to improve women's self-concept after hysterectomy.

Keywords: *Hysterectomy, Iran, qualitative research, self concept, women*

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Introduction

For many women, the uterus is a very valuable organ because in addition to reproductive function it is also linked to feminine identity and sexuality.[1] Uterine removal has a specific meaning for women and has profound outcomes in terms of cultures, beliefs, and attitudes.[2] The experience of gynecological surgeries is unique for each woman.[3] Loss of feminine organs, whether visible to others or not, leads to profound changes in self-concept because these organs, in addition to their specific function, have a direct impact on one's social structure.[4,5] The development of positive or negative self-concept is mainly because of physical and functional changes, health challenges, and significant feedback from others.[6]

Self-concept is a cognition that evaluates a person's strengths and weaknesses and is very important in mental health. A high level of self-concept acts as a protective factor against psychological problems and improves health. A low level of self-concept can challenge mental health.[7] Changes in health status because of the loss of a part of the body can also affect the self-concept.[8] Many studies have investigated different aspects of hysterectomy in women using quantitative and qualitative approaches. These studies have examined the experiences of women,[9] body image, self-esteem, and marital adjustment,[10] women's information needs before and after hysterectomy,[11] the sexual aspects of hysterectomy,[12] and women's needs for coping with hysterectomy.[13] These studies have been conducted in different societies with different cultures and their results have shown the cultural sensitivity of women's experiences. Only 1 study examined women's self-perception in a quantitative approach.[11]

Women's self-concept after hysterectomy that reflects the social-psychosocial aspect of hysterectomy has been neglected. Mishra quotes Rajesh that self-concept is learned through interaction with oneself and others and the environment, and that it is shaped and reshaped.[14] Since cultural factors form a person's perception and also determine the views attributed to chronic diseases and their meanings in the cultural context,[15] it seems necessary to study this concept in the

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Iranian culture using a qualitative approach. We could not find any research that had explored women's experiences of self-concept after hysterectomy in Iran. In addition, no work was identified on the self-concept of women after hysterectomy using a nursing model. Therefore, the aim of this study was to discover the self-concept of Iranian women after hysterectomy using the Roy Adaptation Model (RAM) with a qualitative approach.

Materials and Methods

The present study was a part of a greater study performed using directed content analysis approach in Imam Reza and Ghaem hospitals, which are two tertiary referral centers for hysterectomy in Mashhad, the second-largest city in the northeast of Iran, from August 2018 to November 2019. In this study, the self-concept mode of the RAM was used as framework to explore the experiences of women who had hysterectomy. Behaviors in the self-concept mode are derived from the beliefs, feelings, and perceptions of individuals. In the RAM, the two subgroups of self-body and personal-self have been determined for self-concept.[16]

The study population consisted of all the women who had undergone hysterectomy during the past 10 years. The inclusion criteria were Iranian citizenship, speaking Persian, willingness to participate in study, and lack of any mental disorder or dementia, and lack of use of any sedation or drugs. The study exclusion criteria included unwillingness to continue participation in the study. Participants were identified based on their hospitalization records. Participants were invited through telephone calls to participate in the study, and if they agreed, the place and time of the interview were determined with respect to the convenience of the participant. Purposive sampling was performed with the highest variation in age, educational level, occupation, and the cause of hysterectomy, time after hysterectomy and menopause status before hysterectomy, number of children, and marital status.

In-depth, semi-structured, face-to-face interviews were used for data collection. The interview began with an open question such as "How do you describe yourself after hysterectomy?", "How do you describe yourself as a hysterectomized woman?" Probing questions were used to obtain in-depth data. All interviews were conducted by the first author. Most interviews were conducted in a private visit room with no clients at the Gynecology and Obstetrics Clinic of Ghaem Hospital and Imam Reza Hospital in Mashhad; however, two of the interviews were conducted in the participants' offices, one interview was conducted in the first author's workroom, and one was conducted in the participant's home. The duration of the interviews varied from 30 to 95 min with respect to the participant's convenience. Interviews were audio-recorded, then, transcribed word by word. Data saturation was reached after 30 interviews.

MAXQDA software (version 10; VERBI Software, Berlin, Germany) was used to manage and organize the data. The analysis of participants' experiences in this study was performed using the deductive content analysis of Elo and Kyngäs.[17] The transcripts of the interviews were prepared by the first author, and then, read several times. The text of all interviews was selected as the meaning unit. A categorization matrix was developed according to the self-concept mode of the RAM. While reading the text, a tag or code was used for parts of the text that included emotions, thinking, and self-imagination after hysterectomy (open code). The codes were placed in the categorization matrix based on their similarities or differences, and then, they were organized into subcategories and main categories according to the similarities and differences of concepts.

To ensure the credibility of data, a long time was spent on collecting data, reading the transcripts of the interviews, and analyzing the data. The research team (4 people) reached consensus regarding data analysis including coding and categorization of the data, especially in cases of disagreement, during several discussion sessions. Participants' opinions were considered regarding the accuracy of the interview transcriptions, extracted codes, and findings of the research. For confirmation, an external observer, who was an expert in qualitative studies, confirmed the data analysis process and categorization. The study was also evaluated by 2 external evaluators. Dependability was obtained through the detailed recording and reporting of the study steps and method of extracting the groups, subcategories, and categories, as evidence for evaluation. For transferability, participants with maximum different demographic characteristics were entered. The study findings and study steps were described in detail.

Ethical considerations

This study received the approval of the ethics committee of Mashhad University of Medical Sciences (Code: IR.MUMS.NURSE.REC.1397.037). After explaining the purpose and method of the study to the participants, informed consent was obtained from all of them. The participants were assured of their right to opt out at any time and the confidentiality of all their information. Each participant was given a code and a pseudonym to keep her information confidential. They consented to the audio recording of the interview, prior to the interview.

Results

In this study, experiences of self-concept after hysterectomy were collected through 30 interviews with women who had undergone hysterectomy. The mean age of the participants was 45 years and they were within the age range of 27–68 years. Table 1 shows the demographic characteristics of the participants.

From the analysis of the participants' experiences, 327 primary codes, five subcategories, two generic

Table 1: Sociodemographic characteristics of the participants

Participant code	Age (year)	Education level	Job	Hysterectomy reason	Duration since hysterectomy (year)	Marital status	Menopause status	Child number
P1	39	High school	Housewife	Fibroma	1	Married	Non-menopausal	2
P2	54	University	Retired	Fibroma	3	Married	Non-menopausal	2
P3	57	University	Retired	CIN2*	10	Married	Non-menopausal	2
P4	44	Junior School	Housewife	Bleeding	1	Married	Non-menopausal	3
P5	43	University	Teacher	Irregular Bleeding	3	Married	Non-menopausal	2
P6	36	University	Nurse	Atypical endometrial hyperplasia	4	Divorced	Non-menopausal	1
P7	35	High school	Housewife	Placenta accrete	2	Married	Non-menopausal	3
P8	54	University	Retired	Atypical endometrial hyperplasia	1	Married	Menopausal	0
P9	46	University	Secretary	Cervical cancer	4	Divorced	Non-menopausal	1
P10	46	Junior school	Housewife	Fibroma	4	Married	Non-menopausal	4
P11	40	Elementary	Housewife	Atypical endometrial hyperplasia	4	Married	Non-menopausal	2
P12	48	Junior school	Housewife	Endometrial cancer	3	Married	Non-menopausal	4
P13	40	University	Teacher	Fibroma	1	Married	Non-menopausal	3
P14	48	Junior school	Housewife	Fibroma	3	Married	Non-menopausal	3
P15	40	High school	Housewife	Malignant Fibroma	2	Married	Non-menopausal	3
P16	43	Elementary	Housewife	Ovarian cancer	2	Married	Non-menopausal	3
P17	53	University	Retired	Atypical endometrial hyperplasia	8	Married	Non-menopausal	2
P18	42	Junior school	Housewife	Placenta accreta	5	Married	Non-menopausal	3
P19	37	High school	Employee	Fibroma	1	Single	Non-menopausal	0
P20	37	High school	Housewife	Placenta accreta	2	Married	Non-menopausal	2
P21	33	High school	Housewife	Postpartum hemorrhage	3	Married	Non-menopausal	2
P22	45	High school	Housewife	Fibroma	1	Married	Non-menopausal	2
P23	52	Elementary	Housewife	CINIII	1	Widowed	Menopausal	3
P24	47	Elementary	Housewife	Fibroma	3	Married	Non-menopausal	2
P25	51	Elementary	Housewife	Fibroma	2	Married	Non-menopausal	5
P26	45	Elementary	Housewife	Fibroma	1	Widowed	Non-menopausal	3
P27	40	University	Housewife	Ovarian cancer	2	Married	Non-menopausal	1
P28	27	Elementary	Housewife	Postpartum hemorrhage	3	Married	Non-menopausal	3
P29	68	Elementary	Housewife	Postmenopausal bleeding	8	Married	Menopausal	10
P30	60	Elementary	Housewife	Uterine prolapse	9	Married	Menopausal	1

*Cervical intraepithelial neoplasia

categories, and one main category emerged. The main category of "incoherent cognition of self-concept" consisted of the two generic categories of "heterogeneous feelings and imaginations of the body" and "changed self-perception" [Table 2].

Heterogeneous feelings and imaginations of the body

Participants reported experiences of hysterectomy-induced physical changes that led to various and conflicting feelings and imaginations about their bodies. The mental image created in these women ranged from improvement to destruction of their body image. The two subcategories of paradoxical feeling of physical and body image from destruction to restoration of body emerged from this main category.

Paradoxical feeling of physical changes

Most of the women talked about their feelings toward their bodies. Some of them described the sick and weakened body. Some of them explained their feelings toward their physical health. Some were happy to get rid of the sick body. Others described their fear of post-hysterectomy physical symptoms and genitourinary system changes. Some others talked about the unpleasant sensations in their body after hysterectomy, and the feeling of being defective and anguish because of the absence of an organ after hysterectomy. On feeling defective because of hysterectomy, one of the participants commented: "*The uterus is an organ of your body. Now, that it has been removed, it seems to me as if I do not have a hand. Some people tell me that the uterus is an internal organ and cannot be seen so it does not matter, but in my opinion, it is like I no longer have a leg or a hand. Its removal had a very bad effect on me. I am very upset. Honestly, I feel defective. The femininity of a woman relies on her uterus and breasts. I do not feel like a perfect woman*" (Participant 11).

On feelings toward physical health, a participant stated:" *In fact, I was in a lot of pain after the removal of the uterus.*

Table 2: Main categories and subcategories of self-concept after hysterectomy

Codes	Subcategories	Generic categories	Main category
Feeling weak and sick	Paradoxical feeling of physical	Heterogeneous feelings toward and imaginations of the body	Incoherent cognition of self-concept
Feeling of decreased physical health			
Perceiving painful body			
Fear of physical complications			
Concern about changes in the genitourinary system			
Revival of physical health			
Feeling happy because of getting rid of the sick body			
Unpleasant feeling of the physical situation of the body			
Feeling of being defective			
Feeling of decreased sexual sensation			
Body image destruction	Body image from destruction to restoration		
Messing up the physical body appearance			
Deformity of the female organs			
Improving physical body appearance			
Perceived psychological turbulence		Changed self-perception	
Gradual return to a healthy life	Change in self-consistency		
Decreased psychic capabilities			
Decreased cognitive-mental capabilities			
Gradual improvement of mood			
Isolation			
Getting a new concept of femininity			
Weakening of femininity			
Persistence of femininity despite hysterectomy			
Femininity released of childbearing			
Uterus as an important female organ with functions beyond fertility			
Regret for the loss of femininity	Regret for loss of abilities		
Missing the menstruation period			
Regret for the loss of fertility			
Searching for vacancy of uterus			
Regret for the loss of physical ability			
Trying to improve the appearance of the body			
Relying on God	Spiritualism		
Acceptance of the destiny determined by God			
Dissatisfied with the destiny God had for them			
Spiritual transformations in oneself			
Perception of hysterectomy as a divine test			

I was like a sick person for a long time. It took me a long time to get my physical health back. Now, I cannot say that I consider myself a very healthy person. I feel that my health has decreased" (Participant 9).

However, a group of participants had positive feelings toward their post-hysterectomy physical changes. Regarding post-hysterectomy health, a participant reported: "*I have no problems after the surgery, because I no longer have to sleep for 2 days because of bleeding. These two days have been added to my life. I got out of that sick status and became a healthy person who could easily do any task*" (Participant 3).

A participant spoke about getting rid of a sick body part; "*My uterus was a diseased organ. I have always been in pain and bleeding. I was also worried about diseases such as infection, cervical cancer, and myoma. Now that I have had a hysterectomy, I am happy. I am free of a sick organ*" (Participant 2).

Body image from destruction to restoration

Many participants experienced some changes in the appearance of their bodies. A small group of hysterectomized women described the changes as positive. This group reported an improvement in the appearance of the body, the shrinking of the abdomen because of the removal of the enlarged uterus, and slimming after hysterectomy. For example, on the improvement of post-hysterectomy appearance, 1 participant commented that "*Before surgery my uterus was enlarged. My abdomen*

was big, like that of a 3 or 4 month pregnant woman. Now, after the removal of the uterus, my abdomen is small and my appearance is good" (Participant 4).

Nevertheless, most participants had negative emotions about the perceived changes in their body and described their experiences with themes such as body image destruction due to hysterectomy, messing up the body appearance, deformity of the female organs after hysterectomy, and seeing the body differently. For example, one participant reported the negative changes she felt in the appearance of her body and stated: "*Since I have undergone hysterectomy, I think I am about 10 years older, both physically and mentally*" (Participant 11).

In this regard, another participant stated: "*Since the removal of my uterus, I do not like my body; I think it is not like before. It is ugly. I feel that my abdomen has submerged at the site of my womb. Sometimes, I think I seem old. Overall, I feel like my body is not as good as it used to be*" (Participant 7).

Changed self-perception

After surgery, participants experienced changes in their perception of themselves. These changes were expressed both positively and negatively. They described changes in personal characteristics, mental states, the concept of femininity after hysterectomy, regret for lost abilities after hysterectomy, and changes in spiritual and moral attitudes. The 3 subcategories that emerged in this category include "change in self-consistency", "regret for lost abilities", and "spiritualism".

Change in self-consistency

Participants experienced changes in their characteristics after hysterectomy. Most participants talked about the psychological turbulence they perceived after the hysterectomy. This turbulence included both positive and negative psychological aspects. Negative psychological aspects were expressed in terms of changing of morale, weakening of morale, lack of patience, depression, sadness, resentment, feeling of defeat, concern about being judged by others, and the need to cry after hysterectomy. A participant said about the mental states she experienced after hysterectomy that "*I was upset when my uterus was removed; well, I had lost an organ of my body, though I had no choice. I felt depressed the day my uterus was removed. My morale was very weak. This surgery was like a defeat for me*" (Participant 11).

Positive psychological aspects were described as improvement of morale by relieving illness, happiness following health, and improvement of patience after hysterectomy. For example, one participant stated: "*I lost my morale after the surgery, but one must be satisfied with one's fate. Now, I give myself morale. My husband gave me a lot of encouragement. He said that now that I am healthy, he is happy. When I see that I am no longer sick and I do not have pain or bleeding, my mood is improved*" (Participant 16).

Participants encountered changes in their characteristics. As a result of this change, from the loss of a characteristic to their recovery, most women experienced changes in their ability to control their behavior. They described changes in their characteristics such as psychic capabilities, decreased cognitive-mental capabilities, gradual improvement of mood after mood decline, and sociability. For example, one participant described her experience as follows: "*Since my surgery, I feel bored. I do not have the patience to hear my kids' noise while they are playing. My patience has been reduced. I feel like I am a deteriorating person. I have become a weak person*" (Participant 13).

A participant said about psychic capabilities that "*I have become a sad and Irritable person. I like to be alone. I have become more isolated. I do not like attend family gatherings. I feel Impatient*" (Participant 11).

The participants also described changes in their perception of femininity. They described their experiences with phrases such as the weakening of femininity, the persistence of femininity despite hysterectomy, the femininity released of childbearing, the intrinsic challenge to childbearing, and the uterus as an important female organ with functions beyond fertility. Regarding the weakening of femininity after hysterectomy, a participant said: "*Removing the uterus affects women's morale. I think a woman whose uterus is removed loses her femininity. I told my husband that I had become like a male person. Well, a feminine organ has been removed*" (Participant 8).

Regarding the persistence of femininity after hysterectomy another participant said: "*I used to think that the sense of femininity was related to the uterus, but after two years, I find that it is not so*" (Participant 15).

Another participant on the inner challenges to childbearing stated: "*I think I am the one who was affected psychologically after my uterus was removed. I am still young. I want to have another baby. When I have these thoughts, I get very angry. I get so upset. I struggle with myself and think about it. I am still young, but I cannot give birth to a baby. I think about it a lot. These thoughts disappoint me*" (Participant 28).

A Participant about the uterus' functions beyond fertility said: "The *uterus was the cause of my youth. When I had my uterus, I was more drawn to my husband. I feel that having a uterus is a support for being strong, especially emotionally*" (Participant 11).

Regret for lost abilities

In this study, participants spoke about their lost qualities and abilities. They expressed regret for the loss of these abilities. They described their regret through concepts such

as missing the menstruation period, regret for lost fertility, and feelings of vacuum in body, searching for a vacancy of uterus, regret for the loss of physical ability and the loss of happiness, and trying to improve the appearance of the body. For example, one of the participants said about regret for lost vitality and youth that "*I always thought older women would have to undergo a hysterectomy. Since I have removed my uterus, I have been wearing stylish clothes. I would not like others saying that I have become old. I want to look young and cheerful*" (Participant 14).

Regarding regret for inability to bear a child another participant said: "*I tell myself, I am not going to give birth to a baby anymore. It gives me a specific feeling. I feel like I cannot do anything anymore. Something that is a woman's duty and only happens to a lady is taken from me. I think to myself, this is a weakness for me*" (Participant 7).

Spiritualism

Some participants talked about changes in their spiritual feelings and beliefs after hysterectomy. The participants spoke of trust in God and relying on God after a hysterectomy. Many of the participants accepted their destiny which was determined by God. Some participants were dissatisfied with the destiny God choose for them. A group of participants identified themselves as someone whom God has tested by hysterectomy. Another group perceived spiritual developments such as paying more attention to death, and increased attention to religious practices. A participant described her spiritual developments as follows: "*I had a great deal of contact with God after the surgery, especially in the first year after hysterectomy. My relationship with God was good because I thought to myself that God has punished me. I have been trying to do something to please God, so I have been saying my prayers at due time*" (Participant 14).

Some participants also gave themselves up to the will of God. For example, a participant stated: "*I have always trusted in God and asked God to help me. This surgery was like a scary movie. I always asked God to help me. I wanted to have my uterus as before, but when it is not possible right now, I cannot fight God. I am submitting to God's will*" (Participant 12).

Discussion

The purpose of this study was to describe the self-concept of Iranian women who had undergone hysterectomy using a qualitative directed content analysis approach. The self-concept mode of the RAM includes physical-self and personal-self that were confirmed by the findings of this study. The women who had undergone hysterectomy recognized changes in their perceptions of themselves. These changes included heterogeneous feelings toward and imaginations of their bodies and changes in their self-perceptions that were experienced in the psychological, spiritual, and ideal aspects.

According to the results, the uterus played an important role in the perception of Iranian women. Hysterectomy caused physical changes. Most of the women felt defective after the hysterectomy, which led to anguish due to the absence of the uterus. The women saw their bodies as different and changed. Abadi *et al*. reported that physical and psychological changes following the loss of female organs, such as the uterus and ovaries, led to the negative feelings of women toward themselves. They reported that after the loss of sexual organs, women no longer considered themselves as perfect women,[18] which confirms the findings of the present study. The findings of the present study showed that removal of the uterus in women caused them to feel that their bodies were different, so they saw themselves differently. Silva *et al*. also reported that removing a female organ for the participants meant losing a vital organ that was important to the self-description of women. They experienced a loss in their body, so they perceived their body differently and considered themselves as different persons.[3]

In the present study, physical changes led to psychological changes. The change in self-consistency manifested as psychological changes. Psychological changes were presented in the form of weakening of morale and depression, which led to irritability and unsociability, thus resulting in a change in mood. Laughlin Tomaso *et al*., in their study, found that hysterectomy, even with ovarian preservation, was associated with an increased risk of long-term depression and anxiety.[19] Chou *et al*. and Wilson *et al*. also reported an increased risk of depression and mood disorders in women who had undergone hysterectomy.[20,21] Nevertheless, some studies have shown that hysterectomy is not associated with depression and psychological complications.[22-24] These differences in results were due to the differences in the study design, type of sampling, and follow-up period of the present study and other studies. The present qualitative study was performed using purposeful sampling method. It explored the experiences of women who had undergone hysterectomy during the past 10 years to gain broad and in-depth data. The present study participants tended to avoid social situations because of changes in their bodies and their characteristics, and thus, experienced a state of irritability and unsociability. Other studies in different countries reported similar findings on the negative impact of losing a female organ. Kocan *et al*., in their study, found that some women avoided social situations due to the removal of a feminine organ such as the breasts and the resulting physical changes.[4] Enache *et al*., in their study, found that after removing the breast as a feminine organ, women felt incompetent, shameful, and socially isolated, which was associated with a sense of loss of femininity.[25] According to cultural and social beliefs, the breasts and the uterus, especially the uterus, have an important role in defining femininity and feeling feminine,[5] so its absence raises concerns about femininity

and sexual function. In the present study, the loss of the uterus was associated with decreased feminine emotions and feelings, challenges of childbearing, and thinking about the importance of the uterus as an organ with a function beyond childbearing. Silva *et al*. reported that the loss of female sexual organs, especially the uterus, which is involved in reproduction, childbirth, and menstruation, made women feel defective and not perceive themselves as a perfect woman. The loss of such an important organ distorted the historical notion of feminine identity and the definition of femininity.[3] Solbreackke *et al*. reported that women believed the uterus was a necessary organ for them to be valuable and that its loss could create a gap between their lives and their perceptions.[5] Silva *et al*. also stated that the loss of a female organ had negative effects on the participants' identity and personality.[3]

Women's sense of regret due to the loss of abilities led to a sense of emptiness and a tendency towards spirituality after hysterectomy. Louise Marwan *et al*. stated that it was very difficult to accept the loss of childbearing ability for women, especially those who were not menopausal. Even women, who had already some kids, wish they had the option of future pregnancies.[1] In the present study, participants sought to express their experiences of post-hysterectomy changes in the form of a variety of feelings and spirituality after hysterectomy. Other studies have also referred to these factors. Elmir *et al*. found that women turned to their religious beliefs after emergency hysterectomy and spoke of their experiences of comfort and composure when returning to their faith.[26] Kocan *et al*. also reported similar experiences in their study.[4] Some of their participants considered their status to be the will of God and turned to God as the source of power and authority.[4] This study is the first study in the Iranian traditional culture and society to study the self-perception of women who have undergone hysterectomy through a qualitative approach. This study included women who had undergone hysterectomy for benign and malignant causes and labor complications. The follow-up period ranged between 6-120 months, which is one of the strengths of the study. However, only participants who were willing to share their experiences were studied; thus, self-selection bias occurred. Therefore, there may be other experiences of self-perception among Iranian women that could not be investigated in this study because of this self-selection sampling, and this is the most important limitation of the present study.

Conclusion

The results of this study showed that women's self-concept changed after hysterectomy in both its physical and psychological aspects. The participants of this study described changes in their characteristics that led to change in self-concept after hysterectomy. The effect of hysterectomy on women's self-concept is often overlooked. It is suggested that researchers in their research on hysterectomy take into account women's experiences in this field. Health care providers should also consider pre-hysterectomy and post-hysterectomy counseling in order to improve women's self-concept after hysterectomy.

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Conflicts of interest

Nothing to declare.

References

1. Marván ML, Catillo-López RL, Ehrenzweig Y, Palacios P. Psychological meaning of a woman with a hysterectomy among Mexican physicians and women. Women Health 2012;52:658-78.
2. Marván ML, Quiros V, López-Vázquez E, Ehrenzweig Y. Mexican beliefs and attitudes toward hysterectomy and gender-role ideology in marriage. Int J Women's Health 2012;33:511-24.
3. Silva CDe M, Vargens OM. Woman experiencing gynecologic surgery: Coping with the changes imposed by surgery. Rev Lat Am Enfermagem 2016;24:e2780. doi: 10.1590/1518-8345.1081.2780.
4. Koçan S, Gürsoy A. Body image of women with breast cancer after mastectomy: A qualitative research. J Breast Health 2016;12:145–50.
5. Solbrække KN, Bondevik H. Absent organs—present selves: Exploring embodiment and gender identity in young Norwegian women's accounts of hysterectomy. Int J Qual Stud Health Well-being 2015;10:26720.
6. Caplan B, Bogner J, Brenner L, Beadle EJ, Ownsworth T, Fleming J, *et al*. The impact of traumatic brain injury on self-identity: A systematic review of the evidence for self-concept changes. J Head Trauma Rehabil 2016;31:12-25.
7. Ke S, Yang Y, Yang X, Qiu X, Qiao Z, Song X, *et al*. Factors influencing self-concept among adolescents infected with HIV: A cross-sectional survey in China. BMJ Open 2020;10:e022321.
8. Daniels R, Rrndell G, Wilkins R. Nursing Fundamentals Caring and Clinical Dicision. Vol 1313. USA: Delmar CENGAGE learning; 2010.
9. Alshawish E, Qadous MS, Yamani MA. Experience of Palestinian women after hysterectomy using a descriptive phenomenological study. Open Nurs J 2020;14:203-10.
10. Pinar G, Okdem S, Dogan N, Buyukgonenc L, Ayhan A. The effects of hysterectomy on body image, self-esteem, and marital adjustment in Turkish women with gynecologic cancer. Clin J Oncol Nurs 2012;16:99-104.
11. Gercek E, Dal NA, Dag H, Senveli S. The information requirements and self-perceptions of Turkish women undergoing hysterectomy. Pak J Med Sci 2016;32:165–70.
12. Babazadeh R, Mirzaeei K, Akhlaghi F. Sexuality after hysterectomy (a systematic review). J Obstet Gynecol Infertil

2012;14:51-68.
13. Roudi O, Tirgari B, Cheraghi MA, Nayeri ND, Rayyani M. "Tender care": Iranian women's needs to cope with hysterectomy and oophorectomy-A qualitative content analysis study. Int J Community Based Nurs Midwifery 2019;7:63-74.
14. Mishra SK. Self concept-A Person's concept of self–influence. IJRRA 2016;1:8-13.
15. Mohebbi Z, Sharif F, Peyrovi H, Rakhshan M, Naini MA, Zarshenas L. Self-perception of Iranian patients during their life with irritable bowel syndrome: A qualitative study. Electron Physician 2017;9:5885–93.
16. Roy C, Whetsell MV, Frederickson K. The Roy adaptation model and research: Global perspective. Nurs Sci Q 2009;22:209-11.
17. Elo S, Kyngäs H. The qualitative content analysis process. J Adv Nurs 2008;62:107-15.
18. Abadi OS, Cheraghi MA, Tirgari B, Nayeri ND, Rayyani M. Feeling an invisible wall: The experience of Iranian women's marital relationship after surgical menopause: A qualitative content analysis study. J Sex Marital Ther 2018;44:627-40.
19. Laughlin-Tommaso SK, Satish A, Khan Z, Smith CY, Rocca WA, Stewart EA. Long-term risk of de novo mental health conditions after hysterectomy with ovarian conservation: A cohort study. Menopause 2020;27:33-42.
20. Chou PH, Lin CH, Cheng C, Chang CL, Tsai CJ, Tsai CP, *et al*. Risk of depressive disorders in women undergoing hysterectomy: A population-based follow-up study. J Psychiatr Res 2015;68:186-91.
21. Wilson L, Pandeya N, Byles J, Mishra G. Hysterectomy and incidence of depressive symptoms in midlife women: The Australian longitudinal study on women's health. Epidemiol Psychiatr Sci 2018;27:381–92.
22. Li Y, Wang N, Li L, Li J. Psychological statuses of premenopausal women before and after hysterectomy. Clin Med Res 2017;6:143-8.
23. Gupte SG, Nagabhirava G. Prospective study of psychiatric morbidity and evaluation of quality of life in patients undergoing hysterectomy. MVP J Med Sci 2019;5:204-10.
24. Theunissen M, Peters ML, Schepers J, Schoot DC, Gramke HF, Marcus MA. Prevalence and predictors of depression and well-being after hysterectomy: An observational study. Eur J Obstet Gynecol Reprod Biol 2017;217:94-100.
25. Enache RG. The relationship between anxiety, depression and self-esteem in women with breast cancer after surgery. Procedia Soc Behav Sci 2012;33:124-7.
26. Elmir R, Schmied V, Jackson D, Wilkes L. Between life and death: Women's experiences of coming close to death, and surviving a severe postpartum haemorrhage and emergency hysterectomy. Midwifery 2012;28:228-35.