

# The Practice Of Traditional Bone Setting In The South-South Region Of Nigeria

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## Abstract

**Objective:** Modern day healthcare has greatly evolved following advances in technology and medical research. But despite the availability of these services, traditional bone setting has continued as a most sought after 'alternative' health service, especially in developing countries. This study therefore was carried out to investigate the practice of traditional bone setting in the South-south region of Nigeria. **Design:** Some popular traditional bone setters (TBS) were interviewed using a questionnaire designed to evaluate information such as the age, level of education, years of experience, mode of acquisition of skills, types of fractures treated, method of fracture treatment, types of complications and number of death recorded, class of people who come for treatment, mode of referrals to and from hospitals, assistance needed to improve their practice and ways to improve cooperation between TBS and orthodox practitioners. **Result:** The practice of TBS in Southern Nigeria seems have evolved and the TBS are inculcating modern methods into their practice. **Conclusion:** Revitalising the existing precious science of traditional bone setting would be a cost-effective alternative for the costly "state of the art" techniques of surgical reduction, heavy Plaster of Paris plasters and long periods of immobilisation.

## INTRODUCTION

Traditional healers were practicing long before orthodox medicine was introduced to the developing world<sup>1</sup>. Traditional healers may provide up to 90% of primary healthcare for the rural people in Nigeria. Classes of traditional healers include traditional birth attendants, traditional medicine men and traditional bone setters (TBS)<sup>2</sup>.

A traditional bone setter is a lay practitioner of joint manipulation. He or she is the "unqualified practitioner" who takes up the practice of healing without having had any formal training in accepted medical procedures<sup>3</sup>. TBS services are well preserved as a family practice, and training is by apprenticeship. Records are kept strictly by oral tradition<sup>4</sup>.

According to one estimate, between 10 to 40% of patients with fractures and dislocations in the world are managed by unorthodox practitioners<sup>3</sup>. In one report from eastern Nigeria, 85% of patients who presented with femoral fractures to an Orthopaedic Hospital had been to TBS prior to going to the hospital. There is widespread belief in our society that TBS are better at fracture treatment than orthodox practitioners<sup>5</sup>.

Bonesetters command great respect for their treatment of fractures in many African countries. Although bone setting has a long tradition, the safety and efficacy of traditional methods are sparsely evaluated, with the main focus being on treatment complications<sup>6,7,8</sup>. A study in Nigeria revealed that the outcome of traditional bonesetter practice is good for closed fractures of the shaft of the humerus, ulna, radius and tibia, but poor for peri-articular and open fractures. TBS practices are not scientifically based and cause a lot of complications which if not fatal, may lead to loss of limb<sup>9,10,11</sup>.

Majority of these complications are caused by the methods used in managing these fractures. Such methods include the use of rattan cane, and palm stick wrapped round fracture segments with consequent tourniquet effect. There is also the use of incantations and scarifications, which can cause infection and osteomyelitis<sup>12</sup>.

Nigeria is in West Africa, bordering the Atlantic Ocean. It has a total area of 923,770 km<sup>2</sup>, stretching from the Gulf of Guinea on the Atlantic coast in the south to the fringes of the Sahara desert in the north. It is bounded by Benin on the west, Cameroon on the east, Chad on the northeast and Niger on the north<sup>13</sup>. Nigeria is divided into six Geo-political

zones: North-East, North-West, North-Central, South-West, South-East and South-South. The South-South region of Nigeria, commonly known as the Niger-Delta region is well known for its richness in crude oil, and is composed of Akwa Ibom, Cross River, Rivers, Delta, Edo and Bayelsa states.

This study was carried out to investigate the practice of traditional bone setting in the South-south region of Nigeria. It is hoped that this will serve as an up-to-date documentation of the practices of TBS in Southern Nigeria as a way of exposing the positive and negative elements of traditional medicine and encourage its integration with modern health care practices.

## **METHOD**

### **STUDY DESIGN**

This study was a retrospective study of the practice of TBSs in the Southern part of Nigeria. The study was conducted in November 2010.

Informed consent of each participant was sought and obtained, and they were assured of the confidentiality of their responses.

### **INSTRUMENT**

Some popular TBS were interviewed using a questionnaire designed to evaluate information such as the age of the TBS, level of education, years of experience, mode of acquisition of skills, types of fractures treated, method of fracture treatment, types of complications and number of death recorded, class of people who come for treatment, mode of referrals to and from hospitals, assistance needed to improve their practice and ways to improve cooperation between TBS and orthodox practitioners.

## **RESULTS**

### **TBS 1**

A 58 year old male, has been practicing as a TBS for about 10 years. He has only had primary education but knows how to read and write. He claimed to have acquired his skills through “divine impartation”.

He treats all types of fractures, notwithstanding the severity and claims he has never recorded any complication or death all through his 10 years of practice.

Depending on the presentation, he washes the wound and applies some herbal concoctions to it. The herbs used were however not disclosed to us by the TBS. He then calls on the

“medical personnel” working with him to give tetanus injection and manage the more serious wounds. After the wound has been given the needed attention, he manipulates the bone to reduce the fracture to its anatomical position and then wraps a bandage round it (Fig 1A & 1B). The bandages are changed frequently to allow for application of more herbs. The affected limb is stabilized for a period ranging from 2 weeks to 2 months depending on the type of fracture and rate of healing, after which he encourages gradual use of the limb to strengthen it.

He affirmed that all classes of people come for treatment. He has never had to refer any of his patients to the hospital since he has never recorded any complication arising from his treatment but confirmed that though he has never had any direct referrals from hospitals, friends and family members bring patients who have not been successfully managed in hospitals to him for treatment.

He was contented with the state of his practice and would not require assistance but would welcome more training. He could not foresee any improvement of relationship between TBS and orthodox health staff, revealing that he had once worked with a hospital but had to discontinue as he was being cheated financially.

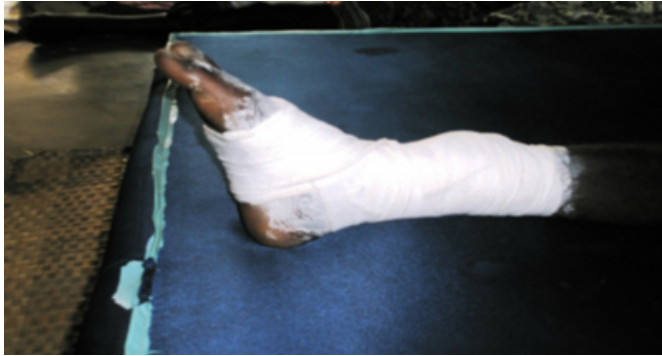
### **Figure 1**

Fig 1A: After one month’s treatment from TBS, a 12 year old secondary school student who tripped and fell while trying to carry his classroom locker from which he fractured his knee and forelimb.



**Figure 2**

Fig 1B: After one month's treatment from TBS, a 30 year old man who was involved in an auto accident from which he sustained an open fracture.



**TBS 2**

A 54 year old male, has been practicing as a TBS for about 30 years. He has not had any formal education, and so cannot read or write. He trained with his father from where he acquired the skill.

He treats all types of fractures, and has recorded some complications which he claimed were mostly in patients who had gone to the hospital first before coming to him, and so was basically due to late presentation. He has recorded a few deaths which he estimated to be about 3 in 100 patients.

He claimed to have a “nurse” in his employ that treats the wounds using orthodox medicine while he concentrates on treating the fractured bone through bone manipulation and splint bandaging, using sticks and ropes (Figure 2A & 2B). He denied using any other form of treatment.

He identified that all classes of people come to him for treatment, and affirmed that he would refer his patients to the hospital if he encountered any complications. He had patients referred to him from hospitals through family members, friends and former clients.

He was open to receiving assistance from the government or any non-profit organization to improve the quality of his services through provision of beds, drugs and money as some of his clients were poor and unable to buy food or pay for his services.

He however did not consider further training necessary as he was good at what he did; and could not foresee any improvement in cooperation between TBS and orthodox medical practitioners.

**TBS 3 AND 4**

Two brothers, 34 and 25 years old, both male have been practising for 20 years and 15 years respectively. They have both been educated up to the secondary school level, and so can read and write. They acquired their skills from their father who had been practising as a TBS for 32 years before his death.

They claimed to treat all types of fractures with limb fractures being the most commonly presented type of fracture. They have no record of complications or death.

Depending on the presentation, the patient is given tetanus toxoid injection and some antibiotics by a “nurse” in their employ, after which they set the bone and immobilize it with bandage and some traditional splinters.

They denied using herbs on the wounds but use roots to remove blood clots in the system.

The patient is immobilized for about 6 weeks depending on the rate of healing, after which the patient is encouraged to start using the affected limb. The patient is monitored for some time and if able to walk well, is then discharged.

All classes of people were affirmed to come for treatment.

They added that they would refer a patient to the hospital if the patient had complications like weakness, maybe arising from loss of too much blood. They also claimed to send some of their patients to do X-ray in hospitals. They had patients referred to them from hospitals, though informally.

They requested assistance in the form of infrastructure, finance and asked that doctors should embark on visits to TBSs and their patients once in a while. They equally welcomed more training to improve their services.

**TBS 5 AND 6**

Two partners, 58 and 20 years old, both male had been practising for about 20, 7 years respectively. They have also both been educated up to secondary school level, and so can read and write. They acquired their skills through apprenticeship from another TBS, though both their fathers were bonesetters and so had a foundation in bone-setting.

They treat all types of fractures, mostly limb fractures, and claimed they have never recorded any complication during treatment; and have recorded only one death since the establishment of their practice.

Depending on the presentation, they administer calcium,

pain killers, antibiotics and tetanus toxoid injection with the help of a “nurse” in their employ. They then wash and stitch the wound, applying honey and some herbs to help in wound healing; after which they set the bone and immobilize it using traditional splint and bandages. They claimed to send their patients to carry out x-ray in hospitals. The patient is immobilized for about 12 weeks depending on the severity of the case and the rate of calcium deposition which they noticed was faster in younger people than the more elderly.

They also stated that all classes of people came for treatment. They have never had to refer a patient to the hospital as they claimed to have never encountered any case they could not handle. They went further to cite that even if they wanted to refer, most of their patients would refuse to go to hospitals because patients who were formerly treated in hospitals always ended up coming to them for treatment, and got better.

They requested for assistance in the form of some good infrastructures in a better location with some equipments like x-ray machines. The only way they felt the relationship between orthodox health practitioners and TBSs would improve was if the hospitals provided paid employment to TBSs to help them manage their cases.

They also welcomed more training to improve their services.

**Figure 3**

Fig 2A & 2B: Splint bandage using sticks and ropes



**Figure 4**



**DISCUSSION**

Most of the TBS interviewed were able to read and write, and the educational level was observed to have a positively significant difference in the way they practiced their trade. This supports the study by Omololu et al.<sup>14</sup> who suggested that there was a need to educate and train traditional bonesetters in fracture treatment both to minimize the mismanagement of fractures and to reduce the healthcare burden on secondary and tertiary institutions.

Most of the TBS interviewed acquired their skills from their father through apprenticeship, with only one getting his from “divine impartation”. TBS’ proficiency in bone setting is passed from generation to generation without any formal documentation whatsoever<sup>15</sup>.

All classes of people go to TBS for treatment. This could be due to the fact that TBS offer cheaper and utilize allegedly faster healing methods. Fear of heavy plaster of Paris bandages, prolonged periods of immobilization and amputation influenced people to visit TBS. In other cases, apathetic attitudes of orthodox hospitals or coaxing by relatives, neighbors and TBS canvassers lead clients to TBS. They are viewed as ‘specialists’ for minor fractures, easily accessible, reassuring and also offering home treatment<sup>4</sup>. For these reasons, bonesetters have enjoyed strong regional influence and popularity<sup>2,9,16</sup>.

There are several bone setting practices reported in literature that are either equivalent to or far better results than orthodox practice. Fang et al.<sup>17</sup> concluded that simple wooden splints were found to be much more effective and satisfactory than plaster of Paris for immobilization of fractures of shafts of both forearm bones. Additionally, randomized trials in buckle fracture of the distal radius have shown that they can be effectively treated in soft bandage<sup>18</sup>.



The technique is simpler, cheaper and much more comfortable for children. The modern practice of 'functional cast bracing', advocated by Sarmiento and Lata<sup>19</sup>, bears close resemblance to some of the 'bamboo' bandaging pattern of traditional bone healers.

None of the TBS interviewed were seen to use incantations, amulets or charms as seen in a study by Omolulu et al.<sup>14</sup>. The practice of TBS in Southern Nigeria therefore seems have evolved and the TBS are inculcating modern methods in their practice like employing nurses to administer orthodox medicine in treatment of the wounds.

Traditional bone setting is not only practiced in Nigeria. China also has a rich tradition in the healing art. Recently the Chinese have made significant efforts to integrate traditional with modern methods in the treatment of fractures. Excellent results have been obtained for certain conditions like peri-arthritis of shoulder, tennis elbow and acute lumbar sprain<sup>20</sup>. Nigerian medical practitioners should look into how to organise collaborative researches with these TBS to come up with better and more effective methods to treat fractures instead of resulting to amputation. In India too, there has been a revival of interest in traditional bone-setting practices. The well known orthopaedic surgeon Dr. M. Natarajan of Chennai has visited and observed a number traditional bone setting centres, and has also adopted the same techniques used by traditional bone setting practitioners in the management of fractures<sup>20</sup>. This should be the attitude of our orthodox health practitioners in Nigeria instead of condemning TBS completely when most of them have successfully treated cases that had been condemned for amputation at hospitals.

Revitalising the existing precious science of traditional bone setting would be a cost-effective alternative for the costly "state of the art" techniques of surgical reduction, heavy Plaster of Paris plasters and long periods of immobilisation.

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