KNOWLEDGE, ATTITUDES AND PRACTICES OF TRADITIONAL PRACTITIONERS ABOUT JAUNDICE IN BOBO-DIOULASSO, BURKINA FASO.

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Abstract

Knowledge, Attitudes and Practices of traditional practitioners about jaundice in Bobo-Dioulasso, Burkina Faso

Introduction: Jaundice, according to popular knowledge cannot be treated in modern medicine and that's why people consult traditional Practitioners. The objective of this paper was to study knowledge, attitudes and practices of traditional Practitioners (TP) about jaundice.

Material and Methods: A descriptive cross sectional study was carried out from February 1st to April 30th in Bobo-Dioulasso, Burkina. An individual questionnaire was used to collect about 100 TP members of two associations in the Bobo-Dioulasso.

Results: The average age of participants was 48.51 (± 14) years old and sex ratio 1.9. Most of TP half (59%) were illiterate. The average number of practice was18.28 (± 11.4) years old and the majority of TP (73%) were trained in Their family. Only few TP had (18%) the authorization of practice. Despite that all the TP knew jaundice, the level of knowledge of the causes was unsufficient in more than 91%. Only10% of TP named as hepatitis because 69% versus malaria. A good knowledge of jaundice causes was statistically associated to the alphabe-literacy (p = 0.003) but not to the anciennity of practice (p = 0.5). The majority of machinery (86.5%) used herbal plants for the jaundice treatment. The most herbal plants cited by the TP were Cochlospermum tinctorium, Terminalia macroptera, Commiphora africana, Anogeissus leiocarpus. Decoction was the most representation form used (74.7%) and drinking is the most administration route (92.7%). Some TP (9.1%) think that the modern treatment was at risk of death in the presence of jaundice. The medical complementary exams were the main reason for TP to refer patients suffering from jaundice in modern medicine (48.7%).

Conclusion: this study shows an unsufficient knowledge of TP about jaundice notably its etiology. Herbal plants were the material the most used for the treatment of PD.

Introduction
According to the World Health Organization (WHO), traditional healers (TP) help significantly in the management of health problems in the world especially in low income countries ⟨2, 9, 10⟩. At the International Conference on Traditional Medicine for the countries of Southeast Asia, in February 2013, the WHO Director-General Dr Margaret Chan, said that *"traditional medicines which quality, safety and efficacy are proven, participate in the achievement of the objective to give everyone access to care. For millions of people, herbal medicines, traditional treatments,*

and traditional practitioners are the main or even the only source of health care. These treatments are close to people and easy to access and affordable. They are also culturally acceptable and many people trust them " [12]. The traditional healers treat a number of diseases including liver disease manifested by frequent symptoms among which jaundice [9]. A study on the characteristics of jaundice conjugated to bilirubin in Burkina Faso on 42 patients we noticed that the average time of consultation from the beginning of symptoms was 20.6 ± 15.2 days [14] and another study on hepatocellular we noticed that the first most common antecedent was jaundice (36.1%). The diagnosis delay was more than 3 months in 50.7% [11]. These delays consultation and diagnosis can be explained by the fact of a first consultation and support among traditional healers. Indeed, cultural beliefs suggest that jaundice is not treated with modern drugs especially injectable all contributing to delay visits to health services.

However, very few studies have been conducted in Burkina to analyze knowledge, attitudes and practices of jaundice regarding traditional healers. While this type of study can help improve the practice of traditional healers and also to identify the medicinal plants they use in the treatment of jaundice. The study of these medicinal plants used in traditional medicine had an increasing interest to reduce toxicity and allow for safer use [10].

This is to contribute to a better knowledge of the management of jaundice by traditional practitioners in Burkina Faso that our study was undertaken with the aim of analyzing their knowledge, attitudes and practices facing jaundice and identify plants used and methods of use.

Materials and Methods

Type of study, population and sampling
It is a quantitative descriptive study of transversal type prospective collection spread over a 3 months period from [1] February 1st to April 30[th]2015.
Our study population was made up of all traditional healers living in Bobo-Dioulasso for at least 6 months and this during the period of the survey they agreed to answer our questions. We paid more attention primarily on those gathered in the framework recognized by health and political authorities. It is the association of traditional healers and herbalists of the province of Houet and Relwendé association.

Were excluded from this study healers specialized in trauma pathology and those using both technical divination in the field of mysticism.

A purposive sample of traditional healers met our inclusion criteria was established. The total number of traditional healers included at the end of our investigation was 100.

Variables and technical data collection
The information collected focused on the sociodemographic characteristics of traditional healers, their knowledge of jaundice, attitudes and practices in the treatment of jaundice.

To evaluate the TP knowledge level of jaundice ; in terms of the definition, the answer "yellow coloration of the eyes and / or palms of the hands and / or soles" was considered good response. Regarding the etiology of jaundice, the following answers were scored with 1 point each to the respondent to rate: malaria, hepatitis, anemia, cirrhosis, liver cancer. The "mosquito bite" answer was considered malaria and also listed on 1 point. A note on 5 points was attributed to each respondent and notes between 0 and 1, the note 2 classified as the average and those between 3 and 5 are good. The level was satisfactory from the average rate in correlation with literacy and anciety.

The data collection technique was the individual interview and a questionnaire was designed for this purpose. The questionnaire included a combination of open questions and closed questions. It was written in french and administered in french, dioula or in moore by language mastered by the traditional healer. The names of the plants were collected in the national language and scientific names found thanks to multilingual dictionary of African medicinal plants [5].

Ethical aspects
Before each interview, the participant consent was obtained on written after explanation about the purpose of the study, its importance and the method of investigation.

Processing and analysis of data
Data were entered using the Epi-Data Manager version 2.0 software. After cleaning, the data were exported and analyzed using Stata software and Epi-info 6.

Quantitative variables have been averaging object and those qualitative calculating proportions. Pearson chi2 test and The Fisher exact test were used as appropriate to compare the proportions and significance level was $p < 0.05$.

Results

Sample Description
In total 100 TP were glimpsed during the study period. The sample consisted of 66% male. The average age was 48.51 years old [± 14.04] with extremes of 18 and 88 years old. More than half (52%) had an age between 40 and 60 years. The average age of the practice of traditional medicine was 18.28 years old   [11.43] with extremes of 2 and 53 years. The majority (83%) were over 10 years of experience. The informative level, less than half (41%) were literate; 34% had attended a Koranic school and 25% did not attend school. The training was part of family type for the majority (73%) of surveyed TP and 7% said their knowledge is a talent (dream). Almost two thirds (64%) were practicing the only profession of traditional healer. Only 18% had a year of authorization from the Ministry of Health. They treated on average 5 diseases. Malaria was the first disease treated by TP in our study (68% TP) followed by hemorrhoidal disease (52%).

Knowledge of jaundice
All TP surveyed had good definition of jaundice, but the level of knowledge on the causes of jaundice was low for 91%, average for 8% and good for 1% of TP. As causes mentioned by traditional healers were noticed, malaria (69%), food (31%) and hepatitis (10%).

There was a statistically significant difference between the level of knowledge on the causes of jaundice and TP literacy level ($p = 0.003$). The proportion of a TP with an acceptable level of knowledge on jaundice causes was higher among the literate than non-literate ($p = 0.003$). There was no relationship between the level of knowledge on the causes of jaundice and the anciety of traditional practitioner ($p = 0.5$).

The attitudes and practices of TP on management of jaundice
In this study 96% of traditional healers said they were able to handle cases of jaundice. The monthly average of the cases treated by them was 11 [± 10.23] with extremes of 0 to 50 cases.

The plants were used as only means of treating jaundice 86% (83) of the TP involved in the care. No traditional practitioner of this study did not mention the use of modern medicines. We discovered 38 plants species belonging to 22 different families, used as a remedy in the treatment of jaundice. Table I is a summary of the plants used by TP in the treatment of jaundice. Theplants most used by TP were: *Cochlospermum tinctorium, Terminalia macroptera, Commiphora africana, Anogeissus leiocarpus, Combretum micranthum, Cassia sieberiana, Entada africana.*

The part of the plants most used as remedy was mainly the roots 83.7% (76) followed by leaves (52.2%). The decoction was the form of preparation the most common (74.4%), followed by the powder (17.9%). The route of administration of remedies was mostly oral (92.7%) followed by baths (79.2%).

Accompanying measures to treatment were recommended by 83 (87.37) % supporting jaundice. It was such dietary measures the eviction of the oil or fatty foods by 67 (39.7%), the sugar eviction by 33 (19.5%), the eviction of meat by 27 (16%) and the ouster milk by 13 (7.8%).

The average duration of treatment was 1.8 weeks with a treatment period of between 1 to 7 weeks.

The majority of traditional healers (84.38%) reported that their treatment had no side effects. Side effects commonly reported by 15.63% of the TP were diarrhea, dizziness, abdominal pain.

For nearly 1 out of 4 TP (18.75%), their traditional treatment was incompatible with the modern treatment in jaundice and those for various reasons dominated by drug reactions (55.6%).

More than half (59.04%) made   available their recipe to the market while the other half preparing the demand at home. The proportion of female TP revenue selling market (30.2%) was higher than that of male TP (20.8%) (p = 0.000).

More than the 3/4 (79.2%) would refer to modern medicine patients with jaundice and for reasons dominated by medical tests (48.7%). About the reasons for not referring to modern medicine, 9.1% of traditional practitioners continued to believe that the modern treatment, including injection was harmful and advise patients with jaundice to avoid modern health.

Discussion

Demographics
It appears from this study that the average age of TP was 48,51 years old, which is superimposed with the results of Ashu M Agbor in Cameroon who found an average age of 46 years old and those of Sombié in Bobo-Dioulasso in 1994 which brought the average age 51 years old [1, 15]. The age most represented in this study was that of 40 to 60 years (52%). This is also the finding done by Sangaré who reported in his study 62% TP of this age [13]. These ages could be explained by the slow acquiring of knowledge and skills for independent exercise of the profession. The TP spend years learning under the guidance of another TP before starting to exercise alone.

The sex ratio in our sample was 1.9. This is comparable to that of Sombié in Bobo-Dioulasso in 1994 which was 1.7. [15]. In contrast, Drissa Diallo instead reported 63.9% women and 36.1% men (sex ratio = 0.6) [12]. This can be explained by the fact that the study of Drissa Diallo was on the treatment of pregnant women and that support is provided by more female than male TP.

In our study, 37% of the TP went to modern schools and 34% at the Koranic school. These results are similar to those of Fallou Mbacke Thiane in Senegal in 2004 which reported 45.5% enrolled in the modern school and 36.3% in the Koranic school. [16]. We also mentionned 41% of scholars. This figure is in contrast to that of Sombié in 1994 which was a smaller percentage of literate (9.7%) in Ouagadougou and Bobo-Dioulasso. [15]. This superiority of our numbers with respect to his own could find an explanation in the increasing literacy rate in our country over the past two decades. This rate increased from 18.9% in 1994 to 28.2% in 2009 for 15 years and more [7]. This study reported a average number of years of exercises 18.28 years. This result is comparable to that of Mr. Ashu M Agbor in Cameroon (21years) [1]. In this study 44% of the TP have a number of years of experience between 10 and 20 years. Toudji-Bandje in Togo in 2007 found 54% with between 10 and 20 years of experience [9]. The reputation is acquired through anciety.

It appears from our study that 73% of TP had acquired their knowledge by a close relative and in most cases direct parents or grandparents. This finding is superimposed on that of Toudji-Bandje (84%) in Togo in 2007 [9]. This finding can be explained by historical and sociocultural realities that underline the practice of traditional medicine. Traditional healers and herbalists, especially in Africa, have an expert knowledge transferred orally from one generation to another by professional healers and elders through learning at the core of the family (from father to son). Similarly, the lack of training school in the field is another explanation. Note that 7% of TP that had acquired their knowledge through a donation by dreams of revelation. Toudji-Bandje in Togo reported by 3% acquisition dream [9]. The inferiority of his numbers could be explained by the sheer size of its smaller sample than ours. These results indicate the involvement of a mystical aspect to traditional medicine.

In our study the TP treated on average 5 diseases. This is higher than the average 3 diseases found by Sombié in the same city in 1994 [15] and which could be justified by the emergence of new diseases in the last 20 years that traditional healers have added to their catalog of treated diseases.

Among the main diseases treated by TP, malaria and hemorrhoids occupied the predominant seats with 68% and 52%. Toudji-Bandje in 2007 made   the same observation with 29% and 32% [15]. This could be correlated to the place of malaria among the population health problems.

Knowledge of jaundice

This study showed that all TP in our sample know jaundice. This certainly is the ease of recognition of the symptoms and the frequency of cases that come to them (about 11cases per month). The level of knowledge on the causes of jaundice is not satisfactory for all respondents. Only 9% had an average level of knowledge. This could stem from the fact that the concept of cause is different in the two medicines. This concept is broader in traditional medicine in that it sometimes includes the factors triggering or aggravating. Also jaundice is sometimes regarded in traditional medicine as a "jaundice" disease and not a symptom of disease as in modern medicine

Power was reported as the cause of 34% of the TP. This figure is close to the 40.4% found by Sombié in 1994 in Bobo-Dioulasso [15]. This similarity could be explained by the fact that more than 2/3 of our sample linked to malaria and jaundice study on malaria.

The level of knowledge on the causes of jaundice was related to the level of the TP study in our study. This could arise due to the acquisition of certain health information at school and also to the greater tendency of scholars to inform the media.

The healing practices of jaundice matters

It is clear from this study about 99% used the plants for the treatment of jaundice, with or without other types of remedies. The more plants used in this study were   : *Cochlospermum tinctorium, Terminalia macroptera, Commiphora africana, Anogeissus leiocarpus, Combretum micranthum, Cassia sieberiana, Entada africana.*

The parts of plants the most used as remedies were the roots (83.7%) and leaves (52.2%). These results are different from those of Sombié (1994) which were 54.2% for roots and 77.4% for sheets and those of Sangaré which reported that the leaves were mainly used (35.29%) [13, 15].

The most recommended form of presentation in our study was the decoction (74.74%) followed by the powder form (17.89%). These results are very similar to those of Sombié in 1994 which were 84% of decoction and 24, 3% [15] powder. Sangaré (2012) also found that the decoction was the most recommended method of preparation (45.45%) [13], as well as El Hafian in 2014 in Morocco. [8] This preference for decoction and powder form could be explained by the ease of preparation, conservation. Sombié in 1994 linked this preference form to the fact that the decoction form provides the active ingredient of the plant. [15].

The mode of use of the most recommended remedies was the drink (92.7%) followed by the bath (79.2%). Sombié in 1994 had made   the same observation in Bobo-Dioulasso with 95.4% for drinking 71.5% for the bath and even Sangaré in 2012 with 63.63% of oral and the El Hafian Morocco in 2014 with 77% of oral [6, 13, 15].

The accompanying measures relating mainly to the diet with eviction fat, sugar, meat and milk were the most recommended by TP in our study. Sombié in 1994 also found in his study that fats and sugar drinks were banned by the TP as an accompanying measure of treatment. [15] Indeed it has been cited as a cause of jaundice by the majority of TP.

It appears from our study that none of TP uses modern medicines in addition to conventional therapy. In Burkina, Sombié (1994) and Coulidiaty (2014) made   the same observation [3.15]. This reflects their commitment and confidence in their drug and also to know their limits to non mastery of modern medicines. Better 18.75% of TP found that the two types of treatment are incompatible.

Conclusion

It appeared from this study that the TP, as though knowing jaundice, have a low level of knowledge about the causes. There was a link between the low level of knowledge and the TP literacy level.

Regarding the treatment of jaundice, we found that the plants were at the heart of it and that there were misgivings concerning the use of modern therapy.

This calls for more collaboration between traditional medicine and the modern one. In Burkina Faso, the creation of a Directorate for the Promotion of Traditional Medicine and Pharmacopoeia testifies this obvious desire to promote traditional medicine and medicinal plants.

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Table I: Summary of medicinal plants used for the treatment of jaundice

Family	Genus and species	Local language names		parts used	Times cited
		Dioula	Moore		
Cochlospermaceae	*Cochlespermum tinctorium*	N'dribala	Sôasga	R	48
Combretaceae	*Terminalia macroptera*	wôlon	Kôdpôko	R, F	28
	Anogeissus leiocarpus	Ngalama	siiga	R, F	14
	Combretum micranthum	Ngolobe	Ranga	R, F	13
	Guiera senegalensis	Kounguiè	Wilinwiga	F	4
	Terminalia avicennioides	Wolo	Koondré	R	2
	Combretum glinitisum		kuilingua	R, F	1
Burseraceae	*Commiphora africana*	Built	Kodentôabga	R	22
Caesalpinaceae	*Cassia sieberiana*	Sindian	Kumbrisaka	R, F, E	13
	Tamarindus indica	Tomi	Pousga	f	4
	Cassia occidentalis	Suma kala	Kinkilba	F	3
	Cassia siamea	Kaset	Kumbrisaka	F	1
	Cassia alata	kontaba		F	1
	Cassia italica	balibali	Kaneda	E	1
	Cassia nigricans	Niokorokala	Zandrékouka	R, F	1
Mimosaceae	*Entada africana*	Samanèrè	Sinnego	R	10
	Acacia nilotica	Baganan	Peg Nenga	F, E	2
	Parkia biglobosa	Nere	Roaaga	E	2
	albida	Balanzan	Zaangha	R, E	1
Meliacea	*Azadirachta indica*	Nim	Nim	F	5
	Trichilia emetica	Sula finsan	Kinkirstaanga	R	3
	Khaya senegalensis	Diala	Kouka	E	1
Rubiaceae	*Mitragyna inermis*	Dum	Yiilga	F	5
opiliaceae	*Opilia amentaceae*	Nenboshi	Wagsalgo	F	5
Asteraceae	*Chrysanthelium americana*	Furakuna	Waltuko	P	5
Anacardiaceae	*Manguifera indica*	Mangoro	Mango,	F	4
Annonaceae	*Anona senegalensis*	Mandingo sunsun	Bakudi	R, F	3
Poaceae	*Oxytenanthera abyssinica*	bo		F	3
Rutaceae	*Citrus aurantifolia*	Lemurukumuni		F, f	2
	Zanthoxylum zanthoxyloides	Wô	Rapeoko	R	1
Ochnaceae	*Lophira alata*	mana		E	1
Rubiaceae	*Nauclea latifolia*			F	1
Caricaceae	*Carica papaya*	Mande	Budebalod	F	1

	Cissus quadrangularis	Wouloudiolôkô	Wob-sendo	F	1
Vitaceae	*Ampelocissus africana*	Forokofaraka	Bugsêntungu	F	1
Verbenaceae	*Vitex doniana*	Kotofin	Andga	F, E	1
Polygonaceae	*Securidaca longipedonculata*	Dioro	Pelga	R	1
Olacaceae	*Ximenia americana*	Ntôke	Leenga	R	1
Euphorbiaceae	*Manihot esculenta*	Bananku		F	1
Fabaceae	*Uraria picta*	Allah gnon		F	1

P = whole plant; R = Root; F = Leaves; Fruits = f; E = Bark