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Traditional embalmment techniques using *Mentha longifolia* among the Igala people of north central Nigeria

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Abstract
The significance of death and burial among the Igala people can never be over emphasized. It can be said that culturally perceived morbid and mortal implications of improper burial rites motivate embalmment towards ensuring that conditions necessary for effective burial is achieved. This is a qualitative study which investigated the perceived preservative properties of a traditional plant named *Mentha longifolia* (*Acheifa)* as well as the processes involved in the use of this plant for traditional embalmment among the Igala people. Focus Group Discussion and Indepth Interview methods were used to gather data for the study using qualitative instruments. Data analysed through content analysis methods reveal that *Mentha longifolia* has potent preservative properties such as sanctifying, antimicrobial, antioxidative and insecticidal compounds necessary for effective embalmment. The process involved in the use of *Mentha longifolia* however requires a corpse attendant using incantation, touching and burning to achieve embalmment effects. Recommendations on the basis of these findings include integration, expansion and preservation of this cultural practice.

Keywords: embalmment, embalmer, *Mentha longifolia* and Igala people

Introduction
Embalming is the art and science of preserving human remains by treating them to forestall decomposition. The purpose is to keep the corpse suitable for public display at the funeral for cultural, religious and other socio-economic purposes which vary from one cultural environment to the other. Embalming has a very long history across cultures with many cultures giving the embalming processes greater cultural and religious meaning. The ancient culture that had developed embalming to its peak is Egypt. As early as the first dynasty (3,200 BC), specialized priests were in charge of a type of embalmment called mummification. The process principally involves the removal of internal organs and ridding the body of moisture. It was a cultural belief among Ancient Egyptians that preservation of the mummy empowered the soul after death which latter returns to the preserved corpse. In the same vein, the Guanches, aborigines of Canary Island and ancient Ethiopian tribes preserved their dead using methods much like those of the Egyptians, removing the viscera and filling the cavity with salt and vegetable powder. Also, in Tibet, some dead bodies are still embalmed using the ancient formula of putting the body in a large box and packing in salt for about three months following which it goes into a mummified state. In another dimension, low fire roasting was another method used by Jivaro tribes of Ecuador and Peru for embalmment. Available literature also unfolds the fact of superficial embalmment by anointing the body with unguent with further information that the use of perfumes and spices was practiced by ancient Babylonians and Greeks. The Greeks as well as Assyrians also made use of honey for embalmment while the British sea forces used alcohol. It is in this light that Alexander the great was said to be embalmed with honey and wax. The Persians used wax and the Jews used spices and aloes. Other ancient methods used also include the use of hot water and hot oil. The ancient Romans washed their dead bodies for seven days with hot water and hot oil. Recent studies also reveal that Idoma and Igbo tribes of Nigeria also undertake low fire roasting for the purpose of embalmment. It is interesting to note that embalming during the Middle Ages includes insertion of preservative herbs into incisions previously made in the flesh parts of the body, and wrapping the body in tarred or waxed sheets. Hence, the use of *Mentha longifolia* for the embalmment of corpses is a prominent practice among the Igala people. This practice owes much to the perceived cultural and religious significance attached to death and burial as well as the chemical properties of *Mentha longifolia*. By this practice, traditional embalmment coexist with its modern forms among the Igala people despite advances in modern medicine using the traditional tool of *Mentha longifolia*.

The study objectives
The general objective of this study is to explore the use of *Mentha longifolia* in the embalmment process among the Igala people. Specific objectives are stated bellow:

1. To examine the cultural and perceived chemical properties of *Mentha longifolia* among the Igala people.
2. To investigate the potency of the use of mentha longifolia for embalmment
3. To explore the art and science of the utilization of Mentha Logifolia in the embalmment process among the Igala people.

Literature Review

Mentha Longifolia.

According to Chambers (1992), [2] the wild mint (*Mentha longifolia* L. family *Lamiaceae*) grows extensively in Mediterranean regions, Europe, Australia, and North Africa. The report further explains that the plant is a variable perennial with a peppermint-scented aroma. It has a creeping rhizome with straight to creeping stems 40-120 cm in height. The leaves are oblong-elliptical to lanceolate, thinly to densely tomentose, green to greyish-green above and white below. The flowers are 3-5 mm long, lilac, purplish, or white, produced in dense clusters on tall, branched, and tapering spikes. *M. longifolia* is used in the pharmaceutical, tobacco and food industries and particularly in cosmetology. Many studies have shown various pharmacological and therapeutic effects of the plant. Different parts of the plant including its leaves, flower, stem, bark, and seeds have also been used widely in traditional folk medicine as antimicrobial, carminative, stimulant, antispasmodic and for the treatment of various diseases such as headaches and digestive disorders (Mkaddmem, 2009). *Mentha longifolia* is a herb with a wide range of pharmacological properties such as antimicrobial, gastrointestinal, and nervous system effects. Pulegone is the main compound of the plant responsible for most of its pharmacological effects followed by menthone, isomenthone, menthol, 1, 8-cineole, borneol, and piperitenone (Chambers, 1992) [2]. *Mentha longifolia* demonstrates a wide range of antibiotic activity against various bacteria, yeasts, insects, etc. Hutchings and Van staden (1994) better capture this by positing that the leaves of *Mentha longifolia* has a wide range of culinary usage and because of their color, aroma and flavour; when used domestically, it keeps mosquitoes and rodents away. It is further believed that the essential oil in *Mentha longifolia* posses antimicrobial and anti oxidant properties (Kaur and Kapor, 2002).

An embalmer is someone who has been trained in the art and science of embalmment who may or may not have any contact with the family, although many people fill both roles. According to Galluce *et al.*, (2007), an evaluation of the antimicrobial and antioxidant activities of the essential oil and methanol extract from *Mentha longifolia* ssp. *longifolia* shows strong antimicrobial activity against all 30 microorganisms tested. In a related dimension, *longifolia* has a long history of use as preservative against agents such as escherichia coli, enterobacter spp, bacillus spp, salmonella spp, staphiloccocu**s** eureus, candida spp, penicillium spp etc.

Before the introduction of Western culture, our progenitors preserved, and people still preserve corpses of loved ones for days, weeks and in some cases months. This tradition in contemporary times continues to run parallel with modern mortuary services especially among rural dwellers. Among the Igala people of north central Nigeria, corpses are treated and/or preserved by the corpse attendant- a masculine priest called *Omelegbe*. This personality is renowned as a professional of high spiritual calling and training. It is believed that the Omelegbe has power to manipulate and even command the spirits of the dead who hang around their corpse prior to burial. His actions are laden with incantations to pacify the spirits of the dead person while carrying out different activities using *Mentha longifolia* for the purpose of preservation.

The purpose of embalmment

Why are dead human bodies preserved? Embalmment or preservation of dead human body has a very long and cross cultural history. Ancient Greek, Egypt, Babylon, Rome etc. had developed embalmment to near perfection. While some cultures attribute religious meaning to the processes of embalmment, others attach cultural values, norms and traditions to it. In south eastern Nigeria, many reasons have been adduced as to why the traditional practice of preserving corpse is still extant. These reasons are similar to the views shared by other ancient cultures worldwide; and perhaps have contributed to and/or guaranteed the continued survival of the tradition in the face of orthodox embalmment methods. As Baker (1992) [1] rightly observes, preservation of dead human body is practiced for the purpose of disinfection, to protect person coming in direct contact with a corpse that may have been infected with pathogenic micro-organism, and to prevent flies from transmitting the disease to other human beings. In some Igbo communities, burials are prohibited during certain festive periods in the traditional calendar of the year. Cases are reported where bereaved family members were refused clearance because the timing coincided with local festivities. Such family members are left with no other choice than to preserve the corpse (s). The corpse of a prominent man in a community like a chief priest, a titled holder or the eldest in the community is treated/ preserved, usually not more than two market days. The aim is to allow enough time for families/relatives and relevant cultural groups and associations to be notified before burial. This enables them to accord the deceased a befitting burial rite. The need for post-mortem investigation on a suspicious death through divination and consultation of oracle before burial may form other reason for preserving dead body. It should also be noted that some Christians accept the practice of traditional embalmment and thus, patronize local embalmers. Perhaps, the Biblical record of embalmment of Jacob and Joseph may have led to their acceptance of the tradition (see Holy Bible: Genesis 50 vs2-3, v26). In some Igala communities, the ancestral home of a married woman determines the day she will be buried. Such culture holds that the woman cannot be buried unless approval is granted by her kinsmen, usually after inspecting the corpse of their daughter and ascertaining the true cause of her death. This of course does not end in a day; thus, the corpse is preserved. Again, in exceptional cases, few dead bodies such as married women were required by tradition to be buried in their ancestral homes. Such corpses were treated/ preserved before being transported to far distances. Deceased Royal fathers are also usually preserved for many days before their demise is announced in preparation for burial which takes a period of months.

Research Methods.

Research Design

This study is a social survey of descriptive orientation which aims at investigating the perceived chemical properties of *Mentha longifolia* (*Acheifa)* as well as the procedures involved in its usage for embalmment among the Igala people.

Study Area

The study was conducted in Igalaland, Kogi East Senatorial District of Kogi state, Nigeria. The area is bordered to the East by Benue State and to the South by Edo, Enugu and Ondo States and to the North by Niger and Nasarawa States and to the West by Kwara and Ekiti States. It is made up of 8 local Government Areas domiciled by the Igala people who are said to be the 9th populous ethnic group in Nigeria. The place is precisely located between longitude 06°30"-07°00" East and latitude 06°30"-08°00" North. There are two main seasons, dry and wet seasons. The wet season begins in March and stops towards the end of October. The climate is favourable for the growth of medicinal plants with the implications for the use of herbs to overcome numerous social problems.

The study population

Data for the study was gathered from three Local Government areas purposively selected for the study. These Local Government areas are the oldest ones in the kingdom which were the three old divisions prior to the emergence of the Local Government system. They still function as the repositories of the cultural values of the Igala people. They are: Ankpa, Dekina and Idah. Every other Local Government within the territory is carved out from these and owes political, religious and cultural affiliation to them. A total number of thirty (30) elderly men selected from each of the Local government areas provided the data for this study. Therefore, the study had 90 respondents across the three Local Government areas purposively selected for the study. In addition to this, one focus group session involving 12 participants purposively selected was conducted in each of the Local Government areas to corroborate the in-depth interview data.

Data for the study

The study used both primary and secondary data for the study. Previous reports on the subject matter in literature were reviewed while in-depth interview and Focus Group Discussion (FGD) were used to gather information related to the perceived cultural properties of *Mentha longifolia* and its use in the embalmment process among the Igala people.

Validity and Reliability

The instrument was validated by experts in psycho-social properties in Kogi State University Anyigba. The reliability of the instrument was achieved through Test- Retest method using a small proportion of people in the selected areas. The contents of the data compared using qualitative analysis method showed significant level of similarities.

Instrument for Data Collection

This study is oriented towards qualitative data. Consequently, a self designed In-depth Interview and Focus Group Discussion Guides were used to gather information from the respondents.

Methods of Data Collection and Analysis.

Informed consent was obtained from the Local Government authorities purposively selected as well as the study respondents. The Instruments were administered by the researchers and research assistants who were Diploma holders of the School of Health Technology specially trained for the study. Content analysis method was adopted for analysis of the data in relation to the objectives of the study.

Data presentation and Analysis

The data collected and presented is a qualitative one and is analysed using content analysis in relation to the objectives of the study.

1. The perceived embalming properties of *Mentha longifolia* (*Acheifa*) among the Igala people.

Mentha longifolia is strongly believed to be the core tool in the preservation of dead bodies and burial practices among the Igala people. *Mentha longifolia, (Acheifa)* as the name implies means the confirmation of the desire or intention of its user. *Mentha longifolia* is said to possess sanctifying, anti-oxidative, anti-microbial insecticidal and scent properties. It is a traditional plant with long history commonly used to manipulate and re-order the natural states of matter among the Igala people. It is used on different states of matter including deities, corpses and dwellings according to specifications to produce culturally desired effects. The antioxidative, antimicrobial, insecticidal and scent properties are essential requirements of the preservation of corpses even in modern mortuary practices.

One of the respondents, 70 years of age reported thus on its sanctifying properties:

> The use of *Mentha longifolia (Acheifa)* dates back to the history of our fore-fore fathers. It is a spiritual scent plant which possesses sanctifying properties which sanctifies the corpse from the defiling cover of death. It is also used to purify the corpse from defilements arising from the sight, touch, visits of unholy people, utterances and comments which could anger a corpse leading to sudden decomposition. If a corpse is angry, it begins to swell and can even explode within a short period of time if adequate sanctifying and appeasing methods are not deployed. It's use therefore keeps the corpse fresh as if it were alive for a minimum of four days.

Mentha longifolia also have antioxidative properties thereby preventing decomposition. According to an 85 year respondent on its antioxidative properties:

> *Mentha longifolia* (Acheifa) has antioxidative properties which help to prevent decomposition. Human body is easily prone to decomposition if adequate care is not taken to preserve it as early as death occurs. We use mentha longifolia for the preservation of food, fruits and meat during hunting for many days without been spoilt. Timely and effective use of menthe longifolia helps in preserving corpses for many days.

Mentha longifolia is also said to possess insecticidal properties. Insects such as flies and maggots contribute to corpse decomposition. On the insecticidal property of *Mentha longifolia*, a 70 year old respondent reported thus:

> Insects contribute to easy decomposition of corpses leading to offensive ordor. But the use of mentha longifolia *(Achefa)* keeps insects such as flies, mosquito and cockroach far away from the corpse thereby preventing biting and decomposition. Menth longifolia *(Achefa)* kills insects thereby serving as an insect repellant.

Mentha longifolia is perceived to possess scent properties. Its scent is pleasant and therefore necessary for use in the preservation of corpses. According to one of our respondents 68 years of age:

> Even living beings require personal care or hygiene for healthy social intercourse, the absence of such key sanitary activities can normally evoke unpleasant odour. Hence, the use of this plant conceals or swallows the ordour leaving the people with a feel of the pleasant scent of menthe longifolia.

Data on the art and science of the use of *Mentha longifolia*. According to respondents' data, the visible functionary in the preservation of corpse is the corpse attendant culturally known as the *Omelegbe.* Hence, when a person dies and requires preservation, an *Omelegbe* is called to duty. The use mentha longifolia in the preservation of corpses is a function of incantation. Corpses and mentha longifolia *(Acheifa*) have ears and they hear and obey instructions and command given by the corpse attendant.

According to an *Omelegbe* (corpse attendant) 75 years of age: on incantations for the corpse:

> If a person dies and need to be preserved Acheifa (*Mentha longifola*) is harvested, and the corpse is honoured with the compliments of his sub-culture and told why he has to be preserved. He will also be pledged not to disappoint and to remain intact until the burial procedures are completed.

On incantations to Acheifa *(Mentha longifolia*), one of the respondents 85 years of age had this to say:

> You are the means for preserving the dead. Today, you are called to duty, our ancestors made use of you and so as it was during the days of our ancestors according to their very words; let it be that we are not disappointed.

On application of Acheifa *(Mentha longifolia).*Data reveals that it is by touching the corpse for sanctification and throwing away the particles used amidst incantations as well as burning the leaves in low fire to bring out the anti oxidative, anti-microbial, insecticidal properties and scent properties.

On the process of burning *Mentha longifolia*, a corpse attendant, 70 years of age reported thus:

> A low fire is usually set under the bed or at a corner of the room where the corpse is, then both the dry and fresh leaves of *Mentha longifolia* is burnt to release its, preservative and scent properties. This is a continuous exercise till the burial process is completed.

Discussion of findings

Burial among the Igala people has social and cultural significance. Hence, corpse by necessity must be preserved. The purpose could be to wait for children and relatives living in distant areas, transport to the desired burial site and post humus investigation. It could also be for search of necessities or requirements for observance of burial rites. Burial is also a community service which is a means of paying last respect for the deceased as well as a show of solidarity to the family of the deceased. Therefore, Public display and presentation of corpses accruing from any of these purposes call for a negation of natural order of decomposition through the sanctifying, antioxidative, antimicrobial and scent compounds present in *Mentha longifolia*. The public health significance of the use of this plant is of twin relevance as it prevents discomforts associated with the pollution of oxygen required for effective breathing and more importantly curtails the spread of infectious diseases associated with the death of the victim.

Respondents' data reveals a cultural perception that corpses are prone to anger resulting from the sight, touch and presence of their defilers leading to easy decomposition. The use of *Mentha longifolia* with purifying properties is to purge the corpse of any defilement thereby preventing its anger and decomposition.

Mentha longifolia is also perceived to have antioxidative properties. Respondents' data reveals that corpses can easily decompose if left untreated. Scientific literature unfolds the presence of radicals in the body and air which aids easy decomposition. The antioxidative compound in *Mentha longifolia* helps in checkmating the activities of those radical thereby preventing oxidation. This finding is in consonance with Kaur and Kapor (2002) who posit that the essential oil in *Mentha longifolia* posses antioxidant properties.

In a similar trend, study data also reveals that the cultural group under study believes that *Mentha longifolia* has antimicrobial and insecticidal properties. Microbes and insects which are commonly referred to as radicals play major role in the decomposition process of dead organisms. This perception is consistent with the views of Galluce *et al.*, (2007) who posits that an evaluation of the antimicrobial, and antioxidant activities of the essential oil and methanol extract from *Mentha longifolia spp (Acheifa)* shows strong antimicrobial activity against all 30 microorganisms tested thereby confirming its long history of use as preservative against microbial, agents such as escherichia coli, enterobacter spp, bacillus spp, salmonella spp, staphiloccocu**s** eureus, candida spp, penicillium spp, etc. In a related dimension, the scent properties of *Mentha longifolia* serve as repellent to a number of insects like flies and maggots which aid decomposition. This finding is consistent with Hutchings and Van staden (1994) who argue that the leaves of *Mentha longifolia* has a wide range of culinary usage and because of their color, aroma and flavour; when used domestically, it keeps mosquitoes, and rodents away.

Mentha longifolia is also perceived to be ascent leave which releases pleasant aroma that can dominate offensive odour arising from decay of dead organisms. The use of this is to

allow for public presentation of corpses at burial given the cultural and social significance of burial in the study area. Hutchings and Van staden (1994) in their finding attest to the pleasant flavour and aroma of *Mentha longifolia*. The use of modern perfumes on caskets following mortuary services is a common site. In traditional embalmment, *Mentha longifolia* is used to serve this purpose.

The potency of *Mentha longifolia* for the embalmment of corpses among the Igala people is overwhelming. Study data revealed that it can be used to preserve corpses for a minimum of four days. Detail explanations reveals that it serves to kill and repel insects, microbes and other radicals known to aid decomposition of dead human bodies.

Finally, the process of anointing the corpse, with mentha leaves, the use of incantation and the burning of the leaves by the corpse attendant *(Omelegbe)* are to pacify the corpse who is believed to be spiritually alive. It is also a means for activating the purifying, antioxidative, antimicrobial, and insecticidal and scent properties of the traditional plant. The functionary in this culturally and spiritually laden action is said to be a courageous personality that have a form of communication with the dead in terms of what is acceptable or otherwise. The interactions between the dead and the corpse attendant have social and spiritual significance all for the health and well-being of the living relations.

Conclusion and Recommendations:

Traditional embalmment is a cultural activity that has both religious and social significance. The use of *Mentha longifolia* among the Igala people of north central Nigeria for the preservation of their dead bodies is hinged on its perceived sanctifying, antioxidative, antimicrobial and insecticidal properties which are potent against decomposing agents. It also possesses pleasant aroma and flavor which gives freshness to the corpse for public presentation and display. The public health significance of this preservative agent is the need to preserve corpses for proper burial as negation of burial rites is perceived to result in health calamity for family members and relatives. It also helps in curtailing the spread of diseases responsible for the death of the victim through its insecticidal and antimicrobial properties. The economic benefit of this practice cannot be waved as it saves money and time required to access mortuary services while those who may not have the means hurry to bury their corpse with attendant problems.

Recommendations on the basis of these findings include the recognition and integration of the activities of the traditional corpse attendants into modern healthcare practice, the expansion and propagation of *Mentha longifolia (acheifa*) plants from its domestic scale to a large scale and the preservation of this cultural practice against extinction.

References

1. Baker. Traditional methods of preserving dead human bodies in Nigeria, 1992.
2. Chambers. Chambers H. *Mentha*: Genetic resources and the collection at USDA-ARSNCGR- Corvallis. Lam Newsl, 1992; 1:3-4.
3. Hutchings, D, Van staden J. Preliminary screening of some traditional zulu medicinal plants for anti-inflammatory and anti-microbial activities. Journal of Ethnopharmacology. 1999; 68(1999):267-274.
4. Ezugworie J, Anibeze C, Akpuaka F. Critical Appraisal of Reasons for Traditional Embalming Among Igbos in the Southeast Nigeria. The Internet Journal of Alternative Medicine, 2009; 7:2.
5. Frederick LG. The Principles and Practice of Embalming. 5thEdition. U.S.A, 1989.
6. Gulluce M, Sahin F, Sokmen M, Ozer H, Daferera D, Sokmen A, Polissiou M, *et al.* Adiguzel A, Ozkan H. Antimicrobial and antioxidant properties of the essential oils and methanol extract from *Mentha longifolia* L. ssp. *Longifolia*. Food Chemistry, 2007; 103:1449-1456.
7. Kaur C, Kapoor HC. Antioxidants in fruits and vegetables -the MIlennium's health. International Journal of Food Science and Technology, 2001; 36:703-725.
8. Mkaddem M, Bouajila J, Ennajar M, Lebrihi A, Mathieu F, Romdhane M. *et al.* Chemical composition and antimicrobial and antioxidant activities of *Mentha longifolia* L. and viridis essential oils. Journal of Food Sciences, 2009; 308-316.
9. Odeyemi OO, Masika P, Afolayan AJ. Insecticidal activities of essential oil from the leaves of *Mentha longifolia* L. subsp. capensis against *Sitophilus zeamais* Motschulsky Coleoptera: Curculionidae Afr Entomol. 2006-2008; 16:220-5.