Knowledge And Belief About Traditional Bone Setters' Practices In Sokoto, North-West Nigeria

M Oboirien, A Khalid

Citation

M Oboirien, A Khalid. *Knowledge And Belief About Traditional Bone Setters' Practices In Sokoto, North-West Nigeria* . The Internet Journal of Orthopedic Surgery. 2013 Volume 21 Number 2.

Abstract

Background: Traditional bone setters' practices abound in both urban and rural Nigeria. It is the art of manipulating bone and joint injuries by person who are unqualified and have no formal training. The practise still thrives even in the face of modernity.

Objectives: To determine people's knowledge and belief about traditional bone practices in our area of practise and the reasons for their continued patronage.

Methodology: Semi-structured questionnaires were administered to patients and their guardian attending the Orthopaedic out-patient department. A total of ninety- nine respondents were involved.

Results: Sixty-one males and thirty-eight females respondent were involved with a male to female ratio of 1.6:1 and the age range was between 15 to 75 years with a mean age of 35.5 and standard deviation of 15.775. Twenty- two per cent of respondents believe that TBS practitioners are competent while 46 % believe they are average. Seventy-one percent of respondent had educational level above primary education. The mean monthly income was 182 USD. Chi-square test showed no significant relationship (P>0.05) between education, occupation and income with perception.

Conclusion: Patronage of traditional bone setters is rooted in belief and has no correlation with people's educational status, income or occupation.

INTRODUCTION

Traditional bone setters' are a common feature amongst urban and rural communities in Nigeria. Various reasons abound from their continued patronage despite the relative awareness of their misdemeanour and their popularity cuts across educational barriers and in rural communities they are often regarded as the first port of call for musculoskeletal injuries[1, 2, 3, 4].Reasons given for their continued patronage include poverty, fear of amputation, faster recovery and better outcome. These reasons have been found to be incongruous and inconsistent while a fixated cultural outlook was recognised as being the motivating factor responsible for their continued patronage [5, 6, 7].

The practise of traditional bone setting dates back to history and it has found root in developing countries like Africa, South America and the Indian subcontinent where they still play roles in providing services. It is estimated that about 40% of patients with fractures and dislocations in the world are managed by traditional bone setters' [8]. In eastern Nigeria it was reported that 85% of patients presenting to the hospital had previously visited a TBS [9]. Orthopaedic surgeons in developing countries are faced with diverse challenges posed by the complications resulting from management of fractures by the Traditional Bone Setters (TBS) including Bone setters' gangrene, compartment syndrome and tetanus and death [3, 4, 10,11,12,.

TBS practices are not scientifically based and complications usually arise from their lack of basic principles of fracture management. The use of tight wooden splint without consideration of the neurovascular status is a risk factor for compartment syndrome and gangrene [13, 14].

METHODS

Semi-structured questionnaires were administered to patients or their guardian attending the Orthopaedic out-patient department. This was done over a four week period. The mode of questionnaire administration was chosen to enable detailed explanation of contents of the questionnaire. The demographic data, educational level, monthly income,

knowledge and reasons of patronage of TBS of respondent were the parameters studied. Data obtained were analyzed using SPSS 16 and level of significant was $p < 0.05$

RESULTS

Sixty-one males and 38 females respondent were involved with a male to female ratio of 1.6:1. Their ages range from between 15-75 years and mean age of 35.5 with standard deviation of 15.775 as shown in Table 1. Eighty-three per cent of respondents were Muslims and 17 % were Christian. The respondent's state of residence showed that 69.7% resides in Sokoto while 30.3% resides in neighbouring states. The education status of the respondents was such that 29% had no formal education while 71 % had educational level above primary. Forty-one per cent of respondents were either civil servants or traders. Fourteen per cent of respondents earn less than 100 USD monthly while the average monthly income was 182 USD as shown in Table 1. Eighty- three per cent of respondents were of the Hausa-Fulani tribe while Ibos and others were 17%. Reasons given for patronage of traditional bone setters include proximity and availability of service (27%), low cost of service (25%), traditional norms (15%). Others include short duration of treatment (12%), individual preference (12%) and quality of service (9%) as shown in figure 1. Twenty-two per cent of respondents believe that Traditional bone setters' are competent, 32% believe they are incompetent while 46% believe they are average as in figure 2. Ninety-one per cent of respondents have knowledge of orthodox service provider while 81% would prefer orthodox care provider only in managing bone and joint injuries and they cite experience, competence for their choice. Thirty-four per cent of respondents have had cause to take patients from TBS for orthodox care and the various reasons given are shown in figure 3. Eighty-eight per cent of respondents advocates for the training of Traditional bone setters. Table 2 shows the perception of TBS practices according to the level of education, occupation and income level. Chi square test showed no significant relationship ($p > 0.05$) between education, occupation and income with perception.

DISCUSSION

Most of the respondents have educational level above primary hence are able to recognise the need for good and efficient health care, however with a mean monthly income of less than 200 USD, it is difficult to want to seek orthodox orthopaedic care in the very first instance. Traditional bone setters will continue to be the first port of call for our numerous urban and rural dwellers [1, 2].

Proximity and availability of service were the major reasons in our study while patient seek the services of traditional bone setters. Similar reasons were also given in the study by Ogunlusi et al and Thanni [5, 6, 7].These reasons are quite cogent if we seek to reduce the menace of traditional bone setters in our society. The number of registered Orthopaedic Surgeons in Nigeria as at 2007 was 144 for a population of 150 million people (15). There was also an uneven distribution with large numbers in urban areas thereby leaving the majority of our rural dwellers at the mercy of traditional bone setters. Low cost of service which include low treatment cost and lack of bureaucracy was also an important reason given by respondents. Traditional bone setters do not require x- rays and no documentation are needed in their practice. Practices are inherited as family tradition with occasional spiritual addendum [1, 8]. In cases of misdemeanour like bone setters' gangrene and further treatment for non-union and malunion, the cost of care rises significantly [3, 10 11, 13,16, 17].

Most of the respondent in our study believe that traditional bone setters are competent and above average even though their practices have no scientific basis. Nature is able to unite untreated fractures, but significant malalignment or complication may occur if the treatment is not supervised. The verdict of competency is borne out of a fixated cultural outlook rather than on any scientific consideration [2, 18].

Most of our respondents have knowledge of orthodox care of fracture and would prefer to be treated by them but their continued patronage of TBS may not be unconnected with the way they plight their trade. Contact with TBS is mainly through middle men who are believe to lock around hospital to lure unsuspecting patients away [5]. The initial idea of visiting a TBS was mooted by an external person as most times the involved individual is helpless in making informed decisions [18].

Thirty-four per cent of respondents in our study have had reasons to withdraw their patients from TBS for orthodox care with "no significant improvement" being the commonest reason. Fracture healing has a definite time frame and this is better appreciated by the trained personnel. Progress of fracture treatment is usually assessed using clinical and radiologic parameters and were non-operative methods have been adopted, decision is usually taken to intervene operatively. The goal of modern fracture management is to restore the patient to a fully functional state as soon as possible while progress of fracture healing is

monitored [19].

Eighty-eight per cent of respondent in our study advocated for the training of TBS and the benefit of this is enormous. There was a significant reduction of limb gangrene within two years in southern Ethiopia following administration of instructional courses to bone setters [20].

The performance of bone setters will improve and will also help to reduce the incidences of avoidable complications [10, 21].

Our study showed no significant relationship between the level of education, occupation and income level to the perception of TBS. There patronage cuts across all strata of the society and has been rooted in tradition and belief that bony injuries are better attended to first by TBS [6,7 21].

CONCLUSION

The practice of traditional bone setting will continue to remain relevant in the minds of our people so long as the alternative of an accessible, cheap and available orthodox care is not available to the majority of our rural and urban dwellers. As a stop gap measure, training and instructional courses on basic principles in fracture care to TBS will reduce the rate of complications seen from their practice.

Table 1

Mean age and monthly income of the respondents

	Mean
Age	35.53
Monthly income	30510.42(184USD)

Figure 1

Reason(s) why TBS are patronized

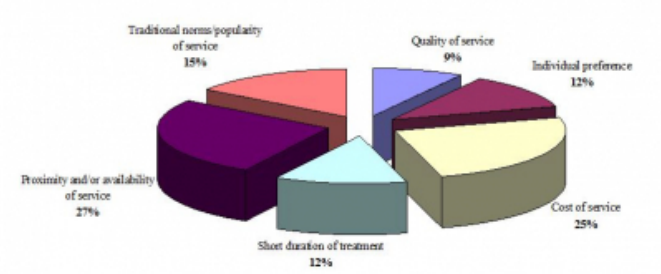

Figure 2

Respondent's perception of TBS

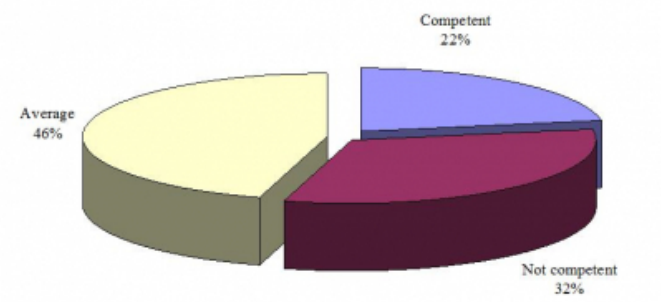

Figure 3

Reasons why patient was withdrawn from TBS

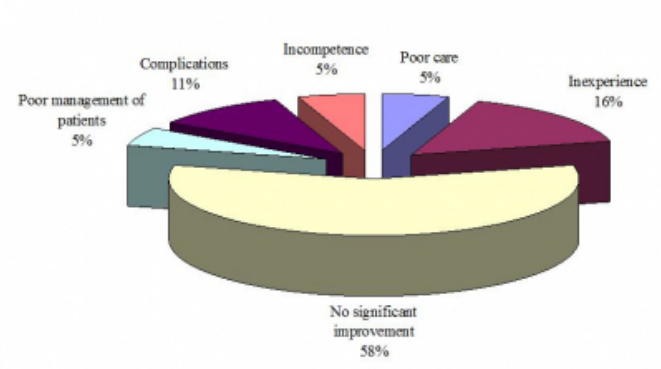

Table 2

Perception of TBS practices according to educational level, occupation and income level

	Perception of TBS				
	Competent	Not competent	Average	χ^2	P-value
Educational level					
No formal education	10 (34.5)	8 (27.6)	11 (37.9)		
Primary	2 (14.3)	3 (21.4)	9 (64.3)		
Secondary	5 (20.0)	12 (48.0)	8 (32.0)	11.820	0.159
Tertiary	3 (11.5)	9 (34.6)	14 (53.8)		
Postgraduate	2 (40.0)	0 (0.0)	3 (60.0)		
Occupation					
Civil servant	6 (21.4)	8 (28.6)	14 (50.0)		
Trading	3 (27.3)	3 (27.3)	5 (45.5)		
Farming	2 (100.0)	0 (0.0)	0 (0.0)	12.159	0.433
Housewife	1 (7.7)	4 (30.8)	8 (61.5)		
Student	5 (27.8)	8 (44.4)	5 (27.8)		
Tailor	1 (20.0)	2 (40.0)	2 (40.0)		
Others	4 (18.2)	7 (31.8)	11 (50.0)		
Income(Naira)					
Below N10,000	2 (14.3)	6 (42.9)	6 (42.9)		
N10000-N50000	5 (29.4)	4 (23.5)	8 (47.1)		
N50000-N100000	2 (25.0)	3 (37.5)	3 (37.5)	7.305	0.696
N100000-N150000	1 (50.0)	0 (0.0%)	1 (50.0)		
N150000-N200000	2 (66.7)	0 (0.0%)	1 (33.3)		
Above N200000	1 (33.3)	0 (0.0%)	2 (66.7)		

Chi-square test showed no significant relationship (P>0.05) between education, occupation and income with perception

References

Author Information

M Oboirien, FWACS
Usmanu Danfodiyo University Teaching Hospital
Sokoto, Nigeria
moboirien@yahoo.com

A Khalid, MBBS
Usmanu Danfodiyo University Teaching Hospital
Sokoto, Nigeria