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REVIEW ARTICLE OPEN ACCESS

USE OF MEDICINAL PLANTS IN CARE OF WOMEN WITH GYNECOLOGICAL DISEASES: INTEGRATIVE REVIEW

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ABSTRACT

Objective: To carry out an integrative review on the use of medicinal plants used by women in gynecological care. **Method:** Integrative review, in which the central question for its implementation was: what medicinal plants do women use to care for gynecological diseases? For the selection of the sample studies, national and international databases were used: SCOPUS, Web of Science, CINAHL, Latin American and Caribbean Literature in Health Sciences, Medical Literature Analysis and Retrieval System Online and COCHRANE. The descriptors (DeCS / MeSH) were used: Medicinal plants. Women's health. The study period was obeyed from 2014 to 2018. **Results:** Eight articles were selected to compose the review sample, which were described according to the database, qualis periodical, title, author, year, objectives, and level of evidence, method and main results of each selected study. The studies were categorized into: Clinical trials and research using phytotherapy in women's health; Ethnobotany and women's health, where these two categories address the relevance of medicinal plants in women's health care. In conclusion, it should be noted that the use of medicinal plants is being increasingly disseminated by women because of their low cost and because they are considered natural means of cure in certain diseases, including gynecological diseases.

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INTRODUCTION

Medicinal plants are an important therapeutic tool in the treatment of various diseases that affect humanity. The use of this therapy in public health is very low because of the lack of knowledge of the therapeutic potential of these natural products. According to the World Health Organization (WHO), a medicinal plant is any plant that contains in one or more of its organs substances that can be used for therapeutic purposes or precursors of substances used for such purposes. Phytotherapy, in turn, is the medicine obtained by exclusively using plant active raw materials and is characterized by the knowledge of its efficacy and the risks of its use, as well as the reproducibility and constancy of its quality (BRASIL, 2004).

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The use of medicinal plants is an old tradition often carried out by different societies. Medicinal plants and their derivatives are among the main therapeutic resources of Traditional Medicine (MT) and Complementary and Alternative Medicine (MCA), and have long been used by the Brazilian population in their health care (BRASIL, 2012). One of the important historical landmarks on the use of medicinal plants in the world was the Declaration of Alma Ata in 1978, in which the use of herbal and phytotherapeutic plants was recognized for prophylactic, curative and palliative purposes. Since then, the WHO has come to recognize medicinal plants and Phytotherapy (IBIAPINA, 2014). Unfortunately, most herbal remedies that are currently used by self-medication or by prescription do not have their well-known toxic profile. On the other hand, improper use of a product, even of low toxicity, can induce serious problems since there are other risk factors, such as contraindications or concomitant use of other drugs

(SILVEIRA; BANDEIRA; ARRAIS, 2008). According to WHO, more than 80% of the world's population, especially in developing countries, uses traditional herbal treatments for their primary health care needs. Some of the reasons pointed out by WHO are the high cost of industrialized medicines and the population's difficult access to health care (Baker *et al*., 2012). However, it is believed that knowledge and autonomy in health care are also good reasons for this use. The increase in the number of adverse reactions is possibly justified by the increased use of medicinal plants. More than 5,000 suspected persons with adverse reactions related to herbal use were informed to WHO prior to 1996. Another factor contributing to non-notification are physicians who do not always recognize adverse events associated with the use of herbal medicines and that patients do not report the use of plants during the consultation (SILVEIRA; BANDEIRA; ARRAIS, 2008). With regard to gynecological diseases, it is estimated that 340 million people worldwide are affected by Sexually Transmitted Infections, which is the second largest cause of morbidity in women (WORLD HEALTH ORGANIZATION, 2007, LUPPI *et al*., 2011). In Brazil, although mortality associated with gynecological infections does not appear among the top 10 causes of death, in 92% of cases, they could be avoided (BRASIL, 2004).

The use of medicinal plants is, therefore, an alternative for the treatment and cure of several diseases that affect the female universe (AMORIM & SANTOS, 2003; FARIA *et al*., 2004, GELLER & STUDEE, 2005, CLARKE *et al*., 2007, SADEGHI & MAHMOOD (1998), and SUNEGHI & MAHMOOD (2002), and continue to be the most used source for the treatment of women's health in rural populations (TSOBOU *et al*., 2016), 2014) around the world. Despite this, in Brazil, the National Program of Medicinal Plants and Phytotherapics was included in the Unified Health System only in 2008, counting on only 71 species (BRASIL, 2006).
International assessments show a small number of studies focusing on the use of medical plants for the treatment of conditions related to women's health, most of them being published in Asia, Africa and Oceania, with few studies in the Americas, especially in Brazil (YAZBEK *et al*. ., 2016). In Brazil, the most commonly used plant families for the treatment of gynecological problems and vaginal infection are Fabaceae and Asteraceae. It is important to emphasize that the part used, the mode of preparation and the most common routes of administration are leaves, tea and oral, respectively (YAZBEK *et al*., 2016). These data are similar to those documented in studies with women from other countries such as Iran (SADEGHI, MAHMOOD, 2014) and Africa (TSOBOU *et al*., 2016). However, the identity of the species used depends on local phytodiversity, plant availability and cultural influence (WET; NGUBANE, 2014). In the study of Silva, Silveira and Gomes (2016), the species most used by women in the treatment of gynecological diseases were mastruz (*Chenopodium ambrosioides* L.) and malvarisco (*Plectranthus amboinicus* (Lour.) Spreng.), Followed by aroeira (*Myracrodruon urundeuva (Bryophyllum calycinum* Salisb.), Noni (*Morindacitrifolia* L.), white wood (*Cordia oncocalyx* Allemão) and uxi-yellow (*Endopleurauchi* (Huber) Cuatrec.). Aroeira (*Myracrodruon urundeuva*) was the most used species (86%) by females, followed by mackerel (*Luffa operculata* L.- 70%), corama (*Bryophyllum calycinum*- 56%), mastruz (*Chenopodium ambrosioides*- 48%), (*Plectranthus amboinicus*- 44%), plum (*Ximenia americana* L. - 40%), linseed (Linum usitatissimum L. - 36%), albumin (*Aloe vera* (L.) Burm. (*Coutarea hexandra* (Jacq.) K. Schum - 20%) (SILVA, SILVEIRA, GOMES., 2016). Therefore, it is emphasized that the use of medicinal plants is being increasingly disseminated by women, due to their low cost and be considered as natural means of cure in certain diseases, highlighting gynecological diseases. In view of the above, this review aims to carry out an integrative review on the use of medicinal plants used by women in gynecological care.

MATERIALS AND METHODS

It is an integrative review, with a research method in which it allowed to gather, analyze and synthesize the results of studies on a specific theme, where it favored a more accurate knowledge of the studied subject (SOUZA, SILVA, CARVALHO, 2010). In order to achieve the objectives, an integrative review was carried out based on Mendes, Silveira and Galvão (2008), through the construction of analysis constituted from six steps that follows below, in order to obtain a better understanding on the theme based in previous studies. In this stage, it was the formulation of the guiding question and the objective of the study, to define the criteria for inclusion and exclusion, collection and analysis of the literature found (MENDES; SILVEIRA; GALVÃO, 2008). In this sense the guiding question was what knowledge produced by the literature on the use of medicinal plants used by women in gynecological diseases care?

Data search or sampling in the literature: This stage corresponded to the choice of databases, definition of descriptors, inclusion criteria, exclusion and the search period of scientific articles. After the delimitation of the thematic, the search of the articles in the data bases selected for the identification of the studies to be analyzed was started. For the selection of the studies, the following databases were used in the research: Medical Literature Analysis and Retrieval System Online (MEDLINE), Latin American and Caribbean Literature in Health Sciences (LILACS), CINAHL, Cochrane, Scopus and Web of Science (WOS). The articles were collected in September 2018. The following descriptors were adopted, as available in the Health Science Descriptors / Medical Subject Headings (DeCS / MeSH) list: Plants medicinal. Women's health. The cross-linking of the descriptors was mediated by the Boolean operator "AND", as presented below: Plants medicinal AND Women's health. The selection criteria of the articles were: primary articles published in the last five years (2014-2018), in Portuguese, English and Spanish, addressing the main theme, medicinal plants used by women in gynecological diseases; have been published in national and international journals; available online and free access, completely free of charge. Theses, dissertations, literature reviews and editorials were excluded from the research. The selection process of the articles is presented below (Figure 1).

Definition of the information to be extracted from the selected studies / categorization of the studies: After reading the articles, the data were collected by completing an instrument (table 1 and 2) containing the following data: database, periodical, qualis, title, author, year, objectives, level of evidence, method and main results of each selected study (MENDES, SILVEIRA; GALVÃO, 2008). In addition to these data, the Pereira and Bachion (2006) benchmark was used to identify the level of evidence.The level of evidence is used to classify the evidence strength of scientific studies according to

the methodological approach used during its execution, thus validating its credibility and fidelity to the information provided. They are further divided into 5 scales, the first being a randomized study with high statistical power and the last a case report. (2006)

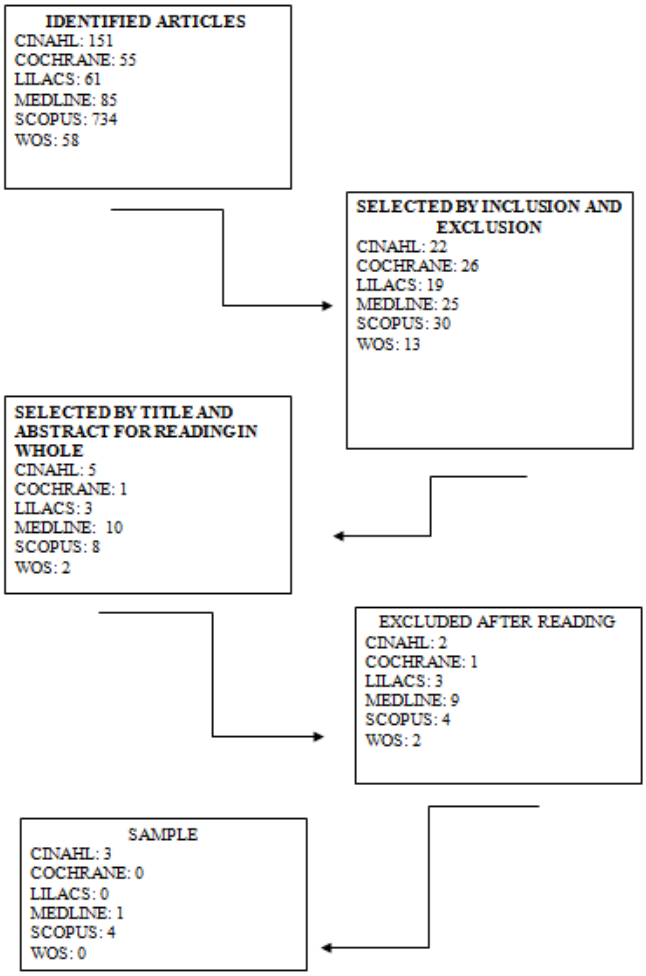

Figure 1. Flowchart of article selection. Redenção, Ceará, Brazil, 2018.

Evaluation of the studies included in the integrative review: In this stage the synthesis, comparison and discussion of the data obtained by reading the articles was constituted. It is equivalent to the analysis of the data in a conventional research, in which there are the use of appropriate tools. To ensure the validity of the review, the selected studies were analyzed in detail. The analysis performed critically, sought explanations for different or conflicting results in different studies. Among the approaches, the reviewer opted for the application of statistical analyzes; the listing of factors that show an effect on the variable in question throughout the studies; the choice or exclusion of studies from the research design. Such approaches presented advantages and disadvantages, being the most appropriate choice a hard task, in which they should seek to evaluate the results in an unbiased manner, seeking explanations in each study for the variations in results (WHITEMORE and KNAFL, 2005).

The levels of evidence of the studies were also evaluated according to the following classification of Pereira and Bachion (2006):

Level I - Randomized work with adequate technique, with follow-up of at least 80% of the cases and compatible statistical study; or meta-analysis with adequate technique and consistent results of level I work.

Level II - Randomized work with partial randomization or with imperfect technique or with follow-up of less than 80% of the cases or imperfect statistical study. Comparative prospective study. Meta-analysis of level II works or meta-analysis of works level I with inconsistent results.

Level III - Comparative retrospective case study or meta-analysis of level III work.

Level IV - Description of case series, with analysis of results, without comparative study.

Level V - Case description, surgical technique description or expert opinion.

Interpretation of results: The stage in which it was constituted by the discussion based on the literature review. It corresponded the phase of discussion of the main results in conventional research. The reviewer based on the results of the critical evaluation of the included studies, made the comparison with the theoretical knowledge, the identification of conclusions and implications resulting from the integrative review. Due to the extensive review conducted, it was possible to identify factors that affect nursing policy and care (clinical practice). The identification of gaps allowed the reviewer to point out pertinent suggestions for future research aimed at improving health care (WHITEMORE and KNAFL, 2005).

Presentation of knowledge review / synthesis: This stage consisted of the elaboration of the document that contained the description of the steps taken and the results that were organized in tables and categories to discuss the importance of medicinal plants in the health care of women (WHITEMORE and KNAFL, 2005).

RESULTS AND DISCUSSIONS

Eight articles were analyzed in this review. A general representation of the analysis of the articles is presented in Tables 1 and 2.

Of the studies evaluated, three reported on clinical trials and research using phytotherapy in women's health and five dealt with ethnobotanical care in gynecological diseases in the area of women's health. Of the surveys evaluated and presented in Table 1, three were in the CINAHL database, one in the Medline and four studies in Scopus. In addition, their qualis, with B1 predominance, were highlighted. The most frequent journals were international. Titles, authors and years were also presented. In Table 2 presents the objectives, level of evidence, method of each study and main results. At the level of evidence of the studies, there was a predominance in level VI, followed by the methodology, which was more prominent qualitative studies. Regarding the main results of each study, there was greater dominance in the category of ethnobotany related to women's health, where they brought the types of plants used to treat gynecological diseases.

Clinical trials and research using phytotherapy in women's health: Based on Table 2, it was observed that three articles (articles 02, 03 and 04) recovered for the purposes of the present review, experimental and exploratory studies, with

Table 1. Presentation of the summary of articles included in the total sample of the integrative review. Redenção, Ceará, Brazil, 2018

	BASE DE DADOS	Journal	QUALIS	TITLE	AUTHOR	YEAR
01	CINAHL	Journal Gaúcha of nursing	B1	Cervical cancer prevention among quilombola women in the light of Leininger's theory	FERNANDES, E. T. B. S. *et al.*	2018
02	CINAHL	Evidence-Based Complementary and Alternative Medicine	B2	Effects of Inhalation of Essential Oil of Citrus aurantium L. var. amara on Menopausal Symptoms, Stress, and Estrogen in Postmenopausal Women: A Randomized Controlled Trial	CHOI, S. Y. *et al*.	2014
03	CINAHL	Journal of Human Nutrition and Dietetics	B1	The effect of marjoram (Origanum majorana) tea on the hormonal profile of women with polycystic ovary syndrome: a randomised controlled pilot study	HUSEIN, I. H.; TUKAN, S. & ALKAZALEH, F.	2015
04	Medline	Journal of Proteomics	A1	Quantitative analysis of differential protein expression in cervical carcinoma cells after zeylenone treatment by stable isotope labeling with amino acids in cell culture	ZHANG, L. *et al.*	2015
05	Scopus	Reproductive BioMedicine and Society Online	Não encontrado	Herbal fertility treatments used in North America from colonial times to 1900, and their potential for improving the success rate of assisted reproductive technology.	LANS, C.; SWANSON, L. T.; WESTFALL, R.	2018
06	Scopus	South African Journal of Botany	B1	Ethnobotanical survey of medicinal plants used for traditional maternal healthcare in Katsina state, Nigeria	KANKARA, S. S. *et al.*	2015
07	Scopus	BioMed Research International	A2	Ethnogynaecological Assessment of Medicinal Plants in Pashtun's Tribal Society	ADNAN, M. *et al.*	2015
08	Scopus	South African Journal of Botany	B1	Traditional herbal remedies used by women in a rural community in northern Maputaland (South Africa) for the treatment of gynaecology and obstetric complaints	WET, H.; NGUBANE, S. C.	2014

Table 2. Presentation of the objectives, level of evidence, method and main results of the articles included in the final sample of the integrative review. Redenção, Ceará, Brazil, 2018

	Aim	NE	METHODOLOGY	MAIN RESULTS
01	Discuss the cervical cancer prevention practices of quilombola women	VI	Qualitative study, conducted in 2014 with twenty women from a quilombola community, located in Bahia. The data were collected by means of a semi-structured interview recorded and analyzed through the ethnographic survey.	The quilombolas pointed out as preventive practices for cervical cancer the cultural care, through the use of medicinal plants, and the professional care, characterized by the accomplishment of the Papanicolau. However, a majority of women did not carry out prevention.
02	Investigate the effects of inhalation of essential oil of Citrus aurantium L. var. amara (neroli oil) in menopausal symptoms, stress and estrogen in postmenopausal women.	II	Randomized double-blind controlled trial. Sixty-three healthy postmenopausal women were randomized to inhale 0.1% or 0.5% of oil of the neolibolum or almond oil (control) for 5 minutes twice daily for 5 days. The following were evaluated: General characteristics, self-reported menopause, life qualification questionnaire and symptoms. Related to menopause.	Compared with the control group, the two groups of oil of neolibol showed significant improvements in the physical domain MENQOL score and sexual desire. Systolic blood pressure was significantly lower in the group that inhaled 0.5% neroli oil than in the control group. Compared with the control group, the two groups of nitrous oil had significantly lower diastolic blood pressure and tended to improve pulse rate and serum cortisol and estrogen concentrations.
03	Investigating the effects of marjoram tea on the hormonal profile of women with polycystic ovary syndrome (PCOS) in a randomized, double-blind, placebo-controlled study .	II	Twenty-five patients were assigned to receive marjoram tea or placebo tea twice daily for 1 month (intervention group: n = 14; placebo group: n = 11). The hormonal and metabolic parameters measured at baseline, as well as after the intervention, were: follicle-stimulating hormone, luteinizing hormone, progesterone, estradiol, total testosterone, dehydroepiandrosterone sulfate (DHEA-S), fasting insulin and glucose, of the homeostasis model for insulin resistance (HOMA-IR) and glucose for insulin ratio.	Marjoram tea significantly reduced DHEA-S and fasting insulin levels ($P < 0.05$) by a mean (SD) of 1.4 (0.5) μmol L-1 and 1.9 (0.8) μU mL -1, respectively. Compared with the placebo group, the change was significant only for DHEA-S ($P = 0.05$), but not for insulin ($P = 0.08$). HOMA-IR was not significantly reduced in the intervention group ($P = 0.06$), although the change was significant in comparison to the placebo group ($P < 0.05$).
04	Investigate the potencies of anticancer properties in human action and the underlying molecular mechanisms.	II	They quantified the changes in protein expression in Zey treated AC cells. They used stable isotope labeling with amino acids in cell culture in combination with high performance liquid chromatography-electrospray ionization mass spectrometry and bioinformatics analysis to compare profiles of protein expression in HeLa cells before and after treatment with Zey.	Of 1805 differentially expressed proteins identified, 229 were selected as key protein molecules and classified into nine categories. Profiling of differentially expressed proteins has contributed to our understanding of the molecular mechanism by which Zey induces apoptosis of HeLa cells.
05	Identify sources of herbal remedies in North America through 1900, describe evidence of their efficacy and any side effects, and examine how plant use can aid Assisted Reproduction Technology.	VI	Ethnomedicinal methodology involving the examination of published ethnobotanical, phytochemical and pharmacological data.	The results were specific uses of plants for infertility treatment and did not recommend its long-term use. Some plants may be used in conjunction with in vitro fertilization or intrauterine insemination treatment; others would be used to support any resulting pregnancy according to the needs of the individual patient. Adapting the treatment to individual needs is the practice of Chinese medicine.

……..Continue

06	Document medicinal plants used for traditional maternal health care in the state of Katsina, Nigeria.	VI	The semi-structured questionnaire method was used to interview 300 respondents (50 of 2 Local Government Areas from each of the 3 senatorial districts), including herbalists, traditional birth attendants (TBAs), traditional physicians (TMPs), domestic wives , farmers and others. Medicinal plants belonging to 101 genera distributed among 50 families were documented.	Most of the plants reported belong to Fabaceae (22.52%), Asteraceae (7.21%) Malvaceae (5.41%) and Anacardiaceae (4.51%). Acacia nilotica (L) Delile and Gueira senegalensis JF Gmel had the highest Relative Frequency of Citation (RFC) and Loyalty Level (FL) of 0.93; 100% and 0.92; 100%, respectively. Among the 18 categories of diseases, headache, navel pain, postpartum haemorrhage and postpartum wound healing had the highest Informant Consensus Factor (ICF) of 1.00 each.
07	Document detailed ethnogynecological knowledge of selected remote regions of the Pashtun tribe in northwestern Pakistan.	VI	Semi-structured questionnaires were developed to collect ethnographic and ethnographic data. Informants were asked about the number of gynecological plants they knew, their gynecological applications, and their used parts. Ethnographic data on the age, occupation, and education of respondents were also collected. Informants in the study area have been given permission to publish and protect traditional drug data provided by them.	We documented 51 medicinal plants belonging to 36 families that were used by the women of the regions studied for the treatment of 9 types of gynecological complaints. Most plants (19) were found against menstruation, followed by 11 plants for gonorrhea and pregnancy.
08	To carry out an ethnobotanical survey, focusing on the knowledge of lay people about plants used in the treatment of gynecological and obstetric complaints.	VI	A total of 70 lay people (all female) were interviewed through structured questionnaires. The focus was on plants used for the treatment of gynecological and obstetric conditions, and information on names of vernacular plants, parts of plants used, methods of preparation and application were collected. Thirty-two plant species from 21 families were registered for the treatment of 19 different gynecological and obstetric diseases.	The most commonly treated gynecological conditions were dysmenorrhea (21 species), infertility (14 species) and menorrhagia (10 species), while blood purification (14 species) were used to facilitate work (9 species) and induce abortion) most mentioned for obstetric conditions. Bridelia cathartica was the most cited plant species (18 times) for the treatment of gynecological and obstetric problems.

Date: Stillwell, Fineout-Overholt, Melnyk, Williamson, 2010, p.43.
* Level of Evidence (EV).

Table 3. Presentation of the medicinal plants mentioned in the review studies, informing the scientific name, family and the main gynecological problems

	Scientific name	Family	Mode of Use	Gynecological problems cited
01	Bridelia catártica	*Phyllanthaceae*	Decocção (cozimento)	Gynecological and obstetric problems.
02	Óleo de neroli (*Citrus aurantium L. var. amara*)	*Rutaceae*	Inhalation (combination of water vapor with volatile substances from aromatic plants).	Symptoms of menopause, elevates sexual desire and lowers blood pressure in postmenopausal women.
03	Manjerona (*Origanum majorana)*	*Lamiaceae*	Tea, bath seat.	Polycystic Ovarian Syndrome.
04	*Uvaria grandiflora Roxb.*	*Annonaceae*	Juice (Liquid extracted from fruit)	Potent inhibition against various tumor cells, including cervical carcinoma cells.
05	black cohosh (Actaea racemosa L.)	*Rananulaceae*	Decoction (cooking)	Symptoms of menopause and efficacy as a complement or substitute for hormone replacement therapy.
06	black haw (Viburnum prunifolium)	*Adoxaceae*	Decoction (cooking)	Dysmenorrhea (pain during menstruation).
07	*Angelica gigasNakai*	*Apiceae*	Macerated (Soak in liquid a substance) or in the form of tea and bath.	Treatment of infertility.
08	*Angelica sinensis*	*Apiceae*	Macerated (Soak in liquid a substance) or in the form of tea and bath.	Treatment of infertility.
09	Chelidonium majus L.	*Papaveraceae*	Syrup, inhalation and tea.	Polycystic Ovary Syndrome
10	Rue (Ruta graveolens)	*Rutaceae*	Syrup, inhalation and tea.	Abortion and for menstruation suppressed.
11	Alcaçuz (Glycyrrhiza uralensis)	*Fabaceae*	Decoction (cooking)	Improve the impaired menstrual cycle, ovarian function and functions of the hypothalamus and pituitary gland.
12	Calota craniana (Scutellaria baicalensis)	*Lamiaceae*	Syrup, inhalation and tea.	Obstetrical and gynecological problems, prevent spontaneous abortion, metrorrhagia.
13	Cohosh azul (*Caulophyllum thalictroides*)	Berberidaceae	Macerated (Soak in liquid a substance) or in the form of tea and bath.	Relieves menstrual cramps, relieves labor pains, amenorrhea (absence of menstrual bleeding) and anti-inflammatory.
14	Barbatimão (*Stryphnodendron adstringens)*	*Fabaceae*	Macerated (Soak in liquid a substance) or in the form of tea and bath..	Inflammation and "heat in the womb" prevent cervical cancer.
15	Romã *(Punica granatum)*	*Lythraceae*	Tea, bath seat.	Inflammation and "heat in the womb" prevent cervical cancer.
16	Jatobá (*Hymenaea courbaril)*	*Fabáceas*	Syrup, inhalation and tea.	Inflammation and "heat in the womb" prevent cervical cancer.
17	Quixaba (Sideroxylon obtusifolium)	*Sapotáceas*	Decoction (cooking)	Inflammation and "heat in the womb" prevent cervical cancer.

quantitative nature, were used to evaluate the effectiveness of a new approach herbal medicine For these articles, the level of scientific evidence II was obtained, obtained from at least one well-delineated, controlled clinical trial. Articles 02 and 03 were developed with small samples of women of different ages. In the studies by Choi *et al*. (2014), it was reported that inhalation of neroli oil (Citrus aurantium L. var. Amara) minimized the symptoms of menopause, elevated sexual desire and lowered blood pressure in postmenopausal women - menopause. Neroli oil may have ability as an innovative and useful intervention to reduce stress and improve the endocrine system. It was evidenced in the study by Choi, *et al*., (2014) that neroli oil is very efficient in the treatment of menopause, stress and estrogen symptoms in postmenopausal women, being the inhalation treatment of this phytotherapeutic compound. The results obtained according to the study by Husein, Tukan, Alkazaleh (2015), showed the beneficial effects of marjoram tea on the hormonal profile of women with Polycystic Ovarian Syndrome (PCOS) because it was found to improve insulin sensitivity and reduce androgen levels. However, further research is needed to confirm these results and to investigate the active components and mechanisms that contribute to these potential beneficial effects of marjoram herb.

It has been found in the above study that marjoram tea has brought beneficial effects in relation to the treatment of Polycystic Ovarian Syndrome. However, in the study by Brasileiro *et al*. (2008), the author brought several plants not mentioned in the results of the previous study, such as Ximenia americana (Ameixa), Anacardium occidentale L. (Cajueiro Roxo), Schinus terebinthifolius Raddi , Plantago major L. (Plantaginaceae) and Turnera ulmifolia L. (Chanana) in the treatment of vaginal discharge, pelvic pain, uterine inflammation, micropolic ovary and regulation of the menstrual cycle. It is important to mention that the following species, such as mastruz (Chenopodium ambrosioides), malvarisco (Plectranthus amboinicus) and coram (Bryophyllum calycinum) have been identified in Silva *et al*. (2016) for the following gynecological diseases: menstrual cramps, gynecological inflammations, atypias / ectopias, uterine fibroids and micropolicísticos ovaries. In the same study, Almeida *et al*. (2006) also reported the same species of higher relative importance in the treatment of infection / inflammation of the vagina, ovary, uterus, menstrual problems, abortion and postpartum. In the work of Zhang *et al.,* (2015), natural plants have been used in the treatment of cancer for many years in China. However, the molecular mechanisms of induction of apoptosis in cervical cancer are not well understood. In the study, the results indicated that Zeylenone (Zey), which is isolated from an ethanolic extract of the leaves of Uvaria grandiflora Roxb. of the Annonaceae family, showed potent inhibitory activity against various tumor cells, including cervical carcinoma cells. The results provided important information for our understanding of the molecular mechanisms by which Zey induces apoptosis and the development of cancer drugs from natural plants.

Ethnobotany and Women's Health: An approach on medicinal plants in women's health care was verified in articles (01, 05, 06, 07 and 08) according to Table 2, following the medicinal properties of these plants as an important antimicrobial, anticancer and anti- in the treatment of these women. These studies reported the types of medicinal plants used in women's health and which parts of these plants were used for the treatment of gynecological diseases. In the study by Lans, Swanson, Westfall (2018), the medicinal plants most used by women in the treatment of gynecological problems were the following: newly discovered native American plants such as black cohosh (Actaea racemosa) and black haw (Viburnum prunifolium) for dysmenorrhea (pain during menstruation), black cohosh is widely used to treat the symptoms of menopause and several clinical investigations have verified its effectiveness as a complement or substitute for hormone replacement therapy, Angelica gigasNakai (Also called Korean angelica, giant angelica and purple parsnip, is a biennial or short-lived perennial plant found in China, Japan and Korea, belonging to the family Apiaceae) and Angelica sinensis (Chinese angelica, commonly known as "danggui" or "female ginseng", is an herb of the family Apiaceae, endemic to China) are plants used in Chinese medicine remedies as multicomp s to treat infertility. In addition to being known as "women's herb", indicated for many different types of gynecological disorders in Traditional Chinese Medicine (TCM). Chelidonium majus L. is used in Traditional Chinese Medicine to treat Polycystic Ovarian Syndrome (PCOS), Ruta graveolens (plant of the Rutaceae family), also a native plant used to abort and used for menstruation repressed. The identified findings on ethnobotany in women's health care revealed several new plants used in the treatment of gynecological diseases. In addition, these studies provide an assessment of the main plants used in women's health care and which parts of these plants were used in the therapy of this plant (Flor Barbosa, 2015).

In the study by Kankara *et al*., (2015), it was found that most of the species of plants used for gynecological complaints in South Africa belong to the Fabaceae family, and that the families of Euphorbiaceae, Asteraceae and Fabaceae were the most used for the treatment of gynecology and obstetrics in northern Maputaland, South Africa. However, she reported that Euphorbiaceae is the family most frequently used for reproductive health management of women in Tana River County, Kenya. Fernandes *et al*., (2018), brought in their study, cultural care, the use of medicinal plants that is commonly used for the prevention and treatment of gynecological diseases, the consumption of which is widely used by quilombola women. The use of medicinal herbs has been highlighted as a traditional practice preserved and older women use to treat inflammation and "heat in the womb" and prevent cervical cancer through the bark of the following plants: barbatimão, pomegranate, jatobá and quixaba. In the study by Wet, Ngubane (2014), thirty-two species of plants were registered for the treatment of various gynecological and obstetric problems. Among these problems were highlighted, dysmenorrhea, infertility and menorrhagia. Dysmenorrhea for 21 plant species, infertility (14 species) and menorrhagia (10 species). *Bridelia cathartica* (from the family Phyllanthaceae) was the plant species most cited by women for the treatment of gynecological and obstetric problems. The modes of preparation of the plants were mostly mixtures which were taken orally. ADNAN *et al*. (2015), emphasized the use of medicinal plants in the treatment of gynecological diseases, bringing the main species used in women's health. Most plants (19) were reported against menstruation, followed by 11 plants for gonorrhea and pregnancy. The parts of plants used by women, in the case of whole plants (33%) and leaves (31%) for various ethnomedicinal preparations in the area of gynecology, were also highlighted. In this study, women from remote regions of Pakistan were identified as having the most

traditional knowledge of the use of medicinal plants for their reproductive health. We highlight more studies confirming the use of medicinal plants in women's health care. The study by Messias *et al*. (2015) is another, where she corroborates with the other authors about several existing species used in the gynecological care of women. The species *Alternanthera brasiliana L, Alternanthera sp, Apium graveolens L, Artemisia vulgaris L, Tagetes minuta L, Impatiens balsamina L, Bryophyllum pinnatum L and Piptadenia gonoacantha* were the most indicated in their work. As noted, several innovative plants were highlighted in these surveys, where many of these were directed to the treatment of gynecological problems. In the ethnobotanical and women's health category, a significant number of studies were observed regarding traditional Chinese medicine and phytotherapy in the treatment of gynecological problems. These are important to understand the relevance of medicinal plants used in the health care of women in several countries (GELATTI; OLIVEIRA; COLET, 2016). Confirming with the study of Lans, Swanson, Westfall (2018), the author Silva, *et al.* (2012), in her work also brought the species Ruta graveolens used by adolescents in the attempt of abortion in the form of infusion teas. It is noteworthy that the use of phytotherapy in women's health care is very prevalent in the studies of this review, however, it is worth mentioning that some herbs such as Ruta graveolens are harmful to women's health, because they are sometimes used to induce abortion, causing complications to their health (OLIVEIRA, LUCENA, 2015). These results complement other research findings on the use of medicinal plants in the various gynecological problems presented in this review, such as the study by Castillo (2015), where the families of Lamiaceae, Leguminosae, Malvaceae and Rubiaceae used in the treatment of the following diseases gynecological: menstrual cramps, uterine inflammation, menstrual regulation, hemorrhage and ovarian inflammation.

Conclusion

In this study, we sought to know the use of medicinal plants in the application in gynecological health. The results found, through the articles selected, revealed the need for more research, without disregarding popular knowledge. Scientific studies on medicinal plants are still few, and the need for more studies and research on the phytotherapy used in the treatment of gynecological diseases is fundamental. The benefits to the use of medicinal plants for the population are a decrease in cost to health, prevention of diseases, health promotion, scientifically proven efficacy and union of popular knowledge and science. For the nurse, this study is of significant value, since this professional is one of those responsible for accompanying women in the prevention of gynecological diseases and also in cervical cancer, contributing to an awakening in relation to their behaviors, to reflect on the relevance of these alternative therapies in women's health care. Therefore, this review allowed an analysis of the studies regarding the medicinal plants used in the health care of women. The study also showed the importance of medicinal plants used by women in the treatment of gynecological diseases. From this, it was possible to identify the main species of plants used by women, as an alternative treatment in the care of their health.

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