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Original Paper

Causes of Bone Injuries and Patronage of Traditional Bone Setters in Maiduguri, Nigeria

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ABSTRACT

The study as an opinion survey identified Road Traffic Accidents (RTA), falling from height and gunshots/matchets as the causes of bone injuries in Maiduguri, Nigeria. Injuries sustained include fracture and dislocation. Structured Interview Schedule (SIS) and Focused Group Discussion (FGD) were the instruments used to obtain data. Population of study comprised of those involved in bone injuries between January and December, 2008. The sample size of 700 respondents was selected using stratified random sampling technique. Frequency distribution and percentages were employed to analyze data. Findings of the study revealed parents/families, relatives and friends as some of the sources of decision to patronize Traditional Bone Setting (TBS) while culture, phobia for hospitalization, no amputation and less expensive were some of the reasons adduced for patronage. Based on the findings, enactment of stringent laws/bye-laws or re-enforcement of existing ones (if any), counselling and enlightenment were suggested/recommended.

Keywords: **Bone, Causes, Decision, Injury, Patronage, Reasons.**

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INTRODUCTION

Road Traffic Accidents (RTA) involving commercial motorcyclists ("Okada", "Going", etc), motor vehicles, falling from heights (roof, tree, pole, etc), gunshots/matchets (resulting from conflict, encounter with armed robbers, etc) and workshops constituted the causes of bone injuries in Maiduguri, Nigeria, and victims usually patronize the Traditional Bone Setters (TBS). Despite the presence of over forty-seven orthopaedics in private and public primary, secondary and tertiary hospitals in Maiduguri, traditional bone setting is increasingly attracting clients to its services which are rooted in the family, culture, local materials and social practices (Ngohi, 2009).

In most developing world people believe in and rely on the services of traditional healers for the relief of physical, physiological, psychological and/or spiritual problems. Erinosho (2005) observed that traditional healers are indigenous to the country whose treatment regimen consist of divination, medicinal herbs, symbolic rituals, individual and group psychotherapy. It has also been emphasised that these practitioners use a wide variety of roots, leaves, barks, animals and insect parts and other materials in the treatment of patients. These healers also use taboos, massage, incantations, ventriloquism and purgatives as forms of treatment. Erinosho (1998) reported that traditional healers are diviners, while others earned reputation as "surgeons" as they specialise in bone setting. In Nigeria, traditional bone setting is a practice that is common, well preserved family practices, and training is by apprenticeship (Ogunlusi *et al*., 2007; Nwadiaro *et al*., 2008).

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However, the practice is characterised by some drawbacks such as the use of tight splint at fracture site without basic knowledge of anatomy, physiology or nursing care resulting in limb and life threatening complications such as non-union and gangrene (Eshete, 2005; Ogunlusi *et al*., 2007). There have been reported cases of fractures in Maiduguri and its environs resulting from motor vehicle accidents or falls from height such as trees. Most of the victims patronize traditional bone setters despite the existence of orthodox health institutions in the state. This study was designed in view of the increased patronage, Ngohi, 2009; of traditional bone setters in Maiduguri to determine what informed the victims' decision to sought traditional orthopaedic care as against the orthodox.

Some workers reported that over 4,351,000 bone injuries in United States of America, Scotland and Ghana were caused by industrial machine, road accidents and gunshots (Doyle *et al*., 1995; BLS, 2003 and Barr *et al*., 2004). In University of Maiduguri Teaching Hospital, about 2,500 cases of bone injuries involving commercial motorcyclists road traffic accidents have been recorded (Ngohi and Digil, 2007). Legs, arms, head and thorax were the body regions most commonly fractured or dislocated. Ngohi (2009) reported an increased rate of accident victims' patronage of Traditional Bone Setters (TBS) in Maiduguri, Nigeria, with immense disregard to presence of qualified health personnel (Orthopaedic Nurses and Doctors) in both public (secondary and tertiary) and private health institutions. These developments have become a source of concern and invariably form the basis for this study. Therefore, study aims at investigating the causes of bone injuries and patronage of TBS in Maiduguri

MATERIALS AND METHODS

The study area and design

Maiduguri the capital of Borno state, Nigeria has a total population of 521,492 (Census, 2006) and over 23 public and private (primary, secondary and tertiary) hospitals (Ijere and Daura, 2000). The study was conducted in ten (10) primary, secondary and tertiary private and public hospitals.

Study Population and Design

The study population comprised of all those involved in bone injuries in Maiduguri between January and December, 2008. Survey design was adopted for the study. Structured Interview Schedule (SIS) and Focused Group Discussions (FGD) were the Instruments used to obtain data. Ten (10) patients/clients patronising traditional bone setters were also recruited and discussions were held with five (5) groups comprising of victims of bone injuries. A total of 700 respondents were randomly selected for the study using stratified random sampling technique.

Data analysis

Data collected was analyzed using descriptive statistics of frequency distribution and percentages.

RESULTS

In this study, analysis of the data revealed that the age of the study population ranged from less than 20 years to above 46 years old. 469 (67%) of the respondents were males while 231(33%) were females. The socio-economic characteristics of respondents are presented in Table 1. Road Traffic Accident (RTA) 378 (54%), falling from height 43 (6.1%) and gunshot/matchet 279 (39.9%) were the main causes of bone injuries in Maiduguri, Nigeria. Fracture (426) (60.9%) and dislocation (274) (39.1%) were the types of bone injuries sustained. Five sources of decisions for patronage of TBS where road traffic accident (54.0%), gunshot/matchet (39.9%) and falling from height (6.1%) formed the predominant causes of bone injuries are presented in Table 2. Eleven (11) reasons behind the patronage (Table 3) were deduced. Fractures (60.9%), dislocations (25.9%) and cracks (13.2%) are principal types of bone injuries attended to by TBS in the study area.

Table 1: Socio-economic characteristics of respondents (n = 700)

Socio-economic Characteristics	Frequency	Percentage
Age Range		
< 20 yrs	132	18.9
21 – 25	114	16.3
26 – 30	108	15.4
31 – 35	73	10.4
36 – 40	85	12.1
41 – 45	91	13.0
> 46 yrs	97	13.9
Marital Status		
Married	140	20.0
Single	282	40.3
Divorced/Widowed	278	39.7
Educational Background		
Quranic school	128	18.3
Primary school	142	20.3
JSS only	107	15.3
SSS only	101	14.4
Tertiary	98	14.0
No school at all	24	17.7
Level of income (per month)		
< N15,000.00	213	30.4
N16,000.00 – N20,000.00	174	24.9
N21,000.00 – N25,000.00	128	18.3
N26,000.00 – N30,000.00	99	14.1
>31,000.00	86	12.3

Table 2: Sources of decisions for patronage of Traditional Bone Setters

Sources	*Frequency*	Percentage
Parents/Families	232	46.1
Relatives	107	15.3
Friends	114	16.3
Victims	97	13.9
Others	59	8.4

Table 3: Reasons for patronage of Traditional Bone Setters

Reasons	Frequency	Percentage
Cheap/Not expensive	98	14.0
Better outcome/reliable	60	8.6
Less complications	81	11.6
Convenient	57	8.1
Heal faster	44	6.3
Accessible/proximity	49	7.0
No amputation	97	13.8
Natural	56	8.0
Culture	44	6.3
No drug reaction	74	10.6
Phobia of hospitalization	40	5.7

DISCUSSION

Studies have indicated an alarming rate of patronage of Traditional Bone Setters (TBS) especially in the Third World Countries of Africa, Asia and Latin America (Thani, 2000; Alonge, *et al*., 2004; Kidmas, *et al*., 2004; Nwadiaro *et al*.,

2004; 2006; 2007; 2008). This present study tends to corroborate the earlier findings of Inonson (2000) and Nwadiaro *et al*. (2008) that the TBS appears to be the first port of call irrespective of age, sex, marital status, location, educational status and financial position.

This present study corroborates the earlier findings of Doyle *et al*. (1995); Barr *et al*. (2004) and Ngohi and Digil (2007) that industrial machines, falling from heights, road traffic accidents and gunshot/matchet are the causes of bone injuries including fracture and dislocation involving legs, arms and thorax. The study also supports the findings of Smeltzer *et al*. (2008) that dislocations, fractures, severed nerves and other non-fatal musculoskeletal injuries were caused by

direct blows, sudden twisting motions, crushing forces or extreme muscle contractions which may occur at home, private or public working places. Bone injuries can be single or multiple, simple or complex and could be sustained on the head, neck or thorax, upper or lower limbs. The most frequent types of single injuries amongst non-fatal musculoskeletal incidents include: sprains, strains, tears, fractures, etc. This present investigation considered fractures, dislocations and cracks are the prime types of bone injuries attended to by TBS in the study area.

The role and efficacy of traditional therapeutics in health care delivery remain contentious (Erinosho, 1998; 2005; Ogunlusi *et al*. 2007 and Nwadiaro *et al*., 2008). A significant number of patients utilize services of traditional healers because of the confidence they have in therapeutic skills of the healers and their accessibility to and /or preponderance of the healers to patients and that patients' choice are guided by what help they need and the resources available e.g. money among others. Ordinarily, when a person gets involved in bone injury, community or family elders are informed who may decide on acquiring the services of TBS. In their studies, 23(79.3%) of the patients, including those with multiple fractures went to TBS centre from the site of injury. Patients' contact with TBS was principally through middlemen most of whom were old TBS patients. Obviously, these patients wanted cheaper and quicker services and fear amputation.

Various studies have indicated that reasons for preference of TBS are incongruous and inconsistent (Nwadiaro *et al*., 2008; Alonge *et al*., 2004). However, decisions are usually collegiate and outside the influence of victims. It is obvious from this study that parents/families 323(46.1%) and friends 114(16.3%) constituted the major sources of decision to patronize TBS, because on such occasions, the victims may be incapacitated by the traumatic episode. There was also an agreement between this study and the work of Nwadiaro *et al*. (2008) that a fixated cultural outlook, natural instinct and degree of confidence in addition to level of poverty can be adduced as the motives behind the patronage of TBS.

In this study, cheap 98(14.0%), less complications 81 (11.6%), no amputation 97 (13.8%), no drug reaction 74(10.6%), natural 56(8.0%) and culture 44(6.3%) were some of the reasons advanced for patronage of TBS.

Thus, it would be recommended that there should be stringent legislation regulating/controlling operations of the TBS or re-enforcement of existing laws, edicts, acts and bye-laws moderating/guiding their activities. Health education should be incorporated into the curriculum of all educational institutions and the general public/society should be enlightened on the detrimental consequences of the operations of TBS which are occasioned by gangrene and may lead to amputation. Measure towards rendering cheaper orthodox services in addition to making quality drugs available and affordable should be instituted. In conclusion, the exponential rate of increase in patronage of Traditional Bone Setters (TBS) in Maiduguri, Nigeria cannot be divorced from socio-economic and cultural background of the victims, which cuts across age, sex, marital and educational status of the study participants. Ameliorating the menace of TBS at all levels require enactment of stringent laws, counselling, education/enlightenment and collaboration of inter and intra national bodies to make available quality drugs at a cut down cost.

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