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Ethnomedicinal Plants in the Treatment of Gynaecological Disorders: Traditional Knowledge and Contemporary Relevance

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ABSTRACT:

Traditional herbal medicine has been the cornerstone of healthcare for centuries, especially in rural India where modern medical facilities are often scarce. Nearly 65–90% of rural women continue to rely on ethnomedicinal knowledge for treating reproductive and gynaecological disorders, including menstrual irregularities, infertility, leucorrhea, pregnancy complications and postpartum issues. This study highlights the ethnobotanical practices of Indian communities in addressing gynaecological health concerns using medicinal plants. Data from existing literature and ethnomedicinal surveys reveal that leaves, roots, seeds and decoctions form the basis of therapeutic remedies, often administered by midwives and local healers. Plants belonging to families such as Fabaceae, Asteraceae and Lamiaceae are widely used for fertility regulation, treatment of infections, pregnancy-related problems and postpartum recovery. However, the decline of traditional knowledge due to urbanisation, limited transmission of oral traditions and dependence on allopathic medicine poses a significant risk of knowledge loss. This study underscores the urgent need for documentation, scientific validation and sustainable utilisation of ethnomedicinal plants to preserve indigenous knowledge while exploring novel phytotherapeutics for women's health.

KEYWORDS: Ethnobotany; Herbal remedies; Medicinal plants; Gynaecological disorders; Women's health; Traditional medicine; Fertility regulation.

1.1 INTRODUCTION:

Despite 200 years of modern medicine, almost 90% of people in rural India still use traditional medicine to treat a variety of illnesses. Approximately 65% of Indians still practise traditional medicine (Badgujar, 2008). Menstrual issues are quite common among Indian women. In order to preserve and use medicinal plants in a sustainable way, traditional knowledge must be recorded.

India is referred to be the "Botanical Garden" of the world due to the variety of herbal treatments available there. Humans have always benefited from employing plants, plant parts, or plant substances for medical purposes (Singh, 2014). Since the beginning of civilization, plants have been utilised to treat a wide range of human ailments. India's ethnic and rural inhabitants have preserved a substantial portion of the traditional knowledge about the medicinal properties of plants growing around them. This knowledge has been handed down through the ages via oral tradition and is commonly used to treat common diseases and disorders. Due to unhygienic living circumstances, hunger and strenuous physical work,



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gynaecological problems are common among rural women in India, often during pregnancy. Every town has a group of women known as "Daiya," who specialise in treating certain illnesses and problems using readily available herbs. However, since the younger generation shows little interest in learning this crucial healing information, the number of these women healers is fast decreasing (Khan, 2005).

1.2 CONCEPT OF ETHNOMEDICINE AND ITS SIGNIFICANCE

The components of the environment have been used by human societies as a source of food and medicine from the beginning of time (Jamshidi, 2018). Traditional herbal treatment, or ayurveda, has a long history and a solid base in India. Human ailments may be prevented and treated with the use of herbal plants (Shakya, 2016). Greek words ethnos and botane combine to form the term ethnobotany. Botane and Ethnos both refer to humans and herbs. The phrase literally translates as "study of people and plants. It involves both the study of plants (including trees, shrubs and herbs) and people. Ethnobotany is referred to as "the study of the utilitarian interaction between human people and flora in their surroundings, including therapeutic benefits".

In the multidisciplinary branch of study known as ethnobotany, people and plants interact. Human communities and plants have long coexisted in a symbiotic connection that goes beyond the provision of food, clothing and shelter to include religious rituals, aesthetics and medical care. An expert in ethnobotany investigates the intricate connections between humans and plants. This comprises plants utilised in textiles, construction, tools, cosmetics, medicine, divination and food. It also comprises plants that are used in social interactions, music and apparel. Additionally, these studies are usually helpful in revealing regionally significant plant species and sometimes they lead to the discovery of crude therapeutics (Yaday, 2010). In the past, most ethnobotanical research consisted of a survey of the plants that various groups utilised. India is one of the eight crucial hubs for the origination and diversification of domesticated species and one of the world's twelve megadiversity nations (Bhushan and Kumar, 2013). India has a long history of using many herbs and traditional medicinal practises, as well as a rich biodiversity. Since contemporary civilization has come to rely more and more on allopathic medications, there have been certain tribes and regions of the globe where herbal remedies have been utilised for generations that have largely lost contact with this practise. Even yet, just a small number of native people make up the family. Herbal treatments are sometimes the only or least priced choice for treating a variety of illnesses. A knowledgeable botanist identified and recorded the usage of the plants. An anthropologist sometimes visited, but a doctor seldom showed up to diagnose the condition. This has grown into a significant problem as a result of the market demand for herbal remedies expanding quickly and the ongoing debates over access, benefit sharing and biopiracy (Lewis, 2003). 40% of India's 16,000 recognised flowering plants have ethnomedicinal potential, according to the All India Coordinated Project of the Ministry of Environment and Forest, New Delhi, but only 10% are



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used in medicines and the pharmaceutical sector. These medicinal plants' intrinsic worth has the potential to be a source of cutting-edge drugs.

As a consequence, ethnobotany has gained popularity among botanists in developed countries like America and Europe. In Indian Vedic literature, the Charaka Samhita seems to be the most important source of knowledge on ethnobotany. Different regions of India were covered in beautiful forests with an abundance of therapeutic herbs. The locals were quite educated about a variety of applications for plants. As a result, scientists throughout the country have begun researching medicinal plants (Panghal, 2010).

1.3 GYNAECOLOGICAL DISORDERS AMONG WOMEN

The specialty of gynaecology, which is more often referred to as gynaecology (uterus, vagina and ovaries), is focused on the reproductive health of women. Medical gynaecology is concerned with the health issues that affect rural women, such as abortion, monthly irregularities (menopause and menopause), morning sickness (leucorrhea), infertility and delivery issues. Due to their financial position, a lot of women are forced to get an abortion. Self-induced abortions are widespread in nations where it is illegal to get an abortion or if the healthcare system is underfunded. Induced abortions were made prohibited nationwide in 1816 when the Indian Phenol Code of 1816 was created. When a miscarriage is purposefully brought on during an abortion operation, the phrase "induced abortion" is used. Gynaecological disorders have an impact on a woman's reproductive organs, including the uterus, vagina, vulva and fallopian tubes. The word thus encompasses a broad variety of ailments that might affect female fertility, such as endometriosis and pelvic inflammatory diseases (Nikolajsena, 2011). Women's health care, according to the WHO, is essential. Women in hamlets are underprivileged in both education and the economy. A trained village midwife, as opposed to a gynaecologist, is often preferred by expectant mothers in rural communities to deliver their newborns. Because of their geographic location and financial limitations, they cannot access healthcare and multispecialty institutions. In many underdeveloped nations, traditional birth attendants (TBAs) are the main providers of essential maternity care. The TBA has been able to provide basic healthcare, support and counselling to pregnant women and new mothers throughout India as a consequence of their significant knowledge and skills obtained from the norms and practises of the communities they hail from. They often practise medicine in underserved, remote and rural areas.

1.4 PREVELANCE USE OF TRADITIONAL HERBAL MEDICINES

Nature has provided everything needed for life, including food, fuel, medicine and other necessities. In this setting, medications are accessible for all human ailments. As long as there have been people on the globe, plants have been utilised to treat human suffering. The highest attention is given to plants with medicinal properties in all traditional medical systems. The ancient Indian Vedas, which range in antiquity from 3500 to 800 B.C., provide many references to medicinal plants. "Virikshayurveda, It was compiled before the advent of Christianity and served as the foundation for medical research in ancient India. It is one of the earliest works in



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traditional herbal medicine. The Rig Veda, which was written between 3500 and 1800 B.C., seems to be the earliest source to mention medicinal plants (Ahmad, 2003). A wide range of plant-based medicines have been developed as a result of the generations-long transmission of information about how to employ medicinally useful plants (Yadav and Bhandoria, 2013). For almost 80% of the world's population, many of the drugs we use today come from plants and plant-based treatments. Most therapeutic compounds in India's traditional systems of Ayurveda, Homoeopathy, Siddha and Unani are mostly derived from plants that have been gathered from the wild. Herbal medicines are becoming more and more popular in developing nations like India and China as people in both urban and rural regions resort to them for their safety, effectiveness and affordability. More than 8,000 plant species are known to have medicinal characteristics and indigenous traditional medicines' traditional formulations have greatly influenced the creation of cutting-edge plant-based medical solutions (Katewa, 2009). Few quantitative studies have assessed the use of traditional medicines for gynaecological treatment despite extensive ethnobotanical research into the medicinal properties of herbal plants. We should be grateful that there are still those who employ conventional treatments for women's health problems. On the other hand, there is insufficient scientific data to sufficiently justify the efficacy of conventional treatments. The availability of synthetic drugs, urbanisation and loss of traditional knowledge about traditional treatments are only a few of the factors that are causing traditional medical knowledge to decline. In this lesson, we learned about the traditional uses of herbs for gynaecological issues. Herbal remedies for gynaecological illnesses, female fertility and pregnancy-related problems are becoming increasingly common in underdeveloped countries like Jordan despite the lack of scientific data to support their safety and effectiveness. According to a research by Bardaweel (2013), the majority of infertile couples undergoing IVF therapy include herbs in their treatment plan. A research found that pregnant women utilised herbal remedies to treat heartburn, nausea and vomiting. AbuIrmaileh and Afifi found a variety of plant species used to treat different gynaecological conditions in 2003.

1.5 DEALING GYANECOLOGICAL ISSUES WITH HERBAL REMEDIES "Herbal remedies with female antifertility and abortificiant effects"

Most evidence-based female fertility drugs derive from rat preclinical research. This is the most feasible scenario without ethical issues concerning pharmaceutical drug usage during pregnancy. (Lamiaceae) A. monosperma, A. herba-alba, R. communis and Inula viscosa L. Aiton (Syn. Dittrichia viscosa (L.) Greuter) Ballota undulate (Fresen.) Bentham [Labiatae (Lamiaceae)], Citrullus colocynthis (L.) Schrad (Cucurbitaceae), Globularia arabica (Astraceae), Compositae (Astraceae), Ballota undulate, "Although the antifertility effects were the same in all species, the mechanisms by which they were achieved varied." Ethanolic extracts of A. monosperma leaves also affected the number of viable foetuses implanted, midterm abortions, delivery delays and spontaneous parturition failure in pregnant women. oxytocin (Hijazi & Salhab 2010). However, Artemisia herba-alba significantly affects rat ovarian and



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embryo weights, pregnancy rates, implantation locations and foetal survivability (Priya 2014). Carum carvi is caused by a reduction in LH and FSH, a blockage of the estrus phase and an increase in ovaries, uterus and body weight. These plants are unsafe for pregnant women and those attempting to conceive.

Lamiaceae plants like Ballota undulata and Salvia fruticosa Mill. are utilised for several purposes in folklore. According to early research, the plant species may damage female fertility and cause abortions. For instance, B. undulata has never treated gynaecological issues. Ballota undulata may reduce the number and weight of viable pregnancies, pregnancies and implantation sites in female rats, cause ovarian degeneration at both primary and secondary stages and have long-term contraceptive effects (Pradhan 2012). Chronic Citrullus colocynthis therapy in female rats may diminish ovarian weights, viable foetuses, pregnancies and implantation locations. These effects may increase dose-dependent mortality in pregnant mice (Dehghani 2008). Abortifacient characteristics are known (Pravin 2013). Lamiaceae plant Salvia officinalis L. has essential oils. This plant decoction has long been used by Jordanians to treat stomach and intestinal issues. Herba salvia and its formulations have several pharmacological effects. The antibacterial and antihydrotic properties may treat gingivitis and mouth irritation. Cosmetics and food markets in Europe are vast. Reproductive toxicity of the plant was studied. Ingesting various S. fruticosa L. (Labiatae) preparations decreased female rats' fecundity. For 30 days, adult female rats were administered an ethanolic S. fruticosa extract, but pregnancy rates did not change. The number of viable foetuses in pregnant rats reduced, whereas resorptions increased dramatically.

"Herbal remedies of fertility, pregnancy-related issues and breastfeeding"

The herb "citrullus carvi" has antispasmodic and galactogogue properties, making it harmful during pregnancy and nursing, according to "Mannion and Mansell" (2012). However, caraway may speed intestinal motility recovery after a C-section. This is not encouraged due to miscarriage or early labour risks. Trigonella foenum-graecum (Fenugreek) stimulates the uterus, thus pregnancy and nursing should be avoided. Cinnamomum zevlanecum, the scientific name for cinnamon, helps many new parents postpartum. Due to its calming and antiinflammatory characteristics, cinnamon is the most often recommended Chinese herbal combination for endometriosis-related clinical pain (Fang 2012). Female athletes' muscle pain may be greatly reduced without affecting exercise-related oxidative stress. It may help reduce vaginal tears during birth by relieving perineal pain and repairing episiotomy incisions (Mohammadi, 2014). Cinnamon decreases insulin resistance and improves menstrual cyclicity in polycystic ovarian syndrome patients. It relieved menstrual pains and irregularities (Flores and Quinlan 2014). Matricaria aurea (Chamomile) may cure nausea and vomiting in early or late pregnancy (Matthews 2014), according to research. Regular chamomile users had more worrisome miscarriages and early labours (Cuzzolin 2010). Chamomile is supposed to reduce pregnancy length and birth weight. In female mice, Nigella sativa L. (Ranunculaceae) (Black seed) decreased cyclophosphamide-induced decreases in primary and secondary follicles and



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ovarian diameters (Kamarzaman 2014). It increased nursing rat milk production, which increased pup weights during sucking. Thymoquinone during pregnancy decreased embryo defects and increased embryo development and maturation in diabetic mice (Al-Enazi 2007). Chamomile and black seed have not proven safe or effective during pregnancy in clinical research. Khreshesh (2011) reported that pregnant Jordanians treated heartburn using mixed herbs, cucumber, lentil seeds, or dried tea leaves. Research has never backed ethnopharmacology's use. Midwives, who care for pregnant women most, must provide evidence-based herb safety recommendations. 'Conventional usage' information should be available to pregnant women so they may make informed decisions about its future use (Holst 2011).

1.6 ROLE OF MEDICINAL PLANTS IN IMPROVING WOMEN'S GYNACELOGICAL STATUS

Many civilizations have employed medicinal plants for ages. Medical plants and their derivatives have long been a key therapeutic resource in Brazilian traditional and complementary and alternative medicine. The 1978 Alma Ata Declaration recognised "the use of herbal and phytotherapeutic plants for prevention" treatment and palliation, marking a turning point in medicinal plant use worldwide. The "World Health Organisation" (WHO) recognises medicinal plants and phytotherapy globally (IBIAPINA, 2014).

WHO uses herbal remedies because industrialised drugs are expensive and the public has limited health care access. Knowing and being autonomous in health care are major arguments for its usage. The surge in adverse reactions may be due to medicinal plant use. WHO received around 5,000 herbal adverse effect complaints before 1996. Non-notification occurs when doctors fail to recognise negative effects of herbal treatments and patients neglect to disclose plant usage during consultations. STIs, the second major cause of morbidity in women, are expected to affect 340 million people worldwide (Luppi, 2011). Gynaecological infections aren't among Brazil's top 10 deaths, thus they're usually preventable (92%).

According to international evaluations, North America, particularly Brazil, has little research on medicinal plant usage for women's health concerns (Yazbek, 2016). Fabaceae and Asteraceae are the most often used plant groups in Brazil for gynaecological and vaginal infections. Remember that ingestion, tea and leaves are the most popular administration modalities, depending on dosage, preparation and route. Similar outcomes have been seen among Iranian and African women. The species chosen depends on local phytodiversity, plant availability and cultural value. Silva, Silveira and Gomes (2016) found that the following species treat gynaecological illnesses: "mastruz (Chenopodium ambrosioides) and malvarisco (Plectranthus amboinicus (Lour.) Spreng.), followed by aroeira (Myracrodruon urundeuva (Bryophyllum calycinum Salisb), Noni (Females used aroeira (86%), followed by mackerel (Luffa operculata L.Medical plants are growing increasingly popular among women due to their affordability and natural cures for many maladies, including gynaecological disorders.



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Medicinal herbs heal several gynaecological problems. Medicinal herbs in Baramulla, Jammu & Kashmir heal many gynaecological diseases. No ethno-gynecological study has been done here. Between September 2019 and August 2020, ethnogynecological data on 73 plant species was collected via interviews with tribal people, traditional healers, midwives and focus groups. FL, UV, RFC and informant consensus factor were used to statistically assess the data. The most used plant component was leaves (29%). The most prevalent method of producing medication was decoction (40%). The highest ICF score was 87% for postpartum issues. Centaurea iberica and Notholirion thomsonianum, used for uterine tonic and contraception, had the greatest FL ratings, followed by Cuscuta reflexa and Notholirion (100%). Taraxacum officinale, Artemisia absinthium, Cannabis Sativa, Foeniculum vulgare and Punica granatum are included. We have demonstrated here that phytochemical and pharmacological research on plants with high UV, RFC and FL values may lead to new reproductive health treatments (Jan, 2022).

The use of therapeutic plants by gynaecological patients will be examined. Women use which herbs for gynaecological issues? Medical Literature Analysis and Retrieval System Online, COCHRANE and SCOPUS were used to select sample research. Medicinal plants described women's health and well-being. Between 2014 and 2018, research was done. Researchers may find a qualis magazine's title, author, year of publication, area of study, degree of evidence, methodology and most significant conclusions using the database. Both phytotherapy and ethnobotany research on women's health stressed the importance of medicinal plants. Studies were divided into two categories: Finally, women are turning to medicinal plants for their low cost and natural cures for numerous maladies, including gynaecological disorders. 2019 (Charlianne)

1.7 CONCLUSION:

The present review establishes that ethnomedicinal plants continue to play a crucial role in managing gynaecological health issues among women in rural and tribal societies of India and beyond. The reliance on plant-based remedies for menstrual regulation, fertility control, pregnancy complications and postpartum recovery reflects both cultural traditions and limited access to modern healthcare. Several species such as Trigonella foenum-graecum, Cinnamomum zeylanicum, Foeniculum vulgare, Artemisia absinthium and Nigella sativa have shown significant therapeutic potential but also pose risks such as antifertility or abortifacient effects when misused. While ethnobotanical practices remain relevant due to affordability, accessibility and cultural acceptance, there is an urgent need for scientific validation of their efficacy and safety through phytochemical and pharmacological studies. Integrating traditional herbal knowledge with modern healthcare can provide a holistic framework for women's reproductive health management. Furthermore, the documentation and preservation of indigenous knowledge systems are critical to preventing cultural erosion and biopiracy. In conclusion, ethnomedicinal plants represent not only a vital component of women's healthcare in rural communities but also an untapped reservoir of potential therapeutic agents for modern medicine. Promoting awareness, ensuring proper usage and supporting sustainable



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conservation efforts can strengthen the role of medicinal plants in improving women's gynaecological status globally.

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