

Use of Popular Traditional Contraceptive Methods among Women of Reproductive Age in the Yopougon District of Abidjan, Côte d'Ivoire

Esme Marie Laure Essis^{1*}, Ehoulé Kroa^{1,2}, Loukou Léandre Konan¹, Djedou Martin Amalaman³, Kevin Yohou¹, Djouka Olga Denise Kpebo^{1,4}, Julie Sackou-Kouakou^{1,5}

¹National Institute of Public Health, Abidjan, Cote d'Ivoire

²National Program for the Promotion of Traditional Medicine, Abidjan, Côte d'Ivoire

³Department of Sociology and Anthropology, Peleforo Gon COULIBALY University, Korhogo, Cote d'Ivoire

⁴Department of Public Health and Biostatistics, Faculty of Medicine, Félix Houphouët Boigny University, Abidjan, Cote d'Ivoire

⁵Department of Public Health, Faculty of Pharmaceutical and Biological Sciences, Felix Houphouët Boigny University, Abidjan, Cote d'Ivoire

Email: *essismarie2007@yahoo.fr

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Abstract

Introduction: This study examines the use of popular traditional contraceptive methods (PTCMs) among women in Côte d'Ivoire. It is based on the observation that the average fertility rate, estimated at 4.3 children per woman, rises to 5.3 in rural areas. However, the national contraceptive prevalence remains relatively low, estimated at 21%, of which 3% use traditional methods. Given the significant proportion of women turning to traditional contraception to meet their family planning (FP) needs, this study explores the social rationales behind the preference for PTCMs over modern contraceptive methods (MCMs). **Methodology:** This is a qualitative study that collected data from 15 users of PTCMs, 3 traditional practitioners, 2 female herbalists, and 2 healthcare providers through in-depth individual interviews. The data enabled an exploration of women's experiences with PTCMs, the reasons for abandoning MCMs, and the identification of medicinal plants and cultural practices used. Audio recordings of the interviews were transcribed, translated, and coded using thematic analysis through an inductive approach. **Results:** The study reveals that the reasons for resorting to MCTPs include, women's deep-seated fear of the alleged side effects of MCMs, specifically infertility. Most women prefer PTCMs due to their perceived safety and long-term effectiveness, financial accessibility, and alignment with religious and cultural values and attachment to religious and cultural values. Various substances (bark, root, stem, leaf, flower, fruit, seed, kernel, whole plant, and entire root) are

used to prepare remedies that help women avoid unwanted pregnancies. Additionally, some innovative practices (belt, post-coital removal of semen, talisman, etc.) with similar purposes were identified. **Conclusion:** The study concludes that the adverse effects associated with MCMs hinder their sustainable use among women of reproductive age in Côte d'Ivoire. Moreover, African traditions are rich in a wide variety of contraceptive methods and practices used by women with unmet family planning needs. It would therefore be appropriate to regulate and promote these methods in order to contribute to the reduction of maternal mortality, especially considering that a significant proportion of women of reproductive age rely on PTCMs.

Keywords

Contraceptive Use, Contraceptive Methods, Traditional Contraceptive Methods, Medicinal Plants, Popular Contraceptive Methods, Cultural Practices, Tradition, Africa

1. Introduction

Family planning is a fundamental component of primary health care and reproductive health. Its primary objective is to improve maternal, neonatal, and child health by reducing morbidity and mortality within these groups, as well as limiting the transmission of HIV/AIDS [1]. Modern contraception was introduced into women's lives due to its numerous health benefits, including the prevention of unintended pregnancies, optimal birth spacing, reduction of maternal and infant mortality, and overall enhancement of the well-being of women and children. It also contributes to the reduction of certain cancers and gynecological conditions [2] [3]. However, the use of modern contraceptive methods (MCMs) is often hindered by various adverse effects that, paradoxically, may compromise women's health. Indeed, MCMs can lead to sexual libido disorders, hormonal imbalances, menstrual irregularities, weight changes, skin conditions, digestive issues, and other complications [4]-[7]. These side effects prompt some women to discontinue MCMs and seek alternative practices. Consequently, concerns about health risks and the impact of side effects on reproductive functions often lead to opposition from those close to the woman particularly religious leaders, husbands, mothers-in-law, and mothers regarding the use of modern contraception. This opposition drives many women to resort to popular traditional contraceptive methods (PTCMs) or abortion to space or limit births, especially in Africa [2] [8]-[10]. Popular Traditional contraceptive methods have recently regained interest due to growing concerns about the effects of MCMs on maternal health [8]. These methods rely on natural techniques such as periodic abstinence, withdrawal (coitus interruptus), rhythm method, exclusive breastfeeding, postpartum abstinence, basal body temperature monitoring, and cervical mucus observation to space births, delay first pregnancies (virginity preservation), cease reproduction, or pro-

vide emergency indigenous contraception to safeguard maternal and child health [9]. Traditional methods also include the use of herbs and medicinal plants, belts, amulets, and charms to prevent unwanted pregnancies. In some cases, a combination of herbal remedies and magical medicine is employed, often provided by traditional healers, to prevent conception [11]. In short, PTCMs are based on natural contraceptive techniques, the use of traditional medicinal plants, and ancestral customs and practices [11] [12].

In Côte d'Ivoire, only 21% of married women aged 15 to 49 use a contraceptive method either modern (18%) or traditional (3%), with the rhythm method accounting for 2% (DHS-CI 2021). Despite being labeled as ineffective, traditional contraception remains underrepresented, even though a significant proportion of women (3%) continue to use it, despite various strategies implemented to promote modern contraceptive use. Although many studies have examined contraceptive practices in Côte d'Ivoire from different perspectives, to our knowledge, none have specifically addressed traditional popular practices in order to capture their contextual characteristics. This study aims to collect data on PTCMs, with a particular focus on understanding the social dynamics that influence women's non-use of modern contraception in Côte d'Ivoire.

2. Methodology

2.1. Study Setting

The study was conducted in Yopougon, one of the ten municipalities of Abidjan. It is located between Banco Forest and the Ebrié Lagoon, in the western part of northern Abidjan. It has a population of 1,571,065 inhabitants, including 775,622 women (GPHC, 2021), spread over an area of 153.06 km², resulting in a population density of 10,264 inhabitants/km². Yopougon has 14 villages and is bordered to the north by the city of Anyama and the commune of Abobo, to the east by Attécoubé, to the south by the Atlantic Ocean, and to the west by Songon. Its infrastructures, mostly located in its industrial park, provide local employment opportunities. It also has residential neighborhoods with apartment buildings, middle-class low-rise housing, affordable rental areas, and numerous informal settlements. Yopougon is known for its vibrant and popular atmosphere, with over 1500 restaurants and nightclubs.

2.2. Study Design

This is a qualitative, cross-sectional study that used semi-structured interviews to gather information on women's knowledge, attitudes, and practices regarding traditional contraceptive methods. The study was conducted over a one-month period, from September 1st to September 30th, 2019.

2.3. Sampling and Population Size

Participants were recruited using two non-probability sampling techniques, namely, "accidental" and "snowball" samplings. The first technique involves selecting sub-

jects based on their practical accessibility and proximity to the researcher. The second technique identifies participants through referrals, starting from a key informant within the researcher's network. These approaches enabled the researchers to move from one user to another, following initial contact and interviews with three traditional healers and two herbalists and three of their patients who use PTCMs. This facilitated access to women using natural and popular traditional contraceptive methods. The sample size was determined by including participants until data saturation was reached, *i.e.*, when no new information emerged with new participants.

A total of 22 informants were interviewed, including 2 women who sell medicinal plants and are known as healers, three traditional practitioners, two FP providers, and 15 women selected according to the following criteria:

2.4. Inclusion Criteria

- Sexually active women with unmet family planning needs, *i.e.* woman at risk of becoming pregnant who wishes to delay pregnancy in order to space out her children or prevent pregnancy in order to stop having children, but does not wish to use any of the modern methods available.
- Women who have used popular traditional contraceptive methods.
- Willingness to participate in the study.

2.5. Exclusion Criteria

- Approval of modern contraceptive methods.
- Current use of modern contraception because these women, who have never used PTCMs, cannot tell us anything reliable about them; at best, they will regale us with rumors.
- Refusal to participate in the study.

2.6. Data Collection Tools

Data were collected through face-to-face individual interviews using a structured questionnaire covering the following thematic areas:

- Reasons for choosing PTCMs.
- Traditional customs and practices used to prevent unwanted pregnancies.
- Medicinal plants employed.
- Participants' wishes and suggestions for improving PTCM use.

2.7. Survey Procedure

The fieldwork was conducted in two phases. The first phase was a preliminary survey, which played a crucial role in facilitating access to and exploration of the study area. The National Program for Traditional Medicine helped establish contact with three traditional practitioners experienced in medicinal plants used for contraception. Individual interviews with these traditional practitioners focused on women's motivations for using PTCMs, the medicinal plants involved, and as-

sociated cultural practices. Each traditional practitioner put us in touch with a patient who was using PTCMs, who in turn led us to another user within their circle of acquaintances or herbal supply network, until we reached our target sample size. Additionally, these users of PTCMs facilitated contact with two herbalists, who were also interviewed individually.

Two midwives providing family planning services were consulted to gather insights into why women abandon modern methods in favor of popular traditional ones. This phase lasted five days (September 1 - 5, 2019) and allowed the research team to identify the various types of popular traditional methods available and to gain familiarity with the field context.

The second phase involved the main survey, conducted over three weeks and four days (September 6 - 30, 2019) in Yopougon. These two phases enabled the researchers to meet all actors included in the sample. Interviews were conducted with users of popular traditional methods, family planning providers, and herbalists. The scheduling of interviews was adapted to participants' availability, including evenings and weekends. Data collection was carried out by a sociologist trained in interview techniques and familiar with the data collection tool. All interviews were recorded using a digital voice recorder with an integrated microphone and transcribed in French.

2.8. Data Analysis

The data collected were transcribed in French and reviewed several times by members of the research team. The interviews were coded by a coder, following a preliminary review to ensure they understood the study's objectives, using Microsoft Word and Excel Windows 16. The first author verified the accuracy of the coded data.

Subsequently, relevant units of meaning were identified from the respondents' verbatim comments and were manually coded. This involved assigning codes to recurring ideas, perceptions or experiences expressed in the transcripts.

Codes exhibiting similarities or conceptual links were grouped into categories, which enabled the identification of main themes and sub-themes reflecting the central elements of the participants' discourse. The themes were progressively refined through comparative readings of the transcripts to ensure their consistency, relevance and representativeness in relation to the study's objectives.

Finally, a thematic analysis was performed to code and process the information using Nvivo 15 software. This involved listing the collected data and transcribed audio recordings verbatim, preserving the original wording of participants' responses. The data consisted of life stories and opinions, which were used to identify, describe, and categorize in detail the social factors influencing the non-use of modern contraception.

2.9. Study Limitations

The study faced challenges related to data availability on patients using TCM. Spe-

cifically, there was a lack of detailed data on each method, and the limited available data were incomplete.

Another difficulty was participants' mistrust regarding the confidentiality of their responses. This mistrust stemmed from fears among traditional healers, herbalists, and some users that their products developed through years of effort might be commercially exploited without their consent. They also feared that their ancestral knowledge of medicinal plants, passed down in secrecy, could be disclosed.

Additionally, some participants found certain questions difficult or too personal. Some respondents preferred that the interviews be conducted outside their homes, in women's gathering places, or in public areas within the city. The duration of interviews conducted in their neighborhoods was generally shorter, often taking place during rest hours. Some individuals failed to attend scheduled appointments.

3. Results

3.1. Reasons for Resorting to TCMs

Among the 22 respondents in our sample were 2 midwives providing family planning services (aged 35 and 44), 2 herbalists (aged 48 and 54), 3 traditional practitioners (aged 69, 56 and 51) and 15 users of MCTP. The users were aged between 23 and 64, traders (60%) or housewives (27%), uneducated (20%) or with primary (47%) or secondary (33%) education, and mothers of between 1 and 7 children. They were married (80%) or single (20%). In total, 19 women (86%) and 3 men (14%) were interviewed.

3.2. Reasons for Using MCTPS

3.2.1. Adverse Side Effects of MCMs

The main reasons for using TCMs, as listed by our respondents, included: the adverse effects of MCMs, prejudices and rumors, *i.e.*, the supposed health problems caused by MCMs, the absence of side effects of TCMs on maternal health, cultural and religious beliefs, effectiveness over time and accessibility, etc.

According to the respondents, the most recurrent rumors regarding the side effects of MCMs were the cessation of menstruation, disruption of the menstrual cycle, early menopause, bothersome bleeding, the development of fibroids, and secondary infertility. These rumors about side effects, whether alleged or proven, seem to outweigh accurate information. This is reflected in the testimony of one respondent:

"...I heard that a girl used the three-month injectable contraceptive, bled for four months, and died. When I used contraception myself, I bled for two months and became pale. My mother asked, 'What is this!?' She had to take me to a woman who gave me some medicine, I started purging and then it stopped. There's also an auntie who got an implant, and now she can't sleep with a man anymore—they ruined her life!" (Housewife, 25 years old, in a

common-law relationship, mother of two children)

3.2.2. Rumors Spread about the MCM

In summary, the rumors surrounding modern contraceptives are often overwhelming and distressing. They create psychological barriers that hinder the use of modern contraceptive methods, as illustrated by another respondent:

“...there are women who are willing to have abortions every day, every year—Yeah! But they don’t want chemicals in their bodies, we see a lot of such cases.” (Family planning provider, 35 years old, mother of five children)

This perceived risk associated with MCMs leads women to seek alternative contraceptive methods, particularly those based on plants, as explained by another respondent:

“Women are increasingly abandoning modern contraception because they have found other methods. They trust traditional methods more, believing that with them, there are no issues like missed periods or cycle disturbances. When they are given traditional medicine, they are told, ‘Here is the totem, don’t do this, don’t do that; and they see their periods return to normal! When they follow their method, wearing their traditional cord around their waist, their periods come as before... and when they stop, they don’t have any other problems... Also, they don’t want to queue for consultations. They prefer to explain their problems to naturopaths and healers, who prescribe medicine immediately.” (Family planning provider, 44 years old, mother of five children)

These views are echoed by a colleague who blames traditional healers for the low uptake of modern contraceptives:

“Since naturopaths started claiming they can provide natural contraception, it’s been a problem for us! They’re supposed to help us, but they don’t. Instead, they create problems for us.” (Family planning provider, 35 years old, mother of five children)

3.2.3. Challenge of Managing Adverse Effects of MCM

Thus, contraceptives derived from traditional medicine based on plants or environmental knowledge significantly influence the use of modern methods. Moreover, the quality of training among healthcare providers also contributes to the preference for traditional methods. In addition to their limited knowledge of MCMs, their handling of the supposed side effects of modern contraceptives is often inadequate, as reported by one respondent:

“Hmmm... when you feel unwell after using a method, or when undesirable symptoms appear and you return to the health center to explain your problem, they tell you the midwives are busy. When they’re done, they’ll be too tired, so they ask you to go home and come back on your appointment date.” (Trader, 28 years old, married, mother of three children)

The cost of treating side effects caused by MCMs is borne by the users themselves. These women often find themselves in situations where they must cover both direct and indirect costs alone. One respondent shared her experience while living in a rural area:

“When I wanted to have a child, I stopped using the method. But it was difficult for me to get pregnant. I had to go to Abidjan for treatment, which lasted two years. Before that, I had already received care in Korhogo without improvement, then in Bouaké, where the treatments were very expensive. That’s why I believe it’s important for the side effects of MCMs to be covered.” (Schoolteacher, 30 years old, married, mother of one child)

3.2.4. Effects of Religion on Contraceptive Use

Paradoxically, although religion was mentioned by some respondents, it no longer appears to be a significant barrier to the use of modern contraceptives, according to other testimonies. One respondent stated:

“According to my faith, it is forbidden. But nowadays, we are faced with reality teen pregnancies, young girls with children which is not good. So, we are forced to reflect on this issue. Even though my beliefs don’t allow me to accept such things, the only method I find acceptable is menstrual cycle tracking. That, to me, is appropriate.” (Woman, 51 years old, mother of five children, trader)

Conversely, another respondent shared a different perspective:

“Religion is no longer a problem. We even raise awareness now in religious gatherings... They tell us that if you have a child, you can use a method because your husband might need you while the child is still breastfeeding or hasn’t grown enough. So, to avoid refusing him or getting pregnant again, you can use a method for up to two years and then stop to have another child.” (Housewife, 32 years old, married, mother of four children)

3.3. Indigenous Contraceptive Practices Revealed

According to our respondents, women engage in certain traditional practices aimed at preventing unwanted pregnancies. For instance, it is believed that a woman must immediately cleanse herself after sexual intercourse to expel semen and thereby avoid conception. One respondent explained:

“There is a method where the woman positions herself to expel the semen. After sexual intercourse, the woman does not say anything to her partner, she pretends to go to the bathroom. She sits down, focuses, presses her abdomen, and the semen comes out immediately. As soon as the man ejaculates and withdraws, she acts as if she is going to urinate to perform this practice...” (Housewife, 31 years old, mother of three children)

Some respondents also mentioned the use of a specific “safety belt” that pur-

portedly helps women avoid unwanted pregnancies. Similarly, wearing amulets prepared by traditional healers is believed to yield the same effect. One respondent stated:

“When women follow their traditional method, that is, wearing their traditional cord around their waist, they experience their menstrual cycles normally as before, but do not become pregnant.” (Family Planning Provider, 44 years old, mother of five children)

A traditional practitioner provided further details about the so-called safety belt:

“The safety belt is a cotton cord spun using a spindle, on which the healer ties several knots... It is practiced by northern Ivorian ethnic groups such as the Djimini. The woman wears the cord around her waist to avoid pregnancy.” (Traditional Practitioner, 69 years old, mother of five children)

Another traditional practitioner echoes this sentiment, describing an ancestral practice passed down through generations that he personally experimented with and found effective:

“There is a somewhat spiritual method that I even practiced on my wife. After she gave birth, I took some of her pubic hair, placed it in a small piece of paper, and went to those who work with leather and animal skins. They made a small talisman into which the paper containing the hair was inserted, but they did not know what it was. I placed the talisman around the child's neck. As long as the child wears the talisman, the mother cannot become pregnant. But if it is removed, she can conceive. My father, who was a healer, passed this knowledge to me, having received it from his own father. It is ancestral knowledge...” (Traditional Practitioner, 56 years old, father of four children)

Some respondents also revealed other popular practices based on their life experiences, confirming the existence of such methods:

“... There is one that is like wood, a small piece of wood that is inserted into the vagina...” (Healer, 48 years old, mother of five children)

“After sexual intercourse, you must drink a large cup of water. Sometimes, you also need to drink lemon juice to prevent a possible pregnancy.” (User, 23 years old, mother of one child)

3.4. Natural Contraceptive Methods Revealed

Users also disclosed that they sometimes resort to the calendar method, withdrawal, or abstinence during their fertile period:

“Before, when we had to take medication, we wouldn't tell anyone. And when we gave birth, as long as the child wasn't three years old, we wouldn't sleep with our husbands.” (Housewife, 64 years old, mother of five children and grandmother)

3.5. Use of Traditional Medicinal Plants

Various parts of medicinal plants are used, including root and stem bark, whole roots, entire plants, leaves, flowers, fruits, and seeds. These components are used to prepare different medicinal formulations. These are administered to women of reproductive age who are sexually active and at risk of pregnancy through various routes: dermal (application), vaginal (vaginal baths, purges), oral (drinks, instillations), and rectal. Respondents shared their experiences with using medicinal plants for vaginal douches and purges to prevent unwanted pregnancies:

“I get the medicine from the old woman who sells under the shelter it costs 100 or 200 CFA francs. She never shows the plant or says its name. She pounds the leaves and sells them. That’s what we call the ‘secret’ you take it every day. If you skip a day, you get pregnant. Her totem is that you must not skip a day.” (Respondent, 27 years old, mother of two children)

Some traditional healers and herbalists shared specific techniques and secrets of their practices. One respondent explained:

“You take these fresh leaves right after sex. You heat them a bit, chew them, and it neutralizes everything. If you want to have a child, you don’t take it. But if you don’t want a child, you take it. This is especially useful when you’re about to travel.” (Female healer, 54 years old, mother of six children)

Another respondent revealed:

“There are certain nuts three in a shell you take one to protect yourself from unwanted pregnancy for a year... It works a bit like implants. There are also leaves that you pound and mix with kaolin, then dry and store. You use it for purging and drinking to avoid pregnancy...” (Traditional healer, 69 years old, mother of five children)

In the same vein, another respondent shared this knowledge:

“... you take an unripe pineapple, crush the pulp to extract the juice, then pound the leaves to get their juice, mix both juices, drink it, and use it for a vaginal purge after each sexual encounter to prevent unwanted pregnancies...” (Traditional healer, 56 years old, father of five children)

Additionally, some medicinal plants are used to produce contraceptive products, such as capsules, as described by this traditional healer:

*“I developed capsules from the fruits of the *Momordica charantia* plant. A woman takes one capsule per day for ten days after her menstruation to avoid pregnancy.”* (Traditional healer, 56 years old, father of five children)

However, according to the traditional practitioners and healers interviewed, many natural products used as traditional contraceptives are also said to have cleansing or abortive properties. They stated that the use of these products could lead to permanent infertility in the user in the event of an incorrect dosage or

malpractice on the part of the practitioner. Furthermore, it is possible that products with non-contraceptive effects may be deliberately administered to women to make them more fertile.

In summary, the rumors surrounding modern contraceptive methods (MCMs), compounded by the reality of certain confirmed side effects, are often overwhelming and discouraging. These factors lead many women to abandon modern contraception. Moreover, the difficulties and painful experiences associated with MCMs create psychological barriers and unmet needs in family planning. In response to this situation, some women turn to popular traditional methods to meet their reproductive health needs.

4. Discussion

This study, which explored the social dynamics underlying the non-use of modern contraceptive methods (MCM), highlighted the existence of cultural and medicinal contraceptive practices that warrant further discussion.

The main findings revealed that the abandonment of MCM was primarily driven by rumors and confirmed adverse effects associated with their use. These results are consistent with previous studies [5]-[7] [13]. Consequently, women of reproductive age fertile, sexually active, and at risk of pregnancy turn to popular traditional contraceptive methods (PTCM) to meet their family planning (FP) needs [2] [11] [13]. This shift reflects not only a lack of trust in modern contraceptive methods but also an increased risk of health complications.

Our findings also uncovered a wide array of traditional methods and techniques known among women, transmitted orally within families, neighborhoods, among friends, and through herbalists or traditional healers. In addition to standard natural contraceptive methods (calendar, temperature, withdrawal, abstinence, cervical mucus, rhythm, etc.), there are, according to our respondents, plant-based contraceptive products with effective properties, as well as indigenous practices or tricks used by women to control births either to space them or to limit them.

Our results align with those of Agadjanian (1998), who noted that indigenous contraception was widely known among Mozambican women, with a prevalence comparable to that of MCM. This form of contraception involved herbs, amulets, and charms a combination of medicinal plants and magical medicine provided by traditional healers to prevent unwanted pregnancies [11]. The work of Sabourian Reyhaneh *et al.* (2016) highlighted a wide range of plants with contraceptive activity, including *Ruta graveolens*, *Ricinus communis*, *Piper nigrum*, and *Physalis alkekengi*, which appeared to be effective [14].

Molelekwa A. Moroole *et al.* (2020) demonstrated that African indigenous contraception continues to play a vital role in preventing unwanted pregnancies. Women used herbs, belts, and even emergency indigenous contraception to avoid pregnancy, delay conception, space births, and cease reproduction for the well-being of both mother and child [9].

However, PTCM are considered less effective than modern methods and are

criticized for exposing women to the risk of induced abortions. Moreover, they are incapable of protecting against sexually transmitted infections, including HIV [2] [15] [16]. It is worth noting that studies concluding on the ineffectiveness of traditional methods have primarily focused on withdrawal, rhythm, and vaginal douching. Nevertheless, despite being labeled ineffective, PTCM often overshadow MCM in popularity and hinder their prevalence in certain regions. The challenge for PTCM lies in their dissemination.

Like previous studies [9] [17] [12], our research revealed a lack of detailed and comprehensive information regarding the use of medicinal plants as contraceptives. Except for one traditional practitioner who named the plant used to produce contraceptive capsules, all other practitioners and healers refrained from disclosing the names of the plants they used. This reflects a fear that others might exploit their knowledge, which constitutes their livelihood. Furthermore, we did not obtain precise information on the mechanisms of action, dosages, or safety of these medicinal products.

Thus, the challenge with of MCTPs remains the total mastery of their contraceptive role and their popularization. Furthermore, some failures attributed to MCTPs are said to be intentional, deliberately caused by traditional practitioners for personal reasons. However, these claims are not supported by any evidence.

5. Limitations

The selection of women who use modern contraceptive methods may have influenced the narrative of the study and highlighted the rumors and negative experiences associated with modern contraceptive methods.

Another major obstacle is the reluctance of practitioners to share their knowledge. They guard their expertise on the therapeutic properties of plants closely, rarely disclosing the names of the species used and the preparation processes.

In fact, these plants are used without undergoing any processing that would confer exclusive rights to their use. As a result, many take their secrets to the grave, limiting the transmission and scientific validation of these practices.

These observations underscore the importance of conducting further research into the potential harmful effects of certain traditional medicinal contraceptive methods, their contraceptive efficacy, and appropriate dosages.

However, some claims seem extravagant and difficult to prove scientifically. The challenge with these PMCTs remains the difficulty in finding scientific evidence.

6. Conclusions

African traditions are said to encompass numerous effective yet under-recognized contraceptive methods that merit study and dissemination to help reduce maternal and infant mortality. Despite their proven efficacy since their introduction into women's lives, the adverse events and confirmed side effects of MCM limit their sustained use. Consequently, MCM expose women to unmet family planning

needs and the risk of induced abortions.

Moreover, it would be important to acknowledge that a significant proportion of women of reproductive age will never adopt MCM and will continue to rely on PTCM, regardless of the policies and intervention strategies implemented that will be deployed in favor of MCMs.

A national health program is dedicated to popular traditional medicine in Côte d'Ivoire, with the mission of improving the coverage of the population's health needs through the effective and efficient use of traditional medicine and pharmacopoeia. However, a doctoral school focused on the epistemology of traditional African medicine could certainly help it to fully come into its own, leaving behind the realm of the irrational and rumors to become a rational and serene science. But how can such a school be established if it does not already exist to combine fundamental research and modern medical practice in order to create a new, more serene African medicine?

Ethics Approval and Consent to Participate

Ethical approval was granted by the National Ethics Committee for Life Sciences and Health (CNESVS) of Côte d'Ivoire (Ref: IRB000111917). Additional approvals were obtained from the Ministry of Health (National Program for Traditional Medicine and the Departmental Health Directorate of Yopougon West) and local traditional leaders.

Consent to Participate

A written informed consent was obtained from all participants in the study. Participation was voluntary and participants were informed of their right to withdraw from the study when they wished to do so. All the participants were aware of the study's purpose, risks, and benefits.

Data were collected, managed, and analyzed in a way to ensure the confidentiality of study participants. All procedures performed in this study involving human participants were in accordance with the ethical standards of the national ethic review committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Availability of Data and Materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Authors' Contributions

EMLE developed the study protocol, collected, analyzed the data and wrote the first draft of manuscript. EK, LLK and DMA made critical revision of the manuscript for important intellectual content. KY, DODK and JSK read, corrected, and approved the final manuscript. So, all the authors mentioned in this article did contribute to the production of the work we are submitting, and the contents of

the manuscript have never been published.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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