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An Assessment of Knowledge, Attitudes, and Practices Concerning the Homologation of Enhanced Traditional Medicines among Practitioners in the Mfoundi Division of Cameroon

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ABSTRACT

The use of Traditional Medicine (TM) has seen significant global growth. However, there is still a lack of understanding in areas such as regulation, legislation, and particularly homologation. The safety and effectiveness of TM have become pressing concerns for public health authorities. This study aims to assess the knowledge, attitudes, and practices related to the homologation of Improved Traditional Medicine (ITM) in Cameroon, specifically focusing on the Mfoundi division. The study surveyed 70 traditional medical practitioners using self-administered questionnaires. Each practitioner was also interviewed individually. The results revealed that 61% of participants were aware of the different categories of ITM. Among these, 70% classified most ITM products under Category 2, while 23% classified them under Category 1. A significant 93% of participants identified the Ministry of Public Health as the primary authority responsible for ITM homologation. However, 51% of the respondents did not know the contents of a homologation file, while 49% had a solid understanding. Only 5% of the participants reported having submitted a homologation request. In conclusion, the study highlights the potential of traditional medicine in Cameroon while underscoring the need to enhance knowledge and practices surrounding its regulation and homologation.

Keywords: Regulation, Homologation, Improved traditional medicine, Traditional medical practitioners

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Introduction

For millennia, humans have relied on plants not only for treating and preventing diseases but also to improve overall well-being. The use of traditional medicine, alongside complementary and alternative medicine, has become increasingly widespread in recent decades. A growing global interest in traditional and alternative forms of medicine has been observed [1, 2]. It is estimated that approximately four billion people, or 80% of the global population, use traditional and complementary medicine [3].

In developed countries, the use of traditional medicine continues to rise. In Canada, for instance, 70% of the population has used traditional medicine at least once. Usage rates vary in other countries, with 31% in Belgium, 42% in the United States, 48% in Australia, and 49% in France. According to data from the 56th World Health Assembly on March 31, 2003, traditional medicine accounts for 40% of healthcare in China, 40% in Colombia, and 65% in India. Additionally, around 80% of populations in Africa and Asia rely on traditional medicine for their healthcare needs [4].

In West and Central Africa, traditional medicine is especially prevalent, with about 80% of the population depending on it [3, 4]. Cameroon follows this trend, with studies showing that 80% of its population uses traditional medicine [5-7]. The rise in TM usage is largely due to its lower cost compared to conventional medicine [8]. Many modern medicines are derived from plants that are part of the traditional pharmacopeia, with about 414 medicinal plants from 95 plant families being used in Cameroon's traditional medicine [9, 10].

Although there is growing recognition of TM's benefits, there is limited knowledge regarding its regulation, legislation, and homologation. The safety and efficacy of TM are increasingly important issues for the public and health authorities.

The World Health Organization (WHO) reports that only 32% of its member states have formal policies on traditional and complementary medicine (TM/CAM). Of the member states without such policies, 56% are in the process of developing them. Additionally, 28% of member states have a national program on TM/CAM, and only 58 member states have at least one national institute dedicated to traditional medicine [11].

National policies on the efficacy, safety, homologation, and regulation of TM are crucial for determining its role in national healthcare systems. These policies provide the legal and regulatory frameworks necessary to promote good practices and ensure equitable access to healthcare. This study aims to assess the knowledge, attitudes, and practices related to the homologation of Improved Traditional Medicine (ITM) in Cameroon, specifically focusing on the Mfoundi division.

Materials and Methods

A prospective, cross-sectional descriptive study was conducted in the Mfoundi Division of the Centre Region of Cameroon from November to February 2021. Ethical approval was granted by the Ethical Committee of the Faculty of Medicine and Biomedical Sciences at the University of Yaoundé I under clearance number N° 135. Participants were selected using a consecutive, non-exhaustive approach. Each participant was interviewed with a pre-designed questionnaire, and informed consent was obtained before any data collection began.

The study utilized a questionnaire with four sections: sociodemographic information, knowledge, attitudes, and practices regarding ITM homologation. Participants were also provided with an informed consent form to sign. A list of traditional medical practitioners in the Mfoundi Division was compiled, and they were contacted through trade fairs and clinics. After scheduling appointments, interviews were conducted with the practitioners.

Results and Discussion

Knowledge of homologation of ITM among the study population definitions

Table 1. Definition of terms

Definition	%
ITM	91.4%
Homologation	91.4%
MA	98.6%

As indicated in **Table 1**, a significant portion of the study participants demonstrated a solid understanding of key terms associated with homologation. Specifically, 98% of the respondents displayed a good understanding of the definition of a Marketing Authorization (MA), while 91% showed clear knowledge of the term homologation.

Knowledge of ITM categories

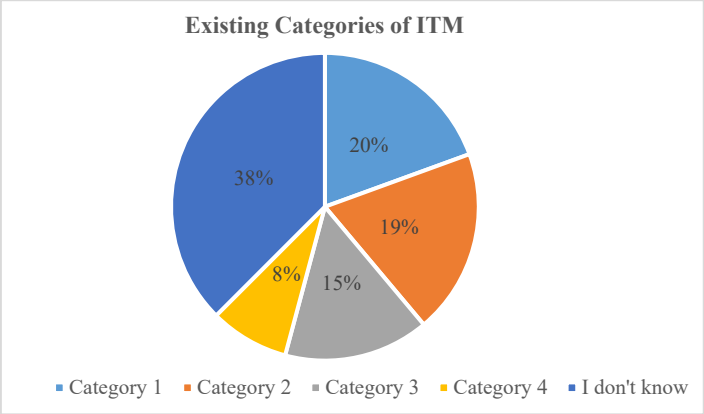

Figure 1. Awareness of ITM categories.

Figure 1 highlights that 38% of the participants admitted to being unfamiliar with the existing categories of ITM.

Categories of ITM produced

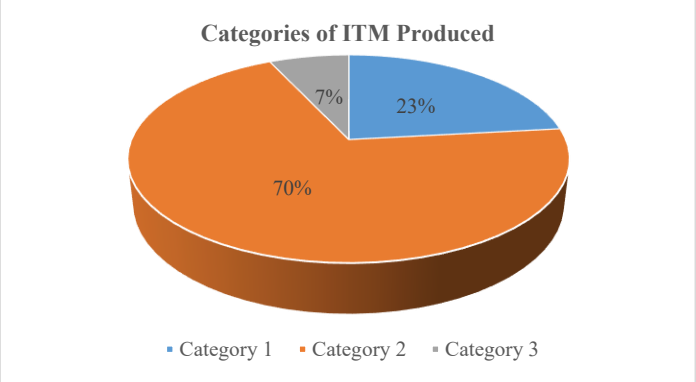

Figure 2. Distribution of ITM by category.

According to **Figure 2**, 70% of the ITM produced fell under Category 2, whereas 23% were classified as Category 1.

Understanding homologation procedures

Bodies responsible for ITM homologation

Figure 3 illustrates that 93% of the respondents identified the Ministry of Public Health as the primary authority responsible for drug homologation in Cameroon.

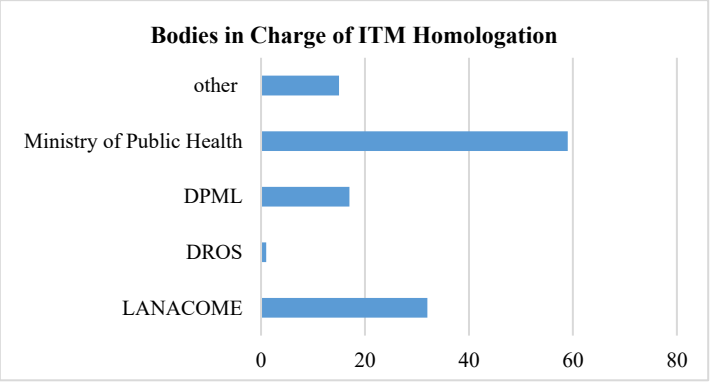

Figure 3. Awareness of bodies overseeing ITM homologation.

The following organizations play key roles in homologation:

DPML: Direction de la Pharmacie, du Médicament et des Laboratoires (*Directorate of Pharmacy, Drugs, and Laboratories*).
DROS: Division de la Recherche Opérationnelle en Santé (*Division of Health Operations Research*).
LANACOME: Laboratoire National de Contrôle de Qualité de Médicament et d'Expertise (*National Drug Quality Control and Expertise Laboratory*).

Attitudes toward ITM homologation

Further analysis of participants' attitudes toward homologation procedures was carried out to assess perceptions and alignment with regulatory requirements.

Table 2. Attitudes towards ITM homologation

Variables	Yes	No
Clarity of information	68.6%	31.4%
Accessibility of information	51.4%	48.6%
Willingness to get accompanied in the homologation process	92.8%	7.2%

In **Table 2**, it was revealed that 92.8% of the study participants expressed a preference for having assistance during their homologation processes. Meanwhile, 51.4% reported that information about homologation was readily available.

Experience with ITM homologation

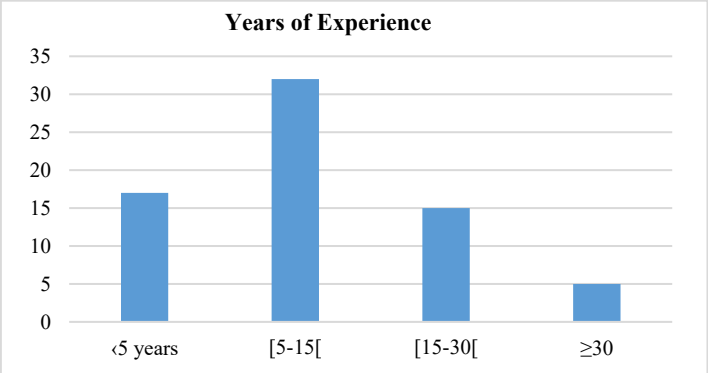

Figure 4. Participant experience duration.

Figure 4 illustrates that 45% of respondents had between 5 and 15 years of experience in practicing traditional medicine.

Homologation

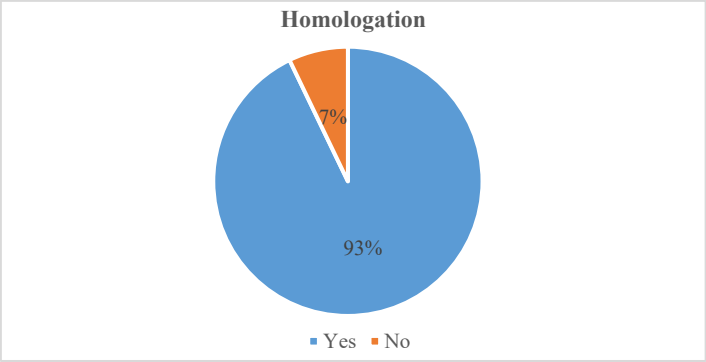

Figure 5. Percentage of participants who pursued drug homologation.

Figure 5 reveals that 93% of participants reported never having submitted a homologation request.

The purpose of this study was to evaluate the understanding, attitudes, and practices related to the homologation of improved traditional medicines in the Mfoundi division of Cameroon's Centre Region. The aim was to gather robust, evidence-based information on homologation processes in Cameroon.

During the study, we encountered several challenges, especially in reaching traditional medical practitioners. The lack of information and official lists of practitioners in the Mfoundi division severely hindered our ability to expand the sample size. Additionally, we faced difficulties getting responses from some practitioners, many of whom expressed a lack of interest in participating, while others were dissatisfied with the existing homologation procedures.

Knowledge of ITM homologation

A notable portion of the study participants displayed strong knowledge of terms related to homologation **(Table 1)**. Specifically, 98% were familiar with the definition of a Marketing Authorization (MA), and 91% understood the concept of homologation. These definitions are commonly found in both national and international legal texts, which describe homologation as a process for obtaining, renewing, modifying, or extending the marketing authorization of a drug by a pharmaceutical regulatory authority, along with other related terms [12-14].

61% of participants demonstrated knowledge about the different categories of ITM, while 39% were unfamiliar with the subject.

Among the practitioners who understood the categories of ITM, 70% classified their products under Category 2, and 23% classified them under Category 1. This distinction is based on the fact that Category 2 medicines are better preserved, more readily accepted by the public, and subject to controlled standards of quality, dosage, posology, and toxicity [15].

Regarding the homologation process, 93% identified the Ministry of Public Health as the main authority responsible for ITM homologation, highlighting the centralized nature of policy-making at the national level, leaving practitioners with limited recourse to this central body [16].

Around 51% found the information on homologation procedures to be easily accessible, while 49% felt it was not readily available. Homologation guidelines specify that required documents must be submitted to the DPML's homologation service, and only complete files are accepted. These documents can be original or certified copies [17].

Attitudes toward homologation procedures

A significant majority (93%) expressed interest in receiving assistance with the homologation process, while 7% indicated a lack of interest, citing fear or indifference **(Table 2)**. About 48% of participants found information on homologation procedures to be easily accessible, and 31% felt that the information available was clear and well-defined. In response, the Ministry of Public Health has organized meetings with officials responsible for drug homologation and held consultations with key stakeholders in traditional medicine [18, 19].

Practices regarding ITM homologation

46% of participants reported having 5 to 15 years of experience in traditional medicine practice **(Figure 4)**. Experience is a key requirement for practicing traditional medicine, and an attestation of prolonged use of traditional medicines is necessary for homologation application files [20].

Only 5% of participants had ever submitted a homologation request. This was attributed to the limited financial resources available to practitioners, which prevented them from conducting the necessary tests on the molecules in their ITM products to obtain marketing authorization (MA). ITM products often consist of multiple plants containing numerous compounds that are difficult to isolate and analyze individually [21].

The development of new drugs based on traditional knowledge requires the collaboration of many experts, including traditional healers, ethnologists, botanists, pharmacognosists, phytochemists, chemists, pharmacologists, toxicologists, galenists, and clinicians [22]. Due to the lengthy and expensive nature of the homologation process, many practitioners felt they could not meet the requirements.

Conclusion

This study aimed to evaluate knowledge, attitudes, and practices regarding ITM homologation in the Mfoundi division. We interviewed 70 traditional medicine practitioners, most of whom were eager to participate in the

research. Our findings revealed significant potential within Cameroon's traditional medicine sector. Many practitioners displayed strong knowledge of homologation procedures, including definitions of key terms, ITM categories, and the relevant regulatory bodies.

Practitioners also demonstrated positive attitudes toward the homologation process, expressing willingness to seek assistance and a desire to participate in training seminars to improve their understanding of the process in Cameroon.

While many practitioners had not submitted a homologation request for their ITM, good practices regarding homologation were still evident. However, further efforts are necessary to streamline the process and ensure greater integration of traditional medicine practitioners into the healthcare system in Cameroon.

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