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Problems Associated with Cross-Border Patient Mobility and Utilization of Healthcare Facilities on the Nigeria-Cameroon Border, Bama Local Government Area, Borno State

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Abstract

This research was carried out retrospectively on the Nigerian – Cameroon border. There are so many communities that live on this border. It was stated in the Border Community Development Agency Act (2003) that Bama Local Government area has 120 identified border communities. These populations therefore need to have access to healthcare facilities on either side of the boundary as they interact in different ways, which expose them to infections, contagious and other socially transmittable diseases. Cross-border healthcare access is therefore relevant to people living on the border. This study examines the extent of cross-border patient mobility and healthcare utilization in the three districts (Banki, Dare-el-jamal and Kumshe) on the Nigeria-Cameroon border. The researchers used mix methods research design. Survey was conducted supplemented by qualitative method which enables the researchers to obtain both quantitative and qualitative data. The researchers and two trained research assistants went to the two camps that host internally displaced persons (IDPs) from Bama local government area (Dalori camp I and II) and identified 625 cross-border patients that come from Banki, Dare-el-jamal and Kumshe districts. This served as the sample population for the research and 40% of the population was selected as sample respondents by random sampling technique. Descriptive statistical tools were used to interpret the data acquired i.e percentages and Chi-square at $P \leq 0.05$ was used to test whether cross-border healthcare utilization in the study area was gender sensitive. Distance decay curves were also used to measure the impact of distance on the level of patronage of healthcare facilities across the Nigeria-Cameroon border. The study revealed that there were established health centres in the three districts but were poorly equipped and that more Nigerians patronize the healthcare facilities across the border where 65.5% of the respondents indicated that more Nigerians sought treatment in Cameroon.

Keywords: *Problems, Associated Cross-border, Patient mobility, Healthcare utilization, Distance and treatment.*

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Background to the Study

Nigeria is a country that shares land boundary with five African Countries. These are Benin Republic, Niger, Chad, Cameroon and Equatorial Guinea. The states that share international boundaries with other Countries are 21 in number. This implies that 58.3% of Nigerian states share border with other African Countries or the ocean (National Boundary Commission, 2008) and Borno State is one of them.

It is located in the North eastern part and shares border with three out of the five countries mentioned. These are Niger, Chad and Cameroon Republic. Ten out of the twenty-seven local Government areas are located near these boundaries. This means that so many communities in the state are near the borders. It is stated in the (Border Community Development Agency Act 2003) that Bama Local Government area (L.G.A) alone has 120 identified border communities. This population therefore needs to have access to healthcare facilities but are usually constrained by political boundaries which restrict the flow of communications and social interactions among communities that hitherto share identical cultural traditions.

Cross border healthcare is of particular relevance to people living in border regions as the distances to health services in neighbouring countries are sometime closer than health services in a patients' home country. However, balancing healthcare accessibility, quality, financial sustainability and equity is one of the most difficult challenges facing modem administration. The provision of social infrastructure at the borders like healthcare service, housing, safe water and motorable roads have always been government priorities at all levels. The border communities (B.C) have the advantage of accessing markets, health centres, roads and electricity from both countries. Access to these facilities is determined by a variety of factors. These among others include their availability within a reasonable distance and affordability. The extent to which healthcare services are utilized at the borders depend on cross-border patient mobility and alternative options for healthcare such as traditional healers or the purchase of drugs from hawkers and cultural factors. Nigeria-Cameroon border at Bama Local Government serves as an important route for patients in and out of Nigeria in search of treatment. This study assessed the utilization of healthcare facilities across this border in Bama local government area.

Statement of the Problem

In the interaction of people from different countries across International Boundaries in search of means of livelihood like trading, farming, grazing, education and leisure have made the border communities susceptible to contagious, infectious and socially transmittable diseases. These diseases may include Tuberculosis (T.B), HIV/AIDS, Ebola, Lassa fever, Polio, Eye problems, Cholera, etc. that may require special treatment and specialized personnel which maybe non-existent in the home country of the patient. The quality and the technical facilities also vary from country to country. These differences encourage patient mobility across the borders in search of healthcare services. Many patients die without access to right treatment. Cross-border healthcare is of particular relevance to people living in the border regions as the distance to healthcare service in a neighbouring country are sometime closer than services in patients home country. (Hem et al 2011).

Abbas (1998) identified seven border problems but cross-border patient mobility was not included. At the Cross-border Initiative Programme (CIP) launching workshop held in Katsina (2007) three platforms were put forward on which to establish Cross-border Cooperation (CBC) between Nigeria and Niger. The enumerated platforms were cross-border information on the markets, movement of goods and services and movement of capital. Cross border patient mobility was not included. If this is left unstudied, the problems experienced by cross-border patients would not be known. It is against this background that this study intends to bridge the research gap.

Aim and Objectives of the Study

The aim of this study was to assess the problems associated with cross-border patient mobility and healthcare utilization at the border of Nigeria and Cameroon in Bama L.G.A. The specific objectives are to:

1. Identify the major health facilities along Nigeria-Cameroon border.
2. Examine the factors responsible for patient mobility.
3. Identify the problems associated with cross-border patient mobility

Research Questions

The study was designed to answer the following questions.

1. Where are the major health facilities located on the Nigeria- Cameroon border?
2. What motivates patients to seek treatment abroad (quality, expertise, cost, or distance)?
3. What are the major problems faced by patients seeking treatment abroad?

Conceptual Framework and Literature Review

Conceptual Framework

The decision to migrate is essentially unique to each individual. People frequently act in groups and share in group decisions. When this occurs a pattern of population movements evolve and this leads to development of concepts and formulation of theories, by some geographers to explain the principles underlying migration or movement of people. This study adopted two concepts as found in (Thoman and Corbin, 1974, Alexander and Hartshorn, 1988 and Whyne-Hommand 1979) as the conceptual framework for the study. The concepts are distance decay and intervening opportunities as explained here for the purpose of clarity and relevance to the study.

(i) Distance Decay

Distance of course are measured in units of length that is; Kilometre, metre, etc. but the economic distance is of greater significance in this study than the physical distance. The concept of distance decay which (Thoman and Corbin, 1974) defined as the negative impact of distance upon the flow of information, goods, services or upon fixed features in space. According to them, interaction is usually relatively easy when cause and effect are close together in space; but is less efficient with increased distance separating them.

Whyne-Hormond (1979) observed that interaction is determined by the relative importance of the regions involved and the distances separating them. The greater the importance and the

shorter the distances, the greater will be the interaction. Whyne-Hormond further states that the general principles of distance decay are the amount of interaction between two places decreases as the distance between them increases. This principle of distance decay is similar to that of cross-border patient mobility, where the distance between the patient and the location of healthcare service greatly influence the patient's access and utilization of the healthcare facilities.

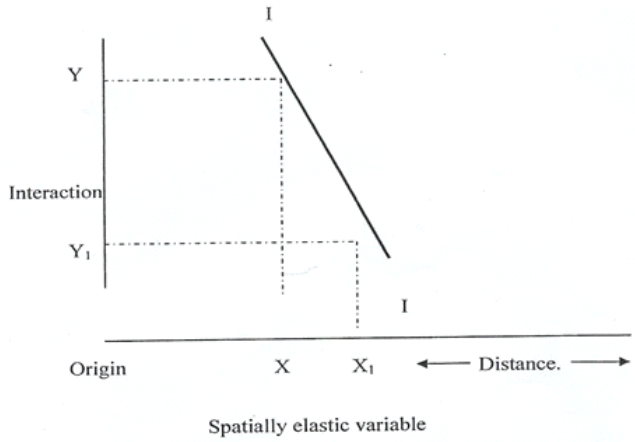
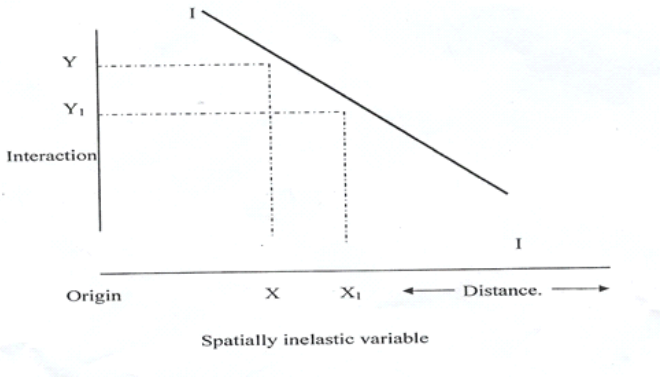


Fig. 1: A variable which changes rapidly over distance from a given origin is said to be spatially elastic.



Source: Thoman & Corbin (1974)

Fig. 2: A variable which shows relatively little change over distance from a given origin is said to be spatially inelastic. This concept will be used to measure the level of health care utilization at Nigeria-Cameroon border at Bama

(i) Intervening Opportunities

"The movement of people and goods from place to place has long been an interesting topic of investigation for social scientist. Why do people go where they go - to work, to play, to shop, to worship – why don't they go to alternative place that can likewise meet their needs?" (Alexander and Gibson, 1964: p. 450). To describe one law governing such movement is the theory of intervening opportunities formulated in 1940 by a sociologist (Samuel Stouffer).

The theory states "the number of people going distance is directly proportional to the number of opportunities at that distance and inversely proportional to the number of intervening opportunities". Thoman and Corbon (1974) further explained that, in the case of an individual travelling a given set of distances, the possibility that an intervening opportunity will occur before the completes any one of those distances increases as the distances increase.

This is true to a large extent in cross border patient mobility. If a patient travels a long distance to access health care service in a hospital there is probability that he gets an equally satisfactory hospital or clinic closer. The longer the distance the patient travels the more chances of finding one closer. Given, then, the existence of chances of obtaining satisfaction closer at the points of origin than at some given distance, and given also that those chances increase with distance, the chances that people will continue traveling to any point at a given distance will be less as the distance of that point from the origin increases. Hence, this alone will produce distance decay (Thoman and Corbin, 1974). The concept of intervening opportunities assists in the understanding of the source of supply of a particular item. When more than one source of supply exists, the nearest source to the final destination (Intervening opportunity) will be chosen (Hartshorn and Alexander, 1988). This is relevant in cross border patient mobility as distance to the health care services in a neighboring country is often shorter than services in patient's home country (Hem, et al, 2011). It is against this background that the two concepts, distance decay and intervening opportunities are chosen as conceptual framework for this research.

Cross-Border Healthcare Service

Cross-border healthcare has become a more prominent phenomenon in the developed countries. When in need of treatment patients act as informed consumers who claim the right to choose their own providers, including some beyond their national borders. They are supported and encouraged in this by several factors and actors, including the internet, internationally trained health professionals and so on Kelly and Joseph in (Inhorn, 2012). The European Commission (2007) however observed that the willingness to travel for care varies widely among member states as well as within social groups. Patient mobility is often motivated by dissatisfaction with health care provision in the home country of the patients and experience in the deficiencies in the health system at home. Some cross-border patient mobility is triggered by domestic crises as pointed out by (Beyrer 2008) when assessing the cholera epidemic in Zimbabwe in 2008.

In 2008, the European countries published a proposal for a directive on the cross- border prevision of healthcare services as part of its renewed social agenda which was approved in 2009. The directive allows patients to travel freely and receive treatment without getting the authorization of their domestic health system (Assembly of European Regions, 2011). The fact is many countries in Africa lack the laws, regulations and policies protecting the right of patients to access healthcare service, where these laws exist they are not properly enforced to facilitate the cross- border patient mobility among the border communities especially in Nigeria. In a recent study on Cross Border Healthcare Services utilization, Monguno and Waziri (2012) observed that border communities between Nigeria and her neighbours including Cameroon share so much in common as a result of their historical ties being one

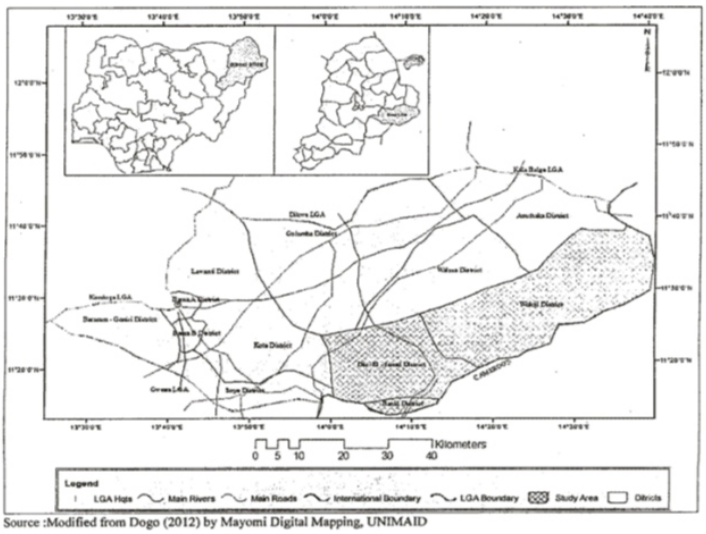
people balkanized by foreign colonial interests- They further state that the famous Kolofata hospital which is close to Banki serves as referral hospital to about six healthcare centres in the area and has a catchment population of 112,000 people. The initial information and impression created about a medical center trigger scores of people to seek medical care far away from their places of residents. And data also indicate that information about the hospitals in Cameroon is always positive. These in the most cases are the source of convictions to seek treatment in Cameroon (Monguno and Waziri 2012)

Methodology

This part examines the location, background of the study area, size and population, historical evolution of the boundary and the culture of the people in the study area.

Location and Size

Bama local government area is located between latitude (11^0 10 N and $11^0$50 N) and longitudes (13^0 30E and 14^0 E). The local government has a total land area of 6176km it is located on the eastern part of Maiduguri the Borno state capital (Ngare, 2012). The area shares a border with Dikwa and Kala-Balge local government area in the north and north-eastern part and Gwoza local government to the south. It also shares common border with Konduga local government to the west and north-western part and the republic of Cameroon to the eastern part. It stretches from the borders of Bama and Gwoza local government to Kala-Balge local government area. Its total length is about 160 kilometers (figure 1).



Source :Modified from Dogo (2012) by Mayomi Digital Mapping, UNIMAID

Fig. 3: Borno State Showing the Study Are (Bama)

Table 1: Distribution of Healthcare Centre in the Study Area

District	Types of Health Centre	Location
Banki	i. Comprehensive Health Centre	Banki
	ii. Primary Healthcare Dispensary	Banki
	iii. Missionary Health Centre	Banki
	iv. Tarmuwa Health Centre	Tarmuwa
	v. Barkari Health Centre	Barkari
Dar-el-jamal	i. Dar-el-jamalHealth Centre	Dar-el-jamal
	ii. Missionary Health Centre	Jebura
	iii. Dipchari Health Centre	Dipchari
	iv. Jere Health Centre	Jere
Kumshe	i. Primary Health Centre	Kumshe
	ii. Primary Health Centre	Andara
	iii. Primary Health Centre	Bula Umarbe
	iv. Primary Health Centre	Bembem
	v. Primary Health Centre	Ndabaza

Source: Bama L.G.A Primary Healthcare Unit, (2013)

Data Acquired

The data collected for this research were demographic and socio-economic profiles of cross-border patients, attitude of health workers and patients, number of health facilities in the study area, distance between patient's location and health facilities, the frequency of patients seeking treatment across the border and the nature of treatment being sought. The qualitative information was obtained through key informant interview with the community leaders, health workers, and the camp managers.

Sampling Technique and Procedure

A simple random sampling technique was used. The researchers and two trained assistants went to the camps and identified IDPs from the three districts that have sought treatment across the Nigeria - Cameroon border both planned and unplanned. A total of 625 cross border patients were identified in the two camps and classified into the three districts (Banki: 263, Dare- el-jamal: 200 and Kumshe: 162). The choice of Dalori camps I and II were necessitated by the insecurity in the study area, hence the study was carried out retrospectively.

Sample Size

A total of 250 respondents were selected from the three districts that were in the two camps. This represents 40% of the population of cross border patients identified in the three districts. According to (Nwana, 1981) if a research population reaches 100 or more, then 40% of the population should be selected. It was based on this, that 40% of the population was selected using random sampling technique in each district and questionnaires were administered on them.

Data Analysis

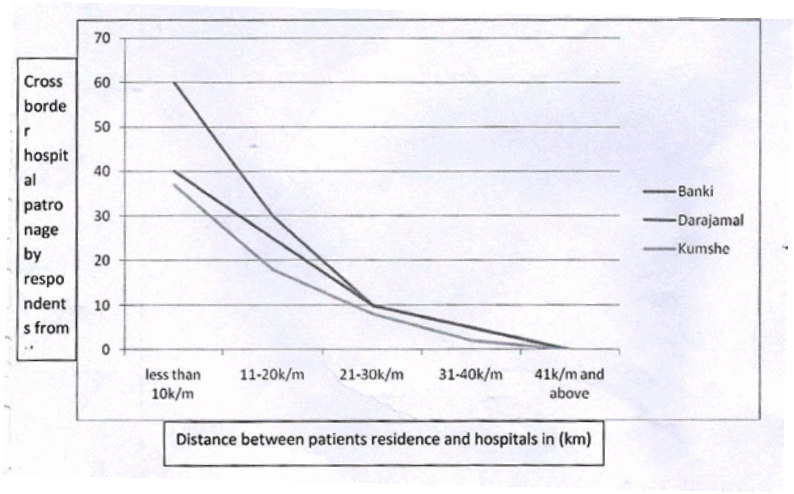
Descriptive statistical tools were used to interpret the data acquired i.e. percentages and bar graphs were used. Chi-square at ($P \leq 0.05$) was also used to test whether cross border patient mobility in the study area was gender sensitive. Distance decay curves were also used to measure the impact of distance on the level of patronage of healthcare facilities along the Nigeria-Cameroon border.

Results and Discussion

Distance between patient's residence and hospital patronage

Results:

Fig. 4



Cross Border Hospital Patronage

The research revealed that the number of respondents decrease with in distance from the hospital. This means the volume of patronage increases as distance because shorter. This interaction can be plotted graphically as shown in fig. 4.1 using distance decay curve of Thoman and Corbins (1974) the curve shown that cross border patients mobility in the area is sensitive to distance as shown on the graph, when the distance between the hospital and the patients' location increases, the level of patronage decreased and its rapid over short distance. Hence, hospital patronage on **border** of Nigeria and Cameroon is spatially elastic. This means cross border healthcare utilization in the study area is sensitive to distance. In focus group interview conducted, it was also revealed that some people from far places do come to Kolofata for instatement, but the more the distance the fewer the people , which may not be unconnected with the presence of eye hospital along the way which served the same purpose, thereby action as an intervening opportunity for patients intending to reach the healthcare facilities across the border.

Table 2: Problem of Cross Border Patients Mobility

Response	Banki	Dar-el-jamal	kumshe	Total	%
Transportation					
Serious	60	05	04	69	27.6
A problem	45	50	42	137	54.8
Not a problem	00	25	19	44	17.6
Security checks					
Very serious	15	45	09	69	27.6
Serious	60	23	47	130	52
A problem	30	12	09	51	20.4
No a problem	00	00	00	00	0
Cost of drugs					
Very serious	60	12	09	81	32.4
Serious	30	34	28	92	36.8
A problem	15	34	28	77	30.8
Exchange rate					
Very serious	50	23	16	89	35.6
Serious	39	05	04	48	19.2
A problem	06	29	22	57	22.8
Language barrier					
Very serious	00	20	13	33	13.2
Serious	30	15	15	60	24
Not a problem	45	22	19	86	34.4
Armed robbery					
Very serious	15	34	28	77	30.8
Serious	00	24	17	40	16
A problem	60	23	18	101	40.4
Not a problem	30	00	02	32	12.8
Poor infrastructure					
Very serious	10	4	8	22	8.8
Serious	24	12	9	45	18
A problem	26	30	28	84	33.4
Not a problem	45	34	20	99	39.6
Government					
Regulation					
Serious	30	12	09	51	20.4
A problem	69	30	24	123	29.2
Not a problem	06	38	32	76	30.4
N=	105	80	65	250	

Source: Field work, 2016

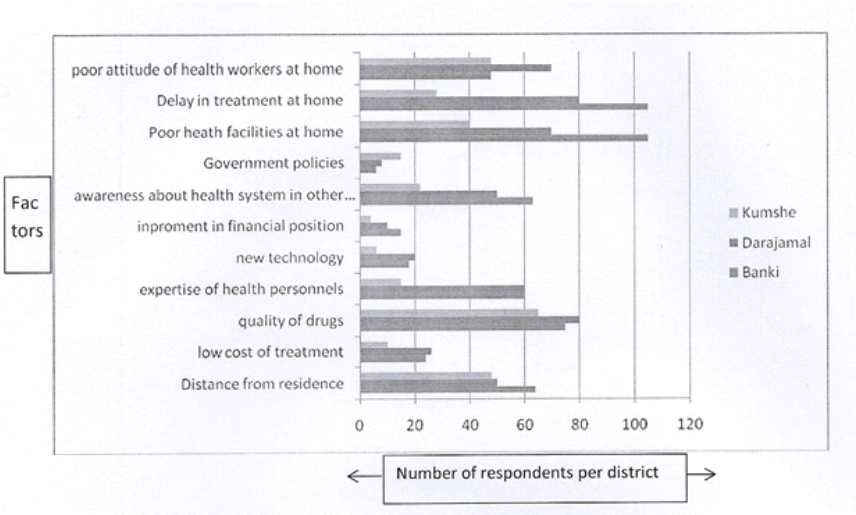


Fig. 5: Factors Motivating Cross Border Patients Mobility

Discussion

The lengthy boundary between Nigeria and Cameroon has so many communities living near it. In fact, Bama local government area alone has 120 identified border communities (Border Community Development Agency Act 2003). The study revealed that these populations interact and travel across the boundary for businesses, education, health services and they inter marry and attend ceremonies across the border. Cross-border healthcare has become a more prominent phenomenon in both developed and developing countries as the world becomes more interconnected *(Fabyet al,* 2011). The border communities through radio, internet services, television and print-media easily received information about healthcare services, these elicits cross-border patient's mobility. The distance between patient's location and the health centers also encourages cross-border patients' mobility, as the distance to these facilities may be shorter across the border than the one in the patients' home country (Hem *et al,* 2011). Results from this study confirmed these, as the distance from the eye hospital in Kolofata (Cameroon) is shorter for the communities in the study area than any available eye hospital on Nigerian side of the border. This agreed with fig. 4.2 where distance ranked fifth among the ten identified motivating factors of cross-border patient's mobility. The distance between the patients' location and the hospital as shown in fig. 4.2influenced the level of patronage, where the level of patronage decreases with increase in distance. A little change in distance elicited a large volume of decrease in cross-border patient's mobility, the graph also suggest that there is distance decay in cross-border patient mobility in the study area. Further analysis using Chi-square also revealed that cross border patient mobility among the communities studied is gender sensitive. The Chi-square value for gender crosstabs, all indicated that female participation in cross-border patient mobility were significant which is also supported by table 2 where 54.4% of the respondents were females.

It is generally observed that the phenomenon of cross-border patient mobility in the three districts were motivated by several factors and the strong ones as revealed by the study are those considered as push and pull factors. Data indicated that quality of drugs, expertise and

attitudes of health personnel are among the pull factors while treatment nuances, delays and poor health facilities at home considered as push factors (Monguno and Waziri, 2012). Further investigation revealed that this situation is true to a large extent in the study area. The respondents confirmed this where their comments and experiences during treatment were positive as 76% of them expressed satisfaction (table 9), whereas poor attitude of health workers and delay in treatment at home were considered as push factors (table 8). Glino, Boffin and Baetem, (2005) concluded that patient mobility must be worthwhile for all stakeholders if it is to work. For patients to move there must be something better, faster and affordable across the border, for providers, purchasers, insurer and public authorities there must be some benefit, otherwise they will not participate in cross-border patient arrangements. Perhaps these were some of the reasons why there was no government participation in cross-border patients 'mobility arrangement in the study area as reflected on table 5. It is generally difficult to ascertain the volume of cross-border patient's mobility even in the developed countries. This is because there is little systematic document on the actual cross-border mobility of patients (Hem *et al,* 2011), this is also because access to treatment abroad can go through various agencies and have different sources of funding. Government can participate in arrangement, NGOs and individuals can arrange privately. In the study area, most of the arrangements were done privately and therefore difficult to ascertain the volume as this cross-border mobility of patients were not documented, the porous nature of the Nigeria-Cameroon border made it more difficult to assess the actual volume of cross-border patients mobility in the study area. The level of literacy in the area is very low and close cultural ties make cross-border patients to evade laws and obtain treatment across the border without permission from home country.

The experiences of cross-border patients before, during and after treatment in the study area as obtained from the respondents were that there are established health centers in the three districts but were poorly equipped and therefore they were not satisfied with the treatment at home. In the focus group interview, it was revealed that most of them received prescription in the health centers but purchase the drugs from hawkers. This usually exposés them to buying fake drugs or expired ones, which sometimes complicate their sickness, thereby forcing them to seek treatment across the border, where they would get better treatment and genuine drugs. These lapses at home, made them to appreciate the little genuine services they receive across the border without much ado. Further investigation revealed that the attitude of the health workers across the border and the prompt attention received gives them satisfaction and makes them to develop confidence in the doctors as shown on table 9. Despite this, some respondents complained of inadequate infrastructures like accommodation and toilet facilities. The exchange rate also does not favour cross-border patients, as they depend on parallel market. Post treatment experience however showed that most of the cross-border patients do not experience complications as indicated by 89.6% of the respondents on table 9. However, few of them did experience complication to some extent. This was due to some cross-border patients' inability to go back for follow-up, which were associated to financial problem as most of them are peasant farmers and petty traders. Some of them said they were discharged prematurely because they run out of resources and could not afford the cost of staying there on admission. In the developed countries, most cross-border treatment are

associated with serious cases like Renal failure, replacement of human parts and test tube babies for barren couples, but the situation in the study area shows that cross-border patients mobility were mainly associated with tropical diseases like eye problems, malaria fever, typhoid fever, cholera and meningitis. This study revealed that 54.9% of the respondents were treated for eye problems across the border. The volume is higher perhaps because there is 'no eye hospital within the reach of the peasant farmers on the Nigerian side of the border and the neighbouring country has established eye hospital which is within their reach hence, the high level of patronage.

Cross-border patients mobility all over the world is not smooth. Some problems experienced include cultural, legal, political, administrative, language barrier and financial problems as identified by (Brand *et al,* 2008). The secrecy involved especially when it has to do with gamete donors and surrogates make cross-border patient mobility a difficult task to accomplish. In Nigeria, for instance some lawmakers see it as a gradual process of destroying healthcare system at home and building medical tourism of other countries (Leo, 2012). The study however revealed that cost of drugs, exchange rate, insecurity and transportation are the major problems of cross-border patient mobility in the study area. The problems associated with cross-border patient mobility in the developing countries such as Nigeria is a little different from that of developed countries. As the developed countries, pay more attention to legality and the type of treatment as mentioned above, the fragmented Africa concentrate on availability and accessibility.

Conclusion

This study revealed the various types of healthcare facilities that are found on the Nigeria-Cameroon border in Bama Local Government Area as at 2013 retrospectively. It also highlighted the healthcare facilities that are close to the boundary. The study also confirmed that many patients from the border communities cross the boundary in search of treatment. The extent to which Nigerians cross the border for treatment was confirmed to be more in volume than that of Cameroonians seeking treatment on the Nigerian border in Bama local Government Area. The research further confirmed that cross border patient mobility in the communities studied was gender sensitive.

The major motivating factors for cross border patient mobility along this border were also revealed; they include both the pull and the push factors. Those facilities that attract patients across the border were considered as the pull factors and they include quality of drugs, proximity, expertise and the caring attitude of their health workers. The identified push factors were the delay in treatment at home, poor health workers at home. Some major problems that cross border patients faced before, during and after treatment were identified. These problems include security challenges, cost of drugs, exchange rates and transportation.

Recommendation

The findings of this research necessitated the following recommendations:

1. The healthcare facilities for the border communities should be well equipped with both drugs and health personnel to minimize the volume of patients crossing the border for treatment.

2. Government should participate in arrangement of cross border treatment to lessen the burden on cross border patients; this can be done by offsetting their bills or arranging exchange rate concessions for cross border patients in place of the parallel market (black market).
3. Improvement of security surveillance will make the border safe for travelers and reduce cases of armed robbery in the area.
4. The present bilateral cooperation between the two countries on security should be extended to include healthcare treatment, so as to give free access to healthcare facilities to cross border patients.
5. Fake drugs hawkers should be checked by SON, NAFDAC and NDLEA to rid the area of fake drugs which are counterproductive to patients' treatment.
6. Other infrastructures like roads, safe water should be provided to minimize cost of transportation between the border communities and the spread of water borne diseases.
7. An eye hospital should be established in the area to reduce the over dependence on the Kolofata eye clinic in Cameroon.
8. The level of literacy were low in the three districts, hence the need to establish more schools in the study area is paramount, as this will improve their awareness about the health issues and enable them to communicate effectively with health workers.
9. The NGOs should be encouraged to participate more in arranging cross border patients mobility. This can be done by giving them logistic support, free land, adequate security and patronage.

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Appendix

Chi-Square Test

	Value	df	Asymp. Sig. (2- sided)
Pearson chi-square	93.934[a]	4	.000
likelihood ratio	113.319	4	.000
Linear-linear association	69.434	1	.000
N of cause	250		

a.0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.44

Chi-Square Test

	Value	Df	Asymp. Sig.(2-sided)
Pearson Chi-square	75.548[a]	4	.000
likelihood Ratio	55.464	4	.000
linear-by linear association	4.143	1	.042
N of Valid cause	250		

a.0 cells (0.0%) have expected count less than 5. The minimum expected is 13.26.

Chi-Square Test

	Value	Df	Asymp. Sig.(2-sided)
Pearson Chi-square	53.590	4	.000
likelihood Ratio	55.363	4	.000
linear-by linear association	38.687	1	.000
N of Valid cause	250		.042

a.0 cells 90.0%) have expected count less than 5. the minimum expected is 20.02

Chi-Square Test

	Value	Df	Asymp. Sig.(2-sided)
Pearson Chi-square	30.243[a]	4	.000
likelihood Ratio	41.990	4	.000
linear-by linear association	10.555	1	.000
N of Valid cause	250		.001

a.0 cells (0.0%) have expected count less than 5. the minimum expected is 8.58.

Chi-Square Test

	Value	Df	Asymp. Sig.(2-sided)
Pearson Chi-square	81.915[a]	4	.000
likelihood Ratio	104.294	4	.000
linear-by linear association	59.066	1	.000
N of Valid cause	250		.001

a.0 cells (0.0%) have expected count less than 5. the minimum expected count is 13.26.

Chi-Square Test

	Value	Df	Asymp. Sig.(2-sided)
Pearson Chi-square	75.248	6	.000
likelihood Ratio	81.672	6	.000
linear-by linear association	37.118	1	.000
N of Valid cause	250		

a.0 cells (0.0%) have expected count less than 5. the minimum expected count is 12.48

Chi-Square Test

	Value	Df	Asymp. Sig.(2-sided)
Pearson Chi-square	93.167[a]	6	.000
likelihood Ratio	116.138	6	.000
linear-by linear association	51.984	1	.000
N of Valid cause	250		

a.0 cells (0.0%) have expected count less than 5. the minimum expected count is 8.16

Chi-Square Test

	Value	Df	Asymp. Sig.(2-sided)
Pearson Chi-square	10.955	4	.000
likelihood Ratio	11.253	4	.000
linear-by linear association	127	1	.000
N of Valid cause	250		.001

a.0 cells (0.0%) have expected count less than 5. the minimum expected count is 5.72

Chi-Square Test

	Value	Df	Asymp. Sig.(2-sided)
Pearson Chi-square	6.880	4	.032
likelihood Ratio	7.151	4	.028
linear-by linear association	5.010	1	.025
N of Valid cause	250		

a.0 cells (0.0%) have expected count less than 5. the minimum expected count is 14.55

Chi-Square Test

	Value	Df	Asymp. Sig.(2-sided)
Pearson Chi-square	5.090	4	.278
likelihood Ratio	5.489	4	.241
linear-by linear association	2.128	1	.140
N of Valid cause	250		

a.0 cells (0.0%) have expected count less than 5. the minimum expected count is 26.