

THE ROLE OF SIGNIFICANT OTHERS IN THE UTILIZATION OF TRADITIONAL ORTHOPAEDIC SERVICES IN KWARA STATE, NIGERIA

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ABSTRACT

Orthopaedic injuries contribute to most musculo-skeletal health challenges in developing societies partly due to increasing rate of technological advancement and its associated consequences. Despite the little recognition experienced, traditional orthopaedic service due to the severity of most orthopaedic injuries which sometimes left patients incapacitated, decision making regarding treatment is sometimes determined by significant others and has implication for patients well being. This forms the focuss of this paper which is hinged on the health belief model as framework for explanation. Both qualitative and quantitative methods were used to elicit data. Questionnaire was administered to 357 randomly selected orthopaedic patients, while In-depth Interview (IDI) was conducted with 7 patients and 14 practitioners. Findings revealed that majority of the patients (73.1%) belonged to the active age group (21-60 years); were males (74.5%) who engaged in occupations that predisposed them to orthopaedic injuries. Referral was mainly effected by family members (43.2%), former TOSP's patients (35.4%), friends (13.0%), and members of practitioners' ethnic groups (8.0%) who made these decisions because they were privy to effective treatment offered by the TOSPs. Intensive capacity building and collaboration with western practitioners was recommended for improved delivery of orthopaedic care.

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BACKGROUND TO THE STUDY

Orthopaedic injuries affect the vertebrae, joint, bone, ligament, cartilage and muscle. It includes bone fracture, dislocation, sprain and stress of bodily tissues and other infections and damages that occur to the musculo-skeletal system of the human body (Hurst, 2014). Although they date to time immemorial, the occurrence of orthopaedic injuries is on the increase, probably due to industrialization and high rate of socio-economic activities that characterize the complex modern society. This has broadened the myriad of factors responsible for orthopaedic injuries. According to Olaitan (2001), both direct and indirect violence (including severe contusion or impact, such as a blow or fall) to any part of the musculo-skeletal system results in orthopaedic injuries. Scholars have identified the causes of orthopaedic injuries to include sporting activities, fall, gunshot, occupational hazard, blow and Road Traffic Accidents (RTAs) ((Olaitan, 2001;

Dada, Yunusa and Giwa, 2011 and Aderibigbe, Agaja and Bamidele, (2013). Onyemaechi, Onwuasoigwe, Nwankwo, Schuh, and Popoola (2014) however observed that RTAs are the leading causes of orthopaedic injuries.

Owumi, Taiwo and Olorunnisola (2013) reported that the high rate of RTAs can be attributed to the poor state of roads in Nigeria, poor motor vehicle maintenance culture, flouting of highway codes, over-speeding and armed robbery activities on the highway. Ngim, Udosen, and Ikpeme (2006) further gave an analysis of RTAs in their review of 'seventy consecutive cases of Limb Injuries in Calabar'. According to them, Car/Bus accounted for 22.6%, Motorcycle, 52.8%, Bicycle, 1.9%, Lorry 1.9% and Pedestrian 20.8%. This implies that motor cycles play a major role in RTA-induced orthopaedic injuries than any other factor. Thus, motorcycle injuries constitute a major but neglected emerging public health problem in developing countries. There is therefore an urgent need to regulate the use of motorcycles for commercial purposes. This is because in their bid to make more profits within the shortest possible time, commercial motorcyclists ride with great recklessness than other motorcyclists. However, there is a general belief in Africa that associates the causes of orthopaedic injuries to underlying spiritual factors such as witchcraft, breaking of taboos and wrath of the gods (Owumiet *al*, 2013). These influence patients' perception of their case as well as their choice and utilization of orthopaedic care.

Before the emergence of modern healthcare system and the consequent advancements experienced in medical science and technology, traditional medicine was the sole source of care available all over the world. This included traditional orthopaedic services, a specialty in traditional medicine which provided care for orthopaedic injuries. Practitioners of traditional orthopaedic care are popularly called Traditional Orthopaedic Service Providers (TOSP). Although the development of modern orthopaedic care which is based on biomedical and scientific principles can be perceived as a threat to traditional orthopaedic practice, Aderibigbe *et al* (2013) reported that majority of populations in developing countries including those in urban areas still utilize the services of TOSP. Thus, orthopaedic patients believe that TOSP are not an alternative but a preferred source of care even when modern hospitals are available.

Orthopaedic injuries are accidental, sudden and unplanned, so that patients' immediate family members are not usually present at the site of occurrence. Due to the severe, life threatening nature of orthopaedic injuries, patients are often left incapacitated and dependent on other people (family members, 'good Samaritans', eye-witnesses and law enforcement agents such as Police and road safety officials). These individuals, groups and organizations play enormous roles in the pathway to the utilization of care by patients. It is against this background that the paper seeks to examine the role of significant others in the utilization of traditional orthopaedic services in Ilorin. This is done with a view to specifically discuss the role of significant others in the utilization of traditional orthopaedic services and investigate the referral practices in the utilization of traditional orthopaedic services

SIGNIFICANT OTHERS AND THE UTILIZATION OF TRADITIONAL ORTHOPAEDIC SERVICES

According to Scott and Marshall (2005), 'significant others' refer to those who have an important influence or play a formative role in shaping the behaviour of another. For the purpose of this paper, significant others include any person or social actors who are in a position to offer support to victims of orthopaedic injuries or influence their health seeking behaviour in any way. These include passers-by, family members, employers, law enforcement agents, co-workers, and eye-witnesses, who may be well known or even total strangers to a victim of orthopaedic injury, but exert enormous influence on health decision making and consequent pathway to the utilization of care by patients. Thus, an holistic understanding of the utilization of TOSP by orthopaedic patients among other things requires proper analysis of the role of significant others who do not only influence health seeking behaviour but further mediate contact between patient and practitioners. Hence, significant others form an indispensable nexus of social relationship that contributes to the healing process. As noted by Umberson and Montez (2010), the quantity and quality of social relationships affect health behaviour and utilization of health services. This is congruent with the views of Olaosebikan, Owoaje and Asuzu (2012) who noted that health behaviour and utilization of healthcare facilities is highly influenced by the social relationships at the disposal of an individual patient. This is most typical of the orthopaedic patient because he is often rendered incapacitated, sometimes unconscious and often times dependent on other people, depending on the severity of his case. Thus, social relationships determine the extent of social capital available to a patient. It also determines his or her social support - the emotionally sustaining qualities of relationships, for example the belief that one is loved, cared for, and listened to (Umberson and Montez, 2010). Corroborating this view, Thoits (1995) and Cohen (2004) noted that social support which derives from social relationships reduces the impact of stress by fostering a sense of meaning and purpose in life. It is the family, friends, relations and significant others that harness the opportunities for and seek help on behalf of the patient as well as serve as caregivers throughout his/her illness career. This is why Owumi *et al* (2013) posited that friends and families remain an important group in the choice of the type of treatment an injured or sick relative will receive. They not only make choices from possible alternatives but also take necessary decisions, contact the TOSP and enter into relevant agreement on behalf of the patient.

According to Solagberu (2005), the initial idea of visiting TOSP is mooted by an external person in 75% of cases. The study conducted by Ogunlusi, Okem and Ogini (2006) also revealed that only 13.8% of patients had direct contact with the TOSP while others are through old patients (44.8%) and middle men (41.4%) either of whom have some relationship with either the patient or his family and friends. According to them, the middlemen are said to be always around the hospital premises to introduce the TOSP's treatment as soon as the opportunity arises. Most of the middlemen are hospital attendants who initiate the idea of utilizing TOSP once they notice delay in response to treatment, relapse or despair in any patient.

In their study, Berkman and Breslow (1983) found that greater overall involvement with formal (religious organizations) and informal (friends and relatives), social ties were associated with more positive health-seeking behaviour. Being married (Waite, 1995), having children (Denny, 2010), and ties to religious organizations (Musick, House and Williams, 2004) have all been linked to positive health care utilization. This may be attributed to the fact that these factors potentially improve the quantity and quality of relationships to which a person belongs, which further has serious implications for the choice and utilization of health care services, by influencing the type of information available to patients with regards to healthcare utilization. Significant others therefore determine whether or not a patient will accept or patronize TOSP's service, as some religious sects actually discourage the utilization of traditional medicine of any kind.

As implied by Dada, Yinusa, Giwa (2011), significant others consider their perceived advantages in making preferred choice for the utilization of traditional orthopaedic service. These include ease of accessibility, low cost of treatment, natural approach to treatment and use of incantations and concoctions which are believed to address the spiritual dimensions to orthopaedic injuries while treating the physical aspects of the injury. Although education produces a tendency towards preference for modern care, Aderibigbe *et al* (2013) found out that there is no significant relationship between level of education and utilization of TOSP. This may be attributed to the overwhelming influence of the significant others who are already products of and participants in cultures which asserts the efficacy of traditional medical systems over modern medicine, and have been socialized along such line. They are therefore, able to exert so much influence due to the communal character of family, kinship and social relationships in Africa generally. As a result of this significant others play enormous roles not only as care-givers but also in defraying patients' treatment costs, which further reinforces their influence in the choice and utilization of traditional orthopaedic service.

In the view of Omololu, Ogunlade and Alonge (2002), there is an erroneous belief that the application of plaster of Paris (P.O.P.) and the belief among the people especially those far away from the cities that fracture cases presented in the hospital mostly ends up in amputation. Based on this, Alonge *et al* (1980), Agarwalet *al* (2010) and Aderibigbe *et al* (2013) further noted that the fear of impending surgical terror and its potentially high costs are factors considered by patients' care givers in the decision-making process. These reasons, coupled with the fact that significant others as well as patients are participants in a wider culture which considers modern healthcare as alien and is therefore biased against it on that ground. This account for why significant others constitute a major influence on the pathway to the utilization of traditional orthopaedic services by orthopaedic patients.

REFERRAL PRACTICES IN THE UTILIZATION OF TRADITIONAL ORTHOPAEDIC SERVICES

Referral is the process by which a health worker transfers the responsibility of care temporarily or permanently to another health professional or social worker or the community

(Ransome-Kuti, Sorungbe and Oyegbite, 1998). The referral process can involve two major dimensions: horizontal and vertical referral. Horizontal referral occurs when a patient transfers from one health care practitioner or level of care to another within the same health care system, modern or traditional. On the other hand, vertical is a situation where the transfer is between modern and traditional healthcare systems or vice-versa. Erinsho (1998) distinguished between voluntary and involuntary referral. According to him, voluntary referral occurs when the patient changes from one source of care to another out of his own volition. Involuntary referral on the other hand is a situation where a health practitioner or facility at which a patient has been receiving care formally transfers the patient from one to another. In the case of traditional orthopaedic service, referral practices is largely horizontal, that is either from one TOSP to another TOSP, or from a TOSP to another traditional medical practitioner (such as Diviners or Sorcerers) other than a TOSP. There are different factors that can necessitate the transfer of patients from one practitioner or health facility to another. These include inadequate diagnostic and treatment facilities, cost of treatment, lack of personnel and proximity to patients' place of residence.

According to Omololu, *et al* (2002), bone healing occurs naturally. It is the anatomical union which is required for the healing to take place effectively that the bone setter does. Hence, Owumiet *al* (2013) argued that certification is not a prerequisite to set bones. Rather, their utilization and prevalence of traditional orthopaedic service is determined by societal norms and values. However modern medical scholars (Dada *et al*, 2011; Ekere, 2011 and Aderibigbe *et al*, 2013) maintained that traditional orthopaedic practitioners do not have adequate training and resources to manage orthopaedic injuries. This in their view accounts for the high rate of treatment failure, complications and mortality associated with TOSP's intervention in orthopaedic cases. Thus, western practitioners believe that TOSP should regularly refer orthopaedic cases to the modern hospital, especially those in which the patient had suffered serious (complex) injuries and shock which are often characterized by open wounds or even unconsciousness.

In a study by Ejima (2014), it was revealed that referral practice among TOSP was poor as only 37.5% of bone setters did refer serious cases to the modern hospital. It was also reported that all (100%) practitioners claimed that they do not refer cases to other traditional bone setting setters but that other practitioners refer patients to them. Similarly, Bassey, Aquaisua, Edagha, Peters and Bassey (2009) also reported that TOSP did not see any reason to refer cases to the modern hospital. According to them, practitioners were contented with the state of their practice and therefore believed that they possessed all that it takes to diagnose and treat any type of orthopaedic injury. Although practitioners have never officially received any direct referral from modern hospital, they claimed that friends and family members bring patients who have not been successfully managed in hospitals to them. This implies that poor referral among traditional orthopaedic practitioners contravenes best practices in health care delivery. Even modern medical practitioners refer patients from one practitioner to another, as no single professional is infinitely good as to not consult another practitioner on certain issues. Poor referral practices

might be responsible for the high rate of complications and disability (Dada *et al*, 2011; Aderibigbe *et al*, 2013, Onyemaechi *et al*, 2014) attributed to the intervention of TOSP in orthopaedic cases as had been highlighted by scholars. This can however be blamed on the non-existence of integration between modern medical practitioners and their traditional counterpart. Bridging this gap would reduce treatment failure and mortality due to traditional orthopaedic service which is the most acceptable to the people in Nigeria.

Health belief Model (HBM)

HBM is a psychological model that attempts to explain and predict health behaviours. It focuses on the perception and beliefs of people as it affects their health seeking behaviour. Developed in the 1950s by Hochbaum, Rosenstock and Kegels who are social psychologists working in the U.S. Public Health Service, HBM uses six major concepts to explain health behaviour. These are: perceived susceptibility, perceived severity, perceived benefit, perceived barriers, cue to action and self-efficacy. The concepts are briefly defined below:

Perceived Susceptibility: This has to do with an individual's assessment of their risk of being affected by a particular ill-health condition. For example a person who perceives himself susceptible to a disease may get himself vaccinated against such disease.

Perceived Severity: This refers to an individual's assessment of the seriousness (severity) of his ill-health condition, and its potential consequences. Individual differences influence perceived severity which varies greatly between people.

Perceived Barriers: This describes an individual's assessment of the influences that enable or incapacitate his adoption of particular health behaviour. Perceived barriers are a person's own thoughts about the obstacles in the way of utilizing a health service. The perceived barriers are the most influential construct because they determine whether someone will adopt a treatment type or not.

Perceived Benefits: This concept has to do with one's belief in the efficacy of a potential action to reduce risk or seriousness of impact. Perceived benefit is based on an individual's assessment of the positive consequences of adopting behaviour or utilizing a health service.

Cues to Action: This refers to strategies to activate readiness, by way of providing information, raising awareness or even facilitating links toward a particular Health behavior or treatment service.

Self-Efficacy: This refers to confidence in one's ability to actually perform a particular Health action.

As presented above, HBM not only accounts for the pathway to the utilization of TOSP treatment *vis-a-vis* the roles of significant others, but further explains the continued patronage of practitioners despite the massive advances in western orthopaedic practice. Due to the attribution of orthopaedic problems to spiritual causes (Owumi *et al* 2013), the theory argues that patients' perceived severity of orthopaedic conditions is very high. Hence their belief that only TOSPs

possess effective approaches (such as use of sacrifice, incantations and other spiritual regimen) for addressing their problem holistically. Such perceived efficacy influences significant others' decision making processes and eventual choice of TOSPs treatment over its western counterpart. Significant others also believe that perceived barriers such as cost, distance and bureaucratic bottlenecks which characterise the hospital are absent in TOSPs settings. These do not only enhance their perceived benefits with regards to the utilization of practitioner services, but further promotes their cue to action by activating readiness and making them harness relevant social relationships to facilitate contact with practitioners (Onyemaechi, 2014). Thus, the preference for, and persistent utilization of traditional orthopaedic treatment can be attributed to factors such as lack of access to modern orthopaedic services in terms of cost, proximity and availability which constitute 'perceived barriers' and naturally makes patients resort to TOSPs. Patients' and more importantly, significant others' assessment of and belief in the efficacy of practitioners' treatment constitute 'perceived benefits' which motivates their utilization of TOSPs services. Thus, TOSPs play huge roles in the provision of orthopaedic services especially in developing countries in spite of civilization and existence of modern healthcare services (Dada et al, 2011) and this partly explains their persistent utilization. Although misconceptions about the aetiology of health problems which patients often attribute to spiritual factors has led to low acceptance of modern orthopaedic services, HBM argues that the utilization of TOSP is due to patients' perception of their situation and the belief that practitioners offer the most effective treatment.

METHODOLOGY

The location for this study was Ilorin in Kwara state, North-central Nigeria. Communities where TOSP resided and offered orthopaedic services were both urban and semi-urban in nature. This included Okelele, Odota, Oko-olowo, Ganmo, Oja-Gboro, Adangba, Sango, Oke-Ose, Jimba-Oja, Aboto, Ote, Afon and Alore areas. Although the number of TOSP that existed in these communities was not well documented due to lack of proper record by the relevant government agencies, it is widely known that traditional orthopaedic service is well utilized in the area (Aderibigbe et al, 2013). Both quantitative and qualitative methods were adopted in the study.

Multi-stage sampling technique was used to select participants (orthopaedic patients) from the study area. In the first stage, all the four (4) LGAs (Ilorin west, Ilorin East, Ilorin South and Asa) constituting Ilorin in Kwara state were purposively selected since they compose the study area. In the second stage, snow-balling method was used to identify 18 TOSP clinics across the study area while the third stage involved the selection of respondents from each of the clinics based on their relative size. Finally, simple random sampling was used to select respondents from each location.

Quantitative data was collected using questionnaire, while qualitative data was collected using in-depth interviews and observation. A total of 357 questionnaires were administered on

patients who were selected using Lemeshow and Lwanga's (1991) formula for determining sample size in descriptive health studies. This is presented below:

$$n = Z^2 \frac{P(1 - P)}{E^2}$$

Where: n= sample size

z= standard normal score corresponding to 95% confidence level=1.96

P= the estimated proportion of the factor to be studied (or P= the prevalence rate of Medical research studies) assumed 50%

E= Sampling error that can be tolerated 5% or 0.05

The questionnaires were distributed across the TOSP centres based on their relative size. The qualitative data involved 14 IDIs that were conducted with practitioners aged 40 years and above, and 7 IDIs that were conducted with patients who had received traditional orthopaedic treatment for a period not less than two months. The researcher believed that practitioners and patients who met above criteria would have garnered indepth experiences relevant to the objectives of the research. Quantitative data were analysed at the Univariate and bivariate levels using SPSS and findings were presented using frequencies. For the qualitative data, IDI responses were content-analysed. In recognition and adherence to ethical considerations for the research, participants' consent were sought and permitted to withdraw their participation allowed. Respondents' privacy was respected and confidentiality ensured as no information was traced to any respondents.

FINDINGS

Socio-Demographic Characteristics of Respondents

Table 1. shows the socio-demographic characteristics. It reveals that most (73.1%) of patients fell within the socially active groups of the population, a time when they were agile and geographically mobile; were males (74.5%) who unlike their female counterparts have instrumental gender roles, and single (58.8%), which also makes them geographically mobile.

Table 1: Socio-demographic Characteristics of patients (N=357)

Variables	Categories	FREQUENCY	PERCENTAGE
Age	20years and below	77	21.7
	21-30years	98	25.0
	31-40years	70	19.7
	41-50years	49	13.9
	51-60years	20	14.7
	61years and above	7	5.2
Sex	Male	266	74.5
	Female	91	25.5
Ethnic Affiliation	Yoruba	224	62.7
	Hausa	84	23.5
	Igbo	21	5.9
	Others	28	7.8
Marital Status	Single	196	54.9
	Married	147	41.2
	Separated/Divorced/Widowed	14	3.9
Religious Affiliation	Christianity	112	31.4
	Islam	224	62.7
	Traditional/others	21	5.9
Level of Education	Non-formal	49	13.8
	Primary	35	9.8
	Secondary	147	41.2
	Tertiary	126	35.3
Residence	Urban	189	52.7
	Semi-Urban	98	27.5
	Rural	70	19.8
Occupation	Civil Servant	63	35.3
	Business	70	33.3
	Farmer	63	19.6
	Artisan	77	5.9
	Student/Apprentice/Unemployed	84	5.9
Income	below #10,000	126	35.3
	#10,001-#50,000	119	33.3
	#51,001-#100,000	70	19.6
	#100,001-#150,000	21	5.9
	Above #150,000	21	5.9

Furthermore, only 19.8% of the respondents resided in rural areas compared to urban and semi-urban areas where there are higher exposures to the leading causes of orthopaedic injuries such as RTAs. Findings revealed that respondents were involved in some other form of occupation that predisposed them to physical dangers, accidents and other hazards that led to occurrence of their injury, yet most of them belonged to low income groups. Similar to the findings by Owumi *et al* (2013), these imply that majority of the patients possessed socio-demographic characteristics that exposes them to the causes of orthopaedic injuries, whereas they had low incomes, which affects their capacity to access modern orthopaedic service. Thus, there is a social class dimension to vulnerability as well as ability to cope with orthopaedic injuries.

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Participants revealed that they experienced a feeling of helplessness and were sometimes unconscious at the time of the accident. They therefore relied on humanitarian assistance and support of significant others such as 'good-samaritans', or family members (depending on where such injury occurred). For injuries that occurred around victim's residence, family members and friends constituted the bulk of rescuers and exerted high influence in determining the first point of call in seeking help, as well as subsequent pathway to patients' utilization of care. In any case, patients had little or no say in the decision about their choice of care until their conditions were relatively stabilized. Factors such as nature and severity of injury as well as nearness of health facilities to the location/site of injury were taken into account in determining the first point of call for treatment. Injuries that involved open wounds leading to enormous loss of blood and those that involved serious internal injury or rendered patients unconscious were first presented to the modern hospital. This was because of the perception that western medicine is highly effective in stabilizing such patients. However, injuries that occurred in urban areas were more likely to have higher geographical access (proximity) to western health facilities than those that occurred in rural areas. This is because of the relatively higher presence of public and private hospitals in the former than the latter.

Findings revealed that 27.4% of patients had hospital as their first point of call, while the larger majority went straight to the TOSP (see table 2 below). It was further found that patients who went straight to the hospital in the first instance presented did so either because their condition needed to be first stabilised or because they were victims of highway accidents rescued by 'good Samaritans' who decided that the best place to seek first aid and temporary abode pending the arrival of victim's kith and kin was the hospital. A respondent who is resident in the study area but went for trading in another state where her injury occurred shared experience:

... I was unconscious...and was rushed to the hospital where I received first aid before my people came the next day...my husband then decided that I should be moved to Ilorin where we live, so that I can receive adequate care from my family members, since I don't have anybody in Oshogbo and it will be difficult to be

coming to see me there from Ilorin. (Female patient/50/Yoruba/IDI/ Ilorin West LGA/ September 16, 2014).

This confirmed the report by Onyemaechiet *al* (2014) that the opinion of relatives and friends is an important factor in many African societies because of the existing social system. The communal lifestyle often required that relatives and friends contributed to defraying the cost of treatment as well as suggesting where treatment for ailments and injuries may be sought. This decision process was however influenced by social factors which determined the nature and extent of information available to patients and their family members regarding alternative sources of care based on the relative advantage of one traditional over modern sources of care. Table 2 shows the rationale behind patients' presenting at modern hospitals before the going to the traditional orthopaedic centre.

TABLE 2: Rationale for presenting orthopaedic cases to hospital before TOSP (N=357)

Reasons for going to hospital	Frequency	Percentage
Nearness of hospital	71	27.4
Rushed to hospital by rescuers	59	22.7
Unconscious	51	19.7
Loss of blood	32	12.4
Unaware of TOSP competence	46	17.7

(Source: Survey, 2014)

As presented in table 2, nearness of hospital which was patients' leading reason for presenting in the hospital can be understood from the viewpoint that majority of the patients resided in urban and semi-urban areas where the injuries were likely to have occurred. Such areas are also likely to have more hospitals than the rural areas. Furthermore, modern hospitals are likely to have better publicity (such as sign posts which shows direction for easy location of the hospital) than TOSP centres. This had implications for the awareness of TOSP's service as an alternative under such emergency situations. Patients (22.7%) who consulted the hospital first related that they were rushed there due to the intervention of eye witnesses of the incidence that led to the injury, as well as law enforcement agents such as Police and Road safety Officials. These constituted the bulk of rescuers especially where the kith and kin of the victim were nowhere in sight. These 'good Samaritans' who were responsible for taking patients to the hospital did so out of humanitarian concerns. They played further roles by informing the families and friends of the patients about the incidence. Apart from the extent of severity which might have been perceived as requiring western treatment, another factor considered by such rescuers was the fact that modern hospitals had better legal backing than TOSP's clinic and therefore

should be the first point of call so as to avoid unnecessary litigations afterwards. This is more so when the patient was unconscious as was the case with 19.7% of patients who utilized hospital services first because they (modern hospitals) were perceived to be the best place to resuscitate and stabilize patients especially those in critical conditions. Therefore, patients harnessed their social relationships to identify possible alternatives, which they eventually found in TOSP. Apart from high treatment cost, western treatment further subject patients to surgical terror in the long run.

The availability of blood banks and safer blood transfusion schemes enabled patients who had lost blood to be easily stabilised in the hospital. This was another reason why some (12.4%) patients presented first to the hospital. Compared to the modern hospital, TOSP did not have the capacity to transfuse blood, and even when they did, it was done under very risky conditions. This general awareness might have accounted for why patients who had lost blood were first taken to the hospital by rescuers and not TOSP centres. The widespread emphasis by modern medical practitioners about TOSP's treatment failures tend to undermine the credibility of TOSP's treatment especially among the majority of the highly educated orthopaedic patients (17.7%) who among other patients attributed their presenting at the hospital to the fact that they were unaware of TOSP's competence when their injury occurred. However, majority of patients who had presented to modern hospitals opted out due to various disadvantages of the hospital which were absent in traditional orthopaedic practice and therefore accounted for preference for TOSP. Thus, significant others, especially patients' family members, friends, neighbours, colleagues and members of TOSP's ethnic group exerted enormous influences on the withdrawal of patients from the hospital. Such factors played further roles in facilitating contact between practitioners and patients. Table 3 presents the various links through which patients and their significant others established contact with practitioners.

TABLE 3: Links through which patients established contact with TOSP (N=357)

Links to contact with TOSP	Frequency	Percentage
Family	147	43.2
TOSP former patients	126	35.4
Friends	49	13.0
Members of practitioners' ethnic group	35	8.0

(Source: Survey, 2014)

From Table 3, it can be observed that contact between orthopaedic patients and TOSP was mediated by family members (43.2%) followed by former patients (35.4%), Patients' friends (13.0%), and people from the practitioners' ethnic group (8.0%). This contradicts the report by Ogunlusiet *al* (2006) that contact between patients and TOSP is often mediated by middle men who facilitate such links for a fee. On the contrary, contact between patients and TOSP was mediated free of charge by significant others. As a result of patients' incapacitation, their

immediate family and friends not only harnessed existing social relationships but further enacted newer ones, weighing the costs against the benefits of modern orthopaedic care and TOSP in a rational decision process. This probably accounted for why former TOSP's patients (35.4%) who may not be primarily part of patients' significant others later played major roles in linking new patients with practitioners. Hence, the quantity and quality of social network determined the extent of social capital and economic/coping resources that are available to patients, which enormously influence decisions about their choice of health care (Berkman and Breslow, 1983). One respondent narrated how she got to locate the TOSP:

...my husband contacted one of his co-workers who once had bone fracture. It was that man that introduced us to this place...his two legs were broken but after receiving treatment in this place for two months, he started using crutches and four months later, he started walking by himself. Today, if you see him walking, you will not know that he once had a serious fracture...and there are different cases like that. 'Eriopinariyanjiyan' (evidence is the end of argument). (Female patient/Yoruba/29/IDI/ university graduate/Ilorin west LGA/ September 19, 2014).

Due to high perceived severity, the choice of TOSP was one that involved serious rationalization by significant others who often considered patients' interest in decision making. The attitude that significant others have towards traditional orthopaedic service is very important. If the people who linked patients with TOSP did not have a positive attitude towards the practice, they would not have encouraged or facilitated the contact in the first place. However, people in African societies generally favour the practice of bone setting which accounted for their preference for TOSP as an indigenous practice, over modern orthopaedic practice (Aderibigbe *et al*, 2013). This can however be attributed to the fact that societal members have been socialized into having positive attitude towards traditional orthopaedic practice, since it is viewed as part of their culture, an ethno-medicine for orthopaedic injury.

Furthermore, bone setting clinics were community-based and operated in a home-like natural environment, unlike the modern hospital that is run as a total institution. Traditional orthopaedic service is therefore more patient-friendly as patients, practitioners and host community interacted in a very cordial manner (Researcher's observation, 2014). This might be due to the absence of strict rules and informal principles in traditional orthopaedic service. There was also free access to in-patients by their family members, friends and significant others who played major roles in introducing patients to practitioners. Infact, significant others who linked patients with their healers often mediated the interaction between the two parties especially on sensitive issues such as having to do with spiritual treatment challenges as well as monetary matters.

REFERRAL PRACTICES IN THE UTILIZATION OF TRADITIONAL ORTHOPAEDIC SERVICES

The referral practices associated with the utilization of traditional orthopaedic services were mostly voluntary in nature. In many cases, patients opted out of the hospital to utilize practitioners' treatment. This was due to a number of attributes of traditional orthopaedic service including affordability, easy accessibility, non-surgical healing methods, and spiritual dimension to healing and cultural acceptance all of which were advantages (benefits) which the practice was perceived to possess over the modern hospital. These factors greatly influenced the decision making process of patients and their significant others towards the utilization of traditional orthopaedic service. Many of the patients who had been rushed to the hospital voluntarily opted out to utilize traditional orthopaedic service. The response of one former TOSP's patient who had come for check-up corroborated this:

...I was admitted at the teaching hospital and after spending two months, the doctors said my leg had 'died' and that they will have to cut it, so that it does not affect other parts of my body. It was at this stage that my family began to look for alternative when somebody advised us to come here. I didn't spend up to 6 months here before I was discharged and today, I have even stopped using crutches. (Male patient/Yoruba/42/IDI/ Asa LGA/ September 19, 2014).

TABLE 4: Patients' perception of the need for referral by TOSP (N=357)

Opinion on referral	Frequency	Percentage
Patients who believed some cases be referred to the hospital	126	35.3
Patients who believed TOSP should handle all cases	217	60.8
I don't know	14	3.9

(Source: Survey, 2014)

From Table 4 above, majority (60.8%) of the patients believed that practitioners needed not to refer any orthopaedic case to the modern hospital, regardless of how severe the case might be. Such patients believed that orthopaedic conditions can never get beyond the capacity of practitioners since the practice predated modern medicine in the first place, and has accumulated experiences over time. Hence, there was no need for referral from TOSP to modern hospital, but vice-versa. Qualitative data however suggested otherwise. Some respondents believed that whenever orthopaedic injuries like those emanating from road traffic accident rendered victims unconscious due to shock, internal injury or loss of blood, the modern hospital was the best place where patients can be resuscitated and stabilized before further treatments by traditional orthopaedic practitioners. A TOSP's patient who voluntarily withdrew from the hospital expressed his view as thus:

...The *Alaanu* (good samaritans) who came to the accident scene promptly rushed me to the hospital where I was stabilised. I shuttled between different hospitals for 7 months... I was treated of the wounds and internal injury...but I opted out of the hospital when I was not getting the improvement that I expected in my broken arm.(Male Patient/52years/IDI/ Asa LGA/ September 23, 2014).

As expressed above, the view that hospitals were better at stabilizing patients, managing sores and internal injury was shared by majority of the patients. This is because complex fractures which involved sore and open wound increases the possibility of infections (Dada *et al*, 2011), hence the need for more competent hands in their management such as obtain under the modern methods. This belief was based on patients' understanding that TOSP did not have adequate training in the dynamics of open wounds/ulcers given the high risk of infection associated with it. Hence, their in-patients also practiced self-medication through the use of western medicines (antibiotics, blood tonic, analgesic, water disinfectant and antiseptic soaps) which they purchased from vendors, as a guide against infection and complication (Researcher's Observation, 2014).

Practitioners themselves believed that they possessed the capacity to address both physical and spiritual factors that affect the cause, course and consequent outcomes of orthopaedic injuries. This included the use of '*ojuinu*' (insight), herbal concoctions, ointment, medicinal powders as well as incantations and other spiritual resources utilized in the diagnosis and treatment of orthopaedic injuries. They argued that most, if not all of these are non-existent in western practice, which they believed makes traditional practice superior to its modern counterpart. The opinion of one practitioner is captured below:

There are some things that we do that doctors cannot do. A good example is the treatment of spinal and neck fracture which we treat easily but doctors cannot. In February last year (2013), a former patient of mine introduced me to some people whose friend sustained a neck fracture in China. He had spent close to one year in the hospital with no improvement. It was when I got there that he began to see changes, and he is now perfectly okay. Even recently, I treated a white man here... (Male TOSP /Yoruba/32/IDI/ Ilorin west LGA/ September 16, 2014)

Another practitioner believed that TOSP are the best experts in orthopaedic injuries just the same way that modern practitioners provide the best treatment for diseases. In his view:

...the body is naturally created by God, and the medicines that we (TOSP) use for treating injuries are also sourced from nature (as revealed by God), not from any man-made chemical.... Hospital treatments often result in complications due to P.O.P and the iron

that they normally put inside broken bone (implant), and which makes the treatment unnatural. (Male TOSP /Yoruba/38/IDI/ Ilorin South LGA/ September 16, 2014).

However, practitioners recognized that some modern methods can be very useful in the treatment of complex orthopaedic injuries such as those involving open wound, loss of blood or requiring surgical suturing. Hence, they favoured the combination of both methods in the management of such injuries. This is supportive of WHO's vision of integrating traditional with modern healthcare systems which has proven in countries like china. However, they noted that modern practitioners showed poor disposition towards them and as well as their practice. This has serious implications for cooperation and referral between modern and traditional orthopaedic systems. According to one TOSP:

Doctors know that we treat bones better than they do...because I have personally treated 2 or 3 medical doctors. However, many of them look at us as Animals who don't know what they are doing. They are hostile towards us...especially those in government hospitals. I often have open confrontation with them whenever relatives of an admitted patient invite me to work while the patient is still on hospital admission...but a particular private hospital actually hires me to treat any orthopaedic case presented to them.... while I also send some of my patients to see them whenever there is need (Male TOSP /32/Yoruba/IDI/ Ilorin West LGA/ September 16, 2014).

As a result of this, majority of the practitioners themselves resorted carrying out minor surgeries and other western procedures including wound dressing. Fig 1 shows a TOSP dressing a patient's wound using western materials.



FIG 1: Practitioner dressing a patient's wound using modern medicinal substances (Hand gloves, cotton wool, Gentian Violet and procaine penicillin powder and hydrogen peroxide)

Practitioners also engaged the services of auxiliary nurses (popularly called 'doctors') who performed treatment procedures such as surgical suturing, blood transfusion, anesthesia administration, wound dressing and prescription of drugs. Fig 2 shows an Auxiliary nurse (standing) wool during a clinic session.

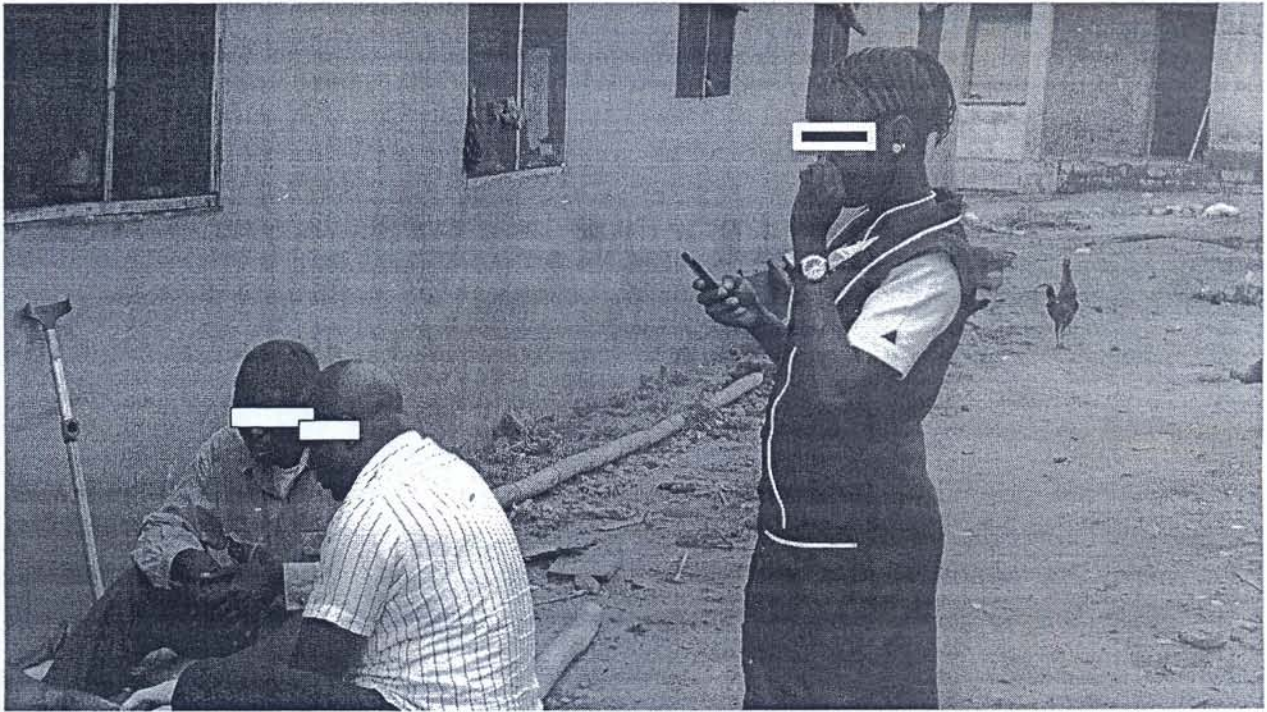


FIG 2: Practitioners, patients and an Auxiliary Nurse (standing) during a clinic session

With the auxiliary nurse meeting most of practitioners' needs with regard to complementary modern procedures, it was believed that no need arose for the referral of patients to modern hospitals except on patients' own voluntary decisions which according to practitioners, was a very rare occurrence. However, the quality of intervention provided by the auxiliary nurses is questionable. This is because, by virtue of their training, auxiliary nurses are too ill-equipped to provide competent interventions in such sensitive health problems as orthopaedic injuries. Hence, their services are likely to be ridden with high level of malpractice which is worsened by the unhygienic conditions under which traditional orthopaedic services are provided. This probably contributes to the complications attributed to traditional orthopaedic service by the modern practitioners (Dada et al, 2011, Aderibigbe et al, 2013 and Onyemaechi et al, 2014).

TABLE 5: Respondents' place of Residence and whether they still went to the Hospital in addition to TOSPs' treatment.

Place of Residence	Do you still go to the hospital in addition to TOSP's		Total (%)
	YES (%)	NO (%)	
URBAN	71.4	50.0	52.9
SEMI URBAN	14.3	29.5	27.5
RURAL	14.3	20.5	19.6
TOTAL	13.7	86.3	100.0

N=357; Pearson Chi-Square=1.562; Df=2; Significant level =0.05; P-Value=0.562

Table 5 shows the relationship between respondents' place of residence (urban, semi-urban and rural) and whether they still attended modern hospitals in addition to seeking TOSP's treatment. With P-Value (0.562) greater than 0.05 level of significance, the table implies that majority of the patients (86.3%) still did not go to the hospital. This shows that although modern hospital services are likely to be more accessible in the urban and semi-urban areas, it did not determine whether a patient will go to the hospital or not. If there is the need for a patient to seek western treatment, he will do all that is within his power to do so, even if it means travelling over many kilometres from the rural area where the patient resides or receives TOSPs' treatment to wherever hospital can be located. Similarly, a patient that resides or receives TOSPs' treatment in an urban area may not utilize modern hospital in addition to TOSP treatment if he does not see the need to do so; regardless of whether or not the hospital is just behind his/her place of residence. Patient's perceived efficacy of TOSP's treatment which is very high may account for why majority of respondents did not go to modern hospitals in addition to TOSPs' treatment. Furthermore, the role of patent medicine sellers and auxiliary nurses who were popularly referred to as 'doctors' by patients went a long way in bringing the 'modern hospital' to the TOSPs' clinic. Table 6 below shows the test of relationship between Respondents' religious affiliation and whether their religious beliefs encouraged the utilization of TOSP.

TABLE 6: Test of relationship between respondents' religious affiliation and whether their religious belief encouraged the utilization of TOSP's treatment.

Religious Affiliation	My religious affiliation encourage the utilization of TOSP's treatment		Total (%)
	Yes (%)	No (%)	
Christianity	25.6	71.4	3.2
Islam	69.8	14.3	62
Traditional	2.3	14.3	4.0
Others	2.3	0.0	2.0
Total	86.0	14.0	100.0

N=357; Pearson Chi-Square=9.25; Df=3; Significant level =0.05; P-Value=0.26

As can be observed, majority (86.0%) of the respondents believed that their religious affiliation encouraged the utilization of TOSP. The P-Value of 0.26 which is greater than 0.05 level of significance implies that there is no significant relationship between respondents' religious affiliation and the belief that their religious affiliation encouraged them to utilize TOSP. This means that Respondents' religions affirmed the adequacy as well as propriety of TOSP in the treatment of orthopaedic injuries. This can be attributed to the belief by practitioners and patients that traditional medicine generally and bone setting in particular are divinely established by God for the purpose of resolving infirmities such as orthopaedic injuries that may arise in the course of life. In line with the biblical verse: 'I am the Lord that healeth thee' (Exodus 15:26), it is generally believed that God himself is a healer who carries out his healing through human instruments such as the bone setters. This is why most respondents who were adherents of one religion or the other agreed that their religious affiliation encouraged the utilization of TOSP.

CONCLUSION

Traditional orthopaedic service plays a huge role in the delivery of orthopaedic services in developing countries like Nigeria. This is because people believed that the practice produces better outcomes than its modern counterpart, hence the persistent utilization of the former. However, significant others played major roles in the utilization of traditional orthopaedic service by orthopaedic patients. Since patients were usually incapacitated, the role of significant others began right from the onset of the injury and spans throughout its course. Apart from the immediate actors who usually ensure the initial first aid, patient's family members, social relations and friends are significant others who decided on the choice of care. However, they often enlisted newer actors into the network in their bid to mobilize social and economic resources for patients' treatment. Practitioners' former patients and members of their ethnic group who may not constitute significant others initially were some of the leading actors that were enlisted. As established by HBM, the utilization of traditional orthopaedic service can be

explained from based on perception of patients condition and belief about the potential benefits of TOSP's treatment which spurred significant others to action. However, the strategic situation of TOSPs in providing orthopaedic services to patients should be optimized through intensified support and training by government and various health care institutions, as well as better disposition by modern practitioners towards the integration project as had been advocated for by WHO.

RECOMMENDATION

1. The study recommends that better education and enlightenment be carried out regarding health-seeking behaviour and healthcare delivery generally in developing countries. This will aid informed decision-making by members of society who are often part of patients' significant others, whose inputs could be needed in the rational process of choosing source of healthcare.
2. Given the dearth of personnel in the health sector of most developing countries, there is the need to enhance capacity building for traditional medical practitioners and auxiliary nurses who are providing the deficit manpower especially at the level of primary care.
3. Modern medical institutions and practitioners should show more disposition and acceptance towards their traditional counterparts who on their part are willing to adopt modern innovation in their diagnosis and treatment. This will not only improve referral practices, reduce complications and mortality due to treatment failure but also provide Proper Avenue for quality orthopaedic care to the people through the traditional practitioners who are more culturally acceptable.

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