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Care Pathways for Infertility in Cameroon: Between Traditional Practices and Medically Assisted Reproduction

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Abstract

Introduction: Infertility remains a major reproductive health problem in Cameroon, with a high prevalence of secondary infertility often linked to sexually transmitted infections, unsafe abortions, and pelvic surgery complications. In a context where motherhood is an essential determinant of social recognition, infertile women adopt complex therapeutic pathways combining traditional and biomedical practices. This study aimed to describe and analyze the care pathways of infertile women in Douala. **Methods:** A cross-sectional analytic study was conducted from January to July 2025 in four health facilities in Douala. Women aged 25 - 55 years, diagnosed with infertility and who provided informed consent, were included (n = 173). Data collected covered sociodemographic and clinical characteristics, as well as therapeutic recourse. Associations between therapeutic choices and women's characteristics were explored using the Chi-square test. A multivariate logistic regression model was used to identify independent determinants of recourse to traditional versus biomedical practices. Statistical significance was set at $p < 0.05$. **Results:** The mean age was 37.2 ± 6.1 years; 76.9% had secondary infertility. A history of sexually transmitted infections and abortion was reported by 53.7% and 52.6% of participants, respectively. Therapeutic approaches were diverse: self-medication (63.6%), herbal medicine (68.2%), ovarian stimulation (51.8%), pelvic surgery (32.4%), and *in vitro* fertilization (8.7%). Determinants of therapeutic choices included low income (OR = 2.3 (1.2 - 4.4); p = 0.01) associated with herbal medicine, higher education favoring access to medically assisted reproduction (OR = 1.8 (1.1 - 3.1); p = 0.03), and a history of sexually transmitted infections associated with combined care pathways (OR = 2.6 (1.4 - 4.7); p = 0.004). **Conclusion:**

Therapeutic pathways among infertile women in Douala are characterized by the predominance of self-medication and herbal medicine, alongside a growing yet limited use of assisted reproductive technologies. Socioeconomic and educational factors strongly shape these choices. An integrated approach combining prevention, regulation of traditional practices, and improved access to modern reproductive care is essential to optimize infertility management in Cameroon.

Keywords

Infertility, Care Pathways, Herbal Medicine,
Medically Assisted Reproduction Cameroon, Women

1. Introduction

In Cameroon, infertility is a frequent reason for gynecological consultation, with a predominance of secondary forms often linked to sexually transmitted infections (STIs), unsafe abortions, and surgical complications [1] [2]. The absence of children is perceived as a major threat to the social and marital stability of women, who often face stigma, marginalization, and even violence [3]. In response to this suffering, infertile women undertake complex therapeutic pathways, oscillating between conventional medicine and alternative practices. These trajectories reflect not only economic and cultural constraints but also the desperate quest for motherhood in a context where fertility remains a cornerstone of social recognition. The present study aimed to describe and analyze the therapeutic pathways of infertile women in Douala, highlighting the coexistence and sometimes complementarity between traditional practices and biomedical approaches.

2. Methods

2.1. Study Design and Setting

We conducted a cross-sectional analytic study over a seven-month period, from January to July 2025, in four health facilities in the city of Douala (Cameroon). These facilities included public and private hospitals with gynecology-obstetrics services and specialized infertility consultations.

2.2. Study Population

The study included women of reproductive age, between 25 and 55 years old, consulting for primary or secondary infertility.

2.3. Inclusion Criteria

1) Any woman diagnosed as infertile by a gynecologist.
2) Any woman aged 25 years or older.
3) Any woman who provided written informed consent.

2.4. Exclusion Criteria

1) Women with a severe chronic condition likely to alter health-seeking behavior (diabetes, cancer, renal failure).

2) Refusal to participate.

3) Incomplete records.

2.5. Sampling and Sample Size

We used exhaustive sampling, including all women meeting the inclusion criteria during the study period. The final sample size was 173 infertile women.

2.6. Variables Studied

Data collected included:

1) Sociodemographic characteristics: age, marital status, educational level, income.

2) Clinical characteristics: type of infertility (primary or secondary), gynecological history of STIs, induced abortion, surgery.

3) Therapeutic pathways: self-medication, use of herbal medicine (medicinal plants, traditional healers), recourse to assisted reproductive technologies (ovarian stimulation, pelvic surgery, *in vitro* fertilization).

2.7. Data Collection Tool

A structured, pretested questionnaire was administered face-to-face by trained interviewers. Women were asked to specify all therapeutic approaches undertaken since the onset of infertility, as well as the reasons guiding their choices (accessibility, cost, family influence, perceived effectiveness).

2.8. Statistical Analysis

Data were entered and analyzed using SPSS version 26.0. Quantitative variables were presented as means ± standard deviation. Qualitative variables were expressed as frequencies and percentages. Associations between therapeutic choices and women's characteristics were explored using the Chi-square test. A multivariate logistic regression model was used to identify independent determinants of recourse to traditional versus biomedical practices. Statistical significance was set at $p < 0.05$.

2.9. Ethical Considerations

Ethical clearance was obtained from the Institutional Ethics Committee of the University of Douala. Anonymity and confidentiality of data were guaranteed. All participants provided written informed consent.

3. Results

3.1. General Characteristics of the Study Population

A total of 173 infertile women were included in the study. The mean age was 37.2

± 6.1 years (range 25 - 55 years), the majority age group was [35 - 40] years. More than half were living in a common-law union (55.5%), 30% were single, and 14.5% were formally married. Higher education accounted for 44.7% of participants, while 46.2% reported monthly income below 100,000 FCFA. Secondary infertility predominated (76.9%). Histories of STIs and abortions were frequent, reported in 53.7% and 52.6% of women, respectively (Table 1).

Table 1. Sociodemographic and clinical characteristics of participants.

Variables	N	%
Mean age (± SD)	37.2 ± 6.1	-
Single	52	30.0
Common-law union	96	55.5
Married	25	14.5
Higher education	77	44.7
Income < 100,000 FCFA	80	46.2
Secondary infertility	133	76.9
History of STIs	93	53.7
History of abortion	91	52.6

3.2. Therapeutic Pathways

Therapeutic practices were multiple and often combined:

1) Self-medication: 110 women (63.6%) practiced self-medication, most often with antibiotics or antifungals purchased without prescription.

2) Herbal medicine: 118 women (68.2%) used medicinal plants or consulted traditional healers. Reasons given included accessibility (72%), lower cost (65%), and family pressure (30%).

3) Medically Assisted Reproduction: 90 women (51.8%) underwent ovarian stimulation, 56 (32.4%) pelvic surgery, and 15 (8.7%) attempted *in vitro* fertilization (IVF) (Table 2).

Table 2. Therapeutic pathways of infertile women.

Type of recourse	N	%
Self-medication	110	63.6
Herbal medicine	118	68.2
Ovarian stimulation	90	51.8
Pelvic surgery	56	32.4
In vitro fertilization (IVF)	15	8.7

3.3. Factors Associated with Therapeutic Pathways

Multivariate analysis showed that:

1) Low income was associated with increased recourse to herbal medicine (OR = 2.3 (1.2 - 4.4); p = 0.01).

2) Higher education favored access to MAR (OR = 1.8 (1.1 - 3.1); p = 0.03).

3) History of STIs significantly increased the probability of resorting to several successive types of care (OR = 2.6 (1.4 - 4.7); p = 0.004) (Table 3).

Table 3. Determinants of therapeutic choices (multivariate logistic regression).

Determinants	OR (95% CI)	p-value
Income < 100,000 FCFA → herbal medicine	2.3 (1.2 - 4.4)	**0.01**
Higher education → MAR	1.8 (1.1 - 3.1)	**0.03**
History of STIs → combined pathways	2.6 (1.4 - 4.7)	**0.004**

3.4. Recourse to Medically Assisted Reproduction (MAR)

Key points from patient interviews and medical records:

1) Ovarian stimulation was the most common recourse, as it is less expensive and more available.

2) Pelvic surgery was indicated in cases of fibroids or sequelae of STIs.

3) Intrauterine insemination (IUI) and especially IVF remained rare, limited by cost and the scarcity of fertility centers in Cameroon.

4) A minority (−12%) followed combined pathways, illustrating the persistent quest for motherhood despite therapeutic failures (Table 4).

Table 4. Details on medically assisted reproduction (MAR) among 173 infertile women.

Type of MAR	N	%	Main remarks
Ovarian stimulation	90	51.8	Most accessible first-line MAR, performed in both public and private hospitals.
Pelvic surgery (myomectomy, laparoscopy, hysteroscopy)	56	32.4	Mainly indicated for fibroids, adhesions, uterine anomalies.
Intrauterine insemination (IUI)	12	6.9	Rarely practiced, limited by availability of specialized facilities.
In vitro fertilization (IVF)	15	8.7	Rare due to high cost (>1,500,000 FCFA per cycle) and few accredited centers.
Combined MAR (≥2 techniques)	20	11.6	Some women underwent ovarian stimulation followed by surgery and/or IVF.

4. Discussion

This study highlights the diversity and complexity of therapeutic pathways undertaken by infertile women in Douala. The findings reveal a high prevalence of self-medication most often with antibiotics or antifungals purchased without prescription and herbal medicine use, alongside a still limited but increasing recourse to Medically Assisted Reproduction.

4.1. Self-Medication and Herbal Medicine: First Steps in the Pathway

More than half of the participants reported self-medication (63,6%), and 68,2% resorted to herbal medicine. This finding is consistent with studies in Nigeria and Ghana [4] [5], where traditional treatments and over-the-counter medications often constitute the first response to infertility. These practices are driven by accessibility, lower cost, and strong family or community influence. However, they expose women to risks of delayed diagnosis, inappropriate drug use, and sometimes worsening of the initial pathology.

4.2. Recourse to Medically Assisted Reproduction

Nearly half of the women in our study had recourse to some form of MAR, mainly ovarian stimulation and pelvic surgery. *In vitro* fertilization (IVF), although available in Cameroon, remained marginal (8.7% in our sample) due to high costs and the limited number of specialized centers. This trend is similar to observations in other sub-Saharan African countries, where access to reproductive technologies remains restricted [6] [7]. Nevertheless, the existence of these practices illustrates a gradual transition toward modern biomedical management.

4.3. Determinants of Therapeutic Choices

Our results show that low income increased the likelihood of using herbal medicine, while higher education favored access to MAR. In addition, a history of STIs increased the probability of following combined therapeutic pathways. These associations emphasize the role of socioeconomic and cultural determinants in care-seeking behavior, consistent with the findings of Dyer and Patel in South Africa [3] and Chimbatata in Malawi [8].

4.4. Toward an Integrated Approach to Care

The coexistence of traditional and biomedical practices reflects an adaptive strategy among patients facing financial, cultural, and structural constraints. In the Cameroonian context, several traditional approaches could be integrated into modern infertility care pathways to improve accessibility, cultural acceptability, and overall patient well-being. These include:

1. The use of validated medicinal plants:

Ethnobotanical studies in Cameroon have identified several medicinal plants used traditionally to treat female infertility. For instance, *Mammea africana*, *Cissus quadrangularis*, and *Scleria striatinux* are widely cited by traditional healers for their fertility-enhancing properties [9] [10]. These plants could be subject to further pharmacological research and possibly integrated into complementary treatment protocols under medical supervision.

2. Psychosocial and community-based support:

Traditional healers often provide not only physical remedies but also emotional and spiritual support, which can be critical in infertility care. This

dimension is frequently lacking in biomedical settings. Integrating culturally grounded psychosocial support, in collaboration with trained community healers, can enhance patient adherence and emotional resilience [11].

3. Policy-level support:

The recent legal framework adopted by the National Assembly of Cameroon (2022) to regulate medically assisted reproduction opens opportunities for structured integration of certain traditional approaches, especially within community-based care settings [12].

Although the WHO Global Traditional Medicine Strategy 2025-2034 does not specifically address infertility, its strategic orientations offer a solid framework for the integration of traditional practices into reproductive health care. In particular, the focus on evidence generation, regulated oversight, system-level integration, and inclusive, community-based policies provides relevant avenues for legitimizing and structuring complementary approaches to infertility management in Cameroon [13].

4.5. Strengths and Limitations of the Study

This study presents several strengths: a multicenter sample, a systematic exploration of therapeutic pathways, and a multivariate analysis of determinants. However, some limitations must be acknowledged: the cross-sectional design does not allow causal inference, and self-reports on herbal medicine use may have been under- or overestimated due to social desirability bias.

5. Conclusions

This study highlights the complexity of therapeutic pathways followed by infertile women in Douala. Most patients resorted initially to self-medication and herbal medicine, while access to modern reproductive technologies remained limited, particularly for IVF. Socioeconomic, educational, and clinical determinants played a major role in guiding therapeutic choices. These results underscore the need to promote an integrated approach to infertility management in Cameroon, combining:

1) prevention of sexually transmitted infections and unsafe abortions,

2) information and awareness for couples regarding available therapeutic options,

3) regulation and supervision of traditional practices,

4) the implementation of health policies aimed at improving financial and geographical access to reproductive care.

6. Future Perspectives

Future perspectives include involving men in the analysis of therapeutic pathways and exploring the psychological impact of treatment choices. The progressive integration of traditional and modern medicine, within a secure and scientifically validated framework, could provide more adapted and culturally acceptable solu-

tions for infertile couples. Ultimately, the fight against infertility in Cameroon cannot be limited to biomedical advances alone but must also address the sociocultural and economic realities shaping care-seeking behaviors.

Conflicts of Interest

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

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