Original Article

The study of life expectancy in hysterectomized women in Semnan Amir Al Momenin Hospital in 2017

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Abstract

Introduction: Hysterectomy as kind of surgery in which the uterus is removed, is carried out in a very high number around the world. Uterus is important because of its impact on feminism and fertility, so the exit of this important organ can lead to many physical and mental disorders. These mental disorders can affect the quality of life of patients and ultimately lead to a reduction in the hope of their lives. **Materials and Methods:** This study was cross sectional on 50 women under hysterectomy referred to the Semnan Amir-Al-Momenin hospital in 2017, in which patients were evaluated in terms of effective subsets of life expectancy that were determined from the angle of view of miller questionnaire, and finally the data were analyzed by SPSS v. 19. **Results:** The results showed that there is no significant difference between hope to life before and after hysterectomy in those who underwent hysterectomy. The results of our study showed that age, occupation, and education factors in patients who participated in this study did not have any meaningful relation with life expectancy after hysterectomy surgery and there was also a statistically significant correlation between the scores of hope for life before hysterectomy with the rate of education in individuals. **Conclusion:** Hysterectomy does not affect the patients' quality of live and don't reduce the hope of living in people who underwent surgery.

Keywords: Hope of life, Hysterectomy, miller hope scale

Introduction

The uterus plays a key role in the reproductive organs of mammals, including humans. From the women's point of view, it has long played the central role of regulating and controlling the physiological function of the sexual organ and has been the source of energy, life force, and the proper preserver of youth.[1]

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Hysterectomy has been the most common gynecological surgery in the world after the C-section over the past 150 years. Hysterectomy is a type of surgery in which the uterus and cervix are removed.[2]

In the United States, more than half a million women have undergone hysterectomy and it is estimated that by the age of about 65, one-third of women will have their uterus removed through hysterectomy.

In Australia, the prevalence is 4.8 per 1,000 women, and in the United Kingdom, 1 per every 5 women over the age of 60 undergo hysterectomy.[3]

The statistics are also high and on the rise in Iran. In Urmia in 2002, 118 cases of abdominal and vaginal hysterectomy have

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been performed in one of the educational hospitals. This number seems to be high just in one hospital and needs to be checked.[4]

Many therapists believe that women who undergo hysterectomy will develop poor mental status and negative emotions that such negative emotions are opposed to the post-operative rehabilitation. Most psychological problems in women undergoing hysterectomy arise from the fact that they do not have a good understanding of hysterectomy and are concerned about the deleterious effect of hysterectomy on their feminine characteristics.[5]

Life expectancy refers to the number of years an individual expects to live. Life expectancy can be the ability to cope with a disease problem, which can play a significant role in passing through the treatment process, especially successfully. Having this feature can speed up the recovery process, Therefore, life expectancy is considered as one of the sources of man in coping with problems and even difficult to cure diseases.[6]

There is a significant and positive relationship between life expectancy and quality of life. That is, the higher the life expectancy, the better the quality of life will be, and vice versa. Therefore, life expectancy is able to predict the quality of life.[7]

Numerous studies have been conducted to evaluate the quality of life of hysterectomized women since the beginning of the last decade that contradictory results have been published in this regard.[8] A number of these studies report an increase in quality of life in women who have had hysterectomy. However, there are proven studies suggesting that a person's mental state before hysterectomy surgery is effective in predicting a person's mental state after the surgery. Therefore, hysterectomy does not seem to cause mental illnesses. In other words, in women who have had severe psychiatric problems, hysterectomy may occur less effective in improving the mental status.[9]

Many studies have examined the quality of life or mental status differences before and after hysterectomy surgery so far. But the important issue is the ambiguity of the results and sometimes the inconsistency of the available findings. A study (2015) in Taiwan suggested that the risk of depression in the hysterectomized women was 1.78 times higher than in the control group. This study showed that women who undergo hysterectomy have a higher risk of developing depression,[10] while a study in India in 2015, it was reported that in general, a remarkable improvement has been seen in the quality of life, particularly in the physical and psychological health of women compared to the period before hysterectomy.[3]

Thus, given the high prevalence of hysterectomy in Iran and insufficient studies on its effects on the quality of life and life expectancy of patients, this study was performed to investigate the patients' life expectancy before and after the hysterectomy on a group of women in the city of Semnan.

Method and Materials

This was a cross-sectional and analytical study, which was conducted in 2017 in Semnan. Following the approval of the Ethics Committee of Semnan University of Medical Sciences (IR. Semums. Res. 2017.128), all pre-menopause women referred to the gynecology clinic of Amir al-Momenin Hospital in 2017 that had been suggested as candidates for hysterectomy after taking their medical history and examination were included in the study using the convenience and available sampling method until the sample size was filled. In reviewing the literature, due to the absence of a quite similar study, the sample size was considered as 50 individuals with the statistically minimum significance assumption. The inclusion criteria involved the individual's full consent to participate in the study, a maximum age of 49 years, and being a candidate for total hysterectomy with preserving at least one ovarian. The exclusion criteria included hysterectomy due to hyperplasia or malignancy, known neuropsychiatric patients, having a history of taking psychiatric drugs currently, and use of alcohol or psychotropic drugs.

The checklist containing demographic information (age), education level, and the employment status was completed for all patients. The Miller Life Expectancy Questionnaire (MHS) was completed by the researcher for patients before surgery and 3 months after the surgery. The results of two questionnaires were compared with a 3-month interval to see whether any change has occurred in the overall score of the questionnaire or not. The Miller Hope Scale (MHS) was developed in 1988 by Miller and Powers. The original questionnaire had 40 questions, which was increased to 48 questions in subsequent versions. The purpose of this questionnaire is to measure the rate of hope in individuals. The questionnaire is scored on a Likert scale ranging from highly disagree (score 1) to highly agree (score 5). Since this questionnaire has no subscale, at the end, we sum up the scores of all items to get the total score. Each person's score will be between 48 and 240. This questionnaire also does not have a cut-off score, and the higher a person's score, the more hope he has.

- Score between 48 and 96: Low expectation (hope)
- Score between 97 and 144: Moderate expectation (hope)
- Score above 144: Hope expectation (hope).

The validity of this questionnaire is appropriate, and its reliability is mentioned above 80 according to the Cronbach's alpha.

The data were analyzed using the statistical Spearman, Wilcoxon, and logistic regression tests. The 95% confidence level and the significance level less than 0.05 were considered to determine the fit of each of the underlying variables in all the tests. Finally, the results were expressed as mean with and without standard deviation. The SPSS Ver. 19 software was used for data analysis.

Results

In this study, 50 women candidates for hysterectomy with no problem according to the inclusion and exclusion

criteria were studied. The mean age of participants was 42.38 ± 4.33 (Mean ± SD) years. The minimum age was 27 years and the maximum was 49 years. Of the participants, 27 (54%) were housewives and 23 were employed; also, 32 (64%) had an education level below diploma, 12 (24%) had diploma and associate degrees, and 6 (12%) had bachelor's degree and higher education levels.

No significant difference was found between life expectancy score before hysterectomy and after hysterectomy ($P > 0.05$) [Table 1]. Also, there was no significant relationship between life expectancy before and after hysterectomy with age and occupation of patients ($P > 0.05$). Only a significant relationship was found between pre-hysterectomy life expectancy and the education level ($P = 0.04$).

Discussion

Hysterectomy is a type of surgery, during which, the uterus is removed, and it is one of the most widely performed surgeries in the world. Physical and psychological problems caused by hysterectomy can act as deterrents of participating in social, family, and personal activities for hysterectomy candidates. The fact of incapable to have a pregnancy is sometimes affects one's sexual identity and can lead to the feeling of inadequacy, guilt, shame, and lack of anger control.[6]

A person with hope is someone who has the energy and motivation required to reach rational goals and knows what s/he wants and how and through what ways s/he can achieve his/her goals. If such a person faces a barrier in one path, s/he will pursue his/her goals through other routes.[6]

In this study, 50 female hysterectomized patients (with a mean age of 42.38) were evaluated in terms of factors effective in life expectancy determined by the Miller questionnaire. In this study, no significant difference was found between life expectancy score before and after hysterectomy.

A study by Leili Barimnejad *et al.* (2010) in Iran aimed at comparing the quality of life of postmenopausal and non-menopausal women after hysterectomy showed that the quality of life is low in women who have undergone hysterectomy before reaching menopause age, especially in the psychological and social dimensions. But in our study, no significant difference was seen between the life expectancy score, which is affected by the quality of life, before and after the hysterectomy.[8]

Table 1: Frequency distribution and frequency percentage of life expectancy rate of women before and after hysterectomy

Life expectancy rate	Before hysterectomy Frequency (frequency percentage)	After hysterectomy Frequency (frequency percentage)
Moderate	6 (12%)	4 (8%)
High	44 (88%)	46 (92%)
Total	50 (100%)	50 (100%)

In a 2008 study conducted by Asghar Nia *et al.* in Iran aimed at comparing the quality of life of women before and after the removal of uterus, the total health score of patients whose uterus was removed showed a statistically significant improvement, but there was no statistically significant difference in the scores of anxiety and depression. Therefore, a part of the result of this study, which includes anxiety and depression scores, was consistent with the results of our study.[11]

The results of Vidhiavati *et al.* study (2018) in India indicated the high prevalence of mental illnesses and a decrease in the sexual satisfaction and quality of life in hysterectomized women.[1]

The study of Krishnamasi *et al.* (2015) in India showed a marked improvement in the quality of life of the patients, especially in physical and mental health compared to their situation before the surgery.[3] The results of a 2015 study by Chu *et al.* in Taiwan revealed that women undergoing hysterectomy have a higher risk of developing depression, and thus, their life expectancy is lower than before the surgery.[10] The last two studies had a larger sample size than ours.

Ronald *et al.* (1980) did a research aimed at determining mental status during 1 year after performing hysterectomy and found that hysterectomy is not associated with an increase in the psychological symptoms such as anxiety and depression, which is consistent with the results of our study in general.[12]

Margaret *et al.* (1989) in the United Kingdom determined the psychological aspects due to hysterectomy and found there is no evidence that hysterectomy can lead to psychological problems. These results are consistent with the results of our study.[13]

Vidyavati *et al.* (2018) in India[1] suggested that people with low incomes had more psychological problems statistically. Also, the quality of life of low-income people was clearly affected by the environmental factors in their lives. Therefore, due to the influence of internal and external environmental factors such as economic and cultural factors, social status and the literacy level of patient, appropriate relationship with the patient's husband before surgery and supporting the patient, giving sufficient information to the patient and her spouse, as well as the patient's family behavior with her can have a positive or negative effect on the quality of life before and after hysterectomy, and failure to control these factors will affect the final conclusions.

The pre-hysterectomy mental state of the patient is effective on predicting her post-surgical mental state. As many people not only have a proper understanding of psychiatric illnesses but also do not even know about many of the symptoms of mental illness, therefore, many of the mental and psychiatric illnesses of those affected remain hidden and such people may have been participated in our study or even other studies and may influence the end result. This was one

of the limitations of our study. It seems that one reason for the heterogeneity and inconsistency in the articles is to ignore this point.

The studies conducted with Miller questionnaire in Iran have been on HIIV patients and their training as well as patients with breast cancer.[7,14] We did not found a study in which the Miller questionnaire has been completed for hysterectomy patients to compare its results with our findings. Hence, it is necessary to conduct similar studies with larger sample sizes among people from different cultures and by removing the effect of the above confounding factors.

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Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient (s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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