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Nursing educational intervention in hysterectomized women: a mixed method study protocol

Intervención educativa de enfermería en mujeres histerectomizadas: protocolo de estudio de método mixto

Intervenção educacional de enfermagem em mulheres histerectomizadas: um protocolo de estudo de método mista

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ABSTRACT

Objectives: To know the meaning of education in the perioperative period, in women undergoing hysterectomy for benign causes and to determine the effectiveness of educational nursing intervention in improving female sexual function, quality of life and self-esteem in women undergoing hysterectomy for benign causes.

Methods: Mixed design, exploratory sequential Qualitative phase semi-structured interviews and content analysis. Quasi-experimental study quantitative phase, non-equivalent control group. 26 women in 2 groups. Instruments: Biosociodemographic, Female Sexual Function Index, SF-36 Questionnaire, Rosenberg Scale. Both groups will receive traditional care and the experimental group will receive nursing educational intervention with web page support. Ethical requirements will be considered.

Expected results: The women in the experimental group will improve their sexual function, health-related quality of life and self-esteem in relation to the comparison group.

Conclusions: Education in the perioperative period of hysterectomy is essential for the recovery of women who go through this experience.

Keywords: Quality of life. Sexuality. Self concept. Hysterectomy.

RESUMEN

Objetivos: Conocer el significado de la educación en periodo perioperatorio, en mujeres sometidas a histerectomía por causa benigna y determinar eficacia de intervención educativa de enfermería en mejoramiento de la función sexual femenina, calidad de vida y autoestima en mujeres sometidas a histerectomía por causa benigna.

Métodos: Diseño mixto, exploratorio secuencial. Fase cualitativa entrevistas semiestructuradas y análisis de contenido. Fase cuantitativa estudio cuasi experimental, grupo control no equivalente.26 mujeres en 2 grupos. Instrumentos: Biosociodemográfico, Índice de Función Sexual Femenina, Cuestionario SF-36, Escala de Rosenberg. Ambos grupos recibirán atención tradicional y grupo experimental recibirá intervención educativa de enfermería con apoyo de página web. Serán considerados requisitos éticos.

Resultados esperados: Las mujeres del grupo experimental mejoraran su función sexual, calidad de vida relacionada con salud y autoestima en relación al grupo comparación.

Conclusiones: La educación en periodo perioperatorio de histerectomía es básica para la recuperación de las mujeres que viven esta experiencia.

Palabras clave: Calidad de vida. Sexualidad. Autoimagen. Histerectomía.

RESUMO

Objetivos: Conhecer o significado da educação no período perioperatório, em mulheres submetidas à histerectomia por causas benignas e determinar a eficácia da intervenção educativa de enfermagem na melhora da função sexual feminina, qualidade de vida e autoestima em mulheres submetidas à histerectomia por causas benignas.

Métodos: Design misto, sequencial exploratório. Fase qualitativa entrevistas semiestruturadas e análise de conteúdo. Estudo quasi-experimental fase quantitativa, grupo controle não equivalente. 26 mulheres em 2 grupos. Instrumentos: Biossociodemografia, Índice de Função Sexual Feminina, Questionário SF-36, Escala de Rosenberg. Ambos os grupos receberão atendimento tradicional e o grupo experimental receberá intervenção educativa de enfermagem com suporte de página web. Requisitos éticos serão considerados.

Resultados esperados: As mulheres do grupo experimental melhorarão sua função sexual, qualidade de vida relacionada à saúde e autoestima em relação ao grupo de comparação.

Conclusões: A educação no período perioperatório da histerectomia é essencial para a recuperação da mulher que vive essa experiência

Palavras-chave: Qualidade de vida. Sexualidade. Autoimagem. Histerectomía.

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INTRODUCTION

Hysterectomies are surgical treatments where the uterus is removed to deal with some of the most prevalent benign gynecological issues in women. These include leiomyomas, abnormal uterine bleeding, uterine prolapse, and others[1]. Hysterectomy is the most common gynecological surgical procedure[2], with millions taking place around the world every year[3].

Although hysterectomy is usually considered to be a safe routine procedure in gynecology, it is associated with certain anatomic complications which, in theory, could affect sexuality, putting the sexual function at risk and, as a consequence, changing the quality of life and the self-esteem of women[4]. Most hysterectomies are carried out to improve the quality of life of women, but their impact is yet to be adequately measured and can be incredibly heterogeneous[4,5].

Investigations on the sexual function of hysterectomized women allowed analyzing negative effects from the hysterectomy, including a change in the dimensions of the sexual function and in the relationship with a partner[6]. Similarly, there are reports on the effects of hysterectomy on the quality of life, showing this is an individual experience and brings forth feelings and perceptions of an incomplete and different body, which is daily reflected on their wellbeing[7].

In Ecuadorian hospitals, there are protocols to provide care to hysterectomized women[8] focused on the disease – in this case, the gynecological pathology, with no regard to the context of the woman or her needs. Therefore, these women are highly unlikely to clarify their uncertainties, such as lack of knowledge, myths, fears and anxieties at the time of diagnosis[9]. On the other hand, health workers give little attention to aspects such as sexuality, quality of life, and self-esteem, considered to be intimate. This leads women to ask for information from unreliable sources, acquiring mistaken information about the consequences and general function of hysterectomy[10].

A literature review shows the importance of preparing women about to undergo hysterectomy and discusses obstacles in the delivery of information regarding definitions and consequences of the surgery in sex life [11], quality of life, and self-esteem, which were addressed by health workers with no accuracy as they delivered information to the woman and her sexual partner[6].

In this regard, there are studies about the effect of educational interventions started before the preoperative stage. This intervention should be personalized and integrative, using a strategy focused on each individual's needs in a formal educational program, enabling the prevention of complications[6,12,13].

Regarding interventions that use information technology, investigators developed and evaluated a website to improve recovery after hysterectomy, providing convenient and relevant information[14]. Other investigators implemented a health care program based on the Internet, which included an intervention in health with personal consultations to achieve an adequate recovery, showing the benefits in the quality of life of the hysterectomized women[15].

The above shows the need of creating investigations to measure the effectiveness of interventions carried out before and after the surgery, in variables such as sexual function, quality of life related to health, and the self-esteem of middle-aged women who undergo hysterectomy.

The evidence available shows that, currently, intervention programs focused on education in health are few and underused. These are assets, since patients who undergo hysterectomies, when they receive proper information and training, will be able to deal with complications and improve their sexual functioning after the surgery[6].

Therefore, this investigation will contribute with concrete evidence, on the level of gynecological hospital services, showing that women's health care should be focused on the person and their needs. We propose an educational nursing intervention with the support of a web page managed during the entire perioperative period, which allows the prevention of sexual dysfunctions and post-surgery emotional disorders, and consequently leads to improvements on their quality of life.

According to the above, this will be an exploratory, sequential study[16] lasting for 12 weeks.

The goals of each stage of the study are as follows:

To discover the effects of perioperative education to women who undergo hysterectomies for benign causes.

To determine the efficacy of an educational nursing intervention in the improvement of female sexual function, quality of life, and self-esteem in women who undergo hysterectomies for benign causes.

METHOD

Design of the study

Mixed, exploratory, sequential design.

Qualitative stage: descriptive, in order to describe the experience of women and give them meaning[17]. The interviews will be carried out by the first author, individually and in person. There will be a script with study-related topics and questions to obtain the information and reach the planned goals[18]. The main category will be highlighted, indicating a topic, as well as its subcategories, which detail micro-aspects of the issue[10].

The construction of an educational nursing intervention, based on a web page, will be useful to integrate qualitative and quantitative elements. The data from the previous stage will be useful to design and elaborate the individual, in-person nursing educational intervention, to be supported by the webpage.

The design of the webpage will be created by a developer to be easy to use, attractive, with clear contents that can complement the in-person educational sessions. There will be a test version formed by an application screen, in which the action bar will provide easy navigation.

To choose the design, the logo, the slogan, and the colors of the webpage, we will consult women using an opinion survey. Regarding content, it will be according to the needs expressed by these women in the semi-structured interview and in the literature review.

Once the page is planned, we will find a provider, hosting service, and a domain to house the online page by contracting a server which will be available for as long as the contract remains in force. The layout, editing, and programming of the web contents will follow the previous plans. The webpage will be compatible with both computers and mobile devices. Its url will be accessed through Google Chrome, Safari, Firefox, and Samsung Internet.

Quantitative stage: a quasi-experimental study, whose design will be that of a non-equivalent control group[20].

Due to the information above, the mixed, sequential design in this study will start with the collection and analysis of qualitative data in the first stage. Starting with the exploratory results, in the following stage, which represents the connection between the mixed methods, the researcher will use the webpage to design and develop the individual educational intervention, where the results of the qualitative stage will be incorporated. In the third stage, we will implement the individual, in-person educational intervention in the quantitative phase. Finally, the author of this study will interpret how and how often quantitative results generalize or broaden initial qualitative findings.

Subjects

Qualitative stage: subjects will be women from 35 to 65 years old, users of the outpatient clinic of a high-complexity ob-gyn hospital, in the perioperative period of a hysterectomy due to benign causes.

Qualitative stage: In this stage, we will invite women from 35 to 65 years old who are on queue for hysterectomy in two gynecological hospitals with similar characteristics: specialized in gynecological care, hospital capacity, professors, third level of complexity, similar population coverage, and function as a national reference.

Selection criteria

The selection criteria will be the same to the two stages, and are described below:

Inclusion criteria: Women from 35 to 65 years old, with partners, in a queue to be scheduled for surgery, with a benign pathology as referred by the medical team, who knows how to read and write and have an internet connection.

Exclusion criteria: Women with cancer, obstetric complications or recommendations, ectopic pregnancies, oophorectomy, mental disorders or dementia, who were undergoing multiple combined surgical procedures, and those with physical or cognitive disabilities.

Interventions for each group

Comparison group: Women will receive routine hospital care, which includes vital sign evaluation and records, physical examination, clinical gynecological evaluation, revision of complementary exams, and general recommendations.

Experimental group: The women will receive routine care in the hospital, coupled with educational nursing interventions with the support of a webpage which includes two components:

I. Five individual, in-person educational nursing sections, lasting 30 minutes each, during 3 months in the perioperative period for hysterectomy (Chart 1).
II. Technological component. Visiting the webpage in each session and at home. This component will be created to complement the nursing educational intervention.

In addition, each patient will receive a kit with materials to give support to the development of the intervention.

The first author of this article will be responsible for carrying out the educational intervention and by staying in touch, throughout these three months, with all patients in the study.

Criteria to interrupt or change the intervention

The intervention will be interrupted upon request of the patient to abandon it, or surgical complications.

Week	Session	Topic	Content
1	First session Day for the validation and surgery scheduling	Perioperative care	• Basic anatomic and physiological concepts regarding the female reproductive apparatus. • Specific hysterectomy measures. • Importance of the quality of life of the woman • Recommendations for the admission • First visit to the technological component/ introduction component with the support of the researcher.
2	Second session Day of the admission, corresponding to the day before the surgery	Self-esteem	• Self-esteem • Self-concept and self-image • Self-esteem changes • Strategies to improve self-esteem • The role of a woman • Femininity
3	Third session The week after the surgery	Female sexual function	• The role of the woman • The role of a couple • Female sexual function • Pleasurable sexuality
5	Fourth Session Four weeks after surgery	Strengthening of the pelvic floor	• Recognizing tour anatomic structures • Pelvic floor • Kegel exercises • Benefits of strengthening the pelvic floor for sexual functioning
12	Fifth session Three months after the surgery	Recommendations	Healthy and balanced eating • Calcium • Vitamin D • Weekly dietary recommendations • Hygienic measures

Chart 1 – Timetable of the nursing educational intervention, supported by the webpage. Quito, Pichincha, Ecuador, 2021
Source: The authors.

Strategy to better carry out intervention protocols

To guarantee that the intervention would be adhered to, the investigations consulted the controls in the Automated Daily Registry of Consultations and Ambulatory Care, and confirmed personal schedules in notebooks provided to the patient.

Primary and secondary results

Primary result to be evaluated: Female sexual function.

Secondary result to be evaluated: Quality of life as related to health and self-esteem.

There will be two measurements: before the intervention and three months later, as it is concluded.

Sample size

Qualitative stage: There will be an intentional sample[17]. We will select a sample from 11 to 15 cases, estimating that, with this number, we will start to reach saturation and an understanding of structural patterns that define the object of study[18]. In this study, we consider that, with a sample of 14 women, we will reach saturation.

Quantitative stage: Our sample size estimation was based on the results of a similar study[12] which considered female sexual function as the outcome. With a 5% confidence level, strength ,of 80%, and 50% abandonment rate, we calculated a sample size of 26 women per group.

Data collection

Qualitative stage: Once the study is approved, we will count on the support from the hospital personnel to gather information about patients in the perioperative stage. These women will be contacted and invited to participate when they visit the hospital before or after their medical appointment.

Quantitative stage: We will obtain a record of all women in a waiting list for hysterectomy, which comply with all eligibility criteria; we expect the gradual invitation of participants to be concluded in one month and fifteen days, estimating 5 women per week, in order to reach a sample of 26 women, both for the experimental group and the comparison group. Eligible patients will be contacted and invited to participate. The goals will be explained to them, as well as the stages of the study and the informed consent.

Blinding

To avoid biases, the interviewers will not know how participants are distributed in the groups (experimental and comparison). They will only know these groups as "group A" and "group B", from the beginning to the end of the study[21].

Data collection methods

Qualitative stage: There will be a semi-structured interview using a script with study-related topics and questions, grouped per category and subcategory according to our objectives[18,22]. The interviews will be individual and in person. The goals will be explained, they will last from 30 to 45 minutes, and the process will be recorded (after informed consent). To conclude, we will summarize, delve in, and corroborate the information found.

Quantitative stage: we will apply all instruments one week before the intervention starts to women in the experimental group, and before the surgery to the comparison group.

The second application of the measurement instruments will be carried out one week after the intervention is finished for the intervention group, and three months after the surgery to the comparison group. Data will be collected by two nurses adequately trained, who will deliver the filled-in questionnaires to the first author, who will store them.

Biosociodemographic Questionnaire: elaborated by the investigators to get to know the epidemiological profile of the women interviewed.

Female sexual function: to be measured using the Female Sexual Function Index (FSFI), which measures six dimensions (desire, arousal, lubrication, desire, orgasms, satisfaction, pain), and is formed by 19 questions. In Ecuador, the year 2009[23] was considered.

Health-related quality of life: to be measured using the Short Form 36 Health Survey (SF-36), which measures physical function, physical role, bodily pain, general health, vitality, social function, emotional role, and mental health. These eight dimensions are summarized in two components: physical and mental health. It is formed by 36 questions. In Ecuador, in 2019[24], the SF36 questionnaire was used to determine the HRQoL of an adult Ecuadorian population.

Self-esteem: to be measured using Rosenberg Self-Esteem Scale, which includes 10 questions, 5 positive and 5 negative. In Ecuador, it was applied in 2010[25]. Data collection instruments are available as supplementary materials.

Data analysis

Qualitative stage: The findings were codified via reading, breaking down, and tagging of the text using abbreviations or symbols to classify it**.** The content analysis will be carried out after a pre-analysis that corresponds to the organization, operationalization, and systematization of the initial ideas, which will serve as the base for the next stage. Later, we will decodify, break down, or number the operations to describe the pertinent characteristics of the analysis.

Treating and interpreting the results found in order to make sure they are significant[26] contributes to generating potential topics to be used in the creation of the educational nursing intervention and the support from the webpage.

In this stage of the study, the scientific rigor is related with scientific quality and will be verified through the criteria of credibility, transfer, reliability, and confirmability.

Quantitative stage: For biosociodemographic variables, we will use descriptive statistics. For the health variables female sexual function, health-related quality of life, and self-esteem, central tendency, dispersion, and distribution measures will be used. For numerical variables, repeated measures variation analysis and the chi-squared test will be used.

The processing and the statistical analysis of the data found will be carried out in SPSS Statistics version 24.0 for Windows 8, and STATA 12.0.

Research ethics committee approval and dissemination

The protocol will follow ethical precepts[27], obtaining verbal and written informed consent from all participants for the two stages before starting the study. We received approval from the Ethics Committee at the Universidad de Concepción-Chile (Ref. Resolution N-CEBB 717-2020) and from Universidad Central del Ecuador (No. 0166- SEISH-UCE-20). The results will be divulged nationally and internationally.

Essay records: ClinicalTrials.gov. ID: NCT05373550.

DISCUSSION

It is important to recognize and adequately attend the needs of women during the perioperative hysterectomy period, an aspect which has been evidenced by multiple studies, which report how insufficient is the information women have and how few opportunities they have to participate in this process, being reduced to depend on the health worker[6,28].

To develop this study, we considered a mixed methods approach, considering that this is the type of approach recommended for health investigations, using information technologies such as tele-health and those reported in a study that, using an exploratory, sequential design, showed the importance of generating technology focused on the needs and requirements of users, in order to give support to people in the process of self-care and generate a positive impact on their health conditions[29].

In the current study, we expect results from the qualitative stage to allow showing the meaning of education in the perioperative stage; questions and uncertainties regarding the surgical act and the state of health of women; as well as get closer to the experiences of women in the perioperative stages of hysterectomy and, therefore, from a professional perspective, to be able to understand this phenomenon and identify areas where an educational intervention can be carried out[28], in order to contribute to the design and elaboration of the nursing educational intervention with the support of a webpage. Later, the quantitative results will allow us to know the effect of the educational intervention, as reported in intervention studies based on counseling, individualized recommendations for recovery based on experts, and education based on specific models, improving the variables mentioned before[12,13–15].

On the other hand, we consider that the incorporation of the technological support in the webpage is a relevant element, since it has been made clear that it can be a valuable complement to sanitary care, with positive effects in the recovery of patients who undergo this gynecological surgery due to benign cases (hysterectomy and/or laparoscopic associated surgery). Other investigations, related with non-gynecological surgeries, which used technology to complement perioperative care, have shown better clinical care when compared to in-person perioperative care in physical functioning and pain[30].

Regarding other interventions to women who undergo hysterectomy and participated in in-person activities, a study by Hosseini[12] developed a program of five educational sessions based on the combination of sexual, sexual ability training, knowledge, attitudes, and requirements to reduce the disorders caused by the anatomic and physiological issues that hysterectomy might cause, significantly improving female sexual function[12]. Another study incorporated two individual educational sections of specific counseling to treat aspects of sexual functioning and sexual quality of life, showing as a result a significant improvement in the sexual function of the intervention group[13].

CONCLUSIONS

Education in the perioperative period of a hysterectomy is considered foundational for the recovery of women who experience this situation. We expect our findings to confirm the efficacy of an individual nursing education intervention supported by a webpage, both in regard to improvements in female sexual function, quality of life, and woman self-esteem.

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