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Medicinal Plants in Traditional Childbirth Practices

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ABSTRACT

Traditional childbirth practices remain a cornerstone of maternal healthcare in many parts of the world, where medicinal plants play a central role in managing pregnancy, labor, and postpartum recovery. Ethnobotanical knowledge, transmitted across generations, has enabled communities to employ plants with uterotonic, analgesic, and healing properties to ease labor pains, induce contractions, and restore maternal health after delivery. Cultural significance is deeply embedded in these practices, with plants serving symbolic, ritualistic, and therapeutic functions. Regional variations exist, with African, Asian, and Indigenous American traditions demonstrating diverse but consistent reliance on plant-based remedies. Scientific evidence reveals that many of these plants contain bioactive compounds such as alkaloids, flavonoids, tannins, and saponins, which influence uterine physiology. However, concerns about safety, dosage, and potential side effects highlight the need for caution. Integration of traditional and biomedical practices, supported by policy frameworks and educational programs, is increasingly recognized as vital for improving maternal health outcomes. Ethnobotanical research, sustainable harvesting, and bioprospecting further emphasize the importance of preserving both cultural heritage and biodiversity. This paper underscores that medicinal plants in childbirth are not only therapeutic agents but also represent a bridge between tradition and modern healthcare.

Keywords: Medicinal plants; Traditional childbirth; maternal health; Ethnobotany; and Uterotonic.

INTRODUCTION

Traditional childbirth encompasses a variety of practices through which medicine men or midwives attended expectant mothers. These approaches, which have evolved from ancient rituals, are still widely employed throughout the world. In many such practices, remedial preparations incorporate medicinal plants, and the therapeutic use of herbal remedies constitutes a vital link with the past. Worldwide, medicinal plants are widely used to alleviate labor pains and pregnancy complications during the post-partum period [1]. These plants may be ingested orally, placed in the vagina, applied topically as a lotion, or used in steam baths [2]. The efficiency of many herbal remedies is enhanced by the inclusion of canteleaf (Centella asiatica), which contains a series of matrikines stimulating collagen synthesis. Many plants used in traditional childbirth are known to contain biologically active phytochemicals that may influence female reproductive physiology: uterine stimulants, uterine relaxants, and emmenagogues.

Historical Overview of Medicinal Plants

The earliest direct evidence for the medicinal use of plants stems from Mesopotamian texts dated to 2600 BC [1]. From ancient times, plant-based medicines have supported health during childbearing and healing in the postpartum period [2]. Traditional childbirth practices in Mali are widely employed among pregnant women, with many choosing medicinal plants to promote healthy pregnancies, prevent miscarriages, ease labour, and alleviate discomfort after birth [3].

Cultural Significance of Medicinal Plants in Childbirth

A wide variety of medicinal plants used during reproductive events such as pregnancy, childbirth, and postpartum are emblematic of the deep cultural roots and significance of traditional practices within the associated societies [4]. Childbirth is additionally situated within a larger cultural and social context, meaning the plants and other preparations chosen for labor may have symbolic value that transcends their perceived therapeutic efficacy [1].

The continued use of such plants and preparations is also often an important way for societies to distinguish their cultural identity.

Common Medicinal Plants Used in Childbirth

Medicinal plants have been an essential component across diverse traditions for women during labor, childbirth, and the postpartum period. Childbirth is an intense process and demands help and support in the form of medicinal plants and other preparations, administered either orally or topically [3]. Medicinal plants such as Cannabis and Ruta have been used since antiquity. Medicinal cannabis preparations were used by women during labor to strengthen the contractions and facilitate pain relief. Ruta was usually consumed in the postpartum period. Cuachalalate was used by indigenous people in America for possible medical uses, considering experiences of the use of the plant in childbirth, mainly strengthening the contractions [5]. Artemisia has also been used during childbirth because its chemical constituents induce uterine contractions. Different combinations of plant parts were preferred during the childbirth process. During walking and walking back home, a combination of rosemary, rue, and orégano was used. During late labor, the lady was requested to put her feet in fresh milk. During the postpartum period, ajenjo, a herbal tea prepared with real garlic and fresh aloe, was given to the patient [4].

Herbs for Labor Induction

Traditional childbirth practices persist widely throughout the developing world, before the introduction and widespread adoption of modern medical care. While contemporary obstetrics is largely dependent on equipment such as ultrasound and fetal monitoring to identify risks to mother and child, the decrease of maternal and infant mortality has historically been achieved through reliance on medicinal plants. The use of traditional medicine during pregnancy and childbirth contains significant cultural meaning around human gestation, much of which is encoded in traditional medicine [5]. Despite the emergence of a global industry of pharmaceuticals, many individuals still turn to medicinal plants to meet the needs of various stages throughout pregnancy [2]. The medicinal plants that are used to assist childbirth can be divided into three separate categories: those taken to induce and accelerate labour, those used to ease labour pains, and those administered post-birth to help uterine involution [5]. Medicinal plants that are used to induce and accelerate labour will be examined below as an example of how traditional knowledge continues to provide important sources of information surrounding pregnancy and childbirth. Laboratory studies have investigated several plant species collected in a similar manner to those used traditionally to determine their effect on uterine contraction and thus their potential spontaneous activity relevant to the induction of labor [2, 5].

Plants for Pain Relief

Management of childbirth exerts a strong influence over the maternal and infant mortality rates of a society. By some accounts, mother and child cannot survive the birth process without aid. In traditional societies, birth is managed by elder women, midwives, and healers following a set of culturally determined practices. There is an abundance of ethnographic literature describing the birth practices that are used in particular localities, with a high degree of continuity over time [4, 3]. Traditional childbirth practices are closely linked to ritual and cultural prescriptions and proscriptions. Symbols such as knotting cords or binding materials during the delivery of the infant are believed to affect an individual's fate. Medicinal plants have been used for thousands of years in childbirth and still constitute the basis for much of the medication used by the earth's population [1, 2]. Various species of Argemone were employed in childbirth for their uterine-stimulating properties. When given as infusions, the plants can cause uterine contractions, while induced inhalation also induces the contractions needed during labour. In some East African countries, some members of the Papaveraceae (poppy) family play an important role during childbirth. For example, to manage pain during delivery, insomnia, anxiety, and post-delivery complications [1, 4]. Extraction, isolation, and biological screening of papaveraceous plants in West Africa also reveal the presence of some pharmacologically active alkaloids. Emmenagogue and uterine stimulant properties have been documented in 43 plant species, and many are used during pregnancy to facilitate childbirth, to hasten delivery, to shorten the duration of labour, to overcome labour protracted beyond the normal limit, to ease delivery, to calm the child, or for rapid involution of the uterus. Plants that are used to soften the abdomen and prevent abdominal distension after delivery may also have uterine stimulant qualities. For example, the roots of the widely used Iranian Rosa dumaliana, whose main constituents of tannins and flavonoids are known to inhibit gastric inflammation and spasm [1, 3].

Postpartum Recovery Herbs

Medicinal plants fulfill important practical, symbolic, and religious functions within many traditional cultures [1]. In childbirth, labour is a process that takes place within a medical and social framework that affects decision-making and choices of medicinal plants. The birth process often consists of several stages, such as preparation, labour, birth, and postpartum recovery. For each stage, commentators have identified a biomedical framework, a social framework, and a pharmaceutical framework in which medicinal plants are used. Within the pharmaceutical framework, plants can be used for a variety of effects, including the facilitation of labour, pain relief, and

postpartum medicinal care [7]. Many traditional cultures have consolidated knowledge concerning natural medicines that have been communicated, refined, and evaluated over hundreds or thousands of years. Such large-scale natural experiments provide a rational basis for the prioritisation of local medicinal plants in the validation of safety and efficacy. During the postpartum period, women have been prepared with medicinal plants administered both internally and externally to speed recovery and strengthen the body following delivery. Steam baths, herbal preparations that contain hot and aromatic plants, are part of this transformational pregnancy experience and are often recommended throughout the day after bathing. The aim is to restore the balance of the body after labour and the expulsion of the foetus and the placenta [6]. The use of steam baths with medicinal plants was also mentioned in earlier ethnobotanical enquiries among several ethnic minorities. Medicinal plants play a significant role during the postpartum period in many rural areas. Women are also given a reduced amount of food during the first few hours after delivery, which is supposed to help keep the internal organs warm. A comparative study of the Brou, Saek, and Kry ethnic groups in Southeast Asia found that the postpartum period is viewed as a time of recovery, and practices are aimed towards restoring the body to a non-pregnant state. A dominant conception is that the woman has to be kept warm after delivery, and treatments for this period often involve confinement, the consumption of hot foods, and the use of medicinal plant decoctions. Contraindications in oral administration may be advised, depending on the type of plant used, dosage, and preparations of the remedy. In many cases, hot or warm preparations are considered to be the most beneficial way for ingestion during the postpartum recovery phase [9].

Mechanisms of Action of Medicinal Plants

Medicinal plants used in childbirth across the world have characteristics associated with uterine contractility [1]. Plants employed to facilitate delivery commonly contain alkaloids, flavonoids, saponins, starches, tannins, and terpenoids. Phytochemical and clinical information indicate that most have oxytocic and antispasmodic properties [1, 2]. The active principles also explain why certain plants are employed in alleviating post-partum pain. Uterotonic effects have been demonstrated for a number of widely used plants: Senecio species indigenous to Kenya, South Africa, and Zimbabwe; Tetradenia riparia from Ethiopia and Kenya; Warburgia ugandensis from Ethiopia, Kenya, Tanzania, and Uganda; and Ocimum suave from Kenya and Tanzania. In Nigeria, preparations from Piper umbellatum and Vernonia amygdalina have been shown to have oxytocic effects on the isolated uterus of non-pregnant rats [2].

Phytochemical Properties

Medicinal plants contain phytochemical properties that may act as active constituents on the human body [2]. Their impact has been extensively explored during pregnancy, childbirth, and postpartum recovery [1]. Various plants are traditionally valued for their ability to facilitate different stages of labor and during postpartum recovery. Their phytochemical constituents may induce uterine contractions that assist with delivery and subsequent cleansing of the womb. The capacity of their extracts to stimulate the myometrium is of particular medical interest [2, 1].

Effects on Uterine Contraction

Medicinal plants constitute a primary source of health care for the global population and have been employed to control clinical conditions since the dawn of human history. The nearly universal use of medicinal plants to assist with childbirth and midwifery, along with the practices of traditional birth attendants, midwives, and elders throughout the world, constitutes a significant aspect of landscape ethnoecology and ethno-palaeoecology, with strong cultural, spiritual, and social components. The mechanisms underlying the efficacy of these practices are not well known [9]. Given the difficulty of assessing the efficacy of oral drugs in vivo, many plants used in traditional medicines are investigated in vitro. An increase in uterine contraction is the primary mechanism to assist in childbirth. Uterotonic substances generally elicit uterine contractions by either increasing the intracellular calcium of myometrial smooth muscle, increasing calcium sensitivity, or both [7, 8]. Various medicinal plants or plants used in childbirth throughout the world have been documented as uterotonics. The increases in contraction strength induced by Spondias mombin L. leaf extract are due to diverse modes of action, including the induction of prostaglandin release, stimulation of α2-adrenoceptors, release of calcium from internal stores, and the ability to overcome the effect of cholesterol on uterine contractions. The traditional use of the leaves of S. mombin is consistent with a pharmacological action that facilitates childbirth and expels the placenta by increasing uterine contractions [7]. Leaf extracts of Bidens pilosa L. (Asteraceae) show weak toxicity and estrogenic- and oxytocic-like activities on primed-oestrogenized rat uterine muscle. These properties could explain its empirical use as a labor enhancer during childbirth, likely stemming from biologically active compounds or a combination of such compounds acting directly on the uterine muscle [8].

Regional Variations in Plant Use

African, Asian, and Indigenous peoples from Latin America and the Caribbean (IPLC) of the Americas all rely upon nearby natural environments to provide the materials required to ensure successful pregnancy, childbirth,

and postpartum recovery [2, 1]. Indigenous Peruvian Amazonian communities provide a custom-built example of how medicinal plants are used to ensure successful childbirth. The labour and birthing processes are unbearable without an infusion of the right plants, in the right combination, and administered at the appropriate moment. In these communities, childbirth is experienced fully, with no reduction of pain. Plant infusions prepared for parturient women do more than simply relieve the pains and aches of delivery: they maintain the efficacy of the labour process. The duration of labour and the intensity of contractions may be enhanced or alleviated by abortive, emmenagogue, or uterotonic plants, as determined by the scholars conducting the present research [1]. Ritual plants play a different but equally important role during the birth process. These plants are believed to hasten the delivery, to ensure that the passage of the child down the birth canal is performed adequately, and to act as a source of protection from all sorts of malevolent forces [2].

African Traditions

Traditional childbirth practices are applied by communities throughout the world and often rely upon medicinal plants to facilitate births. The use of medicinal plants in childbirth is an ancient practice that predates European settlement in regions such as South Africa by thousands of years. Certain plants continue to be widely used by expectant mothers today [9]. The introduction of clinical prenatal and postnatal care and a growing recognition of the high rates of maternal mortality in regions like South Africa have led to initial efforts to document much of the indigenous knowledge still in circulation. Herbal remedies to expedite or ease labour, to provide pain relief during birth, and to promote post-partum recovery can be found throughout African, Asian, and Indigenous American cultures [10].

Asian Practices

Numerous plants are used during pregnancy to complement biomedical care and to facilitate birth by affecting the digestive system, alleviating common pregnancy complaints and conditions, and influencing the uterus directly [1]. For instance, Zenkerella pagilioides is used in western Côte d'Ivoire as an analgesic during labor and to facilitate birth, by causing uterine contractions. The young leaves are part of a decoction prepared with the roots of Musanga cercropioides, which have anti-inflammatory properties. Cymbopogon citratus, an aromatic plant widely used worldwide during childbirth, is valued for its uterotonic effects and to ease persistent hiccups, causing great discomfort during labor. In the Indian subcontinent, the juice of Acacia modesta leaves aids a difficult birth by inducing uterine contractions, and the extract of Sesbania sesban leaves is used to facilitate delivery and to ease abdominal pain after labor [2]. Ocimum tenuiflorum is also reported as a uterotonic in childbirth [1]. Pain during childbirth is regarded as a natural condition, and is often treated with massage, reassurance, and emotional support, instead of plants. During the confinement period after birth, a special diet, steam baths, herbal decoctions, and "mother roasting" are commonly used to help the body's recovery. Mother roasting and food restrictions vary from region to region, but the confinement period usually lasts about a lunar month for a first child, and a shorter time for a subsequent child. In the consumption of the confinement diet, light boiled rice and hot water are staples, whereas cold foods and fresh produce are usually avoided [1].

Indigenous American Knowledge

Indigenous American traditional childbirth practices are well documented as a form of complementary and alternative medicine in many cultures of the Americas. Medicinal plants have been widely used during pregnancy, parturition, and postpartum recovery by Indigenous American women [11]. Practices are reported in Indigenous groups from the southern Chilean region around Patagonia and the Lakes Region, the Mapuche of both Argentina and Chile, the Atacama desert of northern Chile, and the Yucatan peninsula of Mexico. Medicinal plants are often used in conjunction with practices such as steam baths, community support, and abdominal massage. Indigenous trusses such as the q'axw are also utilized during postpartum to facilitate recovery [1]. Some of these plants are emmenagogues, abortifacients, and oxytocics, and some have demonstrated uterotonic activity, highlighting the potential to improve uterine contractility and allow the regulation of the timing and frequency of contractions.

Safety and Efficacy of Medicinal Plants

Medicinal plants are commonly used to facilitate childbirth and treat women during pregnancy and after delivery [3]. In some parts of the world, the safety and effectiveness of these plants have come under increased scrutiny. Use of medicinal plants to treat pregnant women was common among traditional practitioners in Mali, and knowledge about a wide range of plants was found [5]. More research needs to be conducted on the efficacy and safety of commonly used medicinal plants in pregnancy in Africa. Collaborating with traditional practitioners may be an important asset in both future research and public health priorities to improve maternal health during pregnancy and after childbirth. Many studies examine the use of herbal medicines during pregnancy across different regions, including Ethiopia, Palestine, Nigeria, and Rwanda [5]. Certain plants can facilitate childbirth, induce labor, or address postpartum healthcare.

Clinical Studies and Evidence

Despite the long history of medicinal plant use in traditional childbirth practices, scientific investigation of their efficacy remains limited [2]. A small number of clinical studies have been conducted, with most focusing on the oxytocic properties of administered plants. Even in Africa, close to home to the oldest records and probably the greatest contemporary use of traditional medicine, robust evidence remains scarce [9]. Medicinal herbs can be associated with an increased risk of adverse events or even toxicity, and therefore their use requires caution [1]. Meiotic effects can be highly variable: the emmenagogue properties of medicinal plants may induce uterine contraction that threatens pregnancy, yet relaxant activity may either inhibit or facilitate labour progression. Historically, only a small number of oxytocic plants have been thoroughly investigated in clinical contexts, prominent examples among them papaya leaf, which produces papain (L.), an oxytocic enzyme, as well as plants of the Apiaceae family such as Queen Anne's lace and walahang (Caucalis platycarpos), whose oxytocic potency has been noted since classical times [1, 2].

Potential Risks and Side Effects

Pregnant women have used medicinal plants throughout time to enhance corticoid hormone production, reduce infections, accelerate delivery, and alleviate childbearing pain. Medicinal plants may deter infections caused by miscarriage and epidural anesthesia [12]. However, despite widespread use of medicinal plants in healthcare support and pharmacology, information concerning their safety and effectiveness is generally sparse [11]. Women continue to use herbal remedies during pregnancy despite potential risks, possibly because they perceive a lack of alternatives. The use of plant remedies may also reflect psychological preparation, where women medicate to alleviate anxiety about the birthing process. Concerns about the use of medicinal plants during pregnancy and childbirth stem from the fact that pregnant women and fetuses may be more susceptible to adverse effects. Moreover, many plants used for abortion are also employed for assisting delivery. Consequently, the use of these plants during the first and second trimesters could have profound consequences [13]. A secondary analysis of data on 8213 pregnant women reported an association between the use of herbal medicines and a significantly increased risk of perinatal death. Furthermore, the use of herbal medicines during the first trimester has been linked with major congenital malformations. Some herbal preparations, including certain women's poly-herbal formulations and castor oil, have been associated with preterm birth and perinatal mortality. Given these findings, women need to seek medical advice before using herbal medications during pregnancy [12, 13].

Integration of Traditional and Modern Practices

Traditional and biomedicine health care practitioners are collaborating to improve maternal health care in various parts of the world [9]. The Centre for African Medicinal Plants and Traditional Health Practices (CAMPATH) and the University of Zimbabwe Medicinal Plants Research Programme (UZMPRP) are actively promoting collaboration between traditional healers and the United Nations and government agencies. Collaboration between traditional birth attendants and biomedical personnel has also been initiated in Sri Lanka, Tibet, and South America [9]. A partnership between the organization Medicina Ancestral Otomí—Hnas. Maristellas, the Federation of Traditional Midwives, and the Secretaría de Salud in the state of Querétaro, Mexico 1 is one example of implementing these recommendations. According to Burridge, the partnership aims to "effect a sustainable integration of traditional, community-based, and governmental health-care providers, with special emphasis on the protection of the traditional knowledge of the Hñahñu of Querétaro [8]."

Collaboration with Healthcare Professionals

Traditional birth attendants (TBAs) persist in providing skilled attendance at deliveries alongside modern obstetric services, particularly in remote communities lacking proper healthcare facilities. Midwives worldwide acknowledge medicinal plants as effective complements to biomedical pregnancy management and as essential components of health service interventions [12]. Hefni et al. (2018) detail specific examples: Syzygium aromaticum, Cuminum cyminum, and Anethum graveolens, which contain alkaloids, flavonoids, and essential oils, exhibit moderate uterine stimulant effects in vitro, paralleling the widely used Sphaeranthus indicus. The African pharmacopoeia offers both pro-fertility and anti-fertility plant preparations, reflecting community acceptance of herbal remedies and their integration with orthodox medicines. Widespread involvement of traditional and cultural practices enhances the efficacy of delivery and postnatal procedures; such collaborative approaches contribute significantly to the promotion of safe pregnancy and motherhood programmes [12].

Case Studies of Successful Integrations

Successful integration of medicinal plants with local practices is feasible at different levels, posing no substantial challenge to conventional Midwifery. Such collaboration previously yielded favourable outcomes in various societies [1]. Fieldwork in Cameroon employed interviews and observation to establish a comparative assessment of native practice [12]. The insights gained delineate a straightforward and effective programme for cross-collaboration and information exchange among herbalists, traditional birth attendants, and midwives, accordingly contributing to the desired formal healthcare system. A case study conducted in Karnataka, India, collected and

analysed 28 indigenous plant species utilised throughout pre- and postnatal care. The resultant 'Lehya' formulations offer artisanal potential through integration with local enterprises [2].

Ethnobotanical Research on Medicinal Plants

Ethnobotanical research addresses the relationship between people and plants as mediated through traditional knowledge, systems, and cultures. Ethnobotanical studies targeting childbirth practices nonetheless remain a fertile area for further contribution [2]. Systematic documentation and prioritisation of known plants for parturition would assist in meeting that aspiration. A growing number of ethnobotanical and phytotherapeutic surveys emphasise the cultural appropriateness of plant remedies in the context of traditional birth assistance [2]. The wealth of information gleaned also facilitates the incorporation of traditional methods into modern healthcare, as does the description of plant preparation and administration techniques [1]. Various threats from military conflict to restrictive legislation continually jeopardise traditional medical practice and consequently highlight the significance of ethnobotanical research in herbal-based technologies.

Methodologies in Ethnobotany

Ethnobotany is the interdisciplinary human science that studies the reciprocal relationships between people and plants within particular cultural contexts. Building upon the foundational work of Mircea Eliade (1958), ethnobotanical research involves a variety of methods aimed at documenting floristic knowledge and plant utilization [7]. Cross-sectional studies provide a profile of plant knowledge and use at specific moments or across substantial cultural areas, offering a broad perspective akin to an exhaustive review or meta-analysis. Large diachronic studies allow reconstruction of long-term trends in plant use and knowledge, often utilizing herbarium, museum, or archival evidence, for example, to reflect changes since the 16th century [5].

Documentation of Traditional Knowledge

Ethnobotanical research, driven by advances in information technology and analytical techniques, has rigorously documented the use of medicinal plants during pregnancy, childbirth, and postpartum care [2]. Ethnopharmacological research documents preparation and administration methods, clarifying the safety profiles of commonly used plants and serving as an initial step toward evidence-based medicine. Studies of plants used among South-East Asian minorities also demonstrate the importance of ethnopharmacological research as a foundation for developing culturally appropriate healthcare [1].

Future Directions in Research

Bioprospecting and sustainable harvesting of medicinal plants in traditional childbirth practices have become imperative for preserving the availability of these vital resources [3, 1, 2]. Rapid environmental and land use changes threaten the continued safe use of many plants. As traditional knowledge is predominantly transmitted orally, without wide distribution or written formats, these practices and biodiversity may rapidly disappear without intervention. Consequently, documentation and preservation of cultural heritage and biodiversity are urgently required to prevent extensive loss [3]. Medicinal plants are integral to childbirth rites worldwide, where consumption frequently forms part of childbearing ceremonies open to a significant portion of the community. Understanding the significance of medicinal plants in these practices constitutes an invaluable, yet underexplored resource for sustainable development and an integral part of the cultural heritage in many countries. Classical ethnobotanical surveys aiming at preserving and documenting traditional knowledge have successfully captured terrestrial and aquatic species used in rituals, articulating their knowledge, collection modes, preparation, and application to support continued, safe utilization [3]. Integrating traditional and complementary medicines into modern healthcare necessitates public health support for rural and indigenous communities, where most healthcare services rely on medicinal plants. Safeguarding and promoting the wealth of knowledge on medicinal plants and their responsible use is crucial. Expansion of educational programmes on health issues related to pregnancy and on the production and use of herbal products and medicines is required to confront health challenges effectively [2, 1].

Bioprospecting for New Medicinal Plants

Traditional childbirth practices worldwide, including in Africa, Asia, and the Americas, still rely on medicinal plants that penetrate nearly every aspect of care from pregnancy through postpartum services [2]. The varied plants involved mitigate pain, stimulate labour, control bleeding, promote lactation, and purify the mother and infant. Believed to be the oldest therapy still in use today, the tradition dates back at least 60,000 years [3]. Across cultures, the medicines serve as symbolic components, in addition to their pharmacological effects, grounding the physiology of the birth process in the moral and social order. At the same time, they function as the practical element of a complex system of procedures for protecting the mother and child from malign forces. Many species deliver their benefits through stimulation of uterine smooth muscle, which accelerates or triggers contractions [2, 3].

Sustainable Harvesting Practices

Given the heavy reliance on medicinal plants, sustainable harvesting practices become essential to guarantee the ongoing availability of materials required for traditional childbirth treatments. Implementing strategies such as the collection of seeds, leaves, and bark rather than felling entire trees allows plant populations sufficient opportunity for regeneration and continued abundance [2, 1]. Although many indigenous communities employ sustainable methods when gathering medicinal plants for childbirth assistance, increased demand owing to growing urban populations has intensified harvesting pressure [2, 1]. To circumvent widespread overexploitation, governmental authorities must thus develop conventional approaches designed to incentivize communities to maintain customary practices; this not only aids in safeguarding therapeutic resources but also helps preserve the cultural heritage comprising traditional childbirth knowledge.

Policy Implications for Traditional Practices

Some governments have promulgated laws regulating traditional medicinal plants or established national research committees or advisory councils to support traditional healers [1, 14]. Governments in Zimbabwe and Tanzania have established national councils to enhance the role of traditional medicine in health care. In Cameroon, the government has promulgated laws regulating traditional healing practices. In Ecuador, such laws have facilitated the integration of Ecuador's indigenous medicinal system into the national primary health care system at the policy level. In Mexico, the government has established a centre to promote research and development of traditional medicine and the uses of medicinal plants [1]. The Government of Zimbabwe formally acknowledges the role of traditional medicine in health care. However, there is a need to accommodate traditional medicine in the mainstream health delivery system through policy and development of strategies to assist the collaboration between the two systems. While it is imperative to promote the utilisation of traditional medicine during antenatal care in Zimbabwe, there is also a need to encourage antenatal care visits to health facilities [14]. A Bill of Rights of traditional practitioners should be passed into an act of parliament to protect and promote the use of traditional medicine in healthcare delivery. Such a Bill of Rights stipulates the rights of traditional practitioners in relation to their discipline. Legislation to integrate the two systems of healthcare should be enacted, as stated in the Traditional Health Practitioners Bill, as well as the National Health Strategy [14].

Legal Status of Medicinal Plants

Legislation concerning the use of medicinal plants during childbirth varies globally. In many countries, regulations either prohibit or mandate caution in their use, especially when sourced in unconducive environments [12]. In Zimbabwe's urban public healthcare institutions, midwives perceive the consumption of herbs during labor as problematic; protocols often dictate denying admission to pregnant women who have ingested unknown herbal preparations due to the inherent risks involved [2]. The widespread practice of using combustion smoke from selected vegetation during labor further complicates the management of such cases. Although Zimbabwean laws do not explicitly address the use of medicinal plants in pregnancy, the existing legislative framework implies that any illegal or unsupported ingestion constitutes an offence. Acts such as the Medicines and Allied Substances Control Act [Chapter 15:03], the Public Health Act [Chapter 15:09], and the Pharmacy Act [Chapter 27:04] govern the regulation of such practices. A significant challenge is posed by the absence of registered nurses specialized in the philosophy and cultural symbols underpinning traditional herbal practices, the guardians of such hereditary knowledge [2, 12]. Consequently, the current legal environment tends to criminalize the use of medicinal plants during childbirth. Nevertheless, some countries, particularly those rich in floristic resources and subscribers to the Agenda 21 framework, actively promote the conservation of medicinal plants allied to indigenous health systems. Complementary support is provided by the Meeting of African Ministers of Education, which advocates for the development of educational curricula focused on the development and nurturing of medicinal plants, propagation of traditional herbal knowledge, and the marketing of related products [12].

Support for Traditional Healers

Following extensive worldwide use of medicinal plants during pregnancy and childbirth, recent academic endeavours have examined the emerging challenges confronting traditional practitioners [14]. Some Sub-Saharan African countries have enacted specific legislation designed to safeguard traditional practitioners and promote their coexistence alongside contemporary healthcare providers [10]. International organizations such as the Organisation of African Unity have delineated policies aimed at fostering traditional medicine and customary health practices, which remain highly popular in many developing nations. Pharmacists, medical doctors, and healthcare providers thus find themselves encouraged to embrace, support, and respect the services offered by traditional healers. Capacity building for traditional health practitioners assumes critical importance in procuring medicinal plants, their storage, preparation, dosage, and administration, coupled with the establishment of local curricula and certificate renewals [10, 14].

Educational Programs on Medicinal Plants

The extravagant consumption of medicinal plants rather than their enormous numbers contrasts with the profile of medicinal plants used predominantly by men, dissuading the younger generations from following in the herbalists' footsteps [4]. Despite their efficiency and long use, the real health benefit of many medicinal plants is not always fully guaranteed in the absence of adequate preparation, precise dosages, or accurate identification. A didactic guide in the Ecuadorian Andes provides health professionals with relevant information on medicinal plants during traditional childbirth. The use of supportive medicinal plants constitutes essential knowledge in the traditional maternity cycle in a Havyak community of Uttara Kannada district in India [2]. The repertoire of remedies covers the pre- and post-natal periods. Phytochemical screening and spectroscopy studies show the presence of biologically active compounds like saponins, sterols, and terpenes. The pharmacological effect may result in uterine toning or controlled contraction. Along with the provision of herbal tonics, warm baths, and steam tent treatments, reinforce the multi-component approach. Guidelines issued by the World Health Organization secure access to safe, effective, and affordable reproductive health care in the traditional Cofán community of Dureno, Ecuador [11]. The practice of traditional medicine during childbirth involves the consumption of infusions made of flowers, leaves, fruits, bark, and roots in order to relieve ailments. A positive attitude from healthcare providers increases the accessibility rate, while good confidence encourages the disclosure of related information. Herbal medicine largely fulfills local demands when fears of modern childbirth services remain widespread. Women often adopt infusions, baths, ocular drops, and creams with the knowledge that their traditional use offers real benefits. Programs promoting medicinal plants adopted in recent years offer powerful means for the dissemination of knowledge. These initiatives should encourage the implementation of adequate curricula and facilitate the organization of community training in the form of workshops [11].

Curriculum Development

Curriculum development and training of traditional midwives and community health workers in the use of traditional and complementary medicine in pregnancy and childbirth have gained increased attention. Ethnobotanical studies in Nigeria and India have documented the utilization of medicinal plants for mother and child care. A variety of practices are widespread among different ethnic groups in Mali, where traditional medicines continue to play a prominent role in pregnancy care despite improvement in access to health services [3]. Traditional medicine practitioners regularly provide care to pregnant women and advise about the use of medicinal plants during pregnancy and breastfeeding [4]. Rural populations depend on traditional medicine due to inadequate health infrastructure and a lack of skilled health personnel. Indigenous knowledge provides remedies for various ailments in pregnancy, such as abdominal pain, anaemia, backache, bacterial infections, body pains, cough, diarrhoea, epilepsy, fever, and malaria, and plays a vital role when western medicine cannot offer solutions. Some medicinal plants have adverse or embolic effects; therefore, information and education for both traditional practitioners and pregnant women on usage, dosage, and side effects are paramount. Including traditional practitioners and traditional birth attendants in maternal health programmes and training them in safe birth practices offers an opportunity to improve maternal health in Africa [3].

Community Workshops and Training

Community workshops on medicinal plants and their multiple uses in daily life are important to support the development of traditional knowledge [11]. Such workshops teach the preparation of herbal oil, salve, and anti-diarrhea syrup, among others, highlighting how the community can benefit from its plant heritage. In Ecuador, many farmers use plants for childbirth and traditional medical practices, and prefer medicinal plants over pharmaceutical products 4. Similarly, the Cofán-Dureno community actively practices birth control, knows about plants that assist lactation and treat menstrual irregularities, and cures diseases affecting the reproductive system and children. These traditional childbirth remedies involve infusions made from flowers, leaves, fruits, bark, and roots, administered as aromatic water, decoctions, rubs, and poultices, grounded in ancestral knowledge, beliefs, and previous experience [11]. During pregnancy, only a few external medicinal plants are used, whereas breastfeeding mothers employ a wider variety; commonly utilized species include Cinnamomum triplinerve, Citrus limon, Mikania micrantha, Matricaria recutita, Eucalyptus globulus, Turnera diffusa, Citrus x aurantium, Rubus adenotrichus, Mentha spicata, and Quassia amara. Plant use during pregnancy, childbirth, and postpartum healthcare is a common practice in Lao PDR: for example, the Brou, Saek, and Kry ethnic groups use medicinal plants to facilitate childbirth, alleviate menstruation problems, assist recovery after miscarriage, mitigate postpartum hemorrhage, aid postpartum recovery, and treat infants [15, 16, 17]. Novel insights into plant use and preparation offer a better understanding of culturally important practices such as confinement, dietary restrictions, mother roasting, and herbal steam baths, and their incorporation into modern healthcare.

CONCLUSION

Medicinal plants have long shaped childbirth experiences, offering practical, cultural, and spiritual support to mothers across generations. Their widespread use underscores both their accessibility and perceived efficacy in

managing labor, pain relief, and postpartum recovery. While modern obstetrics has advanced maternal care globally, traditional practices continue to provide valuable insights into natural therapies, some of which align with scientific evidence of pharmacological activity. Yet, challenges remain regarding safety, standardization, and regulation, as improper use can pose risks to maternal and fetal health. Bridging traditional knowledge with biomedical practice through collaboration, research, and policy development can enhance maternal health outcomes, preserve cultural heritage, and promote sustainable use of plant resources. Ultimately, the responsible integration of medicinal plants into maternal care highlights their enduring relevance in addressing contemporary healthcare challenges while honoring the wisdom of ancestral traditions.

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