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TRADITIONAL FRACTURE CARE IN THE 21ST CENTURY: EMERGING FACTORS FOR THE CONTINUED PREFERENCES

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ABSTRACT

Traditional fracture care method as part of general traditional medicine has been an old method of fracture treatment that has existed and survived for centuries in most societies. However, the 19th century ushered in the western orthopaedic fracture care method with

Introduction

Traditional Fracture Care method has been an old method of fracture care prior to the emergence of western orthopaedic practices. Traditional healing of all types was practised for centuries to deal and cope with several health-threatening injuries to which traditional fracture care method has been part and parcel of the system (Abdullahi, 2011). However, the 21st-century ushered in a more medically advanced fracture care method. It is no doubt that today orthodox orthopaedic fracture care method has played a significant role in the treatment of fractures in most countries of the world. The most significant question that continues to create debate among scholars is " why do traditional fracture care method has

the introduction of modern medical machines for diagnosis in the treatment of fractures. It is no doubt that in the 21st century, orthodox orthopaedic method of fracture treatment has played a significant role in fracture treatment. One question that studies have failed to answer appropriately is the fact that the practice of traditional fracture care is still striving even amidst the advanced orthopaedic method which ideally should have been the last option. Several factors have been attributed to the preference of people for traditional fracture care over orthodox fracture care which includes affordability, accessibility and fear of amputation among others. The study used Cross-sectional survey design. 600 questionnaires were administered in order to get peoples' opinion on their preference for traditional fracture care over orthodox orthopaedic fracture care. The findings of the study indicated that effectiveness of the traditional method, cultural influence and the belief that the method has been an old method were major factors behind peoples' preference. The major thrust of the study is to assert that cultural influence, the effectiveness of the method and belief in the system plays a key role in the preference of people for traditional fracture care. The study recommended among others the need for the government to improve the traditional fracture care system to enable the system efficiently complement the effort of the western orthopaedic practice.

KEYWORDS: *Traditional Fracture Care, Western Orthopaedic, Cultural influence, Preference, 21st century, Emerging factors.*

continued over the years to gain more prominence over the modern orthopaedic fracture care method even in the 21st-century world?". Nwachukwu, Okwesili, Harris and Katz (2010) assert that despite the

widespread of modern medicine generally, the practice of traditional alternatives still remains popular in most developing nations of the world such as China, and the continent of Africa among others. However, several studies have revealed that traditional fracture care are still in use by a vast population across the globe, and several factors were said to have accounted for such high percentage of peoples' preference for traditional fracture care method which includes affordability, fear of amputation, accessibility and unfriendly nature of the orthodox orthopaedic practitioners among others (Novus, 2019; Nottidge, 2011a; Abdullahi, 2011b).

Several studies have failed to significantly take into account cultural influence, the effectiveness of the traditional fracture care method and the long-lasting record of experiences that have built confidence and reliability on the people in pointing out the factors behind peoples' preference for traditional fracture care even amidst advanced orthopaedic practices. These factors that hasn't gotten much recognition in considering peoples' preference for traditional fracture care in the 21st century is what this study seeks to find. The study tends to establish that there is a positive relationship between peoples' preference for traditional fracture care method and the rising level of patronage of the method even in the 21st century.

METHODOLOGY

The research adopted a cross-sectional survey design. The survey research method according to Stark (2004) has two identifying features. First, it is based on a sample of the population. Second, the data are collected by personal interviews or by having each individual complete a questionnaire. The researcher obtained cross-sectional data from the respondents by means of a questionnaire and In-Depth Interviews (IDIs).

The study area includes major towns of Shongom, Kaltungo and Billiri. These towns are predominantly Tangale native speakers. The Tangale community lies some 30-40 miles south of Gombe - 9°50's Lat. and ITIO' w. Long in a hilly landscape. It forms part of the former Tangale-Waja District in the then Bauchi State, Northeastern Nigeria. The 2006 census put the total population of these communities (Shongom, Kaltungo and Billiri local governments areas) at 503,469 people.

According to certain historical traditions (Mabudi, 1980; Dictionary of the Tangale people, 1991) the Tangaie originated from Mak in Borno and migrated in seven stages via Biu to a place called Kalshingi where they mixed with the Jukun people of Pindiga and then moved to the Tungo and Dikki hills where they descended to establish the present villages of Ture, Shongom and Kaltungo on the one hand and Billiri, Bare, Tal (and Tanglang, Kalmai and Banganje) on the other. The Tangale people are predominantly Christians. Agriculture is the main source of livelihood among the Tangale people in the communities of Shongom, Kaltungo and Billiri.

The study population comprised of males and females, both adults and children who were receiving treatment in the Traditional fracture care centres at the period of the study and people who had earlier used traditional fracture care method within the three Tangale speaking communities of Shongom, Kaltungo and Billiri. The owners of traditional fracture care centres also made up the study population.

All the patients taking treatment at the time of the study were taken. 230 respondents were drawn from the two visited traditional fracture care centres. 370 respondents were also drawn from the three selected communities of Shongom, Kaltungo and Billiri who have had an experience of the traditional fracture care. A total of 600 respondents were drawn from the population for the study.

The sample size is determined statistically using the formula:

$n = z2(PQ)/e2$

Where p = the preferences of people for Traditional fracture care put at (51.9% proportion)

q = complement of p (49.1%)

z = confidence level (95%)

e = accuracy level (4.0%)

n= the required sample size

In applying the formula, it goes like this;

$$n=\frac{1.962(51.9)(49.1)}{0.042}$$

$$n=\frac{3.8416(0.2496)}{0.0016}$$

$$n=\frac{0.958863}{0.0016}$$

n= 599.3

This is rounded up to 600 respondents.

The sampling techniques employed in the study were the purposive and snowball sampling techniques. The purposive sampling technique was used on patients who were receiving traditional fracture care at the period of the study. These set of respondents were purposely selected because they were in a better position to provide the necessary information needed for the study. The snowball sampling technique which entails mobilization of more participants by the respondents themselves was used to select subsequent respondents within the three study communities.

Both quantitative and qualitative methods of data collection were used in the study to collect the necessary data. For the quantitative

method, six hundred (600) copies of questionnaires were administered to 600 respondents drawn from the study population. The In-depth Interview guide was used to obtain data from the owners of traditional fracture care centres.

Five research assistants were trained prior to the assignment by the researcher. They were indigenes from the selected communities of Shongom, Kaltungo and Billiri. They helped in the administration of the questionnaire. The questionnaire was administered to the respondents by the researcher and the research assistants under the supervision of the researcher. The administration of the instrument was done via visitation of the three communities including the two traditional fracture care centres at weekends. This was because weekends normally serves as a rest period for most of our respondents. The researcher interviewed the IDI respondents while the research assistants helped to hand/tape-record the information given by the respondents. Pictures were taken to further buttress the quality of data obtained. 600 questionnaires were administered and 599 were retrieved for analysis.

Quantitative data was analyzed using Statistical Packages for the Social Sciences (SPSS) latest version software to obtain descriptive statistical tools like tables, percentages, frequency distributions, bar charts and pie- charts. The raw data were carefully verified before inputting it into the software. Qualitative data were content analyzed in the study.

LITERATURE REVIEW

Panigrahi, Mishra and Padhy (2017) in their study "Fracture Management by Traditional Bonesetter: A Hospital-Based Observational study" Made an observation on the procedures of indigenous traditional bonesetters with an aim to bring out the various

out cases and possible reasons for their patronage in society, Using an observational method. The result of the study indicated that cost and fear of surgery were observed to be the main reasons for non-acceptance of the modern orthopaedic practice. The study also indicated the same result with Owoseni et al. (2014) with regards to the level of expertise of the bonesetters. The study recommended that awareness should be created and traditional bonesetters should be integrated into the health care system. Although their study focuses on the management rather than people's preferences, the present study is concerned with people's preferences for traditional fracture care method over the orthopaedic method. The study failed to consider the cultural influence, the effectiveness of the traditional fracture care method and the confidence built by the long-lasting record of experiences of the practitioners as major factors behind peoples' preference. This is what the present study intends to discover.

Odatuwa-Omagbemi, Adiki, Elachi and Bafor (2018) in their study " Complications of traditional bonesetters (TBS) treatment of musculoskeletal injuries: experience in a private setting in Warri, South-south Nigeria" posits that the major challenges the orthodox orthopaedic practitioners face are complications arising from the practice of traditional fracture care. Case notes of patients with musculoskeletal injuries who had prior treatment by traditional fracture care practitioners were reviewed, and the data was analyzed using SPSS. The result of their study indicated that the most frequently affected were traders and business persons constituting up to 27.9% of the overall patients. Their conclusion was that complications arising from the practice of traditional fracture care constitute a major challenge to orthodox orthopaedic practices. This is because up to 85% of patients with fractures are said to first turn up for traditional

fracture care Practitioners before presenting to the orthodox orthopaedist when the case becomes complicated. Odatuwa-Omagbemi et al further noted that certain factors were said to have given rise to such high patronage such as affordability, accessibility and etc. However, the study failed to acknowledge that peoples' preference could be influenced by their culture, the effectiveness of the method and its long-lasting record of experiences that has built confidence and trust among the people as factors for their patronage of the method. The present study seeks to establish that affordability, accessibility and fear of amputation are factors that do influence peoples' preference as does culture, effectiveness and confidence built by the record of the experience of the traditional method.

However, the present study does not dispute the fact affordability has been seen as a major factor prompting peoples' preferences but also seeks to establish that there are still quite a number of well-to-do individuals seeking traditional fracture care. In this regard, the effectiveness of the traditional fracture care method should be looked at rather than affordability. This is what the present study seeks to establish.

Owoseni, Taiwo and Ayodele (2014) in their study "Traditional Bone-Setters and fracture care in Nigeria" Seeks to examine the activities of traditional bone-setters on fracture care in Ekiti State using survey method. The findings of the study indicated that traditional bone-setters lack basic knowledge of investigations and wound care and that people patronize them because of poverty, ignorance and superstitious beliefs. The study failed to acknowledge cultural influence in peoples' preferences for traditional fracture care. The findings of the study revealed that poverty among others is the reason why people patronize traditional fracture care. The findings by Odatuwa-Omagbemi et al. (2018) revealed that 27.9% of patients under

the traditional bone-setter at the time of their study were traders and business persons. It is obvious, therefore, that the notion that poverty accounts for a high rate of peoples' preference and not cultural influence and the effectiveness of the method is rejected in the present study. In all their recommendations, none was able to address the issue of improving traditional fracture care centres in the country to meet the needs of its patronizers. The present study seeks to recommend for a total reformation of these centres to meet the standards of any orthodox orthopaedic hospitals in the world.

THEORETICAL FRAMEWORK

FUNCTIONALISM

Functionalism interprets each part of society in terms of how it contributes to the stability of the whole society. Society is more than the sum of its parts; rather, each part of society is functional for the stability of the whole. Durkheim actually envisioned society as an organism, and just like within an organism, each component plays a necessary part, but none can function alone, and one experiences a crisis or fails, other parts must adapt to fill the void in some way.

Within functionalist theory, the different parts of society are primarily composed of social institutions, each of which is designed to fill different needs, and each of which has particular consequences for the form and shape of society. The parts all depend on each other. The core institutions defined by sociology and which are important for understanding this theory include family, government, economy, media, education, and religion. According to functionalism, an institution only exists because it serves a vital role in the functioning of society. If it no longer serves a role, an institution will die away. When new needs evolve or emerge, new institutions will be created to meet them.

Just as the society has been described as an organism comprising of different beneficial parts, each playing its role for the survival of the whole (society), traditional fracture care method has been an old traditional institution of healing that has survived for centuries. It has played and has continued to play a significant role in maintaining a healthy population for the survival of society. Although the 21st century has introduced the use of advanced medical apparatus in the practice of modern orthopaedic fracture care to complement the role of the old existing traditional fracture care method, it is no doubt that each method is functioning to maintain a healthy population, therefore peoples' preferences have continued to be channelled to the traditional method of fracture care.

Functionalists view society as a system in which all parts work—or function—together to create society as a whole. In this way, societies need culture to exist. Cultural norms function to support the fluid operation of society, and cultural values guide people in making choices. Just as members of a society work together to fulfil a society's needs, culture exists to meet its members' basic needs and therefore influences our decision-making.

SOCIAL EXCHANGE THEORY

The Social Exchange Framework was formally advanced in the late 1950s and early 1960s in the work of the sociologists George Homans (1961) and Peter Blau (1964) and the work of social psychologists John Thibaut and Harold Kelley (1959). Over the years, several exchange perspectives, rather than one distinct exchange theory, have evolved (Cook, 2015). The exchange framework is built upon the combination of the central tenets of behaviourism and elementary economics where human behaviour is envisaged as a function of its payoff. The framework is primarily concerned with the factors that mediate the

formation, maintenance, and breakdown of exchange relationships and the dynamics within them.

Twelve (12) theoretical propositions that aid in understanding the exchange theory was put forward by Nye (1978) as follows;

1. Individuals choose those alternatives from which they expect the most profit.
2. Cost being equal, they choose alternatives from which they anticipate the greatest rewards.
3. Rewards being equal, they choose alternatives from which they anticipate the fewest costs.
4. Immediate outcomes being equal, they choose those alternatives that promise better long- term outcomes.
5. Long-term outcomes were perceived as equal, they choose alternatives providing better immediate outcomes.
6. Costs and other rewards being equal, individuals choose the alternatives that supply or can be expected to supply the most social approval (or those that promise the least social disapproval).
7. Costs and other rewards being equal, individuals choose statuses and relationships that provide the most autonomy.
8. Other rewards and costs equal, individuals choose alternatives characterized by the least ambiguity in terms of expected future events and outcomes.
9. Other costs and rewards equal, they choose alternatives that offer the most security for them.
10. Other rewards and costs equal, they choose to associate with, marry, and form other relationships with those whose values and opinions generally are in agreement with their own and reject or avoid those with whom they chronically disagree.

11. Other rewards and costs equal, they are more likely to associate with, marry, and form other relationships with their equals, than those above or below them. (Equality here is viewed as the sum of abilities, performances, characteristics, and statuses that determine one's desirability in the social marketplace.)
12. In industrial societies, other costs and rewards equal, individuals choose alternatives that promise the greatest financial gains for the least financial expenditures.

This theory argues that peoples' preference or choice of their basic need are determined by cost and reward. People first weight the benefits and the cost before diving into action. Peoples' high preference for traditional fracture care over the orthodox orthopaedic fracture care could be said to have emanated from the beneficial relationship in-between that has existed for long. The effectiveness coupled with low cost, accessibility, and influenced by cultural values could be said to have attracted the people into patronizing the traditional fracture care over the modern orthopaedic practice. Exchange theorists observe how culture influences decision-making. Cultural values and beliefs often influence people's choices or preferences, particularly their preferences for traditional fracture care over the orthodox method. If you evaluate your decisions on a daily basis, you might see elements of the culture behind the motivation driving your choices. These choices are often beneficial choices with less or no regret. Exchange theorists observe how culture influences decision-making. Cultural values and beliefs often influence people's choices about the decision. If you evaluate your decisions on a daily basis, you might see elements of the culture behind the motivation driving your choices.

RESULTS AND FINDINGS

This chapter presents an analysis of the data collected for this study. Six hundred questionnaires that were distributed for the study from the study area were validly filled in and returned by the research assistants. It wasn't difficult getting all the distributed questionnaires back. The responses from the entire completed and returned questionnaire were included in the analysis that follows below. This section is structured with tables reflecting the different parts of the study, viz: the socio-demographic information of the respondents and issues on Boko Haram insurgency.

Table 1: *Sociodemographic characteristics of the respondents*.

Sex	**Frequency**	**Percentage (%)**
Male	363	60.6
Female	236	39.4
Total	599	100.0
Age	Frequency	Percentage (%)
1-15	16	2.7
16-26	30	5.0
27-37	45	7.5
38 and Above	508	84.9
Total	599	100.0
Settlement	Frequency	Percentage (%)
Kaltungo	150	25.0
Shongom	205	34.2
Billiri	109	18.2
Kumo	89	14.9
Others	46	7.7
Total	599	100.0
Occupation	Frequency	Percentage (%)

Farmer	289	48.2
Civil servant	158	26.3
Student	32	5.3
Other	120	20.1
Total	599	100.0
Ethnic group	Frequency	Percentage (%)
Tangale	525	87.5
Fulani	30	5.0
Hausa	44	7.5
Total	599	100.0
Education	Frequency	Percentage (%)
Degree/HND	233	39.0
Diploma/NCE	46	7.7
SSCE	77	12.8
Others	242	40.5
Total	599	100

Out of the total respondents in the study (599), 363 respondents were found to be males (60.6%) and 236 (39.4%) were females. Respondents whose age fell within the interval of 38 and above constituted about 84.9% and the remaining were respondents whose age interval fell within 1-37, constituting 15% of the respondents. Most of the participants were from Shongom study area (34.2%) and followed by Kaltungo constituting 25.0%. Respondents from Billiri constituted 18.2% and Kumo constituted 14.9%. Other respondents who were from areas were just 7.7%. The findings further revealed that most of the respondents were farmers with a frequency of 289 (48.2%), civil servant constituted 26.1%, students 5.3% while others stood at 20.1%. The ethnic group of the respondents varies. Tangale ethnic group

constituted (87.5%) of the total respondents, Fulani (5.0%) and Hausa (7.5%). On the educational distribution of respondents, the findings revealed that most of the respondents were not educated at the period of the study with a frequency of 242 (40.5%). The table indicated that Degree and HND holders constituted 39.0%, Diploma/NCE 7.7% and SSCE (12.7%).

Issues:

Assessing the influence of culture and belief on peoples' preference for Traditional fracture care.

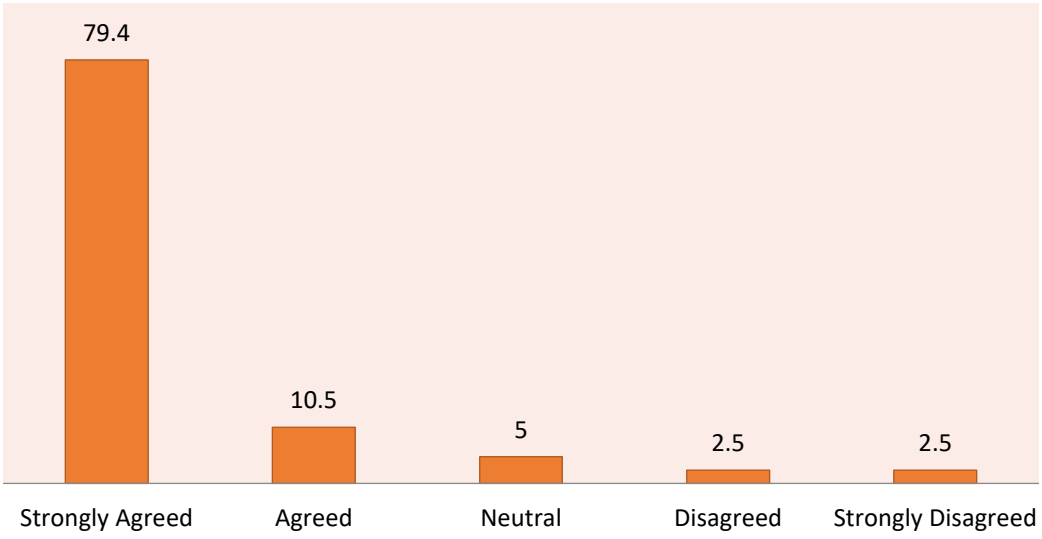

Figure 1. Distribution of respondents on how culture influences their preference for traditional fracture care.

A question was asked on whether culture encourages peoples' preference for traditional fracture care. This was to understand if culture influences peoples' preference. Their response in Figure 1 indicated that; 79.4% of the respondents strongly agreed, 10.5% agreed, that culture encourages their preference for traditional fracture care. While 2.5% of respondents disagreed, 2.5% followed suit

to strongly disagree that culture and tradition do not encourage the patronage of traditional fracture care. 5.0 of the respondents were neutral.

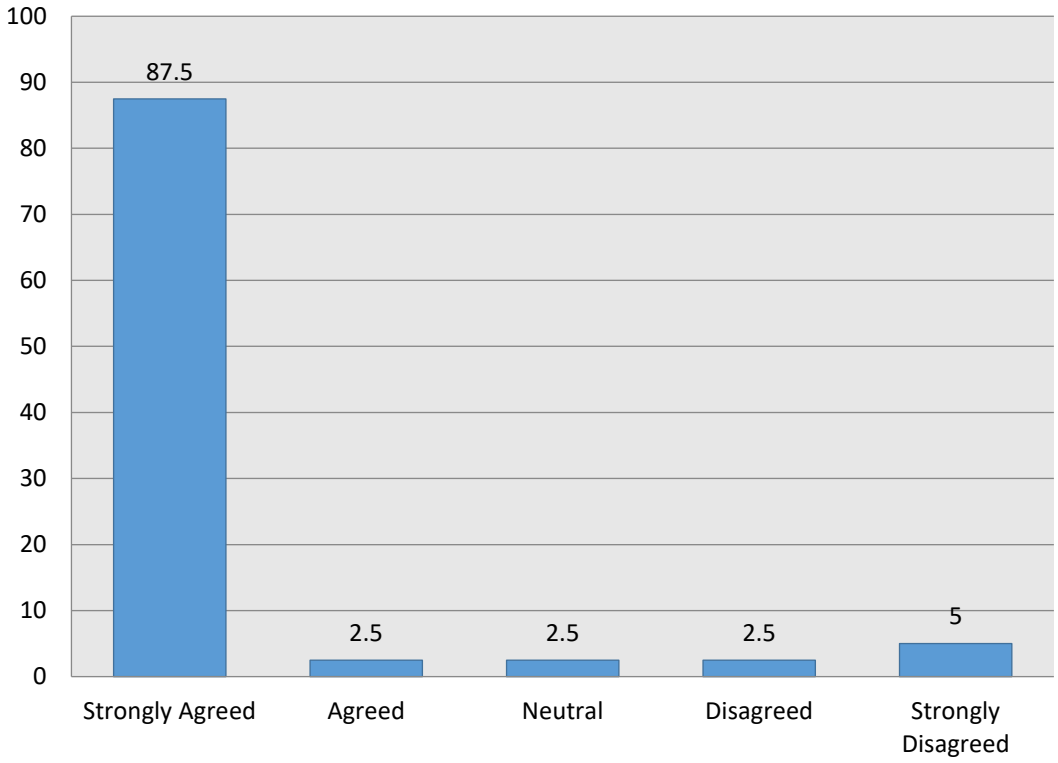

Figure 2. Distribution of respondents on preference for traditional fracture care over the orthodox orthopaedic practice.

The question was on which fracture care method do they prefer? The responses depict that; 524 (87.5%) of the respondents strongly agreed and 15 (2.5%) agreed that they prefered traditional fracture care over the orthodox orthopaedic practice.15 (2.5%) respondents were neutral in their views. Figure 2 depicted another different view indicating that 15 (2.5%) respondents disagreed, and the remaining 30 (5.0%) respondents strongly disagreed that they do not prefer traditional fracture care over the orthodox method.

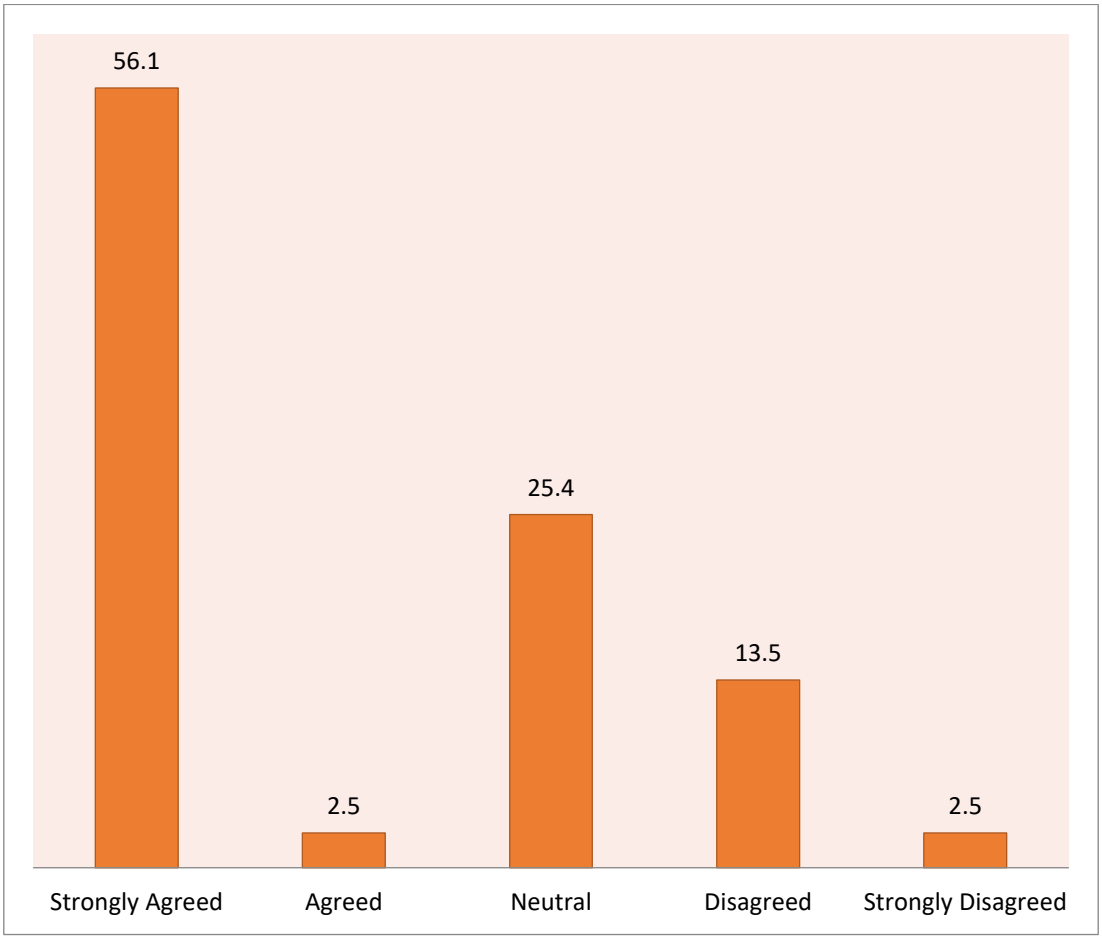

Figure 3. Distribution of respondents on whether affordability influences their preference

Figure 3 displayed the respondents' view on whether affordability is a factor that influences their preference for traditional fracture care. It is obviously indicated that; 336 (56.1%) of the respondents strongly agreed, 15 (2.5%) agreed that affordability is one of the reasons for their preference for traditional fracture care. Out of the total respondents, 152 (24.4%) were neutral in their views on affordability. 81 respondents (13.5%) disagreed and 15 (2.5%) respondents strongly disagreed that affordability is a factor for their preference.

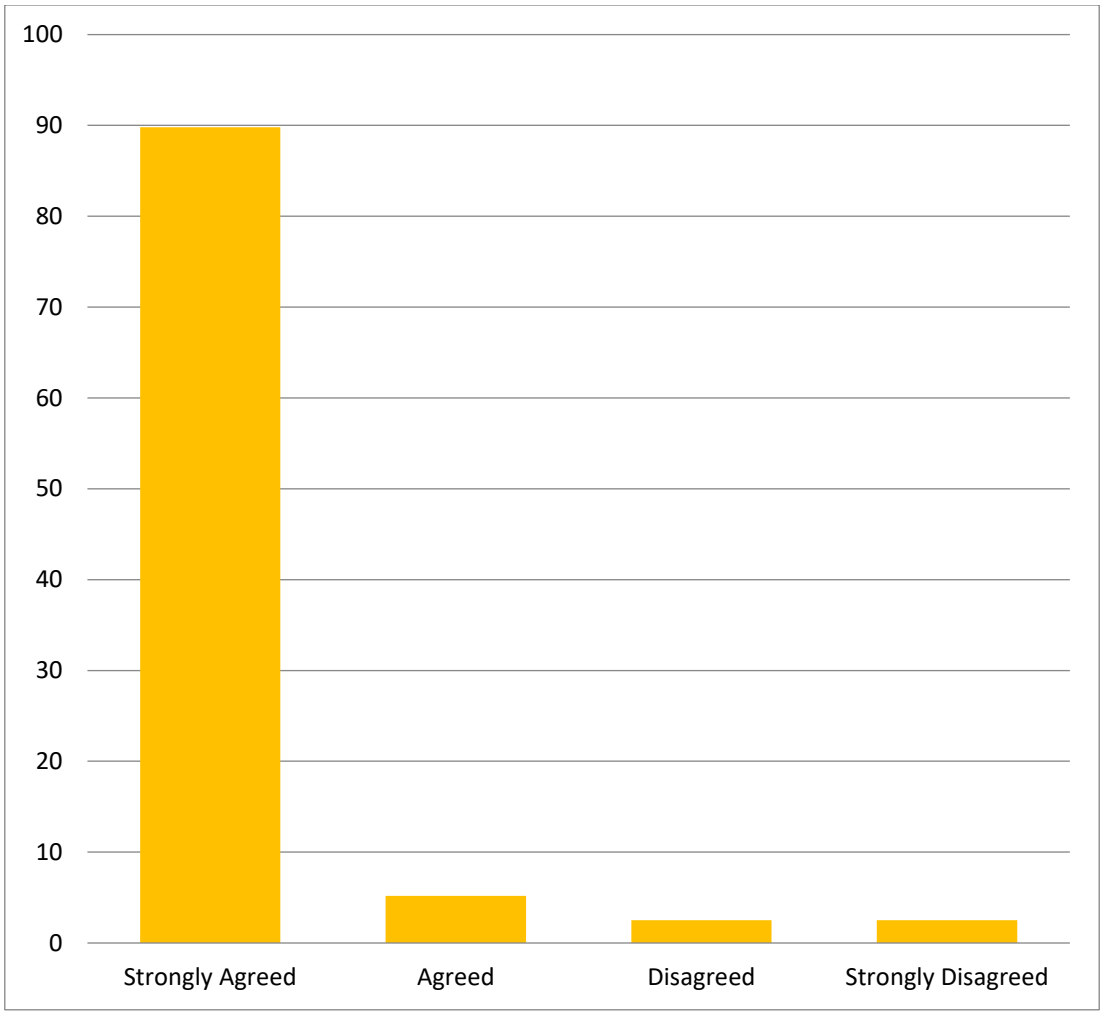

Figure *4. Distribution of respondents' view on the effectiveness of traditional fracture care method.*

The question was to understand whether peoples' preference for traditional fracture care method is a result of the effectiveness of the traditional method. The chart indicated the different responses of the participants. Out of the total number of respondents (599), 89.8% strongly agreed that their preference is a result of the effectiveness of the traditional method. 31 (5.2%) agreed, 15 (2.5%) disagreed and 15 (2.5%) strongly disagreed that their preference was not as a result of the effectiveness of the traditional method of fracture care.

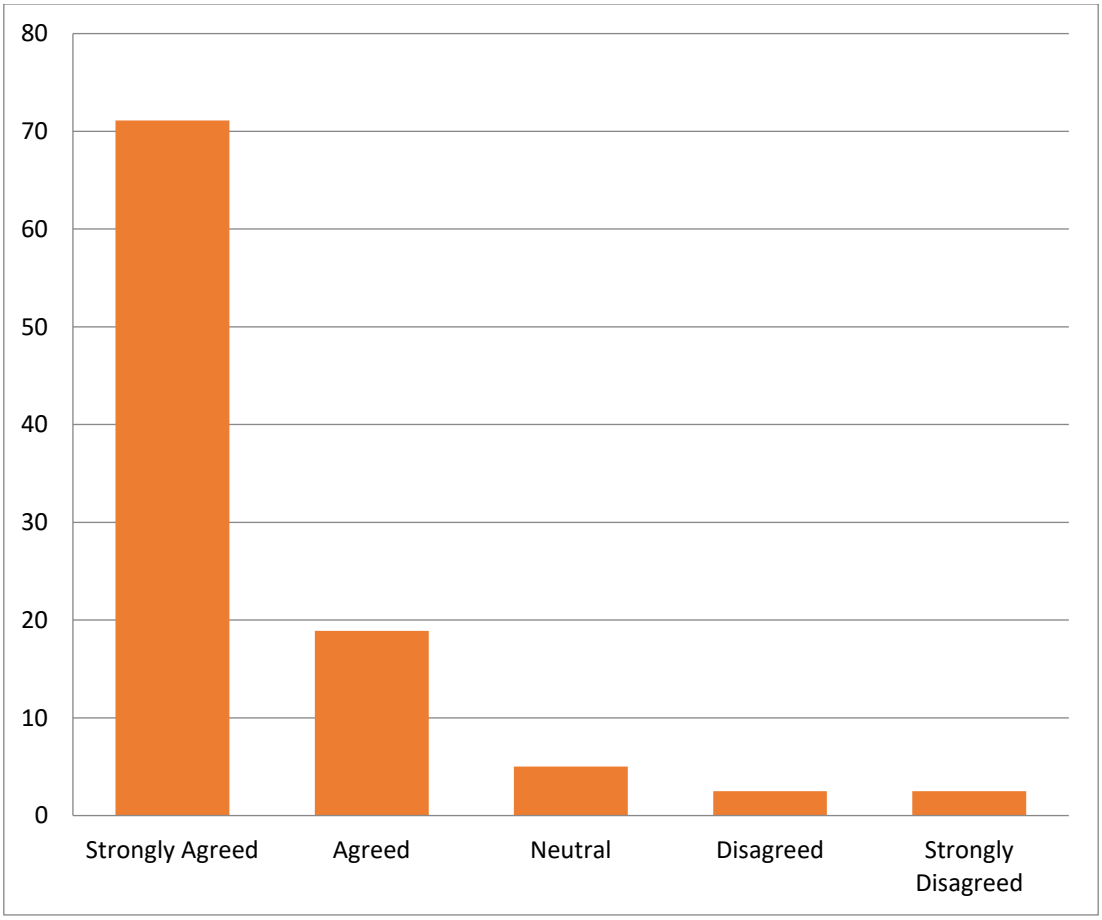

Figure 5. Distribution of respondents' on traditional fracture care as an old method of healing.

The question was to find out if peoples' preference for traditional fracture care was a result of the fact that traditional healing has long existed and survived over centuries. The findings revealed that majority of the respondents (71.1%) strongly agreed that their preference has always been influenced by that it has been an old, reliable system. 18.9% of the respondents agreed, 2.5% disagreed, 2.5% strongly disagreed that their preference for traditional fracture care is not as a result of the fact that it has been an old system. 30 respondents (5.0%) were neutral and pointing out belief instead of their preference.

DISCUSSION OF FINDINGS

The findings of the study showed that out of the total number of respondents (599), males accounted for 60.6% and female accounted for 39.4% of the respondents. This high per cent (60.6%) of male respondents indicated that males were the most injured in the area considering the fact they engage in more risky activities resulting to mostly fracture. The findings of the study revealed that most respondents within the age interval of 38 and above accounted for 84.9% of the total respondents. This finding obviously indicated that people within the age interval of 38 and above-comprising males and females were vulnerable to fracture because of their engaging lifestyle than people who were within the age interval of 1 to 37 (15%).

The findings of the study further indicated that people from Shongom and Kaltungo study areas accounted for a total of 59.2% with Billiri and Kumo jointly accounting for 33.1% of the respondents. Other persons from the different settlement were 46 (7.7%). The study discovered that this could be due to the fact that two of the traditional fracture care centres were located at Shongom next to Kaltungo study area. It might also interest you to know that the majority of the resident in the study areas were found to be farmers accounting for 48.2% of the total respondents. The findings further indicated that farmers (48.2%) were the most affected. This not in line with the findings of Odatuwa-Omagbemi et al. (2018) where the study found that traders and business persons constituting up to 27.9% of the overall patients were the most affected.

The study further revealed that the Tangale ethnic group were the most patronizers of traditional fracture care method, as evidently indicated accounting for 87.5% of the respondents. The study found that the educational status of the respondents was not relevant in their preference for traditional fracture care. This was because out of

the total respondents (599), 59.4% were found to be educated with varying educational qualifications. The study agrees with the findings of Sina and Ayodele (2015). They found that 90.3% of their total respondents were educated and the uneducated account for just 9.7% and so concluded that the educational status of the respondents was not relevant in the patronage of traditional fracture care. At the same time, the study disagrees with Awoseni et al. (2015) where ignorance was found to be among the factors behind peoples' preference for traditional fracture care method.

The findings of the study revealed that culture plays a great role in the preference of people for traditional fracture care. The findings shared that 89.9% of the respondents agreed that culture influences their preference for traditional fracture care and only 5% of the people believed that culture does not influence their preference. Generally, majority of the respondents preferred traditional fracture care over orthodox orthopaedic practices as obviously shown in the study with 88% response as against 7.5% response. It might also interest you to know that affordability was also discovered to be one of the factors or reason for people's preference for traditional fracture care. This finding is in accordance with the finding of Panigrahi et al. (2017) where cost and fear of surgery were discovered as major factors for people's preference for traditional fracture care.

The effectiveness of traditional fracture care was discovered in the study to be a major factor in the preference of people. The study showed that 95% of the respondents indicated that the major factor behind their preference is the effectiveness of traditional fracture care. The respondents believed traditional fracture care is faster and effective than orthodox orthopaedic practice. The study noted that the treatment of fracture case in the traditional fracture last only for a

period of 3 to 6 months depending on the severity of the fracture unlike the orthodox orthopaedic method that takes a year or more.

The findings in the study also revealed that 90% of the study respondents agreed that their preference for traditional fracture care were just their belief in the system considering the fact that traditional fracture care has been an old traditional method of healing. They believed that modern advancement in fracture care cannot last and survive the test of time as the traditional method. 5% of the respondents rejected this factor as their reason for preference.

CONCLUSION

The findings in the study indicated that the effectiveness of the traditional fracture care method as seen in the high response rate of 537 respondents (89.8%) is a major factor influencing peoples' preference for traditional fracture care method. One interesting fact the study discovered was that affordability seems to be less a major factor influencing peoples' choice for traditional fracture care patronage but the trust and belief in the effectiveness of the traditional method and the long positive record of the method. The culture and tradition of people can influence their choice for traditional fracture care and not necessarily accessibility and fear of amputation as always claimed by other researchers.

RECOMMENDATION

Having found some of the major factors influencing peoples' preference for traditional fracture care over the orthodox orthopaedic fracture care method such as the effectiveness of the traditional fracture care method, cultural influence and affordability, the study seeks to recommend the following as a way out for both the government and non-governmental organizations.

1. **Incorperation of traditional fracture care centres as part of its primary health care:** The government of Nigeria should include all traditional fracture care centres across the country as part of its own primary health care to enable the centres to enjoy the full benefits and services enjoyed by government primary health centres in the country. Although the traditional fracture care centres are mostly own by private bonesetters, a certain percentage should be demanded from the practitioners. If this recommendation is adopted, the health conditions of the Nigerian citizens will improve remarkably.
2. **Sponsorship Training for traditional fracture care practitioners:** Over the years, studies have shown that there are sometimes complications that arrive from the treatment of bone by the traditional practitioners as a result of inadequate advanced knowledge of bone care as claimed Owoseni et al. (2015). The fact that people patronize their services does not mean they are perfect practitioners of bonesetting. The government should meet the need of their target citizens by sponsoring those traditional fracture care practitioners to acquire more advanced knowledge of bonesetting abroad. They should be sponsored just like any other medical student undergoing a medical course. Their experiences of traditional fracture care and experiences of modern orthopaedic fracture care will help in tackling any kind of complications at the same time.
3. **The collaboration of traditional and orthodox fracture care practitioners:** A kind of interchange services should be established to enable both practitioners to practically learn from each other. Both practitioners should collaborate and treat any complications by sharing ideas and experiences. This will not

only help reduce the cases of fractures leading to amputation but will help build the confidence of the citizens on health care in the country.

4. The government should set up a ministry specifically for traditional health issues in the country. The ministry should be mandated to improve the traditional health care system and to also strengthen research in the area of traditional medicine. Countries like China have long benefited from its traditional medicine practice.
5. The facilities at the traditional fracture care centres should be upgraded to the standard of any modern orthopaedic hospital in the world. It should be made to enjoy the same benefits as any other Nigerian orthopaedic hospital. It was discovered in one of the traditional fracture care centres visited that the centre lacks sufficient structures to accomodate the trooping patients across different communities. The few patients' wards been used was either built by Non-governmental organisations or the centre itself. The most interesting part of this well known traditional fracture care centre is that it does not collect a dime as payment from its patients.

Fig. 6: Dul Yamba Traditional Fracture Care Centre Karel

Fig. 7: Dul Yamba traditional bonesetters at work

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