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Investigating ethical considerations in the communication network of married women undergone hysterectomy: instrumentation of a questionnaire

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Abstract

Introduction Considering the importance of complying medical and general ethics and the lack of a study on determining ethical considerations in the communication network of women undergoing hysterectomy surgery, this study aimed to present these aspects in the patients' lives by a standard researcher-made instrument.

Method This mixed method analysis (exploratory sequential mixed methods design was conducted in the whole of 2020 to create the "ethical considerations in communication network of women undergone hysterectomy" questionnaire and investigate its psychometric properties. A researched-made instrument was validated and its psychometric properties were checked among 218 women by confirmatory factor analysis (CFA).

Results Accordingly, the 8 factors extracted included "complying ethical consideration by the physician (a)", "complying ethical consideration by medical team (b)", "complying ethical consideration in the hospital (c)", "complying ethical consideration by the secretory in the clinic (d)", "complying ethical consideration by the spouse (e)", and "complying ethical consideration by the family and friends (f)", "complying ethical consideration by the media and society (g)" and "complying ethical consideration by herself (h)". The results of Cronbach's alpha test showed that there is moderate to good internal consistency in all dimensions. Cronbach's alpha for the whole questionnaire was calculated as 0.75, which shows that the internal consistency is at a good level.

Conclusion According to the results of this study, the reliability (internal consistency) and construct validity of the ethical considerations in the communication network of women undergoing hysterectomy questionnaire were confirmed. However, in light of the study limitations, caution should be practiced in the interpretation of the results. There is a need for further longitudinal studies in multiple settings using random sampling methods.

Keywords Ethical considerations, Communication network, Married women, Hysterectomy, Instrumentation

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Introduction

Hysterectomy is the second most common operation performed on women after a cesarean Sect. [1]. Over half a million women in the world undergo a hysterectomy procedure for reproductive issues each year [2]. Most of hysterectomies are performed to treat benign conditions such as uterine fibroids, endometriosis, and symptoms such as uncomfortable menstrual bleeding [3]. Some hysterectomies are performed inappropriately and are due to lack of diagnostic evaluation or failure of alternative treatments [4]. The prevalence of peripartum hysterectomy among Iranian pregnant women was 2.81 per 1000 deliveries [5].

Having a hysterectomy impacts a woman's life in a significant manner. As such, deciding to undergo a hysterectomy is a difficult process for women, especially from a psychological perspective. Following a hysterectomy, women commonly experience changes in body perception, such as perceiving the body as different, feeling disabled, feeling hollow, believing they are different than other women and feeling that their body is attracting notice. The literature reports that women perceive themselves as different, alienated, impaired and changed after a hysterectomy and that they have difficulty making contact with the environment; furthermore, the more changes in body perception increase, the more depression increases [6]. Not paying attention to the needs of women undergoing this process is not ethical. There are many effects from humankind relations around it. Therefore, a lot of ethical considerations should be undertaken about this common surgery.

Ethical considerations in the clinical settings refer to a set of principles and values that "must be taken into account in order to prevent harm to others". The 4 main ethical principles are beneficence, non-maleficence, autonomy, and justice [7]. Today, women's autonomy in decisions related to hysterectomy, its completely private nature and keeping information confidential, considering women's well-being and psychological satisfaction from care, justice in providing care and fair treatment regardless of socioeconomic status and protecting women regardless of their marital status, ethnicity, and religion is one of the things that should be considered [8].

The majority of women experienced a positive attitude towards their decision to elect a hysterectomy based on their perceived sexual functioning and satisfaction; ideas of womanhood to include motherhood and femininity, and their trust in pre-surgical information from healthcare professionals, or other women [2]. A meta-synthesis to identify and synthesize qualitative research evaluating the real feelings, inner needs and emotional experience of women undergoing hysterectomy found comprehensive consideration before hysterectomy, emotions and experience after hysterectomy, coping strategies such as seeking help from others [9].

The World Health Organization has defined rights for patients, including the right to high-quality care and treatment, the right to fair access to health care and services, the right to access information, the right to confidentiality and privacy, and the right to informed consent including right to free will or independence of vote, the right to health education, the right to protest and complain, and the right to compensation [10]. In addition, there are a lot of ethical consideration about hysterectomy as a choice for permanent sterilization [11].

Medical staff, especially doctors and nurses, are required to protect the women's rights and prevent them harm. These supports include informing and learning, honoring and respecting, supporting, protecting and ensuring continuity of care [12]. Sometimes, clinical judgments based on the benefit and independence are incompatible. When there is no clear benefit and there are clear risks of hysterectomy, the woman, more than anyone else, is in a position to determine what treatment is best for her [13]. Informed consent, as the most obvious manifestation of the moral principle of respect for individual autonomy, is one of the most important elements that must be observed before hysterectomy. The concept of informed consent is recognition of patients' autonomy by health service providers and improvement of relationships with patients. One of the primary purposes of informed consent is to provide information about the treatment process or to improve individuals' health care decisions. Informed consent can have the desired quality only when it reflects moral values [7].

Patients have the right to make a decision about their treatment, and it is necessary to make such a decision by receiving complete information about the benefits and harms, alternative ways and possible costs [14]. Medical staff should follow protocols and guidelines for informing about serious diseases such as uterus cancers. If she does not lose his spirit and can make positive decisions or if she has a fragile spirit and informing her will cause mental discomfort and delay in treatment, the patient's condition should be informed to the family [15].

Since ethics in medical centers are sometimes overshadowed by material issues, it is possible that it is not completely in line with the patient's wishes. In many cases, surgeons and medical centers are in conflict between ethical duties. The principles of medical ethics are beneficence (not doing harmful actions), not doing harm, and the right of the individual [7].

There are very few studies on the intra-individual aspect of ethical considerations in hysterectomy. Although this issue is very important in medical ethics. The aspect of disclosing some diseases or surgeries in the common life, workplace, family and close friends has an

important place in the field of medical ethics. Disclosure of this issue after marriage in Iran has created fewer challenges due to the necessity of the wife's consent to surgery. However, there are illegal cases of surgery without the consent of the spouse or non-disclosure of the surgery before marriage [16]. On the other hand, women's privacy and confidentiality are very important in hysterectomy [17]. Another issue sometimes happens in surgeries is under the table costs imposed on the patient. Determining the doctor's salary is something that must be agreed upon by the parties, and when the doctor and the patient are satisfied with the set amount, the doctor is free to receive it, and basically, under the table does not make sense [18].

Not only moral sensitivity of team of treatment but also support and moral considerations by close family, friends and society directly and indirectly affect on women's sense towards loss of uterus. This society ranged from close family members, such as the husband, to the broad community cultures about how they see a woman without feminine organs [19]. Husband's support increase self-acceptance after hysterectomy [20]. Some cultures support family (especially husband in fertility organ surgeries) involvement in management decisions. Even in these cultures, verifying patients' preferences about the roles they wish their families to play is an ethical consideration [21]. Women need visibility in the society as a whole person after their surgery. Even media as a powerful society arm influence on women's decisions about hysterectomy. Some of them receive their informational support from the Internet, followed by family/friends, books/magazines, and other resources [19].

Considering the importance of complying medical and general ethics and the lack of a study on determining ethical considerations in the communication network of women undergoing hysterectomy surgery, this study aimed to present these aspects in the patients' lives by a standard researcher-made instrument.

Method

Research population married women who have been at least 2 months and at most 2 years since their hysterectomy.

Research location Kerman city hospitals.

This mixed method analysis (exploratory sequential mixed methods design was conducted in the whole of 2020 to create the "ethical considerations in communication network of women undergone hysterectomy" questionnaire and investigate its psychometric properties.

Questionnaire development: The questionnaire was developed and tested using a mixed method approach in 3 phases. In the first phase, an item pool was created. Then, its validity was evaluated using Content Validity Ratio (CVR) and content validity index (CVI). In the third phase, Confirmatory Factor Analysis (CFA) were conducted to assess its construct validity.

To set up the initial item pool, 2 approaches were applied, a review of qualitative studies and existing literature, and individual interviews. To investigate the ethical considerations in communication network of women undergone hysterectomy, 10 participants were selected using purposeful sampling method and were interviewed using a semi-structured interview design. We create this tool according to the attitude of diverse women and then, measure its psychometric properties.

The initial item pool consisted of 136 items related to different aspects of ethical considerations in communication network of women undergone hysterectomy. The items were scored on a 5-point Likert scale ranging from 0 to 4 (from completely disagree to completely agree).

The second phase involved an assessment of content validity using CVR and CVI. To determine the content validity ratio, 10 specialists working in the fields of midwifery, psychology, and reproductive health, nursing, medical education, medical ethic, and Islamic ethic accepted and completed the related forms. The CVR of each item was then calculated using the Lawshe formula. Since there were 10 evaluators in the present study, a minimum acceptable value of 0.62 was set for Lawshe. All items of the questionnaire had acceptable CVR (>0.80). Moreover, all items had an acceptable CVI (0.70–0.79). In the third phase, construct validity and internal consistency were assessed. ranging from completely disagree to completely agree. The final questionnaire after creation, finalization and approval by experts in the field included 73 questions.

Sampling

This descriptive-cross-sectional research was conducted in 2020–2021 with the aim of investigating ethical considerations in the communication network of married women undergoing hysterectomy in selected hospitals in Kerman, after the approval of the code of ethics (ethic code: IR.KMU.REC.1399.067) from Kerman University of Medical Sciences. Then, in order to obtain the statistical population, all the hospitals in Kerman city where hysterectomy is performed will be included in the study. Four hospitals will be selected randomly among them. The entire research sample selected by whole population sampling based on the inclusion criteria. The researchers extracted the telephone numbers of the target women undergone hysterectomy and make a phone call. Those who are interested and qualified to participate in the study, and after obtaining informed consent, received a link of online questionnaire. Finally, 218 women were included in the final analysis. The response rate from telephone calls was 40%.

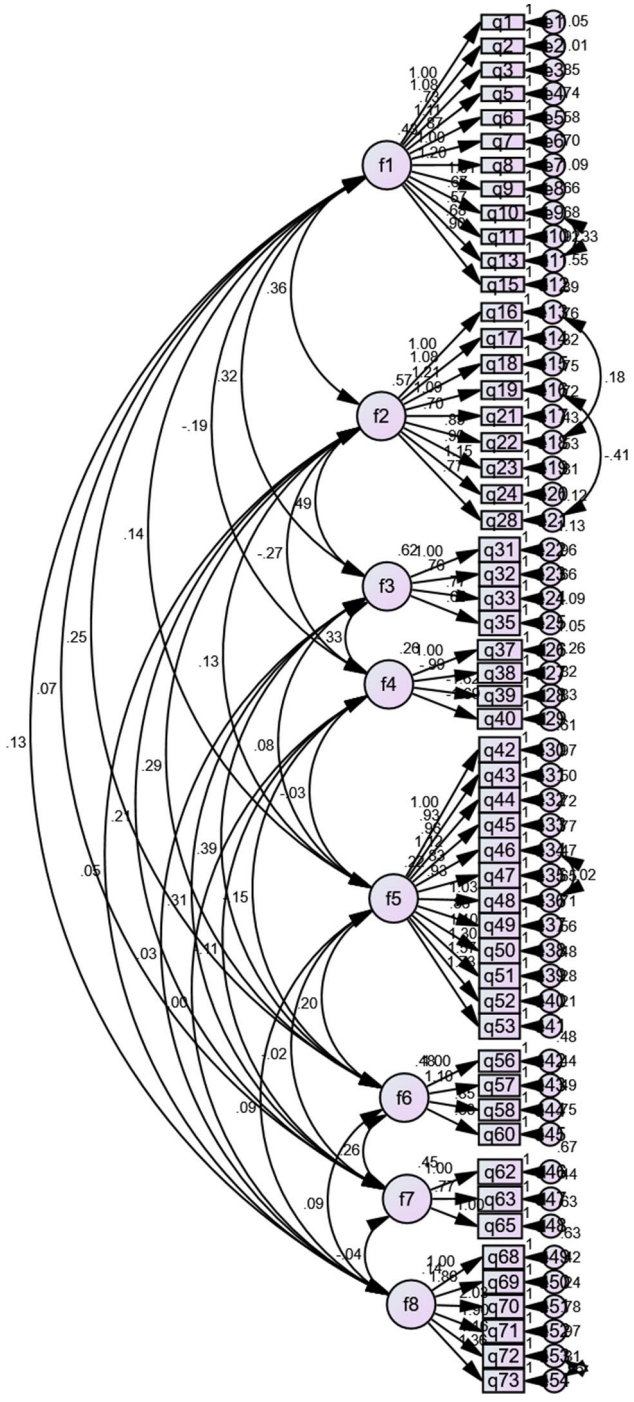

Fig. 1 Research measurement model and its parameters using standardized coefficients

Inclusion criteria The sample people must be at least two months old since their hysterectomy surgery, their age is less than 65 years old (elders not included), and a maximum of 2 years have passed since their hysterectomy and they are willing to cooperate and answer questions.

Table 1 Goodness of fit indices for the primary research model

SRMR	RMSEA	PCFχI	CFI	χ^2/df
0.099	0.092	0.61	0.8	2.88

Exclusion criteria Unwillingness to participate in the study.

Data calculation and analysis method

The questionnaire was analyzed by confirmatory factor analysis using Amos 24.0 software and using the maximum likelihood (ML) model. Questions with standardized coefficients less than 0.4 were removed. Cronbach's alpha method was used to check the internal consistency of the questions.

Ethical considerations

Assuring the participants to keep the information confidential, necessary coordination with the deputy of the research centers and hospitals, full description of the research objectives and working methods to the officials of the centers and all the research units in written and oral form, respecting the research units and assuring them of the confidentiality of the information, obtaining oral consent from all participants and delivery of summary of results to respected hospital officials.

Results

Figure 1 shows the investigated model of the instrument. Goodness of fit indices are reported in Table 1.

The indices reported in Table 1 are goodness of fit indices, each of which must be in a certain range to say that the model has a good fit. The range of changes of χ2/df index is between 1 and 5. If the CFI index is higher than 0.9, it means that the model has a good fit. Another index that is used for the goodness of fit is PCFI, if its numerical value is greater than 0.6, it indicates the appropriate fit of the model. The next index that is examined is RMSE, and if it is between 0.05 and 0.10, we say that the model has a good fit. If the SRMR index is less than 0.1, the model has a good fit. If we pay attention to the numbers reported in the table above, we can see that only the CFI index is not within the acceptable range.

In the Table 2, the path coefficients between the research variables are shown. For the reported paths, unstandardized and standardized coefficients, standard error, and critical ratio of the structural model are given. Standardized and unstandardized structural path coefficients, if they are significant, it means that the variables and their dimensions are significant and in the expected direction. All coefficients had a value above 0.4 and were significant (p-value < 0.001).

In the Table 3, the descriptive information of the dimensions of the questionnaire was reported. The results of Cronbach's alpha test showed that there is

Table 2 Regression coefficients of the confirmatory model

		Domain	Estimate	S.E.	C.*R.*	Standardized
q1	←	complying ethical consideration by the physician	1.000			0.568
q2	←	complying ethical consideration by the physician	1.082	0.163	6.647	0.569
q3	←	complying ethical consideration by the physician	0.735	0.137	5.369	0.431
q5	←	complying ethical consideration by the physician	1.111	0.157	7.060	0.620
q6	←	complying ethical consideration by the physician	0.872	0.134	6.509	0.552
q7	←	complying ethical consideration by the physician	0.999	0.137	7.304	0.652
q8	←	complying ethical consideration by the physician	1.196	0.159	7.520	0.682
q9	←	complying ethical consideration by the physician	1.008	0.159	6.351	0.534
q10	←	complying ethical consideration by the physician	0.666	0.116	5.764	0.471
q11	←	complying ethical consideration by the physician	0.572	0.110	5.185	0.414
q13	←	complying ethical consideration by the physician	0.677	0.129	5.235	0.419
q15	←	complying ethical consideration by the physician	0.898	0.169	5.319	0.426
q16	←	complying ethical consideration by medical team	1.000			0.770
q17	←	complying ethical consideration by medical team	1.082	0.105	10.344	0.685
q18	←	complying ethical consideration by medical team	1.212	0.091	13.340	0.850
q19	←	complying ethical consideration by medical team	1.091	0.105	10.399	0.691
q21	←	complying ethical consideration by medical team	0.700	0.090	7.768	0.529
q22	←	complying ethical consideration by medical team	0.854	0.061	14.057	0.703
q23	←	complying ethical consideration by medical team	0.897	0.087	10.314	0.683
q24	←	complying ethical consideration by medical team	1.155	0.109	10.552	0.697
q28	←	complying ethical consideration by medical team	0.773	0.110	6.998	0.484
q31	←	complying ethical consideration in the hospital	1.000			0.595
q32	←	complying ethical consideration in the hospital	0.759	0.120	6.349	0.521
q33	←	complying ethical consideration in the hospital	0.773	0.109	7.067	0.599
q35	←	complying ethical consideration in the hospital	0.603	0.115	5.244	0.414
q37	←	complying ethical consideration by the secretory in the clinic	1.000			0.444
q38	←	complying ethical consideration by the secretory in the clinic	−0.993	0.233	-4.268	−0.409
q39	←	complying ethical consideration by the secretory in the clinic	-1.616	0.295	-5.487	−0.672
q40	←	complying ethical consideration by the secretory in the clinic	-1.688	0.305	-5.526	−0.686
q42	←	complying ethical consideration by the spouse	1.000			0.519
q43	←	complying ethical consideration by the spouse	0.931	0.186	5.016	0.407
q44	←	complying ethical consideration by the spouse	0.957	0.156	6.140	0.539
q45	←	complying ethical consideration by the spouse	1.121	0.185	6.069	0.530
q46	←	complying ethical consideration by the spouse	0.832	0.166	5.018	0.408
q47	←	complying ethical consideration by the spouse	0.931	0.152	6.139	0.539
q48	←	complying ethical consideration by the spouse	1.032	0.173	5.979	0.518
q49	←	complying ethical consideration by the spouse	0.860	0.163	5.281	0.435
q50	←	complying ethical consideration by the spouse	1.100	0.173	6.370	0.571
q51	←	complying ethical consideration by the spouse	1.298	0.186	6.978	0.664
q52	←	complying ethical consideration by the spouse	1.573	0.203	7.743	0.816
q53	←	complying ethical consideration by the spouse	1.734	0.218	7.952	0.870
q56	←	complying ethical consideration by the family and friends	1.000			0.706
q57	←	complying ethical consideration by the family and friends	1.102	0.113	9.718	0.755
q58	←	complying ethical consideration by the family and friends	0.851	0.101	8.450	0.644
q60	←	complying ethical consideration by the family and friends	0.828	0.113	7.329	0.553
q62	←	complying ethical consideration by the media and society	1.000			0.635
q63	←	complying ethical consideration by the media and society	0.769	0.118	6.520	0.617
q65	←	complying ethical consideration by the media and society	0.997	0.149	6.694	0.647
q68	←	complying ethical consideration by herself	1.000			0.426
q69	←	complying ethical consideration by herself	1.861	0.324	5.745	0.732
q70	←	complying ethical consideration by herself	2.034	0.343	5.930	0.839
q71	←	complying ethical consideration by herself	1.900	0.350	5.436	0.628
q72	←	complying ethical consideration by herself	1.163	0.269	4.323	0.405
q73	←	complying ethical consideration by herself	1.362	0.281	4.850	0.492

Table 3 Descriptive information of questionnaire dimensions and Cronbach's alpha

Domain	Cronbach's alpha	Min-max	SD	mean	Number
complying ethical consideration by the physician	0.77	29–65	7.66	47.73	12
complying ethical consideration by medical team	0.88	13–45	7.07	32.17	9
complying ethical consideration in the hospital	0.7	5–20	3.13	12.91	4
complying ethical consideration by the secretory in the clinic	0.68	4–18	2.78	12.2	4
complying ethical consideration by the spouse	0.85	20–60	6.93	45.64	12
complying ethical consideration by the family and friends	0.75	4–20	3	14.48	4
complying ethical consideration by the media and society	0.71	3–15	2.29	8.37	3
complying ethical consideration by herself	0.78	8–30	4.13	23.82	6
total	0.75	112–252	24.46	197.33	55

moderate to good internal consistency in all dimensions. Cronbach's alpha for the whole questionnaire was calculated as 0.75, which shows that the internal consistency is at a good level.

Discussion

This study was designed to develop and conduct a questionnaire for the assessment of "ethical considerations in communication network of women undergone hysterectomy". The psychometric properties of this tool including reliability (internal consistency) and factorial structure (CFA) were evaluated in a sample of women undergone hysterectomy.

Accordingly, the 8 factors extracted included "complying ethical consideration by the physician (a)", "complying ethical consideration by medical team (b)", "complying ethical consideration in the hospital (c)", "complying ethical consideration by the secretory in the clinic (d)", "complying ethical consideration by the spouse (e)", and "complying ethical consideration by the family and friends (f)", "complying ethical consideration by the media and society (g)" and "complying ethical consideration by herself (h)".

It is noteworthy that complying ethical considerations by a woman's social network about this common surgery has influences on the attitude of women towards hysterectomy and its consequences. These issues point to the ethical issues that may happen around this surgery that affect on the individual thoughts and actions, marital and sexual adjustment and relationships as well as is affected by familial, social and cultural attitude towards hysterectomy [9, 22–24].

After hysterectomy, women not only feel a strong need for support from family members, especially their husbands, they are also seeking support from health care providers and their colleagues. Before the hysterectomy, it is recommended that family members be consulted to ensure the emotional support and care of women after the hysterectomy. It can help the adaptation to hysterectomy [22]. Real experience of women after hysterectomy is related on comprehensive consideration before hysterectomy (a. disease factors; b. fertility factors; c. opinions of others); emotions and experience after hysterectomy (a. postoperative physical condition; b. psychological resilience to the loss of the uterus; c. changes in the couple's relationship); coping strategies (a. self-denial and avoidance; b. change of perception and self-adjustment; c. seek help from others) [9].

In some low income societies, women faced with embedded social inequality in the form of gender biases, lack of labour security and a maternal-centric health system, demonstrated pragmatic agency in their decision to remove the uterus. When they experienced gynecological ailments, most sought two to three opinions and negotiated financial and logistical concerns. The health system offered few non-invasive services for non-maternal health issues. Moreover, women and health care providers believed there is limited utility of the uterus beyond childbearing. Women's responsibilities as caretakers, workers and producers drove them to seek permanent solutions that would secure their long-term work and health security. Thus, hysterectomy emerged as a normalized treatment for gynecological ailments, particularly for low-income women with limited resources or awareness of potential side effects. In this setting, hysterectomy reflects the power structures and social inequalities in which women negotiated medical treatment and the need to reverse a culture of permanent solutions for low-income women [25].

The majority of women experienced a positive attitude towards their decision to elect a hysterectomy based on their perceived sexual functioning and satisfaction; ideas of womanhood to include motherhood and femininity, and their trust in pre-surgical information from healthcare professionals, or other women [2]. Educating couples on sexual affairs and rebuilding the self-image is related to offering enough information to the patients [26]. Providing more information and education to them on the possible after-effects of hysterectomy and alternative options will enable them to make more informed choices [25]. Performing non-therapeutic hysterectomy is subject to the clinical judgement of physicians according to their perception of the patient's quality of life [27].

The resources of information women depended on when making a decision to undergo hysterectomy varied and included a second opinion from another physician, social media, opinion from spouse/partner, second opinion from female family members, and opinion from friends [28]. Information on regional rates and on the need for hysterectomy given through the mass media to the general population can change professional practices [29]. For instance, YouTube is currently not an appropriate source for patients to gain information on hysterectomy. Physicians should be aware of the limitations and provide up-to-date and peer-reviewed content on the website [30]. Establishing support groups to share the women's experiences; and changing community views about hysterectomized women is a beneficial action towards them [19].

Conclusion

According to the results of this study, the reliability (internal consistency) and construct validity of the ethical considerations in the communication network of women undergoing hysterectomy questionnaire were confirmed. However, in light of the study limitations, caution should be practiced in the interpretation of the results. There is a need for further longitudinal studies in multiple settings using random sampling methods.

Limitations Response bias to provide socially desirable answers might be considered due to the inclusion of self-report questionnaires for data collection.

Recommendations Future research can assess the validity of "ethical considerations in the communication network of women undergoing hysterectomy" questionnaire in cross-cultural environments that may have an impact on adoption. Future works are recommended to use a sample size large enough to examine measurement invariance of the questionnaire across aforementioned variables. This tool can be provided deeper insights of ethical considerations in the communication network of women undergoing hysterectomy to health providers.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12910-024-01152-7.

Supplementary Material 1

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Author contributions
E.B., A.Z.A and L.T. collected data, A.H.N. analyzed data and wrote the results, M.G. wrote the method, A.A. wrote the main manuscript F.K. wrote the proposal, M.M. and J.T. approved the first version of the questionnaire.

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Data availability
Data will be available per request. To access data please contact Atefeh Ahmadi (atefeahmadi59@gmail.com/WhatsApp: 00989133979580).

Declarations

Ethics approval and consent to participate
The research entitled "Investigating ethical consideration in communication network of married women undergone hysterectomy in Kerman "with Reg. No. 98000607 was approved by ethical committee of Kerman University of Medical Sciences. The Ethic Approval Code is IR.KMU.REC.1399.067. From all women oral informed consent was obtained.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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