

# CONTRIBUTION OF INDIGENOUS HEALTH CARE GIVERS TO THE HERBAL MANAGEMENT OF FEBRILE ILLNESSES IN RIVERS STATE, SOUTH-SOUTH, NIGERIA

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## Summary

This study was carried out in two rural communities: Kanni and Bouo, in Khana Local Government Area (LGA) and, in one urban community, Elomo, in Elomo LGA, all in Rivers State, South-South Nigeria. The investigations involved in-depth interviews conducted with 104 health care givers comprising indigenous healers: herbalists, sellers of herbal remedies and community elders. Information was obtained on types of febrile illnesses treated, symptoms and methods of establishing illnesses, and traditional herbs used in the prevention and treatment of febrile illnesses. On types of febrile illnesses treated, respondents presented the following: malaria (78.8%), typhoid (23.1%), yellow fever (21.2%), high fever (19.2%), convulsion (15.4%), and pregnancy fever (2.9%). Other illnesses treated were yellow eyes (4.8%), headache (11.5%), waist pain (14.4%), and joint pains, (8.7%). Respondents determined whether a person had fever by the following: physical examination (85.4%), listening to patients' complaints (9.4%), through divination and inspiration (9.4%), while others (0.2%) were not quite explicit on their methods of diagnoses. On the treatment of febrile illnesses, respondents used herb teas (88.5%), herb powders (42.3%), incantation (3.3%), and performance of sacrifice (4.8%) or use of special fluids (27.9%). Majority of the respondents, in describing the best herbal medicines for the treatment of febrile illnesses, 62.5% said that dogonyaro (*Azadirachta indica*) was the best medicine. Other responses were: lemon grass (*Cymbopogon citratus*, 51.9%), mango (*Mangifera indica*) bark (29.8%), lime (*Citrus limetta*) juice (30.0%), paw paw (*Carica papaya*) leaf/fruit (20.2%); guava (*Psidium guajava*) leaf (18.3%), akpagbogoro (*Salacia nitida*), 7.7%, plantain (*Musa sapientum*) sucker (6.7%), Lipton tea (3.8%) and scent leaf (*Ocimum gratissimum*), 1.9%.

**Key words:** Malaria, fever, febrile illness, herbal remedies, Nigeria.

## Introduction

Malaria remains a major public health concern, especially in Africa, despite several years of research and billions of dollars spent on the development of drugs for the treatment of the disease. It is estimated that about 300 to 500 million cases of malaria occur globally every year, out of which 90% of the cases occur in Africa. It is also estimated that malaria is responsible for 1-2 million deaths annually in Africa (Toklehimanot, 2000). For over fifty years, the mainstay of malaria chemotherapy was chloroquine, which was both effective and cheap. In recent times, the malaria parasites have developed resistance to the drug. In some places, up to 98% resistance to chloroquine, have been reported (Salako, 2000). To compound this alarming picture, some of the alternative

antimalarial drugs are either too expensive or are becoming less effective against the parasites. Efforts at malaria vaccine discovery and production have yielded little fruit (Abath et al, 1998; Salako, 2000). The gradual failure of the first-line drugs, coupled with the cross resistance to the second-line drugs, greatly underscore the urgent need to source for alternative strategies for the control of the disease (Nabarro, 1999). It is against this backdrop that efforts are directed at ethnomedical management of the disease in malaria-endemic communities as a veritable source of information that may lead to the discovery of novel pharmacopoeia that could be developed into antimalarial drugs (Nabarro, 1999; WHO/TDR / Benakis, 2000).

Fever, as the basic symptom of a number of

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disease conditions, is poorly characterized in traditional medical practice. Quite often, febrile conditions are regarded as sure diagnosis for malaria by traditional health care givers. Management of febrile illnesses may therefore suggest the traditional medical practitioners' attempt at treating malaria. Consequently, any information obtained on the management of febrile illnesses may indeed yield pointers to the traditional remedies for malaria. Herbal remedies are commonly used and are claimed to be effective in the treatment of febrile illnesses in many rural and urban communities in Nigeria. The South-South zone of Nigeria is one of such areas, which has a rich stock of traditional herbal remedies in the treatment of febrile illnesses. This zone, which is traversed by the Niger-Delta, is also the main oil-producing area of the country. Because of oil pollution, the rich ecological systems of this zone are threatened by biodiversity loss. In order to preserve the useful plants of this area, particularly those used in the treatment of malaria, it is necessary to investigate their ethno-medicinal uses. This study was designed to elicit information from traditional health care givers on the characterization and herbal management of febrile illnesses.

#### Materials and Methods

##### Study Areas

Two rural communities: Kaani II and Boue, in Khana Local Government Area (LGA), and, one urban community: Elemo, in Elemo LGA, all of Rivers State, South-South Nigeria, were used for this study. Kaani II and Boue have residents whose occupations are farming and fishing. Kaani II and Boue, with a population of 5439 and 6546 inhabitants respectively, (Federal Office of Statistics, 1991) lack the usual social amenities like electricity, good tarred roads and pipe-borne water. On the other hand, Elemo, with a population of 6376 inhabitants, has modern social amenities and is situated about 25 km Northeast of Port Harcourt, the capital of Rivers State.

##### Advocacy visits

Advocacy visits were made to the traditional leaders, opinion leaders and other community leaders to explain the rationale for the study to them and to solicit their support for the study. Courtesy visits were undertaken to explain the mission of the research team to the traditional healers and primary health workers in the communities. These groups were in turn very helpful and instrumental to explaining the study to other health care givers in the communities visited.

##### Informed Consent

Approval for the study was obtained from the paramount rulers of the communities and association leaders. Consent to participate in the study was

obtained from all the participants before commencing the in-depth interview. Anybody who declined to participate in the study was excluded.

##### Training of Interviewers and pretest

Research assistants were trained for a period of one week on the modalities for carrying out the interviews. After this they conducted the pretest in Bori, In Bori (LGA) within a period of one week. The results of the pretest were used in revising the instrument before the study.

##### Study Instrument

In-depth interviews were conducted with 104 health care givers comprising indigenous healers, herbalists, sellers of herbal remedies and community elders on the following:

- Types of fevers (febrile illnesses) treated
- Symptoms and methods of establishing types of febrile illnesses
- Herbal methods of treating febrile illnesses
- Herbal treatment for malaria and other febrile illnesses
- Available prepared local medicines for febrile illnesses
- Reasons for referring patients to other healers or hospital
- Suggestions for improving quality of local medicines

##### Results

Analysis of the in-depth interviews in the South-South zone showed that 104 interviews were conducted. Of these, 48 (representing 46.15%) were in the rural study sites, while 56 (representing 53.85%) were in the urban study site. There was no significant difference in the results for the rural and urban practitioners so the data for the two sites were merged as one.

##### Types of respondents

Respondents consisted of 51 (49.04%) herbalists, 50 (48.08%) community elders, and 3 (2.88%) herb sellers.

##### Sources of traditional medicinal training

Of the 104 respondents, 89 (85.57%) said that they inherited the art of herbal medicine from their parents, 12 (11.54%) trained for it, 2 (1.92%) said that it was a gift from God, while 1 (0.96%) gave no reason (Fig. 1). The mean number of years on the job was 17.6 years.

##### Symptoms and methods of establishing fevers (Febrile illnesses)

On how respondents diagnosed febrile illnesses, 82 (78.85.4%) practitioners did so by examining the patients physically; 9 (8.65%) by

following up on patients' complaints; 1 (0.96 %) through divination while others 12(11.54 %) were not quite explicit on their methods of diagnoses (Fig. 2).

**Types of febrile illnesses treated**

On the types of febrile illnesses treated, 82 (78.85 %) respondents said malaria, 4 (23.08 %) said typhoid, 22 (21.15 %) said yellow fever, 20 (19.23 %) said high fever, 16 (15.38 %) said convulsions and 3 (2.88 %) said pregnancy fever. Other illnesses treated were yellow eyes- 5 (4.81%) respondents, headache- 12 (11.54 %) respondents, waist pain-15 (14.42 %) respondents, and joint pains- 9 (8.65%) respondents (Fig 3).

**Reasons for referring patients to the hospital**

Of the 104 respondents, 63 (60.58 %) referred their difficult-to-treat cases to orthodox practitioners. Of these, 38 (60.32 %) did so because the patients health did not improve, 18 (28.57 %) because of the confusing symptoms of the illness, while 7 (11.11 %) did so because they feared the patient might die (Fig. 4).

**Treatment of febrile illnesses**

The remedies used by health practitioners for febrile illnesses include: herb teas, 92 (88.46 %); herb powders, 44 (42.31 %); incantations, 4 (3.85 %); the performance of some special sacrifices 5 (4.80 %) and the use of other special fluids, 29 (27.88 %).

Respondents were asked to describe the best herbal medicine for treating febrile illnesses. Figure 5 shows that more than half of the respondents, 65 (62.5 %), said that the leaf of dogonyaro (*Azadiracta indica*), the Neem tree, was the best medicine. Other responses were: lemon grass (*Cymbopogon citratus*) 54 (51.92 %), mango bark (*Mangifera indica*) 31 (29.81

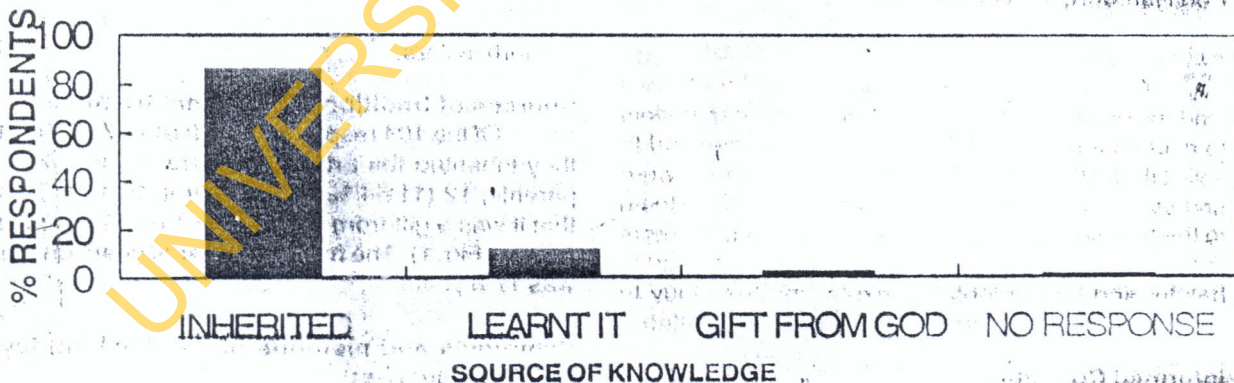
%), lime (*Citrus limetta*) 27 (25.96 %), paw paw (*Carica papaya*) leaf / fruit, 21 (20.19 %), guava (*Psidium guajava*) leaf 19 (18.27 %), akpagbogoro (*Salacia nitida*) 8 (7.69 %), plantain (*Musa sapientum*) sucker 7 (6.73 %), Lipton tea 4 (3.85 %) and scotch loaf (*Ocimum gratissimum*) 2 (1.92 %).

**Local remedies prepared for sale**

The respondents were asked if they prepare medicines for sale and if they had any of those in stock. Respondents presented the following mixtures: dogonyaro (*A. indica*) leaf 17 (16.35 %), lemon grass (*Cymbopogon citratus*) 17 (16.35 %), mixture of herbs 15 (14.2 %), mango bark (*Mangifera indica*) 14 (13.46 %), akpagbogoro (*S. nitida*) 5 (4.81 %), lime (*Citrus limetta*) 6 (5.77 %) and unripe pineapple (*Ananas comosus*) 2 (1.92 %). The contents of other medicines in stock were not specified 22 (21.15 %). Two (1.92 %) of the respondents said they did not have medicines for sale while others did not respond to the question.

**Methods of improving the quality and standard of preparation of local medicines**

The respondents gave a number of suggestions aimed at improving the standard of preparation of local medicines used in ethnomedical management of febrile illnesses. Top on the list was financial assistance from government-18 (17.31 %), training of traditional healers-13 (12.50 %) in all aspects of health care, use of preservatives and proper storage facilities to lengthen the shelf life of drugs-10 (9.62 %) and enlightenment campaign at community level to encourage continuous patronage of native doctors and their medicines-4 (3.85 %). However, 45 (43.27 %) respondents did not offer any suggestions.



**Fig. 1. Respondents sources of knowledge of traditional medicine. Majority of the respondents claim that the profession is within the family.**

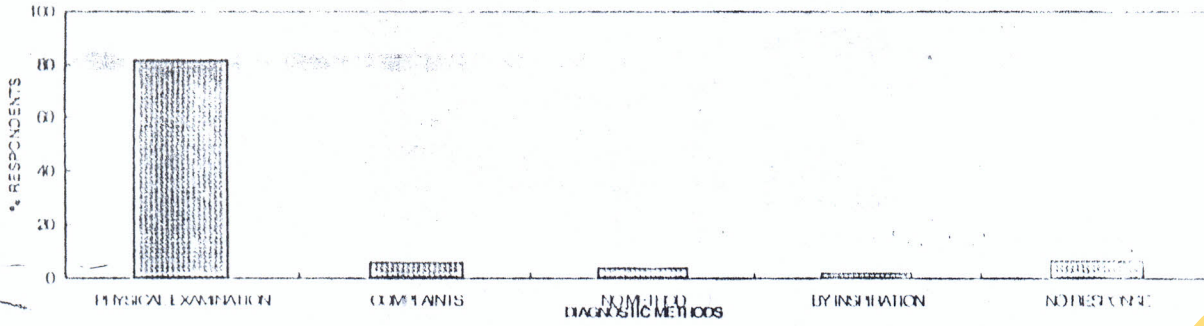


Fig. 2. Methods of diagnosing febrile illnesses.

Physical examination (73.85%), was the most commonly used diagnostic technique by respondents'

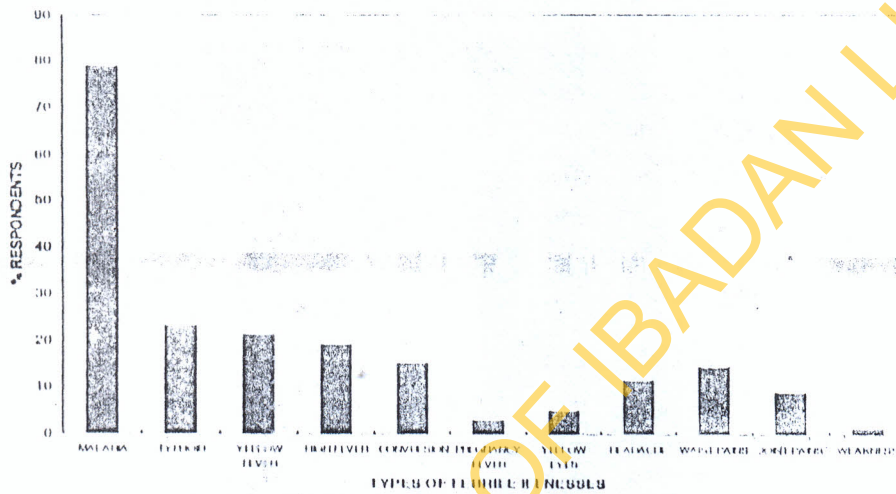


Fig. 3. Different types of febrile illnesses.

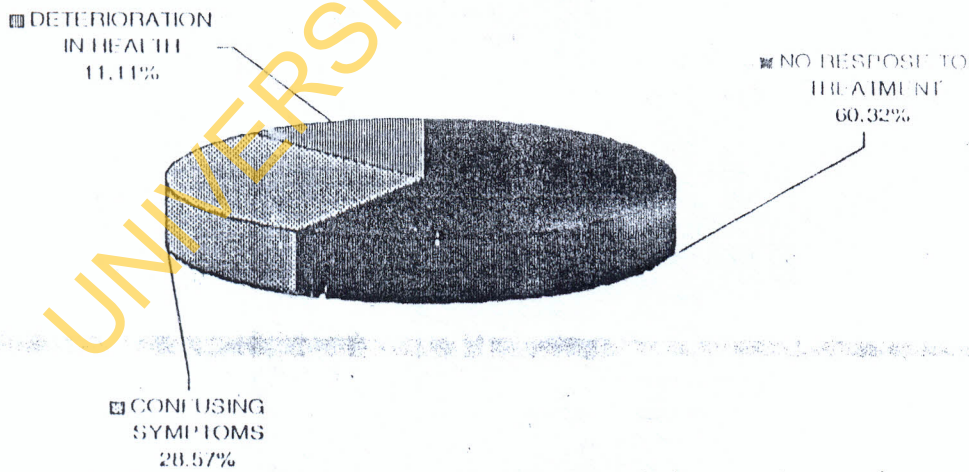


Fig. 4. Reasons for referring patients to other health institutions.

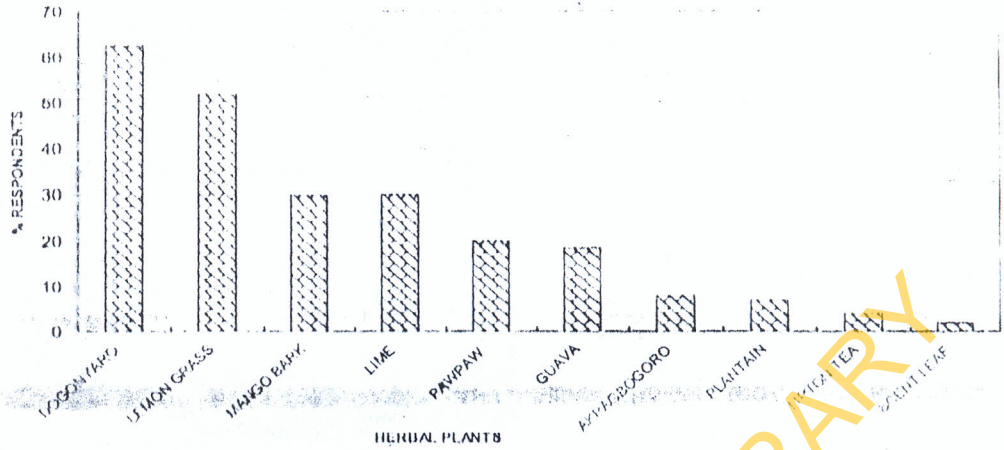


Fig. 5. Types of herbal plants/medicines used for febrile illnesses. Dogonyaro is the local name for *A. indica* and Akpagbosoro is *S. nitida*. More than half of the respondents (62.5%) suggested dogonyaro.

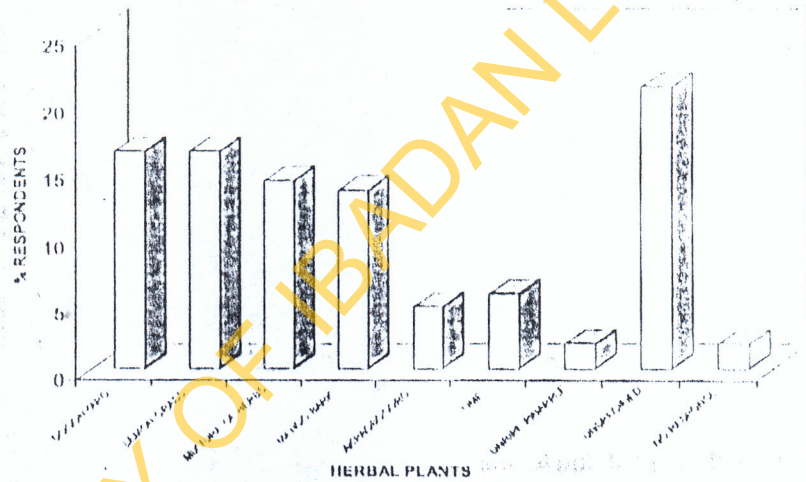


Fig. 6. Types of herbal medicines available for sale for the treatment of febrile illnesses

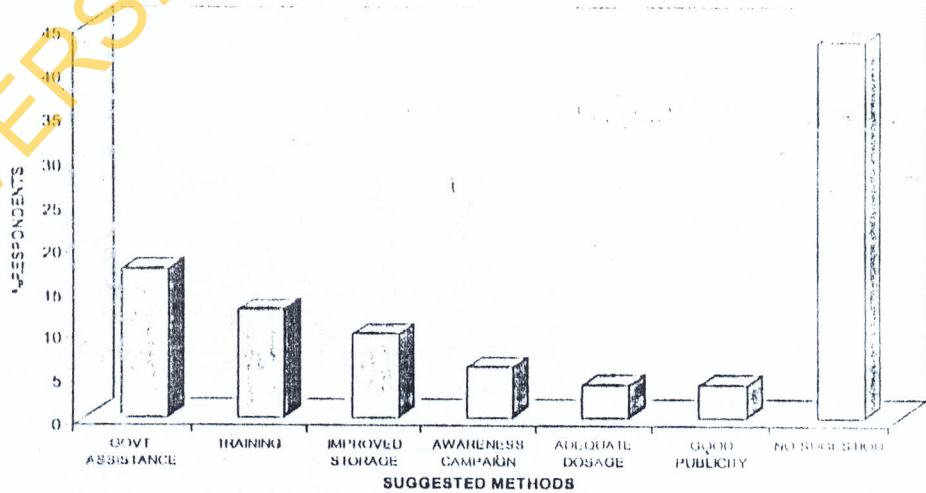


Fig. 7. Methods for improving the quality of local medicines by respondents'

## Discussion

A majority of the traditional practitioners (86.4 %) in the communities visited claimed that they inherited the profession from their parents or grandparents. This is not surprising because, in traditional medicine, the practitioners guard, very jealously, their knowledge on the plant sources, the plant combinations and mixtures, and the special techniques used in traditional practice. This type of information, in many cases, is maintained only within family circles.

These health care givers claimed that they treat more cases of malarial fevers than any other fevers (78.8 %). The practitioners (85.4 %) claimed that they diagnose and differentiate between the types of fevers they treat only by physical examination of the patients. Since malaria is endemic in those communities, it may not be too difficult for traditional healers to accurately differentiate and diagnose the disease by its well-known symptoms. However, this approach alone, without the facility for accurate laboratory diagnosis, may increase the possibility of the traditional practitioner misdiagnosing the medical problem or the type of fever.

The most commonly used herb is dogonyaro (*Azadirachta indica*). 62.5% of the respondents claimed that it was the best drug in the treatment of febrile illnesses. Earlier studies had reported that *A. indica* was the most commonly used drug for the treatment of febrile illnesses by the Yorubas of South-western Nigeria (Ajayioba et al, 2000). The plant is also used for the same purpose in other parts of Nigeria and in many African countries (Sofowora, 1993). The present study thus confirms the general claims on the use of the dogonyaro plant. In many parts of Nigeria, *A. indica*, is a major component in the ethnomedical management of febrile illnesses. It is worthy of note that the antimalarial properties of this plant have so far not been confirmed in all laboratory studies (Sofowora, 1993). Other herbal preparations used by the health care givers in the present study; lemon grass, lime, and mango bark also stand out clearly as herbal preparations, which were reported to be more frequently used in Western part of the country (Ajayioba et al, 2000). Some traditional healers also use herb teas and herb powders in treating ailments.

Since it is common in traditional medicine for the healers to use one herbal mixture to treat more than one ailment, many of their medications often contain more than just one plant. Therefore in herbal remedies, *A. indica* is usually not used alone but in mixtures containing other plants. In many cases, the herbal mixtures are not standardised and vary in composition from one preparation to another and from

one healer to the other, thereby leading to mixtures of varying potencies.

A small percentage, 5.0%, of traditional healers still engage in the practice of divination and 3.3% perform traditional sacrifice. This group of traditional healers apply, in their practice, the belief that ill health and other misfortunes result from a disturbance in the relationship between man and his social and spiritual environment. By the use of divination and ritual sacrifice, they succeed in restoring the patient to a harmonious relationship with his environment and therefore overcome the influence of evil forces.

The traditional healers (60.6 %) reported that there were cases they could not treat, and so they referred the patients to orthodox hospitals. Of the patients sent out, 58.3 % were those who did not respond to treatment, 30.0 % did not have clear-cut symptoms making diagnosis and treatment difficult, and 11.7 % were those with serious illnesses, mostly at the terminal stages. This shows that many of the traditional healers are conscious of their limitations and would seek help when necessary. However, still a good number delay and do not seek help early waiting for the patient's condition to deteriorate before taking action. By so doing, the patients do not die in the traditional clinics but in the orthodox hospitals and supposedly bring disrepute to modern medicine. Therefore, the traditional practitioner needs to be educated in the idea that they need to seek expert advice when necessary, and early enough too and that they cannot treat every ailment that comes to them. This underscores the need for the promotion of 'integrated medicine', which selectively combines traditional herbal medicine with 'modern medicine'.

The traditional practitioners interviewed in the present study, were very clear on what they needed to enhance the quality of their trade. They called for financial assistance, training of personnel and assistance with the preservation of their herbal preparations. This shows that the safety and limitations of herbal medicines are clear to some of these practitioners. They would want to influence more positively on their various communities if some basic education is given to them and if they are considered among small-scale businesses for soft loans.

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