

Editorial

Integrating Herbal Remedies in Indonesian Obstetric and Gynecologic Care: Bridging Tradition with Modern Medicines

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Indonesia is one of the richest places in the world for medicinal plants. It has over 30,000 plant species and a wide range of marine resources. This natural abundance positions Indonesia as a prominent global exporter of herbal medicinal goods. Notwithstanding its abundant natural resources, merely a minor percentage of Indonesia's 19,871 recognized medicinal plants are utilized for industrial applications—approximately 200 species are employed as raw materials for herbal goods. The nation's extensive biodiversity remains largely unexploited, posing both a challenge and an opportunity for the herbal medicine sector. Nonetheless, the utilization of this vast repository remains inadequate.^{1,2} Of the roughly 9,600 plant and animal species identified for their therapeutic properties, only a limited number have progressed to become widely utilized or commercially viable herbal medicines. This disparity underscores the imperative to utilize and protect this potential. To maintain Indonesia's global competitiveness, research and innovation in herbal medicine must transcend academic requirements and focus on tangible product and industry advancement. Despite extensive study by educational and research organizations, insufficient downstream prospects have resulted in many results remaining uncommercialized, so failing to convert research into important health products.^{3,4}

In 2019, Indonesia ranked 19th among exporting nations, holding just 0.61% of the world herbal medicine market. However, the sector showed robust growth with a 14.08% export increase from January to September 2020, amounting to USD 9.64 million. Major buyers include India, Singapore, Japan, Malaysia, and Vietnam. Herbal medicine remains a key element of healthcare. Its popularity spans both developing and developed countries.^{1,2}

The use of herbal remedies is deeply rooted and widespread in Indonesian obstetric and gynaecological care, particularly in pregnancy, postpartum recovery, lactation, and menstrual disorders. While cultural acceptance is high, scientific evidence regarding their safety and efficacy is growing but remains incomplete. Common herbal uses and indications include pregnancy such as ginger (*Zingiber officinale*), turmeric (*Curcuma longa*), and tamarind (*Tamarindus indica*) are frequently used to relieve nausea, fatigue, and back pain during pregnancy. These herbs are valued for their perceived "natural" origin, affordability, and cultural comfort. For lactation, herbs such as *Moringa oleifera* and katuk (*Sauropus androgynus*) are widely used as galactagogues to enhance breast milk production. Multiple studies have demonstrated the positive effects of these practices on milk volume and infant nutrition. Integrating them into both traditional and modern health initiatives, postpartum care involves the consumption of herbal mixtures by postpartum women. These mixtures are aimed at accelerating recovery, reducing uterine cramping, control the bleeding, and restoring strength. Popular plants include turmeric, tamarind, katuk, binahong, and turi leaf (*Sesbania grandiflora*). Ginger-based jamu is believed to assist recovery and uterine health. Menstrual disorders, turmeric is a commonly cited remedy for dysmenorrhea (menstrual pain), with studies supporting its effectiveness among Indonesian adolescents. Women's General Health. Other plants often cited include piper betle, kaempferia galanga, and leaves from vegetables grown locally (e.g., binahong), targeting a variety of women's health issues such as leukorrhea and pre-menstrual symptoms.^{5,6}

Herbal medicine is deeply integrated into Indonesian obstetric and gynaecological practice, with distinct regional preferences and a variety of botanicals used to address pregnancy discomfort, postpartum care, lactation, and menstrual symptoms. While many herbs are culturally ingrained and widely accepted, scientific evaluation of their safety and efficacy remains partial, highlighting the need for ongoing collaboration between traditional and medical practitioners for safe reasons.^{5,6}

Research imperatives and future directions to firmly establish herbal medicine within modern medical regimes, research quality must dramatically improve across primary areas. Herbal medicine quality and standardisation, ensuring quality from source material is needed to authenticate and assure reproducibility. Preclinical pharmacological assessments, standardized products should undergo thorough safety and efficacy evaluation in carefully controlled laboratory and animal studies.^{5,6}

Comprehensive collaboration between traditional and modern medicine in the use of herbal materials as modern medicines requires an integrated approach involving scientific research, standardisation and product development. This includes research on collaboration steps, scientific research, including preclinical trials, active compound identification, and pharmacological research. Raw material and product standardisation to establish quality standards for herbal ingredients, including identification of species, plant parts used, drying methods, and active compound concentrations. Interdisciplinary collaboration between researchers, herbal practitioners, and the pharmaceutical industry. Building close collaboration between researchers from various disciplines, traditional medicine practitioners, and the pharmaceutical industry and providing training and education to healthcare workers on the safe and effective use of herbal medicines and increasing understanding and recognition of traditional medicine as part of a comprehensive healthcare system with implementing clear and consistent regulations regarding the production, distribution, and use of herbal medicines.^{5,7}

Despite widespread use, questions over scientific validation, safety, and dose persist, underscoring the necessity for integration with evidence-based contemporary obstetric care. Indonesia presents an exceptional variety of indigenous herbal and plant-based options for women's health, rooted in profound regional traditions. These resources are significant in obstetric and gynecological treatment, particularly in rural and culturally conservative settings. Integrating indigenous knowledge with contemporary therapeutic practices—ensuring efficacy and safety—could significantly improve women's health. Indonesia provides an exceptional variety of indigenous herbal and plant-based options for women's health, rooted in profound regional traditions.

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