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Investigation Ethnobotanique of Plants used in the Treatment of the Diabetes and the Arterial Hypertension in Kita, Mali.

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Abstract:

Background

Mali overflows several plants capable with to contribute to relieve some pains of the population to know the diabetes, the arterial hypertension and well of others. But, these plants are often little or less known by the big majority of the citizens that can sometimes meet them without paying attention there. **Objective**

The purpose of this study is to make an ethnobotanique on the plants used in the treatment joins the diabetes and the arterial hypertension.

Methods

The investigation took place in the Kita city, Mali. A card of investigation has been submitted to every tradithérapeute on which must be mentioned his/her/its name, his/her/its first name, his/her/its knowledge on the pathologies and the names of the plants.

Results

At the end of this survey, the women are majority (58%) among fifty (50) of the users of the traditional medicine investigated. The majority of them investigated have an age understood between 30 and 40 years. The ethnic groups the more represented are the Malinké (20) and the Peulh (14). The investigation permitted to count 9 plants and among which Leptadenia hastata, Oxytenanthera abyssinica and Vitex doniana were the most quoted.

Conclusion

The investigation permitted to count 9 plants, but these results require biologic and chemical analyses more deepened.

Keywords: Ethnobotanic investigation, diabetes, arterial hypertension,

1. INTRODUCTION

To Mali, the non transferable illnesses (MNT) stay a public health preoccupation. The MNT are estimated responsible 46 700 deaths per year is 30% of every death of which 12% bound to the cardiovascular Illnesses, 4% bound to the cancers, 3% bound to the chronic respiratory illnesses and 1% bound to the diabetes and 10% for the other MNT. The premature mortality risk because of the MNT in Mali between 30-70 years is of 25 % [1]. The rate of prévalence of the diabetes in Mali is of 3,7% according to the studies achieved by the general direction of health and the public hygiene in 2013 and 2019 [2].

The medicines antihypertenseurs and modern antidiabétiques although they are efficient present many

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secondary effects (Attack of the nervous system, renal attack etc.). Seen the stroke and the access conventional treatments, the recourse to the medicinal plants becomes an inescapable factor in the hold in charge of numerous pathology as the diabetes and the arterial hypertension. [3, 4].

Mali overflows several plants capable with to contribute to relieve some pains of the population to know the diabetes, the arterial hypertension and well of others. But, these plants are often little or less known by the big majority of the populations that can sometimes meet them without paying attention there.

2. MATERIALS AND METHODS

2.1. Site of Survey

The circle of Kita covers a global surface of 35 250 km2 for a population estimated to composed 383 501 inhabitants of : Malinké, Peulh, Bambara, Soninké, Diawambé, Kakolo, Kassonkhé, Moorish, Bozo.

It spreads from the North to the South on 400 km and of is in West on 400 km; it is situated in the South part - West of the Region of Kayes. It is understood between the 14th and the 18th degree of North latitude and the 10th degree of West longitude. The Circle of Kita is limited at the North by the Diéma circle, to the South by Republic of Guinea Conakry, to the East by the circles of Kati and Kolokani (Region of Koulikoro), to the west by the Circles of Bafoulabé and Kéniéba.

The relief is composed of a set of trays of 200 to 500 m sprinkled of vestigial heights as" KITA KOUROU ". The tropical type climate with two seasons very marked : the dry season and the season of rains.



Figure1. Renting of the survey site (www.igm.com/mapkita/ml)

2.2. Ethnobotanic Investigation

The investigation took place in the city of Kita (Mali). A card of investigation has been submitted to every the users of the traditional medicine on which must be mentioned his name, his first name, his knowledge on the diabetes and the arterial hypertension and the names of the plants used in the hold in charge of these pathologies.

2.3. Identification of the Plants.

After the spoliation of the investigation cards, a sample of every plant has been identified by the laboratory of botany of the Faculty of the Sciences and Technics of the University of the Sciences, the Technics and the Technological of Bamako.

3. RESULTS AND DISCUSSION

3.1. Sociodemographics Features of the users of the Traditional Medicine

3.1.1. Distribution of the users of the traditional medicine according to the sex

The figure 2 represents the distribution of the users of the traditional medicine according to the sex.

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Figure2. *Distribution of the users of the traditional medicine according to the sex The feminine sex was the more represented, either a rate of 58%.*

3.1.2. Distribution of the users of the traditional medicine in function the ethnic group

The distribution of the users of the traditional medicine according to the ethnic group is listed in the figure 3.



Figure3. Distribution of the users of the traditional medicine in function the ethnic group Among of them investigated, the malinkés (20) and the peuhls (14) are the most numerous.

3.1.2. Distribution of the users of the traditional medicine according to the age group

The distribution of the users of the traditional medicine according to the age group is represented in the figure 4.



Figure4. *Distribution of the users of the traditional medicine according to the age group The age group [40-50 [was majority among them investigated*

3.2. Most Quoted Plants

At the time of the users of the traditional medicine, the most quoted plants are listed in the figure 5.

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Figure 5. Quoted plants at the time of the investigation

Leptadenia hastata and Oxytenanthera abyssinica are the most quoted by the users of the traditional medicine.

3.3. Family Names of the Quoted Plants

The family names of the quoted plants are listed in the table I.

TableI. Family names of the quoted plants

Names of the quoted plants	Family names of the quoted plants
Oxytenanthera abyssinica	Poaceae
Euphorbia hirta	Euphorbiaceae
Vitex doniana	Lamiaceae
Ocimum basilicum	
Sclerocarya birrea	Anacardiaceae
Leptadenia hastata	Asclepediaceae
Balanites aegyptiaca	Zygophyllaceae
Moringa oleifera	Moringaceae
Ximenia americana	Olacaceae

Vitex doniana and Ocimum basilicum belong to the same family Lamiaceae.

At the end of this investigation, we note a predominance of the feminine sex at the traditherapeutes is a rate of 58% what is approved in most cases of ethnological investigation [5, 6].

The ethnic groups peulh and malinké were the most frequent among people investigated and it could be due to the social constitution and sociétale.

The age group the more represented was of]40 - 50] it could explain itself by the experiences acquired by these people and the transmission of the ancestral knowledge on the plants of generation in generation.

The most quoted plants for the hold in charge of the treatment join the diabetes and hypertension were *Leptadenia hastata* and *Oxytenanthera abyssinica* these plants made the object of several studies and in different horizons because they are known for their numerous medicinal and nutritional virtues [7]. *Leptadenia* known *hastata* since strong a long time for this activities antihypertenseur and antidiabétique could also have some activities antifalcémiante [7, 8].

In addition to these properties antidiabétiques and antihypertensives, several studies showed the nourishing wealth and the positive impact on the ecosystem of *Oxytenanthera abyssinica*. [9, 10].

Otherwise, other plants have been mentioned more or less at the time of our investigatings that are known for their therapeutic and medicinal nutritional activities as *Vitex doniana* and *Ximenia americana* and it demonstrate by several survey [11, 12].

4. CONCLUSION

The region of Kita, because of its biodiversity could contribute to the hold a lot in charge of numerous pathologies. This survey permitted to list 9 plants used in the hold in charge of the diabetes and the arterial hypertension that stays a problem of public health. But, these results require biologic and chemical analyses more deepened.

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