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## **An Examination of the Usage of Herbal Contraceptives and Abortifacients in Lagos State, Nigeria**

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### **ABSTRACT**

A study on herbal contraceptives trade and usage in Lagos state of Nigeria was carried out using the research methods in Humanities and Arts through the means of questionnaire administered on some Lagos dwellers and the traditional medicine practitioners (TMPs) who operate around markets in the metropolis and in the outskirts of the city. Lagos is the most populous state in Nigeria where all categories of Nigerians both literate and illiterate co-inhabit. The use of herbal birth control measures by Lagosians is popular because it has little or no side effect, it is cost effective, easily accessible and effective. Social and economic statuses of the people are no barrier to patronage. Most users are young women and the medicaments are usually preferred after sexual intercourse and before pregnancy. Names of the plants that are used and the recipes prepared therefrom are presented. Further pharmacological screening by other researchers into the reported plants is strongly suggested to ascertain or disprove the claims of the traditional medicine practitioners (TMPs).

### **INTRODUCTION**

Lagos is the most populous conurbation in Nigeria with more than 8 million people. It is the most populous in Africa, and currently estimated to be the second fastest growing city in Africa and 7th fastest in the world. Lagos is a huge metropolis which originated on islands separated by creeks, such as Lagos Island, that fringe the southwest mouth of Lagos Lagoon, protected from the Atlantic Ocean by long sand spits such as Bar Beach which stretch up to 100 km east and west of the mouth. From the beginning, Lagos has spread on the mainland west of the lagoon and the conurbation, including Ikeja and Agege, now reaches more than 40 km north-west of Lagos Island. The city is the economic and financial capital of Nigeria. Birth control, sometimes synonymous with contraception, is a regimen of one or more actions, devices, or medications followed in order to deliberately prevent or reduce the likelihood of pregnancy or childbirth. Herbal contraceptives and abortifacients are those plants used for birth control or in the prevention of pregnancy and for premature expulsion of a foetus from the womb. Many plants have been reported to have sterilizing, contraceptive and abortifacient properties. Plants that have contraceptive and abortifacient properties may act through rapid expulsion of the fertilized ova

from the fallopian tube, inhibition of implantation due to a disturbance in oestrogen - progesterone balance, foetal abortion, perhaps due to lack of supply of nutrients to the uterus and the embryo, and also on the male side through affecting sperm count, motility and viability (Ciganda and Laborde, 2003; Kaunitz and Benrubi, 1998; Nounmi and Tchakonang, 2001).

In Nigeria, some women prefer this alternative means of birth control as it constitutes little or no side effects when compared to the synthetic contraceptives and other abortion pills.

Because of a number of reasons, patronage of traditional medicine practitioners (TMPs) by the people has been on the increase in the recent times. People patronize them for a wide range of ailments which they claim are cured by herbs. The herbal preparations or recipes are formulated by traditional healers who have enviably great knowledge of medicinal herbs, though many, if not all, do not know the active properties or toxicological effects of these herbs. In this report, the Traditional Medicine Practitioners (TMPs) recommended water, 'Schnapps' (hot drink), corn pap, water and palm oil for taking the recipes. The recipes are available as decoctions, concoctions, milled powder, burnt black preparations and masticatory. Other approaches involve use of rings and other magic wands which have been previously soaked in the recipe. The efficacy of the preparations was expounded both by the TMPs and users. All parts of the plants were also reported to contain the bioactive compounds.

This study is a contribution to ethnobotanical and floristic studies in Nigeria carried out with the intents of throwing more light on the patronage of herbal medicine in Nigeria, especially in the area of birth control, to document some of the well known plant species which are used for controlling birth for further chemical and pharmacognostic research into the bioactive compounds. Moreover, it also serves as a record of useful medicinal plants in Nigeria because most African herbalists do not keep records.

## **MATERIALS AND METHOD**

Questionnaires were administered on both the TMPs and users of birth control herbal drugs in seven major markets in the state. Up to 2000 voluntary respondents agreed to provide answers to questions raised in the Questionnaire, some of which were answered correctly and multiple answers were given by others. Some of the questions asked were: sex of TMP, experience in the trade, Source of knowledge, age of users or customers, solvent for preparation, plant names used, source of plant materials, method of preparation, application methods (before pregnancy, after pregnancy, before sexual intercourse, after sexual intercourse) and Nuptial status of customers (single or married).

The botanical identity of the plants used in the medicinal preparations was determined using flora and in the herbaria of Forestry Research Institute of Nigeria, Universities of Lagos and Ibadan and Obafemi Awolowo University.

However, it was pretty difficult to obtain information from most of the respondents because of fear of defrauding and attrition of knowledge.

As usual, leaf, bark, stem, root, rhizome, bulb, fruit, seed and whole plant are the materials used in various combinations for the medicinal preparations, they can be harvested at specific times during vegetative and reproductive growth (Harborne, 1998; Sofowora, 2006).

The preparations may be drunk or worn as local rings made from aluminium or alloy steel after soaking in the medicinal preparations.

## RESULTS

Tables 1 and 2 contain some of the recipes that are commonly prescribed to people. Figures 1 and 2 provide information on nuptial status of the users and the various application methods used in different markets respectively. The TMPs reported that they collect plant samples from the wild and personal medicinal plant garden. Some of these plants have been reported to be poisonous and they may act as purgative. The pharmacognostic research into these plants is strongly recommended in order to establish the claims of the TMPs. However, no report was made available on plants that can be used to achieve temporary male sterility in any of the markets.

## DISCUSSION

Efficacy study of the plants used as contraceptives and abortifacient was conducted in seven major markets in Lagos State using the research methods in Humanities and Arts through the means of questionnaire administered on the traditional medicine practitioners (TMPs) and some Lagosians. All respondents agreed that the medicines are effective and that they have no side effect. More women are involved in the business than men. Young ladies between ages 18 and 40 years patronize the TMPs more than older people. They acquired the training through parents and as apprentices. They use ethyl alcohol, ordinary water and water obtained from fermented milled fruits of *Zea mays* and *Sorghum bicolor*, and palm wine are used as solvents to extract the active principles of the plants. The plant materials can be used either in fresh or dry condition and not less than 5 - 30 individuals are attended to every 2months.

In Agege and Ikorodu markets which are markets in the outskirts of Lagos, singles patronized more than any other people in the city markets (Fig. 1). In the city markets, both single and married people patronize. The response pattern is because of unorthodox alternatives that are available in the city.

The trend is almost maintained in the method of application (Fig. 2). In the city outskirts markets, especially in Agege, the preparations are usually applied before pregnancy, Oyingbo market which is in the metropolis with high rate of population, the medicament is applied before pregnancy. Ikorodu market which is also in the outskirts of the city, the herbal drug is applied before pregnancy but in the metropolis markets (Onipanu, Oyingbo and Bariga) users usually apply before sexual intercourse. The application after pregnancy is almost uniform in all the markets, although it is higher in Agege and Ikorodu markets (city outskirts) and Onipanu, metropolis market (Fig. 2).

In fact, all the users unanimously agreed that this method of' childbirth control should be encouraged by the government instead of using the synthetic type which has very serious after-use side effects.

## CONCLUSION

The study of modern herbalisin (phytotherapy) on contraception and abortion is rapidly evolving throughout the world, The curative parts of a plant are not simply its wood, stem or its leaves but the chemical compounds it produces. Hence, this contribution is not a campaign against synthetic contraceptives and abortion pills. It was reported that some women respond well to herbal means of contraception and abortion, while others responds or react better to the synthetic pills. The sole objective of both types of medicine is to restore the patient to good and normal or desired health condition. This attempt has documented names of plants which have the potential to control child birth. The claims of the TMPs should be investigated by subjecting these plants to further pharmacognostic screening and government support is strongly solixcited. The study is a contribution to ethnobotanical and floristic studies in Nigeria.

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**Table 1:** Some contraceptive recipes prescribed and sold in Lagos state.

Sn	Recipe and administration	Function
1.	Grind seeds of <i>Abrus precatorius</i> into powder. A single dose acts as a long acting contraceptive lasting up to three menstrual cycles.	Used as contraceptive
2.	Peel the bark of male <i>Carica papaya</i> root downwards and add sizeable fruits <i>Xylopia aethiopica</i> , little oil of <i>Elais guineensis</i> and cook with cat fish. Then eat.  To restore fertility, carry out the above but with female <i>Carica papaya</i>	Used as contraceptive
3.	Burn the leaves of <i>Macrosphyra longistyle</i> together with <i>Aframomum melegueta</i> and use the powder to cover incisions round the wrist.  To restore fertility, mix the powder with pap daily until conception	Used as contraceptive
4.	Ingest equal number of seeds of <i>Ricinus communis</i> and <i>Mucuna sloaeni</i> . Depending on how long the contraception is desired.  To restore fertility, regular drinking of oil of <i>Elaeis guineensis</i> for two weeks is recommended.	Used as contraceptive
5.	Wash roots of <i>Curculigo pilosa</i> and <i>Anthocleista vogelii</i> , bulb of <i>Chysoptiillum albolum</i> ? ( <i>Chrysophyllum albidum</i> G.Don) and peel the fruit of <i>Colocynthis citrullus</i> , add little quantities of complex salt (potash) and soak them in a bottle of gin for three days. The preparation is taken every time it is needed.  To restore fertility, stop usage whenever conception is desired.	Used as contraceptive
6.	Slice the fruit of <i>Colocynthis citrullus</i> add few quantity of potash and soak in juice of <i>Citrus medica</i> . Take the preparation in small glass cup morning and night.  To restore fertility, stop taking the drink.	Used as contraceptive

**Table 1 continued**

7.	<p>Soak fruits of <i>Xylopi aethiopica</i>, seeds of <i>Aframomum melegueta</i> and leaf <i>Sorghum bicolor</i>. In a mixture of hot drink and juice of <i>Citrus lemon</i>. Take in glass cup morning and night.</p> <p>To restore fertility, stop taking the drink.</p>	Used as contraceptive
8.	<p>Cut roots of <i>Cassia alata</i>, <i>Citrus medica</i>, and <i>Anthocleista vogelii</i> and boil with water obtained from fermented milled fruits of <i>Zea mays</i> for about one hour. Take the juice in small glass cup twice daily.</p> <p>To restore fertility, stop taking the drink.</p>	Used as contraceptive
9.	<p>Grind fruits of <i>Croton penduliflorus</i>, make a paste and drink with pap once in three days. It may cause purging that will stop.</p> <p>To restore fertility, stop taking the preparation.</p>	Used as contraceptive
10.	<p>Wash whole plant of <i>Abrus precatorius</i> and boil in water obtained from fermented milled fruits of <i>Zea mays</i>. Take in small glass cup three times daily before intercourse.</p> <p>To restore fertility, stop taking the preparation</p>	Used as contraceptive

**Table 2:** Some abortifacient recipes prescribed and sold in Lagos state.

Sn	Recipe and administration	Function
1.	Pound fruits of <i>Citrus medica</i> together with fruit and leaf of <i>Cassia sieberiana</i> and little quantity of potash. Take in small glass cup once every morning.	Used as abortifacient
2.	Cook leaf of <i>Cassia alata</i> , root of <i>Curculigo pilosa</i> and fruit of <i>Colocynthis citrullus</i> in water obtained from fermented milled fruits of <i>Zea mays</i> for 45 minutes. Take in small glass cup thrice daily.	Used as abortifacient
3.	Make a decoction of <i>Mareya micrantha</i> using leaf and bark. Take in small glass cup twice daily.	Used as abortifacient
4.	Squeeze out the juice in <i>Pleioceras barteri</i> and take twice daily.	Used as abortifacient
5.	Make a decoction of <i>Tephrosia densiflora</i> using root. Take in small glass cup twice daily.	Used as abortifacient
6.	Root bark of organically grown <i>Grossypium arboreun</i> is removed and grind to powder. Boil one teaspoonful of bark per cup of any liquid for 10 minutes. Then drink three cups per day for a maximum of 6 days.	Used as abortifacient
7.	Slice root of <i>Baphia nitida</i> , wood of <i>Pterocarpus osun</i> and leaf of <i>Sorghum bicolor</i> , soak in gin for 24 hours and take in small glass cup thrice daily.	Used as abortifacient
8.	Slice root of <i>Randia lucida</i> and leaf <i>Sorghum bicolor</i> and soak with Potash in water in a corked bottle. Take in small glass cup every morning and night.	Used as abortifacient
9.	Slice fruit of <i>Citrus medica</i> and root of <i>Curculigo pilosa</i> , soak in gin in a corked bottle. Take in glass cup thrice daily.	Used as abortifacient
10.	Crush whole plant of <i>Artemisia vulgaris</i> and make tea infusion using water. Take three glass cups daily for a maximum of six days.	Used as abortifacient