INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH & DEVELOPMENT

ISSN: 2278 – 0211 (Online)

Treatment Of Childhood Fall-Related Injuries In The New Juaben Municipality Of Ghana: Implications For Improving Traditional Health Practice

Nicholas Apreh Siaw
Lecturer, School Of Applied Science And Technology, Koforidua Polytechnic, Ghana
Gladys Apreh Siaw
Lecturer, School Of Applied Science And Technology, Koforidua Polytechnic, Ghana

Abstract:
This study explored the treatment regimens available for childhood fall-related injuries and the factors contributing to the choice of the regimen. The study is carried out against the background that traditional bone setters (TBS) have wider clientele base and patients with fractures seek health care first from TBS but when there are complications, seek emergency care from allopathic health practitioners. A cross-sectional descriptive design which used both quantitative and qualitative methods of data collection was adopted for the study. A total of 600 respondents and 24 key informants were drawn from 12 out of the 52 communities in the municipality using simple random sampling techniques. It was found that most children (58.3%) suffering from minor fall-related injuries (cuts and scrapes) are treated with menthol-like ointment usually purchased from pharmacy shops. However, many of those with dislocation and fractures are treated by traditional bone setters, with a small number seeking medical care from the hospitals. The socio-demographic variables such as educational background, income, marital status and parity were found to influence the choice of treatment for childhood fall-related injuries. Moreover, there was no clear trend emerging when the socio-demographic characteristics of respondents were analysed.

Key words*: Treatment of Childhood fall-related injuries, paediatric orthopaedic treatment, Fracture treatment, TBS practices, fracture and dislocation*

1.Introduction

Falling is considered as part of the way of life of toddlers as it is normal for a child to fall many times while learning how to walk, climb, run and explore the physical environment (WRCIP,2008). Most falls have little threatening effect since the impact is often not great. However, there are some cases where the impact of fall is so devastating such that emergency care is needed to avert possible death or permanent disability (WRCIP, 2008).

Studies from low-income and middle-income countries show that a significant number of children do not receive treatment for fall-related injuries from health professionals due to the distance to the hospital, prohibitive transport cost, and a lack of awareness on the part of the caregivers of the need for early attention (Bangdiwala et al. 1990, Zargar et al.2005 and Tercero et al. 2006). According to Siaw (2013) most parents or caretakers of children in the New Juaben Municipality of Ghana (59.5%) self- treat childhood injuries at home with only 25% using orthodox treatment. Edet (1996) found a high non-utilization of orthodox treatment (1%) in Nigeria. It was further found that such injuries were managed by relatives and neighbours.

It has also been found that like other African countries, Ghana has experienced a general increase of traumatic injuries among children as a result of urbanization and a growing dependence on motor vehicles (Aries et al. 2007; NRSC, 2012). For instance, in 2012 alone, 2,249 Ghanaians lost their lives while 14,169 got injured through RTA. Of these numbers, 32% were children aged below 18 years (NRSC, 2012).

There are three broad treatment regimens for fall-related injuries in Ghana: allopathic, traditional and the concurrent use of both regimens (Quansah et al. 2001). Many parents compel their injured children to leave the hospital after diagnosis of a fracture to seek treatment from a traditional bone setter because there is the perception that the traditional bone setters are better able to treat fractures than physicians (Aries et al. 2007). Other reasons for preference are the low cost, only available service, beliefs, fear of Plaster of Paris, fear of amputation (Saadeldin et al. 2009).

Studies and reports in Ghana (Siaw 2013, Eastern Regional Hospital 2011 Annual Report, Aries et al. 2007, Van der Horst 1985 and Warren 1974) have revealed that fracture treatment failures and sub-optimal management are high due to the increased use of home – based care. There is a general problem of patients delaying in seeking appropriate treatment at the hospital. A situation which often leads to many patients being admitted for emergency care in the hospital for complications such as non-union, mal-union, traumatic osteomyelitis and limb gangrene. The likely reasons for the delays in seeking appropriate treatment are the inability of some parents/ caretakers to determine the severity of injury and whether they have the capacity to treat such injuries at home. The strong presence of the traditional health practitioners, especially the Traditional Bone Setters (TBSs) in the municipality, is another likely reason.

Traditional bone setters are known to command great respect for their treatment of fractures and as a result, most of the childhood fall-related injuries are sent to these practitioners for treatment. Unfortunately, there have been cases of reported complications associated with their practice. The inability of most traditional bone setters to identify the type of injuries (fractures) they are capable of treating but to accept all types of fractures and to be experimenting on complex cases which are beyond their capabilities is a major source of worry(Museru & Mcharo,2002 ; Onuminya, 2004). It is common in most of the hospitals in the New Juaben Municipality to hear of a patient or his/her relation agitating for the discharge of a patient home from the hospital with the aim of seeking treatment from traditional bone setters because they are known to adopt treatment practices that heal faster than orthodox treatment. But the complications associated with such treatments are often overlooked or are not even known. It is as a result of these complications that this study is necessary to examine the treatment practices of fall-related injuries in the study area with the aim of reducing complication associated with TBS practices in the study area.

2.Methods

2.1.Study Design

This study adopted a cross-sectional descriptive design which employed both quantitative and qualitative methods of data analysis. Data was collected using key informants interview, questionnaires and direct observation on the treatment regimen used for childhood fall-related injuries. The use of the blend of both quantitative and qualitative methods of data collection offers better understanding of the research problem as well as provided detailed information on the subject of study (Creswell et al. 2007).

2.2.Setting

This study was conducted in the New Juaben Municipality. It has 52 communities with a population of 183,727 based on the 2010 national housing and population census (Ghana Statistical Service 2010). The population composition consists of 35% of people aged below 15 years, 60% for those between 15-64 years while those aged above 65 years are 5%. The site was chosen because despite the establishment of two referral hospitals (Regional Hospital Koforidua: 326 bed capacity and Saint Joseph Hospital: 200 bed capacity) which specialise in orthopaedic and traumatology, parents/caretakers of children prefer the services of traditional bone setters despite the numerous complications associated with their practices. The municipality presents a nice case study on the various regimens for treating fall-related injuries since both the allopathic and traditional health practices abound in the study area. There are even some communities such as mile-50, Agavenya and Agbogiri in the municipality who are well known TBS.

2.3.Sampling Procedures

A two-stage multi-sampling method was used for the study using simple random sampling method as a basis of selection in each case. In the first stage, which involves the selection of communities, 12 communities were randomly selected from the 52 communities in the municipality. This was to scale down the number of communities to be studied for the sake of convenience.

The second stage involved the selection of houses and individuals from the 12 communities. The simple random sampling method was used again to select two (2) out of five (5) enumeration areas (EA) from each of the twelve (12)communities selected. The enumeration areas are almost of the same size and as a result, a proportionate number of twenty-five (25) houses were randomly selected using the house numbers from each EA by the lottery method. Parents/ caretakers from the houses selected were brought together to constitute the total sample size (600) for the study.

The sample size for the study was determined based on the Godden's (2004) formula for infinite population. The main assumption underlying the use of this formula is that the population should be more than 50,000. The adult population for New Juaben from the 2010 Population and housing census was 83,018, hence the use of the formula.

2.4.Data Collection

Two main instruments were used for the data collection: semi-structured questionnaires and an in-depth interview. The questionnaire was administered with question regarding the socio – demographic backgrounds of the parent/caretakers, treatment seeking-behaviour for parents/caretakers and treatment regimens for childhood fall-related injuries. Key informants such as parent whose children are on admission for fall-related injuries and health professionals were interviewed on the circumstances leading to the occurrence, nature of injuries, and treatment practices for childhood fall-related injuries. Pseudo names were given to the key informants for the sake of anonymity.

2.5.Data Analysis

The qualitative data collected from the key informant interviews were audio-recorded, transcribed verbatim and analysed using core content analytic approaches. With respect to the quantitative data, after a careful cleaning, editing and data entry, the SPSS soft ware(version 17) was used to run cross tabulation and chi-square test to show the relationship among the various treatment regimens and the socio-demographic variables of the respondents.

2.6.Ethical Clearance

The Ghana Health Service Ethical Review Committee reviewed the insrument for data collection and approved the survey in accordance with the guidelines for research involving human subjects(ID number: GHS-ERC3).

3.Results

Interview with key informants (elderly women in compound, drug store keepers, herbalist and nursing officers) suggests that first-aid practices are not overlooked by parents/caretakers, especially the elderly women in the treatment of fall- related injuries. First-aid is given as a temporary measure while the affected child's case is studied by the elderly woman at home for proper diagnosis and treatment to be given. The main first-aid given is massaging the affected area with menthol-like ointment such as Omega Ointment, Deep Heat Ointment, Nerve & Bone Ointment or Robb. These are over-the-counter drugs. Massaging is done carefully bearing in mind that it can be dangerous especially where it can lead to internal bleeding. It was further found that parents most often keep such menthol-like ointments in their emergency kit so that whenever there is the need for them, they can be easily accessible.

Massaging with menthol-like ointment was found to play two key roles in the treatment process: to determine the type of injury, and the severity of injury. Elderly women interviewed indicated that when a skilful person massages a child with fall-related injury, that person can tell whether there is a fracture or a broken bone and whether that injury is severe or not. Beside the use of menthol-like ointments for first–aid, the other practices such as massaging with shea butter or application of the mixture of red clay with shea butter were identified.

Nana Addobea, an elderly woman had this to say:

You cannot sit down unconcerned when your grandchild complains about the pains he/she has sustained as a result of a fall. When it happens like this, I rush to my bedroom and get into the emergency kit for a hot ointment. Then I carefully massage the affected area with the ointment to determine the severity of the injury. This first assessment helps me to determine the types of treatment to be given subsequently.

The drug store keeper suggested that most parents give first-aid to the affected children and that some first-aid drugs are even procured from his drugstore.

Most often parents rush to my shop to request hot ointments that can sooth the pain as well as reduce swellings associated with minor fall- related injuries. I normally give them robb or omega ointment since that is cheaper than deep heat or bone & nerve.

In an interview with Agya Kofi, a herbalist, he indicated that most often when there is a minor fall-related injury, parents / caretakers repeat the administration of the first-aid drug for a period between 3-7 days after which the injury is healed. In the case of a major injury such as bone dislocation or fracture, a bone setter is called in to handle the case. Massaging with hot water and application of herbal drugs to the affected area is a common treatment practice for major injury. Agya Kofi added:

As for minor fall- related injuries they occur most often at home. Toddlers learning how to walk and run will fall and get hurt. When playing, a child can easily fall and have minor injury. The treatment is first a massage with hot ointment. Major injuries normally require specialist attention where herbal and traditional bone setters need to intervene to save the life of the child because in most cases the injury is life threatening. The yelling from the affected child alone will compel the parents to seek experts' attention promptly.

The submission from Agya Kofi, the herbalist is in line with the traditional bone setter's submission that only major fall–related injury cases in the form of dislocations and fractures are presented to them for treatment in their facility. The main mode of treatment is through massage with hot water and application of herbal drugs. The herbalist added:

We have the best methods for treating fractures and dislocations. One needs not to go to the hospital for orthopaedic treatment since they cannot do it well. Most patients often end up having crooked legs due to improper treatment at the hospital. When it happens like that, we will have to break the bone again and refit it. With proper positioning, massaging and effective herbal drugs patients can walk again within three to six weeks depending on their body size, age and degree of fracture.

The comment of Agya Kofi and the traditional bone setter imply that parents can determine minor- fall related injury from major ones. And that major injuries are most often sent to traditional bone setters for treatment instead of the hospital.

Awo, a caretaker also gave her perception about severe fall-related injury and how it can cause permanent disability or death of children. She recounted how a close relative's son fell into an open drain and suffered broken ribs and how the child died due to delay in sending him to either the hospital or the herbalist for treatment. She indicated that three days after the incident, the child started to cough and subsequently vomited blood before the child was rushed to the hospital. Based on this experience, whenever a child with severe injuries is brought to her, she recommends that the affected child be sent to the hospital or clinic for immediate treatment. This suggests that some parents/caretakers have the perception that every type of childhood fall injuries that can be handled by the traditional bone setters.

Similarly, Auntie Elizabeth, the Nursing Officer said that it pays to have an immediate professional health care whenever there is any form of childhood injury. In this way, the affected child can be properly assessed for effective treatment. She further bemoaned the poor attitude of some parents delaying seeking prompt medical attention whenever children are injured. She added:

The cost of early treatment for an injured child will always be far lower than whenever one delays and complications set in. If treatment is delayed, the child may lose his life or be permanently disabled. I become very much upset when a child is rushed into the health facility with an acute injury condition as a result of delays in seeking appropriate treatment. I have no regret reprimanding such parents who are so insensitive to the plight of children

Auntie Elizabeth's comment implies that some parents/caretakers or traditional healers do not know the type of injuries they can conveniently heal and those that need medical attention from hospitals, a situation which often leads to delay in seeking treatment from hospitals. Again the behaviour of the nursing officer for reprimanding instead of educating/ advising parents who delay in seeking treatment for their children goes to confirm study findings that health personnel often put up poor behaviours toward client. These poor behaviours often prevent patients from accessing allopathic health care (Bannerman et al., 2002 and Dapaah 2012).

Furthermore, the background characteristics of parents / caretakers of children were explored in relation to their preferred mode of treatment for childhood fall-related injuries. The results show that educational background, income, marital status and parity were found to influence the choice of treatment for childhood fall-related injuries. Moreover, there was no clear trend emerging when the socio-demographic characteristics of respondents were analysed. This suggests that there is no relationship between the choice of treatment modes for fall-related injuries and the socio-demographic characteristics of parents. This confirms WRCIP (2008) findings that both the rich and the poor from high and low income countries patronise indigenous health care. The details are presented in Appendices 11.5.3a-e.

Mode of Treatment	**No Education**	**Primary n(%)**	**JHS n(%)**	**SHS n(%)**	**Vocational n(%)**	**Tertiary n(%)**	**Total n(%)**	χ^2 **test**
Orthodox	55(9.9)	27(24.0)	20(56.9)	18(59.7)	13(77.1)	51(85.4)	184(53.5)	P - value = .001
Traditional	96(62.8)	77(51.0)	11(32.8)	27(30.2)	52(23.3)	69(19.9)	332(32.8)	
A Blend	26(27.3)	20(25.0)	1(10.3)	9(23.2)	10(25.7)	18(30.2)	84(13.7)	
Total	177(100)	124(100)	32(100)	54(100)	75(100)	138(100)	600(100)	
Mode of Treatment	**Less than 100.00 n(%)**	**100.00-200.00 n(%)**	**200.01-300.00 n(%)**	**300.01-400.00 n(%)**	**400.01-500.00 n(%)**	**500.01+ n(%)**	**Total n(%)**	χ^2 **test**
Orthodox	69(47.7)	27(51.8)	37(56.1)	37(60.0)	9(62.2)	5(34.1)	184(53.5)	
Traditional	12(36.4)	108(38.2)	66(28.1)	94(25.3)	24(29.7)	28(46.3)	332(32.8)	
A Blend	7(15.9)	35(10.0)	11(15.8)	19(14.7)	4(8.1)	8(19.5)	84(13.7)	P - value = .004
Total	88(100)	170(100)	114(100)	150(100)	37(100)	41(100)	600(100)	

Appendix 11.5.3a: Educational Background Of Parents And Mode Of Treatment For Childhood Fall-Related Injuries
Appendix 11.5.3b: Income Level Of Parents And Mode Of Treatment For Childhood Fall-Related Injuries
Source: Field Data

Mode of Treatment	Less than 20 n(%)	20-29 n(%)	30-39 n(%)	40-49 n(%)	Total n(%)	χ^2 test
Orthodox	31(73.4)	48(56.7)	66(49.1)	39(32.1)	184(53.5)	
Traditional	91(18.2)	105(28.0)	101(32.1)	35(56.5)	332(32.8)	P – value = .000
A Blend	25(8.4)	25(15.3)	25(18.8)	9(11.5)	84(13.7)	
Total	147(100)	178(100)	192(100)	83(100)	600(100)	
Mode of Treatment	**Single n(%)**	**Married n(%)**	**Divorced n(%)**	**Widowed n(%)**	**Total n(%)**	**χ^2 test**
Orthodox	11(54.0)	57(54.8)	65(41.2)	58(55.2)	184(53.5)	
Traditional	30(30.0)	133(31.7)	23(45.1)	11(37.9)	332(32.8)	
A Blend	16(16.0)	57(13.6)	7(13.7)	2(6.9)	84(13.7)	P – value = .002
Total	100(100)	420(100)	51(100)	29(100)	600(100)	
Mode of Treatment	**1 Child n(%)**	**2 Children n(%)**	**3 Children n(%)**	**4 Children n(%)**	**Total n(%)**	**χ^2 test**
Orthodox	55(74.3)	62(70.3)	57(40.9)	10(24.3)	184(53.5)	
Traditional	32(15.4)	107(21.7)	132(45.3)	61(52.7)	332(32.8)	
A Blend	14(10.3)	24(8.0)	38(13.8)	8(23.0)	84(13.7)	
Total	101(100)	193(100)	227(100)	79(100)	600(100)	

Appendix 11.5.3c: Age Of Parents And Mode Of Treatment For Childhood Fall-Related Injuries
Appendix 11.5.3d: Marital Status Of Parents And Mode Of Treatment For Childhood Fall-Related Injuries
Appendix 11.5.3e: Parity And Mode Of Treatment For Childhood Fall-Related Injuries
Source: Field Data

4.Discussion

Most fall-related injuries occur at home and as a result, most treatment processes also begin and often end at home (Pressley and Barlow 2005). The common locations at home where fall-related injuries occur are at kitchen, bathroom, stair cases, and play area (Phelan et al 2001 and Mack et al 2007). Injuries mostly sustained include cuts, scrapes, dislocations and fractures. In half of all cases, the affected children are left with some form of disability due to sub-optimal care or delay in seeking treatment from health care providers (WRCIP 2008).

In the current study, it was found that most children (58.3%) suffering from minor fall-related injuries (cuts and scrapes) are treated with medicines from pharmacy shops. However, those with dislocation and fractures are treated by traditional health practitioners, with a small number seeking medical care from the hospitals. This finding supports most studies on health-seeking behaviour for children in rural communities in low income countries. For instance Van der Stuyte (2006) found self-medication and the use of traditional herbal drugs to be the dominant health care practice for children in rural Guatamala. Similar findings were made in East Timor (Roger 2001), rural Kenya (Mbagaya et al. 2005) and in Malawi (Chibwana et al. 2009). This treatment-seeking behaviour might be attributed partly to the problem of availability, accessibility and affordability of allopathic health care compelling many people from low-income countries to seek health care from indigenous medical practitioners (Budu 2005).This explains why Addae-Mensah (1992) finds the use of traditional medicine in many Ghanaian societies to be very important due to its reliability and level of patronage. Other studies have found traditional medicine to be effective because the practitioners specializes in specific diseases and illnesses, each with their diagnostic and treatment structures relating to the cultural beliefs of the people (Klienman and Sung 1979, Twumasi 1979 and Anyinam 1987).

In the study area, first aid measures constitute an important treatment practice for childhood fall-related injuries. Parents often administer gentian violet solution to minor cuts and scratches irrespective of the health concerns about the safety of gentian violet solution. Parents cannot be blamed for the use of such a drug. This is because no public education on the risk of using such a drug had been made neither has the Ghana Food and Drugs Board made any effort at redrawing such a drug from pharmacy shops. In the case of major fall-related injuries such as dislocations and fractures, the practice is to massage the affected area with hot ointment or shea butter. It is always important to get a skilful masseur/masseuse to do the massaging since some massages can be dangerous. Reasons for massaging are consistent with most first aid treatment for fractures: aid circulation of blood in the affected area, prevent swelling and to determine the severity of injury (Bassey et al 2011, Aries et al 2007). It was found that a skilful masseur can always tell whether there is a fracture or a dislocation and whether the injury is severe or not. Determining the status of the injury is very important in the treatment process since in most cases the decision to continue home-based care, consult traditional bone setter (TBS) or to visit the hospital depends on the perceived nature and severity of the injury accessibility, affordability and the nature of personnel.

The study further found that many children with fractures are sent to the traditional bone setter for treatment. In certain instances, some parents negotiate to have their children released from the hospital after the children have been diagnosed of fracture in order to seek treatment from traditional bone setters. The preference for this treatment regimen can be attributed to the perception that traditional bone setting practice is far better than that of allopathic practice (Fang et al 1996, Radhika 2000, Aries et al 2007). Previous studies on the practice of traditional bone setting in south-south regions of Nigeria found that people with different socio-economic backgrounds utilize the services due to the fact that it is cheaper and utilize faster healing methods. Discomfort of plaster of Paris, prolonged periods of immobilization and fear of amputation influence people to visit TBS (Bassey et al 2011). In other cases, they are viewed as specialists for minor fractures, are easily accessible, reassuring and also offer home treatment (Orunlusi et al 2007). The use of simple and cheaper treatment techniques, such as bamboo bandaging, are much more comfortable for children (Sarmento and Lata 2006) and the use of treatment practices which are linked with the cultural practices makes TBS more acceptable and successful(Kleinman and Sung 1979). Considering the fact that the current study found certain background characteristics of parents/ caretakers such as educational level, income, age and parity to influence their choice of treatment, also explains in part, the increased use of traditional Bone Setters in the treatment of childhood falls. This finding supports other studies that patients with low socio-economic status mostly patronize treatment from TBS (Chowdling et al 2011, Ngohi et al 2009, Nwadiaro et al 2005 and Choffat 1979).

The efficacy of treatment by TBS remains contentious (Nwadiaro et al 2008; Ogunlusi et al 2007 and Erinsoh 2005). A significant number of patients utilize services of TBS because of the confidence they have in the therapeutic skills of the healer. In addition, most traditional healers openly declare to their patients at their first encounter that they are capable of treating all fractures and dislocations without any complications. However, such promises have been challenged by many studies. A study in Nigeria revealed that the outcome of traditional bone setting practice is good for only closed fractures, but poor for peri-aticular and open fracture (Onuminya 2004). Similarly, a study in northern Ghana showed that 14% of the patients studied had slight deformities and 2% had major deformities, (Badu 2005). Aries et al (2007) found similar observations in central Ghana. Even though treatment failures seem to be relatively higher it is worth noting that these are not limited to TBS or indigenous practitioners but to allopathic practitioner as well. There are instances where renowned allopathic health institutions have been sued for treatment failure and negligence (CBA 2013). This goes to suggest that both treatment regimens are not ideal and efforts should be made to strengthen their operations. Ideally, countries could bring the two systems together in highly effective ways. In several countries where health systems are organized based on primary health care approach, traditional medicine is well integrated and provides a backbone of preventive care and treatment of common ailments. For example in the People's Republic of China, the national list of essential medicines includes conventional medicines and traditional Chinese medicines and both are covered by the health insurance as well as a new cooperative medical scheme serving rural areas (ECOSOC 2013). There are evidence based studies in Ghana to justify the fact that training of traditional practitioners is feasible and the training will improve on primary health care outcomes. The Danfa Rural Health Project which was begun in 1970 was to improve primary health care and family planning in rural areas of Ghana. Traditional birth attendants were trained in villages to monitor pregnant women, recognise and refer high risk women to clinics, properly care for the umbilical cord and promote improved maternal and child health practices through health education. The result was that the training was successful and the programme has been gradually replicated throughout the country (Neumann and Lauro 1982). Another related programme is the Brong-Ahafo Rural Integrated Development Project (DARIDEP). This was carried out from 1975-1980 by the Government of Ghana with assistance from WHO and UNICEF with the aim of training traditional birth attendants to promote health status and self-help projects. The outcome of the project was that the status of the TBAs in the rural communities was enhanced (Stromberg 1988). The Primary Health Training for Indigenous Healers (PREHETIH) project is one of the famous projects aimed at training traditional practitioners with the aim of facilitating cooperation and integration into the health system of Ghana. The results were that there was a high level of information retention, trainees were able to store herbal medicine well, care for the sick was significantly improved, relationship between allopathic practitioners and indigenous practitioners improved and the number of referrals between the traditional practitioner and other health workers increased in both direction (Warren et al.1981).

As part of the integration process, the Government of Ghana have come out with policy guidelines on traditional medicine development in Ghana. The policy focuses on the following areas: regulatory measures, management of associations, intellectual property right protection, training, research and product development, standardization, quality assurance and integration into national health systems. All these can be achieved if there is mutual cooperation between modern and traditional healers as WHO has been promoting since 1978 (WRCIP 2008).

5.Conclusion

Many parents / caretakers (53.33%) in the New Juaben Municipality use orthodox drugs in the form of creams and ointments to treat fall-related injuries for their children while one-third (32.8%) prefer using herbal drugs mostly prepared at home. The main first-aid practice is massaging affected area with menthol-like ointments such as robb or omega oil to prevent swelling and to enhance circulation of blood in the affected area. Minor fall-related injuries are most often treated at home, but dislocations and fractures are often sent to traditional bone setters with few patients treated at hospitals. Massaging with hot water and application of herbal drugs is a common practice with the traditional bone setters, but are often associated with complications.

Socio-demographic characteristics of parents such as education, income, age and parity are significant in influencing the choice of the modes of treating childhood fall-related injuries. The influence of these socio-demographic variables suggests that any intervention to influence parents' choice for appropriate treatment regimen should take into consideration such key characteristics of parents. There is

also the need for mutual cooperation between allopathic and traditional health practitioners so as to improve on their respective practices.

6.References

1. Addae-Mensah Ivan (1992) Towards a Rationale Scientific Basis for Herbal Medicine: A phytochemistry. Accra: Ghana University Press
2. Anyinam C (1987) Traditional medical practice in contemporary Ghana: Dying or growing profession. Canadian Journal of African Studies. vol 21, no 3 pp 315-36.
3. Aries MJ, Joosten H, Wegdam HH, Van der Geest S (2007). Fracture treatment by bonesetters in central Ghana: Patients explain their choices and experiences. Tropical Medicine International Health ;12:564–74.
4. Budu A (2005) Tradition medicine in contemporary Ghanaian society: practices, problem & future outlook. Ghana University Press.
5. Bannerman C,Tweneboa NA, Offei A, Acquah SD (2002) Health care quality assurance manual. Sed Ltd, Accra.
6. Creswell, J.W, Piano, C & Vicki L (2007) Designing and conducting Mixed Methods Research, Sage Publications, Thousand Oaks, California
7. Chibwana A I, Mathanga D P, Chinkhumba Jand Campbell C H (2009).Socio-cultural predictors of health-seeking behaviour for febrile under-five children in Mwanza-Neno district, Malawi. Malaria Journal 2009, 8:219
8. Canadian Bar Association (2013) Medical malpractice. http://www.cba.org/bc. Accessed: 20th February, 2013.
9. Dapaah M J (2012) HIV/AIDS treatment in two Ghanaian hospitals: Experiences of patients, nurses and doctors. African studies collection vol. 38
10. ECOSOC (2013) the contributions of traditional medicine to the revitalization of international development objectives related to global public health. http://esango.un.org. Accessed 13th march, 2013.
11. Edet F E, (1996) Agents and nature of childhood injury and initial care providers at the community level in Ibadan, Nigeria Central African Journal of Medicine 42: 347 – 349.
12. Ghana Statistical Service (2012) 2010 Population and Housing Census. Eastern Region Analysis of district data and implications for planning. Asante & Hittssher press ltd. Accra.
13. Godden B. (2004) Sample size calculation. http://www.williamgodden.com/samplesizeformula.pdf Accessed 16th December, 2012
14. Kleinman A and Sung L (1997) Why do indigenous practitioners successfully heal? Social Science and Medicine vol 13b pp7-26. Pergamon Press Ltd. Great Britain.
15. Mbagada et al. (2005) Mother's health seeking behaviour during child illness in a rural western Kenya community. African Health Sciences Vol. 5 (4) 2005: pp. 322-327
16. Neumann AK AND Lauro P (1982) Ethno-medical and bio-medical linking. Social Science & Medicine. Vol 16 pp 1817-1824.
17. Ogunlusi JD, Okem IC and Oginni LM, (2007) Why Patients Patronize TBSs. The Internet Journal of Orthopedic Surgery
18. Radhika A 2000, A Tradition of bone setting. The Hindu
19. Roger A (2001) A household level analysis on the use of traditional medicine for childhood illnesses in East Timor. http://www.bairopiteclinic.tripot.com/childhoodill.html Accessed: 15th January, 2012
20. Sarmiento A and Latta L (2006); the evolution of functional bracing of fractures. Journal of Bone and Joint Surgery
21. Siaw A. N (2013), Do Children receive appropriate treatment for childhood burns in the New Juaben Municipality of Ghana? Implications for reducing complications with the use of home-based care. African Development and Resources Research Institute Journal. Vol 1, Pp57-65
22. Stromberg J (1988) Education for community involvement: Experiences from the BARIDEP (Ghana) project. In Carlaw Raymond and Ward William (eds), Primary health care the African experience. Third Party Publishing Company.
23. Twumasi P A (1988). Social foundation of the interplay between traditional and modern medical systems. Ghana University press, Accra.
24. Van Der Stuyft P; Sorensen SC; Delgado E and Bocaletti, E (1996). Health seeking behaviour for child illness in rural Guatemala. Tropical Medicine and International Health, 1(2):161-170.
25. Van der Horst J (1985) The role of traditional medicine in the primary health care process. An example from Upper-West Ghana. Thesis, Master of Public Health, Royal Tropical Institute, Amsterdam.
26. Warren, Dennis, et al.(1981) "Ghanaian national policy towards indigenous healers: The Case of the Primary Health Training for Indigenous Healers (PRHETIH) Program," a paper presented to the annual meeting of the Society for Applied Anthropology, Edinburgh.
27. World Report on Childhood Injury Prevention (2008) Implementing proven childhood injury prevention. WHO Press, Geneva Switzerland
28. Zargar M, Khaji A and Karbaklish M. (2005) Injuries Caused by Falls from trees in Tehran, Islamic Republic of Iran. Eastern Mediterranean Health Journal 25: 197